

# KEE ROOF SYSTEMS AND SERVICES

KPC  
904 Rose Road  
Ashland, KY 41102

Mr. Patrick Richardson, Chairman  
Ms. Nancy Hutchinson, Chief Executive Officer



## PROJECT MANUAL



**VOLUME 1**

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CKEC – GRREC – KEDC – NKCES -OVEC – SESC - WKEC

**KENTUCKY EDUCATIONAL DEVELOPMENT CORPORATION (KEDC)**

**904 ROSE ROAD, ASHLAND, KY 41102-7104**

**Member Services (606) 928-0205**

[www.kedc.org](http://www.kedc.org) or [www.kpc4me.com](http://www.kpc4me.com)

**\*\*\* BID ANNOUNCEMENT \*\*\***

BID TYPE:	PREFERRED VENDOR
BID REFERENCE:	<b>KEE ROOFING SYSTEMS-2022</b>
BID PUBLIC NOTICE DATE:	August 11, 2022
BID OPENING DATE & TIME:	September 1, 2022, 2:00 PM ET
BID CONTRACT START DATE:	UPON AWARD
BID ITEMS:	KEE Roof Systems and Services

**BID PURPOSE:** The Kentucky Educational Development Corporation (KEDC) Board of Directors, as the Legal Education Agency (LEA) for KPC solicits sealed bids for KEE Roofing Systems and Services that would, if accepted by the KEDC Board of Directors or its designee, establish a best value PREFERRED VENDOR BID CONTRACT per KRS.45A, with the specifications, standard terms and conditions as defined in this project manual. This bid contract is intended to provide member institutions (primarily school districts) the right to contract to purchase goods and services at fixed prices from a specific list of items contained herein this project manual as part of the bid proposal. Said contracts shall hereinafter be referred to as the Bid Contract. Selected vendors shall be responsible for complying with all applicable Kentucky Board of Education regulations (especially 702 KAR 4:160 Capital Construction Process), and (through coordination with the Owner and its member institutions) insuring any necessary Architectural or Engineering Design services required by KRS 322.360, and other revised statutes are provided by the Owner and approved by the Kentucky Department of Education. Vendors shall also ensure that any necessary approvals required by the Kentucky Department of Housing, Building and Construction are obtained prior to project initiation.

**PRE-BID MEETING:** A Prebid Zoom Meeting will be held at 2:00 PM ET, Tuesday, August 16th. Bidders shall e-mail Sam Atkins ([sam.atkins@kedc.org](mailto:sam.atkins@kedc.org)) for the Zoom link information.

### Preferred Roofing Vendors

- A. Preferred Construction Services, 3069 Ohio Dr, Henderson, KY 42420.
- B. Swift Roofing, 108 S. Park Cir., Valley Creek Busine, Elizabethtown, KY 42701.
- C. ABR Construction, 121 Crestview Ct, Nicholasville, KY 40356.
- D. Tri-State Roofing & Sheet Metal Company, 1624 Old Frankfort Pike, Lexington, Kentucky 40504,
- E. Bri-den Company, Inc., 110 Old Wallaceton Rd, Berea, KY 40403.
- F. Imbus Roofing, 5 Charlin Dr, Wilder, KY 41076.
- G. Eskola Roofing, 2933 NW Park Drive, Knoxville, TN 37921
- H. Kramer & Sons, 9171 Harrison Pike, Unit 12 Cleves, OH 45002.
- I. Highland Roofing, 4007 Produce Rd, Louisville, KY 40218.
- J. Geoghegan Roofing Corp, 1405 Garland Ave, Louisville, KY 40210.
- K. Quality Roofing, 9350 SSR-C, Senath, MO 63876
- L. Collier Roofing, 1523 Jones Ave, Nashville, TN 37207

# Kentucky Department of Education Version of AIA Document A701™ – 1997

## *Instructions to Bidders*



This version of AIA Document A701™–1997 is modified by the Kentucky Department of Education. Publication of this version of AIA Document A701–1997 does not imply the American Institute of Architects’ endorsement of any modification by the Kentucky Department of Education. A comparative version of AIA Document A701–1997 showing additions and deletions by the Kentucky Department of Education is available for review on the Kentucky Department of Education Web site.

Cite this document as “AIA Document A701™– 1997, Instructions to Bidders — KDE Version,” or “AIA Document A701™–1997 — KDE Version.”



# Kentucky Department of Education Version of AIA® Document A701™ – 1997

## *Instructions to Bidders*

for the following PROJECT:  
*(Name and location or address)*

THE OWNER:  
*(Name, legal status and address)*

THE ARCHITECT:  
*(Name, legal status and address)*

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

## ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement or Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders, the bid form, and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications and all Addenda issued prior to execution of the Contract.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201™, or in other Contract Documents are applicable to the Bidding Documents.

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

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 The Base Bid is the sum stated in the Form of Proposal for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids. The Base Bid shall include all labor, material, bonds, and the cost of all direct purchase orders for material to be purchased by the Owner

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment or labor for a portion of the Work.

## ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 The Bidder by making a Bid represents that:

§ 2.1.1 The Bidder has read and understands the Bidding Documents or Contract Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, and for other portions of the Project, if any, being bid concurrently or presently under construction.

§ 2.1.2 The Bid is made in compliance with the Bidding Documents.

§ 2.1.3 The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.

1. The submission of a Bid will be construed as evidence that a site visit and examination of local conditions have been made. Later claims for labor, equipment, or materials required or difficulties encountered which could have been foreseen had such an examination been made will not be recognized.

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

## ARTICLE 3 BIDDING DOCUMENTS

### § 3.1 Copies

§ 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the issuing office designated in the Advertisement or Invitation to Bid in the number and for the deposit sum, if any, stated therein. The deposit will be refunded to Bidders who submit a bona fide Bid and return the Bidding Documents in good condition within ten days after receipt of Bids. The cost of replacement of missing or damaged documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the Bidding Documents and the Bidder's deposit will be refunded.

### § 3.1.2 (Not Used)

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

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

### § 3.2 Interpretation or Correction of Bidding Documents

§ 3.2.1 The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall at once report to the Architect and Construction Manager (if utilized) errors, inconsistencies or ambiguities discovered.

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

§ 3.2.3 Interpretations, corrections and changes of the Bidding Documents will be made by Addendum. Interpretations, corrections and changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them.

### § 3.3 Substitutions

§ 3.3.1 The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.

§ 3.3.2 No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least ten days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work, including changes in the work of other contracts that incorporation of the proposed substitution would require, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

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

§ 3.3.4 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

### § 3.4 Addenda

§ 3.4.1 Addenda will be transmitted to all who are known by the Architect and Construction Manager (if utilized) to have received a complete set of Bidding Documents.

§ 3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

§ 3.4.3 Addenda will be issued no later than four days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 3.4.4 Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

## ARTICLE 4 BIDDING PROCEDURES

### § 4.1 Preparation of Bids

§ 4.1.1 Bids shall be submitted on the forms included with the Bidding Documents.

§ 4.1.2 All blanks on the Form of Proposal shall be legibly executed in a non-erasable medium.

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

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

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

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

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

#### § 4.2 Bid Security

§ 4.2.1 Each Bid greater than \$25,000 shall be accompanied by bid security in the form of a Bond provided by a Surety Company authorized to do business in the Commonwealth of Kentucky, or in the form of a certified check, and in an amount equal to at least five percent (5%) of the Base Bid amount, pledging that the Bidder will enter into a contract with the Owner on the terms stated in the Bid and will, if required, furnish bonds covering the faithful performance of the Contract and payments of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.

§ 4.2.2 If a surety bond is required, it shall be written on AIA Document A310™, Bid Bond, unless otherwise provided in the Bidding Documents, and the attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of the power of attorney.

§ 4.2.3 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until either (a) the Contract has been executed and bonds, if required, have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn or (c) all Bids have been rejected.

#### § 4.3 Submission of Bids

§ 4.3.1 All copies of the Bid, the bid security, if any, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder’s name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation “SEALED BID ENCLOSED” on the face thereof.

§ 4.3.2 Bids shall be deposited at the designated location prior to the time and date for receipt of Bids as indicated in the Advertisement or Invitation to Bid or any extensions thereof made by Addendum. Bids received after the closing time and date for receipt and opening of Bids will be rejected and returned to the Bidder unopened.

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

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

#### § 4.4 Modification or Withdrawal of Bid

§ 4.4.1 A Bid may not be modified, withdrawn or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting a Bid.

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

§ 4.4.3 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

§ 4.4.4 Bid security, if required, shall be in an amount sufficient for the Bid as resubmitted.

## ARTICLE 5 CONSIDERATION OF BIDS

### § 5.1 Opening of Bids

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

### § 5.2 Rejection of Bids

The Owner shall have the right to reject any or all Bids. A Bid not accompanied by a required bid security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.

### § 5.3 Acceptance of Bid (Award) [Reference: KRS 45A.365]

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

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

## ARTICLE 6 POST-BID INFORMATION

### § 6.1 Contractor's Qualification Statement

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

§ 6.1.2 In determining the qualifications and responsibilities of the Bidder, the Owner shall take into consideration the Bidder's skill, experience, facility, previous work standing, financial standing, capacity and ability to handle work in addition to that in progress, and quality and efficiency of construction plant and equipment proposed to be used on the project.

### § 6.2 (Not Used)

### § 6.3 Submittals

§ 6.3.1 Each Bidder shall submit as part of the Form of Proposal a list of subcontractors proposed for each major branch of work itemized and described in the specifications for the Project. The Bidder's listing of a subcontractor for a work category certifies that the subcontractor has in current employment, skilled staff and necessary equipment to complete that category. The Architect and Construction Manager (if utilized) will evaluate the ability of all listed subcontractors to complete the work and notify the Owner. Listing of the Bidder as the subcontractor may invalidate the Bid should the Architect's and Construction Manager's (if utilized) review indicate the bidder does not have skilled staff and equipment to complete the work category at the time the Bid was submitted.

- .1 Changing subcontractors from those listed with the Form of Proposal is prohibited unless the bidder provides grounds for such a change that are consistent with provisions of the Instructions to Bidders. Said change shall be accompanied by a written explanation from the Bidder as well as a written release from the listed subcontractor. All letters shall be on original company stationery with original signatures from an officer in the company legally approved to act for the company. An unjustifiable change of subcontractors may invalidate the Bid. Any change to a proposed person or entity shall be addressed as noted in Section 6.3.3 of these Instructions to Bidders

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

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

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

#### § 6.4 List of Materials, Suppliers, and Manufacturers

§ 6.4.1 Each Bidder shall submit a complete list of materials/equipment with supplier's and manufacturer's name in the form and manner indicated on the Form of Proposal and in compliance with materials and equipment specified.

§ 6.4.2 In addition to the list furnished with the Form of Proposal, the successful Bidder thereafter known as the Contractor, may be requested within thirty (30) calendar days after award of contract to furnish to the Architect and Construction Manager (if utilized) a more detailed and complete list of the materials and equipment, together with the manufacturer's or maker's name, brand and/or catalogue number, and product data or illustration thereof.

§ 6.4.3 Prior to the award of contract, the Architect and Construction Manager (if utilized) will make a preliminary check of the lists included with the Form of Proposal and advise the Bidder and the Owner of the acceptance thereof, and of such other actions as may be necessary in order to meet the requirements of the contract specifications. Should it develop that any of the materials or equipment named in the list do not meet the requirements of the project specifications, the Bidder shall be required to offer to the Owner other materials or equipment in compliance with the specifications at no change in contract price. Preliminary review and acceptance of the above list shall not relieve the Contractor of furnishing equipment and materials in accordance with the specifications.

§ 6.4.4 Written approval shall be obtained from the Architect regarding any material/equipment, supplier, and manufacturer substitution. Substitutions are permitted in the following instance:

- .1 Failure to comply with contract requirements;
- .2 Failure of the supplier or manufacturer to meet delivery schedules or other conditions of the contract;
- .3 Written release by the supplier or manufacturer.

§ 6.4.5 The Owner reserves the right to reject the bid of any Bidder who fails to furnish the information required under Sections 6.3 and 6.4.

#### § 6.5 Unit Prices

§ 6.5.1 Each Bidder shall submit as part of the Bid a list of unit prices as designated on the Form of Proposal.

§ 6.5.2 Unit prices are for changing or adjusting the scope or quantity of work from that indicated by the contract drawings and specifications.

§ 6.5.3 Unit prices shall include all labor, materials, equipment, appliances, supplies, overhead and profit.

§ 6.5.4 Only a single unit price per item shall be given and it shall apply for either more or less work than indicated or specified in the contract documents. In the event the contract is adjusted by unit prices, a change order shall be issued for the change and for the increased or decreased amount.

§ 6.5.5 Unit prices listed by the Bidder and accepted by the Owner shall apply to all phases of work whether the work is performed by the Bidder or by the Bidder's (Contractor's) subcontractors.

§ 6.5.6 For unit prices that apply to a lump sum Base Bid, the Owner reserves the right, prior to an award of contract, to negotiate, adjust and/or reject any price that is determined by the Architect, Construction Manager, or Owner to be excessive or unreasonable in amount.

§ 6.5.7 On line item total sum bids where Bidders are quoting firm unit prices for estimated quantities of units of work, the unit price is the Bid and is not subject to change, either by the Bidder or Owner. The Owner reserves the right to correct mathematical errors in extensions and additions by the Bidder. The Owner's corrected bid sum total shall take preference over the Bidder's computed bid sum total.

#### § 6.6 Bid Division, Material Suppliers, and Purchase Orders

§ 6.6.1 This Section applies to projects with or without Bid Division (Multiple Prime Contracts), and those Projects that provide for direct purchase by the Owner of materials and equipment from Material Suppliers.

**§ 6.6.2** For Projects with Bid Division: General Construction and Concrete, Masonry, Plumbing, HVAC and Electrical Contractors shall provide with their Bid a breakdown of major material items (excluding sales tax). This breakdown shall include description of the item, name of the manufacturer, name of the supplier, and the amount of the supplier's quote. The Owner will issue Purchase Orders direct to the suppliers for these materials. The following shall be provided:

- .1 Within four (4) days from the Bid Date, the low Bidder shall furnish to the Owner the list of material suppliers of the items listed on the bid breakdown, with authorization given to the Contractor to quote the materials listed and that the Supplier will furnish the listed materials to the Owner under the Owner's standard Purchase Order for the amount stated on the Contractor's bid breakdown. Failure of any Contractor to provide this written list of material suppliers with authorization will cause forfeiture of the bid security.
- .2 The Contractor shall also guarantee to the Owner that materials listed in the breakdown to be purchased directly by the Owner shall comply with requirements of the Contract Documents and that the quantity of such material is sufficient to complete the Bid Division. The Performance and Payment Bonds required of the Contractor shall be in the combined amount of the materials designated in its bid to be acquired by Purchase Order by the Owner and all remaining items of cost in the respective Bid Division. Contractor shall provide an invoice from the supplier to the Owner with Contractor's Application for Payment.
- .3 Material Suppliers will be paid the full amount of their invoices. Retainage that would otherwise be withheld from invoices submitted by and paid to a material supplier shall be withheld from the approved payment request of the Contractor. Refer to General Conditions for further requirements regarding retainage.
  - a Lockers, Library, Kitchen, Shop, Technology, Science or other major equipment bid divisions shall provide with their Bid a breakout price for the material portions of the Bid (excluding sales tax). Award of contract will be based on the lump sum price of the accepted Bid that includes labor and materials. The Owner will issue a Purchase Order for the material and a contract for the labor and incidental materials. Retainage will be held on both the Purchase Order and the Contract in accordance with the General Conditions.
  - b The language of the Bid Divisions is designed to outline and define the work in general to be included in a particular Bid Division and to prevent overlapping and conflicting requirements within other Bid Divisions. No Bidder shall use the omission of any item from this language as a basis for a claim for additional cost when such item is specified or indicated to be part of a complete and workable system.
  - c It is the responsibility of the Bidder to determine which Bid Division or combination of Bid Divisions the Bidder desires to Bid.

**§ 6.6.3** For Projects without Bid Division but with direct purchase by the Owner of materials and equipment from Material Suppliers, Contractors shall comply with paragraph 6.6.2 above as applicable to the Project. The Owner will issue Purchase Orders direct to the suppliers for these materials. Award of contract will be based on the lump sum price of the accepted bid that includes labor and materials. Retainage will be held on both the Purchase Orders and the Contract(s) in accordance with the General Conditions.

## **ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND**

### **§ 7.1 Bond Requirements**

**§ 7.1.1** Unless stipulated otherwise in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Bonds shall be executed by a surety company authorized to do business in Kentucky.

**§ 7.1.2** The cost of such bonds shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

### **§ 7.2 Time of Delivery and Form of Bonds**

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

**§ 7.2.2** Unless otherwise provided, the bonds shall be written on AIA Document A312™–2010, Performance Bond and Payment Bond — KDE Version. Both bonds shall be written in the amount of the Contract Sum, being the total of the Base Bid, as described in Section 1.5 herein, and all Alternates accepted by the Owner.

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

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

#### **ARTICLE 8 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR**

Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101™-2007, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum — KDE Version, except for those Projects utilizing a Construction Manager the Agreement will be written on AIA Document A132™-2009, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Advisor Edition — KDE Version. Owner-Contractor Agreements shall be valid only after written notice by the Kentucky Department of Education that the proposed Agreements are approved.

#### **ARTICLE 9 PUBLIC WORKS ACT [Reference: KRS 337.505 to 337.550]**

##### **§ 9.1 Labor Regulations**

§ 9.1.1 Work shall be performed in compliance with applicable provisions of the Kentucky Prevailing Wage Act on Public Works Projects, KRS 337.505 through KRS 337.550.

§ 9.1.2 Prevailing wage rates, included with the Bidding Documents, shall be paid on this Project if required under Section 10.1.1. The stipulated wage rates represent prevailing minimum wage rates of pay allowable and shall not be construed to mean that higher rates may not have to be paid in order to secure labor.

§ 9.1.3 Any Bidder and/or subcontract bidder in violation of any wage or work act provision (KRS 337.510 to KRS 337.550) and under citation by the Kentucky Department of Labor is prohibited by KRS 337.990 from bidding on or working on any and all public works contracts either in their name or in the name of any other company, firm, or other entity in which there is vested interest. No Bid shall be submitted by a prime Bidder or sub-bidder in violation of KRS Chapter 337. The responsibility of the qualifications of the sub-contract Bidder is solely that of the prime Bidder. The rejection of the subcontract Bidder and resubmittal of a qualified subcontract Bidder shall be addressed per the provisions of these Instructions to Bidders relating to subcontract Bidders (subcontractors) and materials.

##### **§ 9.2 Davis-Bacon Act Provisions**

Projects funded with Federal Funds shall comply with the Davis-Bacon Act (Subchapter IV of Chapter 31 of the Title 40 of the United States Code). Where the amount received from federal revenue sharing is less than 25 percent of the estimated total construction cost of a public school project, state law and not the federal applies to the wage rate and the prevailing wage scale to be used for the project (OAG 74-329). Refer to Supplementary Conditions for direction regarding application of federal rates, if included in the bidding documents, to this project. In the event both state and federal wage rates apply, the higher of the two rates shall be used to determine labor costs.

#### **ARTICLE 10 TAXES**

##### **§ 10.1 Kentucky Sales and/or Use Tax [Reference KRS 139.495(1)]**

Bidders are informed that construction contracts of the Commonwealth of Kentucky and political subdivisions are not exempt from the provisions of the Kentucky Sales and/or Use Tax, unless provisions are clearly noted in the bidding documents for the direct purchase of certain materials and equipment by the Owner. Materials and equipment which are to be submitted for direct purchase are as noted by the Architect or Construction Manager in the Form of Proposal and shall be limited to forty (40) items with a minimum price of \$5,000 each. All other materials and equipment shall be included in the Contract Price and are subject to Kentucky Sales and/or Use Taxes. Current Sales and/or Use Tax shall be provided for and included in the bid amount as no adjustment will be permitted nor made after the receipt of bids.

##### **§ 10.2 Federal Excise Tax**

The Commonwealth of Kentucky and its political subdivisions are exempt from Federal Excise Tax.

#### **ARTICLE 11 POST BID REVIEW AND MATERIAL SUBMITTAL**

##### **§ 11.1 Representative at Bid Opening**

§ 11.1.1 Each prime Bidder shall have an authorized representative at the bid opening for submittal of the list of materials and equipment, and the post bid review which follows immediately after the opening and reading of bids.

§ 11.1.2 Following the opening of bids, the three (3) apparent low Bidders shall remain for a post-bid review, and shall submit a completed list of materials, equipment and suppliers within one (1) hour from the close of the reading of the bids. The list of materials and equipment shall be the listing contained in the Form of Proposal.



§ 11.1.3 The post bid review, open to all bidders, will be conducted jointly with representatives of the Architect and Construction Manager (if utilized), Owner, and apparent low Bidder. Preliminary review will be directed toward Bidder's qualifications, list of subcontractors, list of materials and equipment, and unit prices.

#### **ARTICLE 12 EQUAL EMPLOYMENT AND NONDISCRIMINATION**

The Commonwealth of Kentucky and its political subdivisions are committed to equal job opportunities on public contracts and prohibited from discrimination based on race, creed, color, sex, age, religion, or national origin.

#### **ARTICLE 13 CONFLICT OF INTEREST, GRATUITIES AND KICKBACKS, USE OF CONFIDENTIAL INFORMATION [Reference KRS 45A.455]**

Conflict of Interest, Gratuities, Kickbacks, and Use of Confidential Information as described in KRS 45A.455 are expressly prohibited. Penalties for any violation under this statute are located in KRS 45A.990.

#### **ARTICLE 14 KENTUCKY FAIRNESS IN CONSTRUCTION ACT OF 2007 [Reference KRS 371.400 to 371.425]**

Projects constructed for school districts in the Commonwealth of Kentucky are subject to provisions of the Kentucky Fairness in Construction Act of 2007 as it relates to the right to litigate, the right to delay damages against the Owner, the right to file a mechanic's lien, prompt payment by Owners, amount of retainage that can be withheld and other provisions of the Act.

#### **ARTICLE 15 KENTUCKY PREFERENCE LAW [Reference KRS 45A.490 to 45A.494]**

§ 15.1 Projects constructed for school districts in the Commonwealth of Kentucky are subject to provisions of the reciprocal preference for Kentucky Preference for Resident Bidders law, KRS 45A.490 to KRS 45A.494. Reciprocal preference shall be given by public agencies to resident bidders.

§ 15.2 The Kentucky Finance and Administration Cabinet shall maintain a list of states that give to or require a preference for their own resident bidders, including details of the preference given to such bidders, to be used by public agencies in determining resident bidder preferences. The cabinet shall also promulgate administrative regulations in accordance with KRS Chapter 13A establishing the procedure by which the preferences required by this Section shall be given.

§ 15.3 The reciprocal preference as described in KRS 45A.490 to KRS 45A.494 above shall be applied in accordance with Kentucky Administrative Regulation 200 KAR 5:400.

## Supplemental Instructions and Terms

1. **BID FORMS AND RETURN INSTRUCTIONS:** The public notice for this invitation, the invitation itself, and any addendums are available for view, download, or print from the Internet at [www.kpc4me.com](http://www.kpc4me.com) on the public notice date and until the time and date specified for the opening. KPC staff and the Board or its designee will review proposals.

KPC has an online interface that creates a confidential and encrypted electronic bid submission. Bid submission requires that each respondent have an updated vendor account. Instructions on how to register as a new vendor or update an existing account and complete the bid submission process can be found at <http://www.kpc4me.com/bid-opportunity>. For assistance with registration or technical questions regarding the online interface contact [info@kpc4me.com](mailto:info@kpc4me.com).

Submit all proposals and any attachments via the online application. No other form of submission (e.g., paper, telephone, facsimile, telegraph, mail, etc.) will be accepted. Proposals submitted on company forms are subject to rejection. The respondent acknowledges that he or she has read this invitation, understands it, and agrees to bind by its terms and conditions.

2. **ERROR IN PROPOSAL:** KPC reserves the right to waive defects and informalities in proposals, to reject any or all proposals, or to accept any proposal as may be deemed to its interest. KPC may allow the withdrawal of a proposal where there is a patent error on the face of the document, or where the proposer presents sufficient evidence, substantiated by worksheets, that the proposal was based upon an error in the formulation of the price.
3. **WITHDRAWAL OF PROPOSAL:** All proposals shall be valid for a period of sixty (60) days from the opening date to allow for tabulation, study, negotiation, and consideration by KPC. The proposer may withdraw a proposal, without prejudice, prior to the published opening date.
4. **ADDENDA:** KPC may issue addenda to this RFP after its release.
5. **PROTEST PROCEDURES:** KPC shall have authority to determine protests and other controversies of actual or prospective firms in connection with the solicitation or selection for award of a contract.

Any actual or prospective firm, who is aggrieved in connection with solicitation or selection for award of a contract, may file protest with the Office of the Executive Director of KEDC. A protest or notice of other controversy regarding the solicitation must be filed prior to the bid opening. A protest or notice of other controversy regarding an award must be filed promptly within two (2) calendar weeks after award. All protests or notices of other controversies must be in writing and addressed to:

**KEDC**  
**ATTN: Chief Executive Officer**  
**904 Rose Road**  
**Ashland, KY 41102**  
[Nancy.Hutchinson@kcdc.org](mailto:Nancy.Hutchinson@kcdc.org)

KPC shall issue a decision in writing. A copy of that decision shall be mailed or otherwise furnished to the aggrieved party and shall state the reasons for the action taken.

The decision of KPC shall be final and conclusive.

6. AUTHENTICATION OF BID AND STATEMENT OF NON-COLLUSION AND NON-CONFLICT OF INTEREST AND COMPLIANCE WITH THE KENTUCKY MODEL PROCUREMENT CODE:

I hereby swear or affirm under penalty of false swearing as provided by KRS 523.040:

- I am the respondent (if respondent is an individual), a partner in the respondent (if the respondent is a partnership), or an officer or employee of the submitting corporation having authority on its behalf (if the respondent is a corporation).
- The costs quoted in the response are correct and have been arrived at by the respondent independently and have been submitted without collusion and without agreement, understanding, or planned common course of action, with any vendor of materials, equipment, or services described in the invitation to bid, designed to limit independent competition.
- The contents of the bid or bids have not been communicated by the respondent, or its employees, or agents to any person not an employee or agent of the respondent or its surety on any bond furnished with the bids and will not be communicated to any such person prior to the official opening of the bid or bids. Respondent certifies that this proposal is made without prior understanding, agreement, or connection with any corporation, firm or person submitting a proposal for the same materials, supplies, or equipment, and is in all respects fair and without collusion or fraud. The contractor certifies that collusive bidding is a violation of federal law and can result in fines, prison sentences and civil damage awards.
- The respondent is legally entitled to enter contracts with agencies of the Commonwealth of Kentucky and is not in violation of any prohibited conflict of interest, gratuities and kickbacks including those prohibited by the provisions of the Model Procurement Code (KRS Chapter 45A). Any employee or official of KPC or member institution, who shall take, receive, or offer to take or receive, either directly or indirectly, any rebate, percentage of contract, money, or things of value as an inducement or intended inducement, or in the procurement of business, or the giving of business, for or to or from, any person, or in open market seeking to make sales to the membership shall be deemed guilty of a felony and upon conviction such person or persons shall be subject to punishment or fine in accord with state and/or federal laws.
- The KPC collective bidding process is conducted consistent with KRS Chapter 45A:345 through 45A:460, the Model Procurement Code and that the contents of the bid proposal and the actions taken by the respondent in preparing and submitting the bid proposal comply with above sections of the Model Procurement Code.

7. CERTIFICATION REGARDING LOBBYING: The respondent certifies, to the best of his or her knowledge and belief, that:

- a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of

Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

- b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
  - c. The respondent shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.
  - d. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. The Respondent will comply with the Byrd Anti-Lobbying Amendment (31 U.S.C. 1352) and the New Restrictions on Lobbying and has signed and attached to this agreement the Certificate Regarding Lobbying and, if applicable, the Disclosure of Lobbying Activities (Forms SF-LLL) and annually will sign and submit a certificate, if applicable, Form SF-LLL to KPC.
8. **CERTIFICATION CONCERNING DISBARMENT AND SUSPENSION:** The contractor understands that a contract award (see 2 CFR 180.220) must not be made to parties listed on the government wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension."

By electronically submitting this proposal, the proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by KPC. If it is later determined that the respondent knowingly rendered an erroneous certification, in addition to remedies available to KPC, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The respondent agrees to comply with the requirements of 2 CFR 180.220 while this offer is valid and throughout the period of any contract that may arise from this offer. The respondent further agrees to include a provision requiring such compliance in its lower tier covered transactions.

9. **AWARD:** After the review of the bid proposals, the KEDC Board or its designee may accept one or more bid contracts based on the criteria below and the needs of the members. In the case of identical bids, KEDC reserves the right to select and to award the contract by whatever method it chooses. The proposals will be evaluated based on the points awarded to each proposer utilizing the following scale subject to KRS 45A.490 to 45A.494, Reciprocal Preference for Resident Bidders. Item 1 below shall be prorated based on prices received.

POINTS

1. Total of weighted core package cost calculations	50
2. Listed Manufacturers and Installers Utilized	40
3. Past performance/Quality Assurance	<u>10</u>
POINT TOTAL	100

10. RESIDENT BIDDER STATUS: The scoring of cost is subject to Reciprocal preference for Kentucky resident bidders. Vendors not claiming resident bidder status need not submit the corresponding affidavit.

**KRS 45A.490 Definitions for KRS 45A.490 to 45A.494.**

As used in KRS 45A.490 to 45A.494:

- (1) "Contract" means any agreement of a public agency, including grants and orders, for the purchase or disposal of supplies, services, construction, or any other item; and
- (2) "Public agency" has the same meaning as in KRS 61.805.

**KRS 45A.492 Legislative declarations.**

The General Assembly declares:

- (1) A public purpose of the Commonwealth is served by providing preference to Kentucky residents in contracts by public agencies; and
- (2) Providing preference to Kentucky residents equalizes the competition with other states that provide preference to their residents.

**KRS 45A.494 Reciprocal preference to be given by public agencies to resident bidders -- List of states -- Administrative regulations.**

- (1) Prior to a contract being awarded to the lowest responsible and responsive bidder on a contract by a public agency, a resident bidder of the Commonwealth shall be given a preference against a nonresident bidder registered in any state that gives or requires a preference to bidders from that state. The preference shall be equal to the preference given or required by the state of the nonresident bidder.
- (2) A resident bidder is an individual, partnership, association, corporation, or other business entity that, on the date the contract is first advertised or announced as available for bidding:
  - (a) Is authorized to transact business in the Commonwealth; and
  - (b) Has for one (1) year prior to and through the date of the advertisement, filed Kentucky corporate income taxes, made payments to the Kentucky unemployment insurance fund established in KRS 341.490, and maintained a Kentucky workers' compensation policy in effect.
- (3) A nonresident bidder is an individual, partnership, association, corporation, or other business entity that does not meet the requirements of subsection (2) of this section.
- (4) If a procurement determination results in a tie between a resident bidder and a nonresident bidder, preference shall be given to the resident bidder.
- (5) This section shall apply to all contracts funded or controlled in whole or in part by a public agency.
- (6) The Finance and Administration Cabinet shall maintain a list of states that give to or require a preference for their own resident bidders, including details of the preference given to such bidders, to be used by public agencies in determining resident bidder preferences. The cabinet shall also promulgate administrative regulations in accordance with KRS Chapter 13A establishing the procedure by which the preferences required by this section shall be given.
- (7) The preference for resident bidders shall not be given if the preference conflicts with federal law.

(8) Any public agency soliciting or advertising for bids for contracts shall make KRS 45A.490 to 45A.494 part of the solicitation or advertisement for bids.

The reciprocal preference as described in KRS 45A.490-494 above shall be applied in accordance with 200 KAR 5:400.

An offeror claiming Kentucky resident bidder status shall complete the attached Required Affidavit for Bidders, Offerors, and Contractors Claiming Resident Bidder Status. KPC reserves the right to request documentation supporting a claim of resident bidder status. Failure to provide such documentation upon request shall result in disqualification of the offeror or contract termination.

A nonresident offeror shall submit its certificate of authority to transact business in the Commonwealth as filed with the Commonwealth of Kentucky, Secretary of State. The location of the principal office identified therein shall be deemed the state of residency for that offeror. If the offeror is not required by law to obtain said certificate, the state of residency for that offeror shall be deemed to be that which is identified in its mailing address as provided in its proposal.

11. **CONTRACTOR CERTIFICATION: CONTRACTOR CERTIFICATION/CONTRACTOR'S EMPLOYMENT ELIGIBILITY:** By entering the contract, contractor warrants compliance with the federal immigration and nationality act (FINA), and all other federal and state immigration laws and regulations. The contractor warrants that it complies with the various state statutes of all states it operates this contract in.

Participating government entities including school districts may request verification of compliance from any contractor or contractor's supplier performing work under this contract. These entities reserve the right to confirm compliance in accordance with applicable laws.

Should the participating entities suspect or find that the contractor or any of its suppliers are not in compliance, they may pursue any and all remedies allowed by law, including, but not limited to: suspension of work, termination of the contract for default, and suspension and/or debarment of the contractor. All costs necessary to verify compliance are the responsibility of the contractor.

The proposer complies and maintains compliance with the appropriate statutes which requires compliance with federal immigration laws by state employers, state contractors and state subcontractors in accordance with the e-verify employee eligibility verification program (<http://www.uscis.gov/e-verify>).

Contractor and contractor's vendors and their employees shall not provide services on school district properties until authorized by the district.

Contractor shall comply with governing board policy of the KPC participating entities in which work is being performed.

12. **CONTRACT PERIOD:** The contract period will end on **October 31, 2023**, plus any extensions. The contract may be extended on an annual basis by KPC not to exceed ten years in total including the first

contract period. KPC shall notify the contractor in writing of its intent to extend or not to extend the contract by September 1 of each year. If KPC notifies contractor of intent to extend the contract by one year, contractor shall respond in writing by September 15 that it either does or does not intend to extend the contract. Any necessary price increases or decreases should be submitted in writing to KPC by September 15 for the extended year. If price increases submitted are deemed excessive by KPC then KPC shall have cause to not extend the contract. Price change notifications will follow the same pattern as above for any years in which this contract is extended. KPC reserves the right to extend the term for up to 180 days to continue a source of supply until new or replacement contracts are completed. Since this bid request is subject to multiple contracts being accepted, KPC reserves the right to renew and/or solicit additional bids. Any contract extension is contingent upon written agreement of KPC and the contractor. The bid will not be automatically extended beyond any current year unless expressly approved by KPC. KPC reserves the right on any contract extension to revise, update, or supplement the contract terms and conditions including the assessment of administrative fees to the contractor as needed to cover the cost of KPC servicing the bid contract, bidding program, or procurement service for the members.

13. PAYMENTS, AND ADMINISTRATIVE FEE: : Each member shall be responsible for making payment to the contractor, unless KPC has been established as the Purchasing Agent for the contractor, in which case, KPC will coordinate orders and payments directly to the contractor with the individual members being the ship to party. Normally, members pay bills only after approval from the member board, which meets monthly. KPC reserves the right to negotiate upon mutual agreement to serve as Purchasing Agent for any Bid Contract including charging an additional administrative fee to the contractor beyond the two percent (2%) fee detailed below.

The contractor will be assessed an administrative fee of two percent (2%) on all purchases made by KPC members under this contract. The fee is to be included in the contractor’s pricing and cannot appear on the member’s invoice. The contractor will remit payment to KPC on a quarterly basis by the 25<sup>th</sup> day of the next month accompanied by an electronic sales report showing total amounts for all purchases made by members under this contract during the period of the bid.

<u>Period</u>	<u>Reporting and Payment Schedule</u>
January - March	April 25 <sup>th</sup>
April - June	July 25 <sup>th</sup>
July - September	October 25 <sup>th</sup>
October - December	January 25 <sup>th</sup>

The contractor will compile and provide to KPC a quarterly report showing all purchases made by members under this contract in a format provided by KPC. Contractor shall compile sales report by member district. The sales report shall be submitted electronically. Sales must be reported in the quarter in which the member is invoiced. It is the contractor’s responsibility to track and report all purchases made by KPC members. All sales to KPC members are considered to be made under this contract unless

the contractor holds an individual contract with the member. It is the vendor's responsibility to provide proof of individual contracts.

KPC will routinely request procurement data from participating KPC members to verify sales report accuracy. The contractor will make all administrative fee payments to KPC by the 25<sup>th</sup> day of the succeeding month. All checks are to be made payable to KEDC and mailed to KEDC, 904 Rose Road, Ashland, KY 41102. In consideration of receiving a KPC PREFERRED VENDOR BID CONTRACT, respondent agrees to report and pay KPC's administrative fees for all sales to KPC members even if orders are placed directly by the member to the contractor.

14. **PRICING:** Bid Contracts may be accepted from multiple respondents. Contract pricing and discounts shall remain in effect for the entire contract and any agreed upon contract extensions, however additional discounts and/or special pricing are encouraged and may be accepted when consistent with other terms and conditions of the contract and offered equally to all members. Price change notifications will follow the same pattern as above for any years in which this contract is extended. Additional discounts and/or special pricing are encouraged and may be accepted when consistent with other terms and conditions of the contract and offered equally to all members. Accumulated or group orders may be requested by KPC during the contract period.

Replacement and/or supplemental products that meet or exceed the minimum bid requirements may be added to this contract at the sole discretion of KPC. Replacement/supplemental products shall be offered at a discount equal to or greater than the original award. The contractor shall submit, on its letterhead the request to add products/services. The request shall be submitted by an authorized representative of the organization. KPC is under no obligation to accept the offerings.

The respondent shall provide each item on this bid to all KPC members at the same price. Respondents **MAY NOT** submit multiple discount levels for the same product by KPC member (i.e., Regional Bidding is **NOT** permissible).

KPC reserves the right to accumulate orders among KPC members to obtain volume discounts for the group.

15. **PROMPT PAYMENT DISCOUNT:** Contractor may provide a prompt payment percentage discount for invoice payments postmarked less than 30 days from the invoice date. The discount may take the form of either a deduction from the total invoice or a check in an amount equal to the same. Example: 1% discount for payment of invoices postmarked within 10 days of the invoice date.
16. **NON-ASSIGNABILITY OF AWARDED BID:** The bid award will be made only to the individual or entity that submits a bid. The awarded bid cannot be conveyed to an awarded respondent's successors or assigns without the prior, express approval of the Board of Directors of KEDC or its designee.
17. **PARTICIPATING MEMBER INSTITUTIONS:** Any institution that is a member of KPC - hereinafter referred to as member or members - is eligible to utilize the Bid Contract; however, this does not mean that all members will participate. The successful respondent(s) will be required to serve all eligible members.



18. PIGGYBACK CLAUSE: KPC reserves the right to extend the terms, conditions, and prices of the awarded respondent to other Institutions who express an interest in participating in any contract that results from this bid. Each of the piggyback Institutions will issue their own purchasing documents for purchasing of goods and services. The respondent agrees that KPC shall bear no responsibility or liability for any agreements between the respondent and the other Institution(s) who desire to exercise this option. Piggyback contracts may not extend beyond the contract date established by KPC. Participation by other institutions may not result in a material change to the contract.
19. TRANSMITTAL OF ORDERS: KPC shall issue purchasing guidelines to members. The members will use formal purchase orders in ordering from the awarded respondent. The successful respondent acknowledges that orders from KPC members may be transmitted from KPC's office on the member's behalf. The successful respondent may use salespeople for in-person and/or telephone solicitation of orders in accordance with a mutually arrived schedule developed between the members and the awarded respondent.
20. DELIVERY CHARGES: **All products or services procured from the Bid Contract are to be delivered free of freight charges (FOB destination).** All bid prices must include transportation and delivery charges to the location (school district, KEDC, etc.) specified during ordering. Fuel surcharges and other similar charges are not permitted.
21. QUANTITIES: It shall be understood that the bid contract will not obligate KPC or its members to purchase from the Bid Contract.
22. ITEM SUBSTITUTION AND OUT-OF-STOCK BACK-ORDERS: No substitutions are allowed without prior written authorization from the member. Member must be notified if item is out of stock, backordered or if timely delivery cannot be made. Upon member notification, the contractor must receive written directions from the member on how to proceed, i.e. cancel, process, etc.
23. RETURNS: The successful respondent must provide a Return Material Authorization within 1 working day of the request by KPC member. Returned materials shall be restocked at no charge to the member (special order and custom crafted items excluded).
24. RECALLS: The contractor shall notify KPC and its members immediately of any products recalls. Any products that have been recalled and have been delivered shall be issued a credit and/or a comparable substitute immediately. All costs associated with voluntary and involuntary product recalls shall be borne by the awarded vendor.
25. PRODUCT EVALUATION: Samples requested must be furnished free of expense to KPC and KPC members for evaluation for a period of thirty (30) days. Samples shall be returned at the respondent's or respondent's Distribution Partner's expense.
26. PROMOTION: KPC actively markets all Prime and Preferred Vendors to member districts, which includes the company logo and contact information on the KPC website, a notice of the winning bid

contract(s) sent to every KPC member, and promotion of all KPC Prime and Preferred Vendors during regular district visits by KPC staff. Vendors are expected to provide promotional materials and participate in regional conferences, district shows, and trainings.

27. **CONTRACTOR COMMITMENT:** Each contractor is required to make three basic commitments to ensure the overall success of the statewide program:
  1. **Corporate Commitment** – A commitment that KPC has the support of senior management, and that KPC is the primary offering to K-12 educational entities statewide. The contractor shall make existing K-12 clients aware of the KPC contract and upon the member's request transitioned to the contractor's KPC contract.
  2. **Pricing Commitment** – A commitment that KPC pricing is the lowest available pricing (net to buyer) to KPC entities and a further commitment that, if a KPC entity is eligible for lower pricing through a state, regional, or local contract, the vendor will match the pricing under KPC.
  3. **Sales Commitment** – A commitment that the supplier will aggressively market KPC statewide and that the sales force will be trained, engaged, and committed to offering KPC to K-12 entities statewide with a further commitment that all KPC sales be accurately and timely reported to KPC.
  
28. **PRODUCT AND SAFETY INFORMATION:** The successful respondent shall provide upon request by any member, the most recent MSDS information sheets for any products the vendor may deliver to said member. It is the vendor's responsibility to comply with all local, state, and federal regulations.
  
29. **NOTICES:** Notices under this Agreement are sufficient if given by nationally recognized overnight courier service, certified mail (return receipt requested), facsimile with electronic confirmation or personal delivery to the other party if given to the last known address. Notice is effective: (a) when delivered personally, (b) three business days after sending by certified mail, (c) on the business day after sending by a nationally recognized courier service, or (d) on the business day after sending by facsimile with electronic confirmation to the sender. A party may change its notice address by giving notice in accordance with this section.
  
30. **LIABILITY:** The awarded firm agrees to protect, defend, and save harmless KPC and members from any suits or demands for payment that may be brought against it for the use of any patented material, process, article, or device that may enter into the manufacture, construction, or form a part of the work covered by either order or contract; and awarded respondent further agrees to indemnify and save harmless KPC and members from suits or actions of every nature and description brought against it for, or on account of any injuries or damages received or sustained by any party or parties by, or for any of the acts of the respondents, his servants or agents, unless such injuries or damages are caused by the actions or omissions of KPC or participating members. The awarded firm will hold KPC and participating members harmless for all damages resulting from consumption of products delivered under this contract when such damages are attributed to foreign materials or other defects in products delivered by the awarded firm.
  
31. **SEVERABILITY:** If any provision of this Agreement is determined by any court or governmental authority to be unenforceable, the parties intend that this Agreement be enforced as if the unenforceable provisions were not present and that any partially valid and enforceable provisions be enforced to the extent that they are enforceable.

32. **CONTRACT SUSPENSION:** KPC may, at its sole discretion, suspend the awarded contract for a period of up to 90 days to investigate alleged instances of material breach of contract or material non-compliance. Breach of contract, default, or noncompliance renders the awarded contract null and void. The awarded firm agrees that they have no legal recourse of any nature against KPC or member entities except for services that are due for prior purchases under the awarded contract. The decision of KPC regarding suspension and/or termination is final.
33. **TERMINATION FOR CONVENIENCE:** KPC reserves the right to terminate any contract at any time, in whole or in part, by thirty (30) day written notice to Contractor. Upon receipt by the Contractor of the "notice of termination", the Contractor shall discontinue all services with respect to the applicable contract. KPC or the participating member, after deducting any amount(s) previously paid, shall pay for all services rendered or goods supplied by the Contractor, as well as any reasonable costs incurred by Contractor up to the time of termination but not including Contractor's loss of profit. The cost of any agreed upon services provided by the Contractor will be calculated at the agreed upon rate prior to "notice of termination" and a fixed fee contract will be pro-rated (as appropriate).
34. **TERMINATION FOR NON-PERFORMANCE (DEFAULT):** KPC may terminate the resulting contract for non-performance, as determined by KPC, for such causes as:
- a. Failing to provide satisfactory quality of service, including, failure to maintain adequate personnel, whether arising from labor disputes, or otherwise any substantial change in ownership or proprietorship of the Contractor, which in the opinion of KPC is not in its best interest, or failure to comply with the terms of this contract;
  - b. Failing to keep or perform, within the time period set forth herein, or violation of, any of the covenants, conditions, provisions or agreements herein contained;
  - c. Adjudicating as voluntarily bankrupt, making a transfer in fraud of its creditors, filing a petition under any section from time to time, or under any similar law or statute of the United States or any state thereof, or if an order for relief shall be entered against the Contractor in any proceeding filed by or against contractor thereunder. In the event of any involuntary bankruptcy proceeding being instituted against the Contractor, the fact of such an involuntary petition being filed shall not be considered an event of default until sixty (60) days after filing of said petition in order that Contractor might during that sixty (60) day period have the opportunity to seek dismissal of the involuntary petition or otherwise cure said potential default; or
  - d. Making a general assignment for the benefit of its creditors, or taking the benefit of any insolvency act, or if a permanent receiver or trustee in bankruptcy shall be appointed for the Contractor.
35. **NOTIFICATION:** KPC will provide ten (10) calendar days written notice of default. Unless arrangements are made to correct the non-performance issues to KEDC's satisfaction within ten (10) calendar days, KEDC may terminate the contract by giving written notice, by registered or certified mail, of its intent to cancel this contract.

36. **ATTORNEY'S FEES:** In the event that either party deems it necessary to take legal action to enforce any provision of the contract, and in the event KPC prevails, the Contractor agrees to pay all expenses of such action, including attorney's fees and costs at all stages of litigation.
37. **COMPENSABLE DAMAGES FOR BREACH:** The Contractor agrees that the following items shall be included as compensable damages for any breach of a contract with KPC.
- a. Replacement costs
  - b. Cost of repeating the competitive bidding procedure expenses
  - c. Expenses incurred as the result of delay in obtaining replacements.

The enumeration of compensable damage contained in this section is not intended to be exclusive and will not operate to bar recovery by KPC for any other damages occasioned by the contractor's breach of a contract. However, in cases where contract provides for liquidated damages, said liquidated damages shall be in lieu of all other damages, including those enumerated.

38. **SEVERABILITY:** If any provision of this Agreement is determined by any court or governmental authority to be unenforceable, the parties intend that this Agreement be enforced as if the unenforceable provisions were not present and that any partially valid and enforceable provisions be enforced to the extent that they are enforceable.
39. **NO WAIVER:** A party does not waive any right under this Agreement by failing to insist on compliance with any of the terms of this Agreement or by failing to exercise any right hereunder. Any waivers granted hereunder are effective only if recorded in a writing signed by the party granting such waiver.
40. **CUMULATIVE RIGHTS/CONSTRUCTION:** The rights and remedies of the parties under this Agreement are cumulative, and either party may enforce any of its rights or remedies under this Agreement or other rights and remedies available to it at law or in equity.
41. **CONTRACTOR CERTIFICATION:** Installation shall be under the direct supervision of an industry certified installer who must always be present when work is performed for any KPC member. **Proof of certification for all supervising installers must be submitted with the bid.** It is the responsibility of the contractor to notify KPC of any changes to the certification status of their installers within 14 calendar days. Manufacturer certification programs may be accepted in lieu of industry certification at KPC's discretion.
42. **INSTALLATION:** For all installation services provided under this bid the respondent agrees to complete all work within the guidelines set forth. KPC reserves the right to inspect all work performed under this contract. KPC will correct or require correction of substandard work at the respondent's expense.
- Substandard work is a default of the bid contract and grounds for immediate termination of the contract.
43. **OTHER CONDITIONS:**
- a. Contractors shall comply with all local, state, and federal laws and regulations related to this bid and the rendering of goods and /or services.

- b. Contractor shall comply with all member requirements for background checks as outlined in KRS 160.380.
- c. This contract shall be governed in all respects as to validity, construction, capacity, performance, or otherwise by the laws of the Commonwealth of Kentucky.
- d. Any suit, action or other proceeding regarding the execution, validity, interpretation, construction, or performance of this agreement brought against KPC shall be filed in the Boyd County Circuit Court of the Commonwealth of Kentucky.
- e. Any suit, action or other proceeding regarding the execution, validity, interpretation, construction, or performance of this agreement brought against any participating member shall be filed in the member's local jurisdiction.
- f. Contractors providing services under this bid invitation, herewith assure KPC they are conforming to the provisions of the Civil Rights Act of 1964 as amended.
- g. Kentucky Sales and Use Tax Certificate of Exemption Form will be issued upon request.
- h. Contractor shall provide access to the grantee, the sub grantee, the Federal grantor agency, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers, and records of the contractor which are directly pertinent to that specific contract for the purpose of making audit, examination, excerpts, and transcriptions (7 CFR § 3016.36).
- i. Contractor shall retain all required records for three years after grantees or sub grantees make final payments and all other pending matters are closed (7 CFR § 3016.36).
- j. In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating based on race, color, national origin, sex, age, or disability. To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410 or call (800) 795-3272 or (202) 720-6382 (TTY). USDA is an equal opportunity provider and employer.
- k. Contractor is and shall remain in compliance with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR Chapter 60).
- l. Contractor is and shall remain in compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3).
- m. Contractor is and shall remain in compliance with the Davis-Bacon Act (40 U.S.C. 276a to 276a-7) as supplemented by Department of Labor regulations (29 CFR Part 5).
- n. Contractor is and shall remain in compliance with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5).
- o. Contractor is and shall remain in compliance with all applicable standards, orders or requirements issued under Section 306 of the Clean Air Act (42 U.S.C.) 187 [h], Section 508 of the Clean Water Act (33 U.S.C. 1368, Executive Order 11738 and Environmental Protection Agency (EPA) regulations, (40 CFR Part 15), which prohibit the use under non-exempt federal contracts, grants or loans of facilities included in the EPA list of violated facilities.
- p. Contractor is and shall remain in compliance with all mandatory standards and policies relating to energy efficiency contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163, 89 Stat. 871).

- q. By signing this document, the contractor certifies that this proposal is made without prior understanding, agreement, or connection with any corporation, firm or person submitting a proposal for the same materials, supplies, or equipment, and is in all respects fair and without collusion or fraud. The contractor certifies that collusive bidding is a violation of federal law and can result in fines, prison sentences and civil damage awards.
- r. Prohibition against conflicts of interest, gratuities, and kickbacks: Any employee or official of KPC or member institution, elective or appointive, who shall take, receive, or offer to take or receive, either directly or indirectly, any rebate, percentage of contract, money, or things of value as an inducement or intended inducement, or in the procurement of business, or the giving of business, for or to or from, any person, or in open market seeking to make sales to the membership shall be deemed guilty of a felony and upon conviction such person or persons shall be subject to punishment or fine in accord with state and/or federal laws.
- s. The respondent is legally entitled to enter contracts with agencies of the Commonwealth of Kentucky and is not in violation of any prohibited conflict of interest, including those prohibited by provisions of KRS 164.390, KRS 61.092-61.096, and KRS 42.990.
- t. The provisions of KRS 365.080 and KRS 365.090 which permit the regulation of resale price by contract, does not apply to sales to the State.
- u. KPC reserves the right to reject any and/or all bids and to waive informalities.

# Kentucky Department of Education Version of AIA<sup>®</sup> Document B101<sup>™</sup> – 2007

## *Standard Form of Agreement Between Owner and Architect*



This version of AIA Document B101<sup>™</sup>–2007 is modified by the Kentucky Department of Education. Publication of this version of AIA Document B101–2007 does not imply the American Institute of Architects’ endorsement of any modification by the Kentucky Department of Education. A comparative version of AIA Document B101–2007 showing additions and deletions by the Kentucky Department of Education is available for review on the Kentucky Department of Education Web site.

Cite this document as “AIA Document B101<sup>™</sup>–2007, Standard Form of Agreement Between Owner and Architect — KDE Version,” or “AIA Document B101<sup>™</sup>–2007 — KDE Version.”

# Kentucky Department of Education Version of AIA<sup>®</sup> Document B101<sup>™</sup> – 2007

## Standard Form of Agreement Between Owner and Architect

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

BETWEEN the Architect's client identified as the Owner:  
*(Name, legal status, address and other information)*

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

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



This version of AIA Document B101–2007 is modified by the Kentucky Department of Education. Publication of this version of AIA Document B101 does not imply the American Institute of Architects' endorsement of any modification by the Kentucky Department of Education. A comparative version of AIA Document B101–2007 showing additions and deletions by the Kentucky Department of Education is available for review on the Kentucky Department of Education Web site.

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

The Owner and Architect agree as follows.

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### EXHIBIT A INITIAL INFORMATION

### EXHIBIT B LIST OF DESIGN CONSULTANTS

#### ARTICLE 1 INITIAL INFORMATION

§ 1.1 This Agreement is based on the Initial Information set forth in this Article 1 and in optional Exhibit A, Initial Information: *(Complete Exhibit A, Initial Information, and incorporate it into the Agreement at Section 13.2, or state below Initial Information such as details of the Project's site and program, Owner's contractors and consultants, Architect's consultants, Owner's budget for the Cost of the Work, authorized representatives, anticipated procurement method, and other information relevant to the Project.)*

§ 1.2 The Owner's anticipated dates for commencement of construction and Substantial Completion of the Work are set forth below:

- .1 Commencement of construction date:
- .2 Substantial Completion date:

§ 1.3 The Owner and Architect may rely on the Initial Information. Both parties, however, recognize that such information may materially change and, in that event, the Owner and the Architect shall appropriately adjust the schedule, the Architect's services and the Architect's compensation.

#### ARTICLE 2 ARCHITECT'S RESPONSIBILITIES

§ 2.1 The Architect shall provide the professional services as set forth in this Agreement. The Architect shall also comply with 702 KAR 4:160, pertaining to services and actions required of the Architect.

§ 2.2 The Architect shall perform its services consistent with the professional skill and care ordinarily provided by architects practicing in the same or similar locality under the same or similar circumstances. The Architect shall perform its services as expeditiously as is consistent with such professional skill and care and the orderly progress of the Project.

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§ 2.3 The Architect shall identify a representative authorized to act on behalf of the Architect with respect to the Project.

§ 2.4 Except with the Owner's knowledge and consent, the Architect shall not engage in any activity, or accept any employment, interest or contribution that would reasonably appear to compromise the Architect's professional judgment with respect to this Project.

§ 2.5 The Architect shall carry professional liability insurance in addition to insurance to protect themselves from claims under Worker's Compensation Acts, for claims for damages because of bodily injury, including death, to their employees, and for other liability normally covered by such insurance and shall furnish evidence of such insurance to the Owner.

§ 2.5.1 During the term of this Agreement, the Architect shall provide evidence of professional liability insurance coverage in the amounts stated in Subparagraph 2.5.2. In addition, the Architect agrees to attempt to maintain continuous professional liability coverage for the period of design and construction of this project, and for a period of two years following Substantial Completion, if such coverage is reasonably available at commercially affordable premiums. For the purposes of this Agreement, "reasonably available" and "commercially affordable" shall mean that more than half the architects practicing in the State are able to obtain such coverage.

§ 2.5.2 Professional liability coverage shall be provided in the following minimum amounts:

- |    |                                |   |
|----|--------------------------------|---|
| a. | Projects \$1,000,000 or less   | \$500,000 per claim and<br>\$1,000,000 aggregate per annum.   |
| b. | Projects exceeding \$1,000,000 | \$1,000,000 per claim and<br>\$2,000,000 aggregate per annum. |

§ 2.5.3 The Architect's Consultants shall carry professional liability coverage during the term of the Agreement as stated in Subparagraph 2.5.1, and shall furnish evidence of such insurance to the Owner. The minimum limit of liability for each of the Architect's Consultants is \$250,000 aggregate, except that structural design and mechanical-electrical-plumbing consultants shall carry a minimum amount of \$1,000,000 aggregate for projects \$1,000,000, or less, and \$2,000,000 aggregate for projects exceeding \$1,000,000.

§ 2.5.4 The Architect shall carry Commercial General Liability Insurance with limits of \$500,000 per occurrence and \$1,000,000 aggregate. This policy shall be written or endorsed to include the following provisions:

- a. The Owner shall be named as an additional insured,
- b. Waiver of Subrogation,
- c. Severability of Interest (Separation of Insureds), and
- d. Cross Liability Endorsement.

§ 2.5.5 The Architect shall carry Worker's Compensation Insurance as required by statute, including Employers Liability, with limits of

- a. \$100,000 each accident,
- b. \$500,000 disease—policy limit, and
- c. \$100,000 disease—each employee.

§ 2.5.6 The Architect shall carry Automobile Liability Insurance, including coverage for hired and leased vehicles, with limits of \$500,000 per occurrence, and Non-Owned Automobile Liability Insurance, including coverage for hired and leased vehicles, with limits of \$500,000 per occurrence.

§ 2.5.7 The above indicated minimum coverages shall be subject to the terms, exclusions and conditions of the policies. The Architect shall provide Certificates of Insurance to the Owner upon execution of the Agreement and prior to commencement of services.

§ 2.6 The Architect and the Architect's Consultants shall provide a notarized non-collusion affidavit on current Kentucky Department of Education form to the Owner upon execution of the Agreement and prior to commencement of services.

### ARTICLE 3 SCOPE OF ARCHITECT'S BASIC SERVICES

§ 3.1 The Architect's Basic Services consist of those described in Article 3 and include usual and customary structural, mechanical, and electrical engineering services, including civil engineering, landscape, and kitchen design services required for the Project. Services not set forth in Article 3 are Additional Services.

§ 3.1.1 The Architect shall manage the Architect's services, consult with the Owner, research applicable design criteria, attend Project meetings, communicate with members of the Project team and report progress to the Owner.

§ 3.1.2 The Architect shall coordinate its services with those services provided by the Owner and the Owner's consultants. The Architect shall be entitled to rely on the accuracy and completeness of services and information furnished by the Owner and the Owner's consultants. The Architect shall provide prompt written notice to the Owner if the Architect becomes aware of any error, omission or inconsistency in such services or information.

§ 3.1.3 As soon as practicable after the date of this Agreement, the Architect shall submit for the Owner's approval a schedule for the performance of the Architect's services. The schedule initially shall include anticipated dates for the commencement of construction and for Substantial Completion of the Work as set forth in the Initial Information. The schedule shall include allowances for periods of time required for the Owner's review, for the performance of the Owner's consultants, and for approval of submissions by authorities having jurisdiction over the Project. Once approved by the Owner, time limits established by the schedule shall not, except for reasonable cause, be exceeded by the Architect or Owner. With the Owner's approval, the Architect shall adjust the schedule, if necessary, as the Project proceeds until the commencement of construction.

§ 3.1.4 The Architect shall not be responsible for an Owner's directive or substitution made without the Architect's approval.

§ 3.1.5 The Architect shall, at appropriate times, contact the governmental authorities required to approve the Construction Documents and the entities providing utility services to the Project. In designing the Project, the Architect shall respond to applicable design requirements imposed by such governmental authorities and by such entities providing utility services.

§ 3.1.6 The Architect shall assist the Owner in connection with the Owner's responsibility for filing documents required for the approval of governmental authorities having jurisdiction over the Project.

### § 3.2 Schematic Design Phase Services

§ 3.2.1 The Architect shall review the program and other information furnished by the Owner, and shall review laws, codes, and regulations applicable to the Architect's services.

§ 3.2.2 The Architect shall prepare a preliminary evaluation of the Owner's program, schedule, budget for the Cost of the Work, Project site, and the proposed procurement or delivery method and other Initial Information, each in terms of the other, to ascertain the requirements of the Project. The Architect shall notify the Owner of (1) any inconsistencies discovered in the information, and (2) other information or consulting services that may be reasonably needed for the Project.

§ 3.2.3 The Architect shall present its preliminary evaluation to the Owner and shall discuss with the Owner alternative approaches to design and construction of the Project, including the feasibility of incorporating environmentally responsible design approaches. The Architect shall reach an understanding with the Owner regarding the requirements of the Project.

§ 3.2.4 Based on the Project's requirements agreed upon with the Owner, the Architect shall prepare and present for the Owner's approval a preliminary design illustrating the scale and relationship of the Project components.

§ 3.2.5 Based on the Owner's approval of the preliminary design, the Architect shall prepare Schematic Design Documents for the Owner's approval. The Schematic Design Documents shall consist of drawings and other documents including a site plan, if appropriate, and preliminary building plans, sections and elevations; and may include some combination of study models, perspective sketches, or digital modeling. Preliminary selections of major building systems and construction materials shall be noted on the drawings or described in writing. For school Projects on new

sites, the Architect shall provide a campus master plan with the Schematic Design Documents.

§ 3.2.5.1 The Architect shall consider environmentally responsible design alternatives, such as material choices and building orientation, together with other considerations based on program and aesthetics, in developing a design that is consistent with the Owner's program, schedule and budget for the Cost of the Work. The Owner may obtain other environmentally responsible design services under Article 4.

§ 3.2.5.2 The Architect shall consider the value of alternative materials, building systems and equipment, together with other considerations based on program and aesthetics, in developing a design for the Project that is consistent with the Owner's program, schedule and budget for the Cost of the Work. The Architect shall revise the scope of Work to be within the approved BG-1 estimate of Construction Cost, or advise the Owner to submit to the Kentucky Department of Education a revised BG-1 financial page requesting approval of additional financial support.

§ 3.2.6 The Architect shall submit to the Owner an estimate of the Cost of the Work prepared in accordance with Section 6.3.

§ 3.2.7 The Architect shall submit the Schematic Design Documents to the Owner, and request the Owner's approval.

### § 3.3 Design Development Phase Services

§ 3.3.1 Based on the Owner's approval of the Schematic Design Documents, and on the Owner's authorization of any adjustments in the Project requirements and the budget for the Cost of the Work, the Architect shall prepare Design Development Documents for the Owner's approval. The Design Development Documents shall illustrate and describe the development of the approved Schematic Design Documents and shall consist of drawings and other documents including plans, sections, elevations, typical construction details, and diagrammatic layouts of building systems to fix and describe the size and character of the Project as to architectural, structural, mechanical and electrical systems, and such other elements as may be appropriate. The Design Development Documents shall also include outline specifications that identify major materials and systems and establish in general their quality levels.

§ 3.3.2 The Architect shall advise the Owner of any adjustments to the preliminary estimate of Construction Cost, and of any conflict with the budget established by the BG-1.

§ 3.3.3 The Architect shall submit the Design Development Documents to the Owner, advise the Owner of any adjustments to the estimate of the Cost of the Work, and request the Owner's approval.

### § 3.4 Construction Documents Phase Services

§ 3.4.1 Based on the Owner's approval of the Design Development Documents, and on the Owner's authorization of any adjustments in the Project requirements and the budget for the Cost of the Work, the Architect shall prepare Construction Documents for the Owner's approval. The Construction Documents shall illustrate and describe the further development of the approved Design Development Documents and shall consist of Drawings and Specifications setting forth in detail the quality levels of materials and systems and other requirements for the construction of the Work. The Owner and Architect acknowledge that in order to construct the Work the Contractor will provide additional information, including Shop Drawings, Product Data, Samples and other similar submittals, which the Architect shall review in accordance with Section 3.6.4.

§ 3.4.2 The Architect shall incorporate into the Construction Documents the design requirements of governmental authorities having jurisdiction over the Project.

§ 3.4.3 During the development of the Construction Documents, the Architect shall assist the Owner in the development and preparation of (1) bidding and procurement information that describes the time, place and conditions of bidding, including bidding or proposal forms; (2) the form of agreement between the Owner and Contractor; and (3) the Conditions of the Contract for Construction (General, Supplementary and other Conditions). The Architect shall also compile a project manual that includes the Conditions of the Contract for Construction and Specifications and may include bidding requirements and sample forms.

§ 3.4.4 The Architect shall update the estimate for the Cost of the Work. The Architect shall advise the Owner of any conflict with the budget established by the BG-1.

§ 3.4.5 The Architect shall submit the Construction Documents to the Owner, advise the Owner of any adjustments to the estimate of the Cost of the Work, take any action required under Section 6.5, and request the Owner's approval. The Architect shall prepare the appropriate application forms and submit them with the required Construction Documents to the applicable governmental authorities.

### § 3.5 Bidding or Negotiation Phase Services

#### § 3.5.1 General

The Architect shall assist the Owner in establishing a list of prospective contractors. Following the Owner's and the Kentucky Department of Education's approval of the Construction Documents, the Architect shall assist the Owner in (1) obtaining either competitive bids or negotiated proposals; (2) confirming responsiveness of bids or proposals; (3) determining the successful bid or proposal, if any; and, (4) awarding and preparing contracts for construction. The Architect shall prepare the Advertisement for Bids and give it to the Owner for placement in the newspaper having the largest local circulation.

#### § 3.5.2 Competitive Bidding

§ 3.5.2.1 Bidding Documents shall consist of bidding requirements and proposed Contract Documents.

§ 3.5.2.2 The Architect shall assist the Owner in bidding the Project by

- .1 procuring the reproduction of Bidding Documents for distribution to prospective bidders;
- .2 distributing the Bidding Documents to prospective bidders, requesting their return upon completion of the bidding process, and maintaining a log of distribution and retrieval and of the amounts of deposits, if any, received from and returned to prospective bidders;
- .3 organizing and conducting a pre-bid conference for prospective bidders;
- .4 preparing responses to questions from prospective bidders and providing clarifications and interpretations of the Bidding Documents to all prospective bidders in the form of addenda;
- .5 organizing and conducting the opening of the bids, and subsequently documenting and distributing the bidding results, as directed by the Owner; and
- .6 providing a written evaluation of bids received and recommendations regarding an award of Contract for Construction.

§ 3.5.2.3 The Architect shall consider requests for substitutions, if the Bidding Documents permit substitutions, and shall prepare and distribute addenda identifying approved substitutions to all prospective bidders.

#### § 3.5.3 Negotiated Proposals

§ 3.5.3.1 Proposal Documents shall consist of proposal requirements and proposed Contract Documents. Negotiated proposal procedures may only be utilized for emergency construction, for construction estimated to cost no more than \$20,000, or, for those Owners who have adopted the Kentucky Model Procurement Code, under the terms and conditions of KRS 45A.370, KRS 45A.375, KRS 45A.380, and KRS 45A.385.

§ 3.5.3.2 The Architect shall assist the Owner in obtaining proposals by

- .1 procuring the reproduction of Proposal Documents for distribution to prospective contractors, and requesting their return upon completion of the negotiation process;
- .2 organizing and participating in selection interviews with prospective contractors; and
- .3 participating in negotiations with prospective contractors, and subsequently preparing a summary report of the negotiation results, as directed by the Owner.

§ 3.5.3.3 The Architect shall consider requests for substitutions, if the Proposal Documents permit substitutions, and shall prepare and distribute addenda identifying approved substitutions to all prospective contractors.

### § 3.6 Construction Phase Services

#### § 3.6.1 General

§ 3.6.1.1 The Architect shall provide administration of the Contract between the Owner and the Contractor as set forth below and in AIA Document A201™–2007, General Conditions of the Contract for Construction — KDE Version. If the Owner and Contractor modify AIA Document A201–2007 — KDE Version, those modifications shall not affect the Architect's services under this Agreement unless the Owner and the Architect amend this Agreement.

§ 3.6.1.2 The Architect shall advise and consult with the Owner during the Construction Phase Services. The Architect shall have authority to act on behalf of the Owner only to the extent provided in this Agreement. The Architect shall not

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have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, nor shall the Architect be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect shall be responsible for the Architect's negligent acts or omissions, but shall not have control over or charge of, and shall not be responsible for, acts or omissions of the Contractor or of any other persons or entities performing portions of the Work.

§ 3.6.1.3 Subject to Section 4.3, the Architect's responsibility to provide Construction Phase Services commences with the award of the Contract for Construction and terminates on the date the Architect issues the final Certificate for Payment, except for the Architect's obligation to conduct an inspection of Work and report prior to the expiration of one year from the date of Substantial Completion per Section 3.6.6.5.

### § 3.6.2 Evaluations of the Work

§ 3.6.2.1 The Architect shall visit the site at intervals appropriate to the stage of construction, or as otherwise required in Section 4.3.3, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine, in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect shall not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of the site visits, the Architect shall keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect shall keep the Owner informed of the progress and quality of the Work by a written report each month until time of Substantial Completion.

§ 3.6.2.2 The Architect has the authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect shall have the authority to require inspection or testing of the Work in accordance with the provisions of the Contract Documents, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees or other persons or entities performing portions of the Work.

§ 3.6.2.3 The Architect shall interpret and decide matters concerning performance under, and requirements of, the Contract Documents in consultation with either the Owner or Contractor. The Architect's response to such requests shall be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 3.6.2.4 Interpretations and decisions of the Architect shall be consistent with the intent of and reasonably inferable from the Contract Documents and shall be in writing or in the form of drawings. When making such interpretations and decisions, the Architect shall endeavor to secure faithful performance by both Owner and Contractor, shall not show partiality to either, and shall not be liable for results of interpretations or decisions rendered in good faith. The Architect's decisions on matters relating to aesthetic effect shall be final if consistent with the intent expressed in the Contract Documents.

§ 3.6.2.5 Unless the Owner and Contractor designate another person to serve as an Initial Decision Maker, as that term is defined in AIA Document A201-2007 — KDE Version, the Architect shall render initial decisions on Claims between the Owner and Contractor as provided in the Contract Documents.

### § 3.6.3 Certificates for Payment to Contractor

§ 3.6.3.1 The Architect shall review and certify the amounts due the Contractor and shall issue certificates in such amounts. The Architect's certification for payment shall constitute a representation to the Owner, based on the Architect's evaluation of the Work as provided in Section 3.6.2 and on the data comprising the Contractor's Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject (1) to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, (2) to results of subsequent tests and inspections, (3) to correction of minor deviations from the Contract Documents prior to completion, and (4) to specific qualifications expressed by the Architect.

§ 3.6.3.2 The issuance of a Certificate for Payment shall not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction

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means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) ascertained how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 3.6.3.3 The Architect shall maintain a record of the Applications and Certificates for Payment.

#### § 3.6.4 Submittals

§ 3.6.4.1 The Architect shall review the Contractor's submittal schedule and shall not unreasonably delay or withhold approval. The Architect's action in reviewing submittals shall be taken in accordance with the approved submittal schedule or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review.

§ 3.6.4.2 In accordance with the Architect-approved submittal schedule, the Architect shall review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of such submittals is not for the purpose of determining the accuracy and completeness of other information such as dimensions, quantities, and installation or performance of equipment or systems, which are the Contractor's responsibility. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 3.6.4.3 If the Contract Documents specifically require the Contractor to provide professional design services or certifications by a design professional related to systems, materials or equipment, the Architect shall specify the appropriate performance and design criteria that such services must satisfy. The Architect shall review Shop Drawings and other submittals related to the Work designed or certified by the design professional retained by the Contractor that bear such professional's seal and signature when submitted to the Architect. The Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals.

§ 3.6.4.4 Subject to the provisions of Section 4.3, the Architect shall review and respond to requests for information about the Contract Documents. The Architect shall set forth in the Contract Documents the requirements for requests for information. Requests for information shall include, at a minimum, a detailed written statement that indicates the specific Drawings or Specifications in need of clarification and the nature of the clarification requested. The Architect's response to such requests shall be made in writing within any time limits agreed upon, or otherwise with reasonable promptness. If appropriate, the Architect shall prepare and issue supplemental Drawings and Specifications in response to requests for information.

§ 3.6.4.5 The Architect shall maintain a record of submittals and copies of submittals supplied by the Contractor in accordance with the requirements of the Contract Documents.

#### § 3.6.5 Changes in the Work

§ 3.6.5.1 The Architect may authorize 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. Subject to the provisions of Section 4.3, the Architect shall prepare Change Orders and Construction Change Directives for the Owner's approval and execution in accordance with the Contract Documents.

§ 3.6.5.2 The Architect shall maintain records relative to changes in the Work.

#### § 3.6.6 Project Completion

§ 3.6.6.1 The Architect shall conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion; receive from the Contractor and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract Documents and assembled by the Contractor; and issue a final Certificate for Payment based upon a final inspection indicating the Work complies with the requirements of the Contract Documents.

§ 3.6.6.2 The Architect's inspections shall be conducted with the Owner to check conformance of the Work with the requirements of the Contract Documents and to verify the accuracy and completeness of the list submitted by the Contractor of Work to be completed or corrected.

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§ 3.6.6.3 When the Work is found to be substantially complete, the Architect shall inform the Owner about the balance of the Contract Sum remaining to be paid the Contractor, including the amount to be retained from the Contract Sum, if any, for final completion or correction of the Work.

§ 3.6.6.4 The Architect shall forward to the Owner the following information received from the Contractor: (1) consent of surety or sureties, if any, to reduction in or partial release of retainage or the making of final payment; (2) affidavits, receipts, releases and waivers of liens or bonds indemnifying the Owner against liens; and (3) any other documentation required of the Contractor under the Contract Documents.

§ 3.6.6.5 Prior to the expiration of one year from the date of Substantial Completion, the Architect shall, without additional compensation, conduct an inspection with the Owner to review the facility operations and performance, and record any nonconforming Work, and shall submit a written report of nonconforming Work to the Contractor, Owner and the Kentucky Department of Education. At the discretion of the Owner and for Reimbursable Expenses, the Architect may be the Owner's agent during the one-year period after Substantial Completion.

§ 3.6.6.6 As a record of the Work as constructed, the Architect shall prepare and deliver to the Owner a set of drawings showing significant changes in the Work during construction, based upon the drawings maintained by the Contractor at the site during construction, other data furnished by the Contractor to the Architect, Addenda, Construction Change Directives and Change Orders.

**ARTICLE 4 ADDITIONAL SERVICES**

§ 4.1 Additional Services listed below are not included in Basic Services but may be required for the Project. The services described under this Article shall only be provided if authorized and confirmed in writing by the Owner and accompanied by a written Board of Education Order. The Architect shall provide the listed Additional Services only if specifically designated in the table below as the Architect's responsibility, and the Owner shall compensate the Architect as provided in Section 11.2.

*(Designate the Additional Services the Architect shall provide in the second column of the table below. In the third column indicate whether the service description is located in Section 4.2 or in an attached exhibit. If in an exhibit, identify the exhibit.)*

Additional Services	Responsibility <i>(Architect, Owner or Not Provided)</i>	Location of Service Description <i>(Section 4.2 below or in an exhibit attached to this document and identified below)</i>
§ 4.1.1 Programming (B202™–2009)		
§ 4.1.2 Multiple preliminary designs		
§ 4.1.3 Measured drawings		
§ 4.1.4 Existing facilities surveys		
§ 4.1.5 (Not Used)		
§ 4.1.6 Building information modeling		
§ 4.1.7 (Not Used)		
§ 4.1.8 (Not Used)		
§ 4.1.9 Architectural Interior Design (B252™–2007)		
§ 4.1.10 Value Analysis (B204™–2007)		
§ 4.1.11 Detailed cost estimating		
§ 4.1.12 On-site project representation (B207™–2008)		
§ 4.1.13 Conformed construction documents		
§ 4.1.14 As-designed Record Drawings		
§ 4.1.15 (Not Used)		
§ 4.1.16 Post occupancy evaluation		
§ 4.1.17 Facility Support Services (B210™–2007)		
§ 4.1.18 Tenant-related services		

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Additional Services	Responsibility (Architect, Owner or Not Provided)	Location of Service Description (Section 4.2 below or in an exhibit attached to this document and identified below)
§ 4.1.19 Coordination of Owner's consultants		
§ 4.1.20 (Not Used)		
§ 4.1.21 Security Evaluation and Planning (B206™–2007)		
§ 4.1.22 Commissioning (B211™–2007)		
§ 4.1.23 Extensive environmentally responsible design		
§ 4.1.24 LEED® Certification (B214™–2012)		
§ 4.1.25 Fast-track design services		
§ 4.1.26 Historic Preservation (B205™–2007)		
§ 4.1.27 Furniture, Furnishings, and Equipment Design (B253™–2007)		

§ 4.2 Insert a description of each Additional Service designated in Section 4.1 as the Architect's responsibility, if not further described in an exhibit attached to this document.

§ 4.3 Additional Services may be provided after execution of this Agreement, without invalidating the Agreement. Except for services required due to the fault of the Architect, any Additional Services provided in accordance with this Section 4.3 shall entitle the Architect to compensation pursuant to Section 11.3 and an appropriate adjustment in the Architect's schedule.

§ 4.3.1 Upon recognizing the need to perform the following Additional Services, the Architect shall notify the Owner with reasonable promptness and explain the facts and circumstances giving rise to the need. The Architect shall not proceed to provide the following services until the Architect receives the Owner's written authorization:

- .1 Services necessitated by a change in the Initial Information, previous instructions or approvals given by the Owner, or a material change in the Project including, but not limited to, size, quality, complexity, the Owner's schedule or budget for Cost of the Work, or procurement or delivery method;
- .2 Services necessitated by the Owner's request for extensive environmentally responsible design alternatives, such as unique system designs, in-depth material research, energy modeling, or LEED® certification;
- .3 Changing or editing previously prepared Instruments of Service necessitated by the enactment or revision of codes, laws or regulations or official interpretations;
- .4 Services necessitated by decisions of the Owner not rendered in a timely manner or any other failure of performance on the part of the Owner or the Owner's consultants or contractors;
- .5 Preparing digital data for transmission to the Owner's consultants and contractors, or to other Owner authorized recipients;
- .6 Preparation of design and documentation for alternate bid or proposal requests proposed by the Owner;
- .7 Preparation for, and attendance at, a public presentation, meeting or hearing;
- .8 Preparation for, and attendance at a dispute resolution proceeding or legal proceeding, except where the Architect is party thereto;
- .9 Evaluation of the qualifications of bidders or persons providing proposals;
- .10 Consultation concerning replacement of Work resulting from fire or other cause during construction; or
- .11 Assistance to the Initial Decision Maker, if other than the Architect.

§ 4.3.2 To avoid delay in the Construction Phase, the Architect shall provide the following Additional Services, notify the Owner with reasonable promptness, and explain the facts and circumstances giving rise to the need. If the Owner subsequently determines that all or parts of those services are not required, the Owner shall give prompt written notice to the Architect, and the Owner shall have no further obligation to compensate the Architect for those services:

- .1 Reviewing a Contractor's submittal out of sequence from the submittal schedule agreed to by the Architect;
- .2 Responding to the Contractor's requests for information that are not prepared in accordance with the Contract Documents or where such information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation;
- .3 Preparing Change Orders and Construction Change Directives that require evaluation of Contractor's proposals and supporting data, or the preparation or revision of Instruments of Service;
- .4 Evaluating an extensive number of Claims as the Initial Decision Maker;
- .5 Evaluating substitutions proposed by the Owner or Contractor and making subsequent revisions to Instruments of Service resulting therefrom; or
- .6 To the extent the Architect's Basic Services are affected, providing Construction Phase Services 60 days after (1) the date of Substantial Completion of the Work or (2) the anticipated date of Substantial Completion identified in Initial Information, whichever is earlier.

§ 4.3.3 The Architect shall provide Construction Phase Services exceeding the limits set forth below as Additional Services. When the limits below are reached, the Architect shall notify the Owner:

- .1 ( ) reviews of each Shop Drawing, Product Data item, sample and similar submittal of the Contractor
- .2 ( ) visits to the site by the Architect over the duration of the Project during construction
- .3 ( ) inspections for any portion of the Work to determine whether such portion of the Work is substantially complete in accordance with the requirements of the Contract Documents
- .4 ( ) inspections for any portion of the Work to determine final completion

§ 4.3.4 If the services covered by this Agreement have not been completed within ( ) months of the date of this Agreement, through no fault of the Architect, extension of the Architect's services beyond that time shall be compensated as Additional Services.

## ARTICLE 5 OWNER'S RESPONSIBILITIES

§ 5.1 The Owner shall provide full information regarding requirements for the Project, including Educational Specifications, interior and exterior space requirements and relationships, flexibility and expandability, special equipment and systems, site requirements, and the Owner's objectives, schedule and constraints. Within 15 days after receipt of a written request from the Architect, the Owner shall furnish the requested information as necessary and relevant for the Architect to evaluate, give notice of or enforce lien rights.

§ 5.2 The Owner shall establish and periodically update an overall budget for the Project based on consultation with the Architect and the Owner's Fiscal Agent, as applicable, which shall include the Construction Cost, the Owner's other related costs and fees, and reasonable contingencies related to all of these costs. If the Owner significantly increases or decreases the Owner's budget for the Cost of the Work, the Owner shall notify the Architect. The Owner and the Architect shall thereafter agree to a corresponding change in the Project's scope and quality.

§ 5.3 The Owner shall identify a representative authorized to act on the Owner's behalf with respect to the Project. The Owner, through Board of Education Order, shall examine and take action in a timely manner regarding approval of documents submitted by the Architect in order to avoid unreasonable delay in the orderly and sequential progress of the Architect's services.

§ 5.4 The Owner shall furnish surveys to describe physical characteristics, legal limitations and utility locations for the site of the Project, and a written legal description of the site. The surveys and legal information shall include, as applicable, grades and lines of streets, alleys, pavements and adjoining property and structures; designated wetlands and flood plain limits as applicable; adjacent drainage; rights-of-way, restrictions, easements, encroachments, zoning, deed restrictions, boundaries and contours of the site; locations, dimensions and necessary data with respect to existing buildings, other improvements and trees; and information concerning available utility services and lines, both public and private, above and below grade, including inverts and depths. All the information on the survey shall be referenced to a Project benchmark.

§ 5.5 The Owner shall furnish the services of geotechnical engineers when such services are deemed necessary and requested by the Architect.

§ 5.6 The Owner shall coordinate the services of its own consultants with those services provided by the Architect. Upon the Architect's request, the Owner shall furnish copies of the scope of services in the contracts between the Owner and the Owner's consultants. The Owner shall furnish the services of consultants other than those designated in this Agreement, or authorize the Architect to furnish them as an Additional Service, when the Architect requests such services and demonstrates that they are reasonably required by the scope of the Project. The Owner shall require that its consultants maintain professional liability insurance as appropriate to the services provided.

§ 5.7 The Owner shall furnish tests, inspections and reports required by law, government agencies, or the Contract Documents.

§ 5.8 The Owner shall furnish all legal, insurance and accounting services, including auditing services, that may be reasonably necessary at any time for the Project.

§ 5.9 The Owner shall provide prompt written notice to the Architect if the Owner becomes aware of any fault or defect in the Project, including errors, omissions or inconsistencies in the Architect's Instruments of Service.

§ 5.10 Except as otherwise provided in this Agreement, or when direct communications have been specially authorized, the Owner shall endeavor to communicate with the Contractor and the Architect's consultants through the Architect about matters arising out of or relating to the Contract Documents. The Owner shall promptly notify the Architect of any direct communications that may affect the Architect's services.

§ 5.11 Before executing the Contract for Construction, the Owner shall coordinate the Architect's duties and responsibilities set forth in the Contract for Construction with the Architect's services set forth in this Agreement. The Owner shall provide the Architect a copy of the executed agreement between the Owner and Contractor, including the General Conditions of the Contract for Construction.

§ 5.12 The Owner shall provide the Architect access to the Project site prior to commencement of the Work and shall obligate the Contractor to provide the Architect access to the Work wherever it is in preparation or progress.

#### ARTICLE 6 COST OF THE WORK

§ 6.1 The Cost of the Work shall be the total construction cost, or to the extent the Project is not completed, the estimated total construction cost recorded on the current BG-1 form to the Owner to construct all elements of the Project designed or specified by the Architect and shall include contractors' general conditions costs, overhead and profit. The Cost of the Work does not include the compensation of the Architect, the costs of the land, rights-of-way, financing, contingencies for changes in the Work or other costs that are the responsibility of the Owner.

§ 6.2 The Owner's budget for the Cost of the Work is provided in Initial Information, and may be adjusted throughout the Project as required under Sections 5.2, 6.4 and 6.5. Evaluations of the Owner's budget for the Cost of the Work, the preliminary estimate of the Cost of the Work and updated estimates of the Cost of the Work prepared by the Architect, represent the Architect's judgment as a design professional. It is recognized, however, that neither the Architect nor the Owner has control over the cost of labor, materials or equipment; the Contractor's methods of determining bid prices; or competitive bidding, market or negotiating conditions. Accordingly, the Architect cannot and does not warrant or represent that bids or negotiated prices will not vary from the Owner's budget for the Cost of the Work or from any estimate of the Cost of the Work or evaluation prepared or agreed to by the Architect.

§ 6.3 In preparing estimates of the Cost of Work, the Architect shall be permitted to include contingencies for design, bidding and price escalation; to determine what materials, equipment, component systems and types of construction are to be included in the Contract Documents; to make reasonable adjustments in the program and scope of the Project; and to include in the Contract Documents alternate bids as may be necessary to adjust the estimated Cost of the Work to meet the Owner's budget for the Cost of the Work. The Architect's estimate of the Cost of the Work shall be based on current area, volume or similar conceptual estimating techniques. If the Owner requests detailed cost estimating services, the Architect shall provide such services as an Additional Service under Article 4.

§ 6.4 If the Bidding or Negotiation Phase has not commenced within 90 days after the Architect submits the Construction Documents to the Owner, through no fault of the Architect, the Owner's budget for the Cost of the Work shall be adjusted to reflect changes in the general level of prices in the applicable construction market.

§ 6.5 If at any time the Architect's estimate of the Cost of the Work exceeds the Owner's budget for the Cost of the Work, the Architect shall make appropriate recommendations to the Owner to adjust the Project's size, quality or budget for the Cost of the Work, and the Owner shall cooperate with the Architect in making such adjustments.

§ 6.6 If the Owner's budget for the Cost of the Work at the conclusion of the Construction Documents Phase Services is exceeded by the lowest bona fide bid or negotiated proposal, the Owner shall

- .1 give written approval of an increase in the budget for the Cost of the Work;
- .2 authorize rebidding or renegotiating of the Project within a reasonable time;
- .3 terminate in accordance with Section 9.5;
- .4 in consultation with the Architect, revise the Project program, scope, or quality as required to reduce the Cost of the Work; or
- .5 implement any other mutually acceptable alternative.

§ 6.7 If the Owner chooses to proceed under Section 6.6.4, the Architect, without additional compensation, shall modify the Construction Documents as necessary to comply with the Owner's budget for the Cost of the Work at the conclusion of the Construction Documents Phase Services, or the budget as adjusted under Section 6.6.1. The Architect's modification of the Construction Documents shall be the limit of the Architect's responsibility under this Article 6.

#### ARTICLE 7 COPYRIGHTS AND LICENSES

§ 7.1 The Architect and the Owner warrant that in transmitting Instruments of Service, or any other information, the transmitting party is the copyright owner of such information or has permission from the copyright owner to transmit such information for its use on the Project. If the Owner and Architect intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions.

§ 7.2 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and shall retain all common law, statutory and other reserved rights, including copyrights. Submission or distribution of Instruments of Service to meet official regulatory requirements or for similar purposes in connection with the Project is not to be construed as publication in derogation of the reserved rights of the Architect and the Architect's consultants.

§ 7.3 Upon execution of this Agreement, the Architect grants to the Owner a nonexclusive license to use the Architect's Instruments of Service solely and exclusively for purposes of constructing, using, maintaining, altering and adding to the Project, provided that the Owner substantially performs its obligations, including prompt payment of all sums when due, under this Agreement. The Architect shall obtain similar nonexclusive licenses from the Architect's consultants consistent with this Agreement. The license granted under this section permits the Owner to authorize the Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers, as well as the Owner's consultants and separate contractors, to reproduce applicable portions of the Instruments of Service solely and exclusively for use in performing services or construction for the Project. If the Architect rightfully terminates this Agreement for cause as provided in Section 9.4, the license granted in this Section 7.3 shall terminate.

§ 7.3.1 In the event the Owner uses the Instruments of Service without retaining the author of the Instruments of Service, the Owner releases the Architect and Architect's consultant(s) from all claims and causes of action arising from such uses. The Owner, to the extent permitted by law, further agrees to indemnify and hold harmless the Architect and its consultants from all costs and expenses, including the cost of defense, related to claims and causes of action asserted by any third person or entity to the extent such costs and expenses arise from the Owner's use of the Instruments of Service under this Section 7.3.1. The terms of this Section 7.3.1 shall not apply if the Owner rightfully terminates this Agreement for cause under Section 9.4.

§ 7.4 Except for the licenses granted in this Article 7, no other license or right shall be deemed granted or implied under this Agreement. The Owner shall not assign, delegate, sublicense, pledge or otherwise transfer any license granted herein to another party without the prior written agreement of the Architect. Any unauthorized use of the Instruments of Service shall be at the Owner's sole risk and without liability to the Architect and the Architect's consultants.

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**ARTICLE 8 CLAIMS AND DISPUTES**

**§ 8.1 General**

**§ 8.1.1** The Owner and Architect shall commence all claims and causes of action, whether in contract, tort, or otherwise, against the other arising out of or related to this Agreement in accordance with the requirements of the method of binding dispute resolution selected in this Agreement 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 Architect waive all claims and causes of action not commenced in accordance with this Section 8.1.1.

**§ 8.1.2** To the extent damages are covered by property insurance, the Owner and Architect waive all rights against each other and against the contractors, consultants, agents and employees of the other for damages, except such rights as they may have to the proceeds of such insurance as set forth in AIA Document A201–2007, General Conditions of the Contract for Construction — KDE Version. The Owner or the Architect, as appropriate, shall require of the contractors, consultants, agents and employees of any of them similar waivers in favor of the other parties enumerated herein.

**§ 8.1.3** The Architect and Owner waive consequential damages for claims, disputes or other matters in question arising out of or relating to this Agreement. This mutual waiver is applicable, without limitation, to all consequential damages due to either party’s termination of this Agreement, except as specifically provided in Section 9.7.

**§ 8.2 Mediation**

**§ 8.2.1** Any claim, dispute or other matter in question arising out of or related to this Agreement shall be subject to mediation as a condition precedent to binding dispute resolution. If such matter relates to or is the subject of a lien arising out of the Architect’s services, the Architect may proceed in accordance with applicable law to comply with the lien notice or filing deadlines prior to resolution of the matter by mediation or by binding dispute resolution.

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

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

**§ 8.2.4** If the parties do not resolve a dispute through mediation pursuant to this Section 8.2, the method of binding dispute resolution shall be the following:

*(Check the appropriate box. If the Owner and Architect do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, the dispute will be resolved in a court of competent jurisdiction.)*

- Arbitration pursuant to Section 8.3 of this Agreement
- Litigation in a court of competent jurisdiction where the Project is located
- Other: *(Specify)*

**§ 8.3 Arbitration**

**§ 8.3.1** If the parties have selected arbitration as the method for binding dispute resolution in this Agreement, any claim, dispute or other matter in question arising out of or related to this Agreement subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of this

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Agreement. A demand for arbitration shall be made in writing, delivered to the other party to this Agreement, and filed with the person or entity administering the arbitration.

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

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

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

#### § 8.3.4 Consolidation or Joinder

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

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

§ 8.3.4.3 The Owner and Architect grant to any person or entity made a party to an arbitration conducted under this Section 8.3, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Architect under this Agreement.

### ARTICLE 9 TERMINATION OR SUSPENSION

§ 9.1 If the Owner fails to make payments to the Architect in accordance with this Agreement, such failure shall be considered substantial nonperformance and cause for termination or, at the Architect's option, cause for suspension of performance of services under this Agreement. If the Architect elects to suspend services, the Architect shall give seven days' written notice to the Owner before suspending services. In the event of a suspension of services, the Architect shall have no liability to the Owner for delay or damage caused the Owner because of such suspension of services. Before resuming services, the Architect shall be paid all sums due prior to suspension and any expenses incurred in the interruption and resumption of the Architect's services. The Architect's fees for the remaining services and the time schedules shall be equitably adjusted.

§ 9.2 If the Owner suspends the Project, the Architect shall be compensated for services performed prior to notice of such suspension. When the Project is resumed, the Architect shall be compensated for expenses incurred in the interruption and resumption of the Architect's services. The Architect's fees for the remaining services and the time schedules shall be equitably adjusted.

§ 9.3 If the Owner suspends the Project for more than 90 cumulative days for reasons other than the fault of the Architect, the Architect may terminate this Agreement by giving not less than seven days' written notice.

§ 9.4 Either party may terminate this Agreement upon not less than seven days' written notice should the other party fail substantially to perform in accordance with the terms of this Agreement through no fault of the party initiating the termination.

§ 9.5 The Owner may terminate this Agreement upon not less than seven days' written notice to the Architect for the Owner's convenience and without cause.

§ 9.6 In the event of termination not the fault of the Architect, the Architect shall be compensated for services performed prior to termination, together with Reimbursable Expenses then due.

§ 9.7 (Not Used)

§ 9.8 The Owner's rights to use the Architect's Instruments of Service in the event of a termination of this Agreement are set forth in Article 7 and Section 11.9.

#### ARTICLE 10 MISCELLANEOUS PROVISIONS

§ 10.1 This Agreement shall be governed by the law of the place where the Project is located, except that if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 8.3.

§ 10.2 Terms in this Agreement shall have the same meaning as those in AIA Document A201–2007, General Conditions of the Contract for Construction — KDE Version.

§ 10.3 The Owner and Architect, respectively, bind themselves, their agents, successors, assigns and legal representatives to this Agreement. Neither the Owner nor the Architect shall assign this Agreement without the written consent of the other.

§ 10.4 If the Owner requests the Architect to execute certificates, the proposed language of such certificates shall be submitted to the Architect for review at least 14 days prior to the requested dates of execution. The Architect shall not be required to execute certificates that would require knowledge, services or responsibilities beyond the scope of this Agreement.

§ 10.5 Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either the Owner or Architect.

§ 10.6 Unless otherwise required in this Agreement, the Architect shall have no responsibility for the discovery, presence, handling, removal or disposal of, or exposure of persons to, hazardous materials or toxic substances in any form at the Project site.

§ 10.7 The Architect shall have the right to include photographic or artistic representations of the design of the Project among the Architect's promotional and professional materials. The Architect shall be given reasonable access to the completed Project to make such representations. However, the Architect's materials shall not include the Owner's confidential or proprietary information if the Owner has previously advised the Architect in writing of the specific information considered by the Owner to be confidential or proprietary. The Owner shall provide professional credit for the Architect in the Owner's promotional materials for the Project.

§ 10.8 Except as provided under the Kentucky Open Records Act, KRS 61.870 to KRS 61.884, if the Architect or Owner receives information specifically designated by the other party as "confidential" or "business proprietary," the receiving party shall keep such information strictly confidential and shall not disclose it to any other person except to (1) its employees, (2) those who need to know the content of such information in order to perform services or construction solely and exclusively for the Project, or (3) its consultants and contractors whose contracts include similar restrictions on the use of confidential information.

#### ARTICLE 11 COMPENSATION

§ 11.1 For the Architect's Basic Services described under Article 3, the Owner shall compensate the Architect as follows:

*(Insert amount of, or basis for, compensation.)*

§ 11.2 For Additional Services designated in Section 4.1, the Owner shall compensate the Architect as follows:  
(Insert amount of, or basis for, compensation. If necessary, list specific services to which particular methods of compensation apply.)

§ 11.3 For Additional Services that may arise during the course of the Project, including those under Section 4.3, the Owner shall compensate the Architect as follows:  
(Insert amount of, or basis for, compensation.)

§ 11.4 Compensation for Additional Services of the Architect's consultants when not included in Section 11.2 or 11.3, shall be the amount invoiced to the Architect plus \_\_\_\_\_ percent ( \_\_\_\_\_ %), or as otherwise stated below:

§ 11.5 Where compensation for Basic Services is based on a stipulated sum or percentage of the Cost of the Work, the compensation for each phase of services shall be as follows:

Schematic Design Phase:	Fifteen percent (15%)
Design Development Phase:	Twenty percent (20%)
Construction Documents Phase (Completed Plans & Specifications):	Forty percent (40%)
Bidding or Negotiation Phase:	Five percent (05%)
Construction Phase:	Twenty percent (20%)
<hr/>	
Total Basic Compensation:	One hundred percent (100%)

§ 11.6 When compensation is based on a percentage of the Cost of the Work and any portions of the Project are deleted or otherwise not constructed, compensation for those portions of the Project shall be payable to the extent services are performed on those portions, in accordance with the schedule set forth in Section 11.5 based on (1) the lowest bona fide bid or negotiated proposal, or (2) if no such bid or proposal is received, the most recent estimate of Construction Cost as recorded on the BG-3 form approved by the Kentucky Department of Education. The Architect shall be entitled to compensation in accordance with this Agreement for all services performed whether or not the Construction Phase is commenced.



§ 11.7 The hourly billing rates for services of the Architect and the Architect's consultants, if any, are set forth below. The rates shall be adjusted in accordance with the Architect's and Architect's consultants' normal review practices. (If applicable, attach an exhibit of hourly billing rates or insert them below.)

Employee or Category	Rate
----------------------	------

**§ 11.8 Compensation for Reimbursable Expenses**

§ 11.8.1 Reimbursable Expenses are in addition to compensation for Basic and Additional Services and include expenses incurred by the Architect and the Architect's consultants directly related to the Project, as follows:

- .1 Transportation and authorized out-of-town travel and subsistence;
- .2 Long distance services, dedicated data and communication services, teleconferences, Project Web sites, and extranets;
- .3 Fees paid for securing approval of authorities having jurisdiction over the Project;
- .4 Printing, reproductions, plots, standard form documents;
- .5 Postage, handling and delivery;
- .6 Expense of overtime work requiring higher than regular rates, if authorized in advance by the Owner;
- .7 Renderings, models, mock-ups, professional photography, and presentation materials requested by the Owner;
- .8 Architect's Consultant's expense of professional liability insurance dedicated exclusively to this Project, or the expense of additional insurance coverage or limits requested by the Owner in excess of that required to be carried by the Architect and the Architect's Consultants by the Kentucky Department of Education;
- .9 All taxes levied on professional services and on reimbursable expenses;
- .10 Site office expenses; and
- .11 Other similar Project-related expenditures.

§ 11.8.2 For Reimbursable Expenses the compensation shall be the expenses incurred by the Architect and the Architect's consultants of \_\_\_\_\_ percent ( \_\_\_\_\_ %) of the expenses incurred.

§ 11.8.3 Prior to incurring Reimbursable Expenses, the Architect shall estimate the cost of the reimbursable items, and obtain approval of the Owner's representative for the expenditures.

**§ 11.9 Compensation for Use of Architect's Instruments of Service**

If the Owner terminates the Architect for its convenience under Section 9.5, or the Architect terminates this Agreement under Section 9.3, the Owner shall pay a licensing fee as compensation for the Owner's continued use of the Architect's Instruments of Service solely for purposes of completing, using and maintaining the Project as follows:

**§ 11.10 Payments to the Architect**

§ 11.10.1 (Not Used)

Init.

§ 11.10.2 Unless otherwise agreed, payments for services shall be made monthly in proportion to services performed. Payments are due and payable upon presentation of the Architect's invoice. Amounts unpaid ( ) days after the invoice date shall bear interest at the rate entered below, or in the absence thereof at the legal rate prevailing from time to time at the principal place of business of the Architect.  
*(Insert rate of monthly or annual interest agreed upon.)*

§ 11.10.3 The Owner shall not withhold amounts from the Architect's compensation to impose a penalty or liquidated damages on the Architect, or to offset sums requested by or paid to contractors for the cost of changes in the Work unless the Architect agrees or has been found liable for the amounts in a binding dispute resolution proceeding.

§ 11.10.4 Records of Reimbursable Expenses, expenses pertaining to Additional Services, and services performed on the basis of hourly rates shall be available to the Owner at mutually convenient times.

§ 11.10.5 The Architect shall pay each project Consultant within 10 days after receipt of each payment from the Owner for services rendered. Consultant's fees shall be based on a typical 80% x total fee for work categories paid to the Architect for which the Consultant is responsible. If the Architect's fee is a lump sum, the Consultant shall receive the same proportionate amount. If such payments are not made in a timely manner, the Consultant may make a written request that the Owner issue joint checks for all subsequent payments to the Architect naming the Architect and the Consultant as payees.

§ 11.10.6 Prior to final payment, the Architect shall provide the Owner a written statement of release from each Consultant stating that all fees up to that point have been paid. (This clause does not apply to Consultants, i.e., geotechnical engineers, land surveyors, having direct contracts with the Owner.) The Architect shall be paid his construction phase fee at the same proportionate percentage as the construction's completion until final contract completion as designated by the submission and approval of the BG-4 form by the Owner, to the Kentucky Department of Education.

## ARTICLE 12 SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Agreement are as follows:

## ARTICLE 13 SCOPE OF THE AGREEMENT

§ 13.1 This Agreement represents the entire and integrated agreement between the Owner and the Architect and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both Owner and Architect.

§ 13.2 This Agreement is comprised of the following documents listed below:

- .1 AIA Document B101™-2007, Standard Form Agreement Between Owner and Architect — KDE Version
- .2 AIA Document B101™-2007, Standard Form Agreement Between Owner and Architect — KDE Version, Exhibit B, List of Design Consultants
- .3 AIA Document E201™-2007, Digital Data Protocol Exhibit, if completed, or the following:

- .4 Other documents:  
*(List other documents, if any, including Exhibit A, Initial Information, and additional scopes of service, if any, forming part of the Agreement.)*

This Agreement entered into as of the day and year first written above.

\_\_\_\_\_  
OWNER (Signature)

\_\_\_\_\_  
ARCHITECT (Signature)

\_\_\_\_\_  
(Printed name and title)

\_\_\_\_\_  
(Printed name and title)

## EXHIBIT B — LIST OF DESIGN CONSULTANTS

(Identify Consultant, Firm, Mailing Address, Telephone and Email Address)

Structural Design:

Mechanical/Electrical Design:

Landscape/Site Design:

KETS Consultants:

Other:

(Identify Consultant and Design Area)

Professional Liability Insurance Certificates must be attached for consultants covered by KRS 322, 323, and 323A.

Init.

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**AIA**<sup>®</sup>

# Document B101™ – 2007 Exhibit A

## Initial Information

for the following PROJECT:  
*(Name and location or address)*

THE OWNER:  
*(Name, legal status and address)*

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

THE ARCHITECT:  
*(Name, legal status and address)*

This Agreement is based on the following information.  
*(Note the disposition for the following items by inserting the requested information or a statement such as “not applicable,” “unknown at time of execution” or “to be determined later by mutual agreement.”)*

### ARTICLE A.1 PROJECT INFORMATION

§ A.1.1 The Owner’s program for the Project:  
*(Identify documentation or state the manner in which the program will be developed.)*

§ A.1.2 The Project’s physical characteristics:  
*(Identify or describe, if appropriate, size, location, dimensions, or other pertinent information, such as geotechnical reports; site, boundary and topographic surveys; traffic and utility studies; availability of public and private utilities and services; legal description of the site; etc.)*

§ A.1.3 The Owner’s budget for the Cost of the Work, as defined in Section 6.1:  
*(Provide total, and if known, a line item break down.)*

Init.

§ A.1.4 The Owner's other anticipated scheduling information, if any, not provided in Section 1.2:

§ A.1.5 The Owner intends the following procurement or delivery method for the Project:  
*(Identify method such as competitive bid, negotiated contract, or construction management.)*

§ A.1.6 Other Project information:  
*(Identify special characteristics or needs of the Project not provided elsewhere, such as environmentally responsible design or historic preservation requirements.)*

## ARTICLE A.2 PROJECT TEAM

§ A.2.1 The Owner identifies the following representative in accordance with Section 5.3:  
*(List name, address and other information.)*

§ A.2.2 The persons or entities, in addition to the Owner's representative, who are required to review the Architect's submittals to the Owner are as follows:  
*(List name, address and other information.)*

§ A.2.3 The Owner will retain the following consultants and contractors:  
*(List discipline and, if known, identify them by name and address.)*

§ A.2.4 The Architect identifies the following representative in accordance with Section 2.3:  
(List name, address and other information.)

§ A.2.5 The Architect will retain the consultants identified in Sections A.2.5.1 and A.2.5.2.  
(List discipline and, if known, identify them by name, legal status, address and other information.)

§ A.2.5.1 Consultants retained under Basic Services:

.1 Structural Engineer

.2 Mechanical Engineer

.3 Electrical Engineer

§ A.2.5.2 Consultants retained under Additional Services:

§ A.2.6 Other Initial Information on which the Agreement is based:  
(Provide other Initial Information.)

Init.

BG No. \_\_\_\_\_

Date: \_\_\_\_\_ To: (Owner) \_\_\_\_\_

Project Name: \_\_\_\_\_ Bid Package No. \_\_\_\_\_

City, County: \_\_\_\_\_

Name of Contractor: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Business Address: \_\_\_\_\_ Telephone: \_\_\_\_\_

Having carefully examined the Instructions to Bidders, Contract Agreement, General Conditions, Supplemental Conditions, Specifications, and Drawings, for the above referenced project, the undersigned bidder proposes to furnish all labor, materials, equipment, tools, supplies, and temporary devices required to complete the work in accordance with the contract documents and any addenda listed below for the price stated herein.

Addendum \_\_\_\_\_ (Insert the addendum numbers received or the word "none" if no addendum received.)

**BASE BID:** For the construction required to complete the work, in accordance with the contract documents, I/We submit the following lump sum price of:

\_\_\_\_\_

Use Figures

\_\_\_\_\_ Dollars & \_\_\_\_\_ Cents

Use Words for both dollars and cents

**ALTERNATE BIDS:** (If applicable and denoted in the Bidding Documents)

For omission from or addition to those items, services, or construction specified in Bidding Documents by alternate number, the following lump sum price will be added or deducted from the base bid.

Alternate Bid No.	Alternate Description	+ (Add to the Base Bid)	- (Deduct from the Base Bid)	No Cost Change (from the Base Bid)
Alt. Bid No. 1				
Alt. Bid No. 2				
Alt. Bid No. 3				
Alt. Bid No. 4				
Alt. Bid No. 5				
Alt. Bid No. 6				
Alt. Bid No. 7				
Alt. Bid No. 8				
Alt. Bid No. 9				
Alt. Bid No. 10				

**A maximum of 10 Alternate Bids will be acceptable with each Base Bid. Do not add supplemental sheets for Alternate Bids to this document.**

**LIST OF PROPOSED SUBCONTRACTORS:**

List on the lines below each major branch of work and the subcontractor involved with that portion of work. If the branch of work is to be done by the Contractor, so indicate.

The listing of more than one subcontractor in a work category shall invalidate the bid.

The listing of the bidder as the subcontractor for a work category certifies that the bidder has in current employment, skilled staff and necessary equipment to complete that category. The architect/engineer will evaluate the ability of all listed subcontractors to complete the work and notify the owner. Listing of the bidder as the subcontractor may invalidate the bid should the architect's review indicate bidder does not have skilled staff and equipment to complete the work category at the time the bid was submitted.

**A maximum of 40 subcontractors will be acceptable with each bid. Do not add supplemental sheets for subcontractors to this document.**

**The bidder shall submit the list of subcontractors with the bid.**

	<b><u>BRANCH OF WORK</u></b> (to be filled out by the Architect)	<b><u>SUBCONTRACTOR</u></b> (to be filled out by the contractor)
1.		
2.		
3.		
4.		
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8.		
9.		
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12.		
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16.		
17.		



	<b><u>BRANCH OF WORK</u></b> (to be filled out by the Architect)	<b><u>SUBCONTRACTOR</u></b> (to be filled out by the Contractor)
18.		
19.		
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**LIST OF PROPOSED SUPPLIERS AND MANUFACTURERS:**

List on the lines below each major material category for this project and the suppliers and manufacturers involved with that portion of work. Listing the supplier below means the Contractor is acknowledging authorization from the Supplier to include the Supplier in this bid.

The listing of more than one supplier or manufacturer in a material category shall invalidate the bid.

**A maximum of 40 suppliers and manufacturers will be acceptable with each bid. Do not add supplemental sheets for suppliers to this document.**

**The bidder shall submit the list of suppliers and manufacturers within one (1) hour of the bid.**

	<b><u>MATERIAL DESCRIPTION BY SPECIFICATION DIVISION AND CATEGORY</u></b> (to be filled out by the Architect or Contractor)	<b><u>SUPPLIER</u></b> (to be filled out by the Contractor)	<b><u>MANUFACTURER</u></b> (to be filled out by the Contractor)
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			

	<u><b>MATERIAL DESCRIPTION BY SPECIFICATION DIVISION AND CATEGORY</b></u> (to be filled out by the Architect or Contractor)	<u><b>SUPPLIER</b></u> (to be filled out by the Contractor)	<u><b>MANUFACTURER</b></u> (to be filled out by the Contractor)
19.			
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**UNIT PRICES:**

Indicate on the lines below those unit prices to determine any adjustment to the contract price due to changes in work or extra work performed under this contract. The unit prices shall include the furnishing of all labor and materials, cost of all items, and overhead and profit for the Contractor, as well as any subcontractor involved. These unit prices shall be listed in units of work.

**A maximum of 40 unit prices will be acceptable with each bid. Do not add supplemental sheets for unit pricing to this document.**

**The bidder shall submit the list of unit prices within one (1) hour of the bid.**

	<b><u>WORK</u></b> (to be filled out by the Architect)	<b><u>PRICE / UNIT</u></b> (to be filled out by the Contractor)	<b><u>UNIT</u></b> (to be filled out by the Contractor)
1.			
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9.			
10.			
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18.			
19.			

	<u>WORK</u> (to be filled out by the Architect)	<u>PRICE / UNIT</u> (to be filled out by the Contractor)	<u>UNIT</u> (to be filled out by the Contractor)
20.			
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**DIRECT MATERIAL PURCHASES:**

Indicate on the lines below those materials to be purchased directly by the Owner with a Purchase Order to be issued by the Owner to the individual suppliers. The value of the direct Purchase Order cannot be less than \$5,000. Following the approval of bids, the Contractor shall formalize this list by completing and submitting the electronic Purchase Order Summary Form provided by KDE. Listing the supplier below means the Contractor is acknowledging authorization from the Supplier to include the Supplier in this bid.

**A maximum of 50 POs will be acceptable with each bid. Do not add supplemental sheets for additional POs to this document.**

**The bidder shall submit the list of Purchase Orders within four (4) days of the bid.**

	<b><u>SUPPLIER</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER DESCRIPTION</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER AMT.</u></b> (to be filled out by the Contractor)
1.			
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19.			

	<b><u>SUPPLIER</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER DESCRIPTION</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER AMT.</u></b> (to be filled out by the Contractor)
20.			
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43.			
44.			

	<b><u>SUPPLIER</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER DESCRIPTION</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER AMT.</u></b> (to be filled out by the Contractor)
45.			
46.			
47.			
48.			
49.			
50.			



**TIME LIMIT FOR EXECUTION OF CONTRACT DOCUMENTS:**

In the event that a bidder's proposal is accepted by the Owner and such bidder should fail to execute the contract within ten (10) consecutive days from the date of notification of the awarding of the contract, the Owner, at his option, may determine that the awardee has abandoned the contract. The bidder's proposal shall then become null and void, and the bid bond or certified check which accompanied it shall be forfeited to and become the property of the Owner as liquidated damages for failure to execute the contract.

The bidder hereby agrees that failure to submit herein above all required information and/or prices can cause disqualification of this proposal.

Submitted by:

NAME OF CONTRACTOR / BIDDER: \_\_\_\_\_

AUTHORIZED REPRESENTATIVE'S NAME: \_\_\_\_\_

Signature

AUTHORIZED REPRESENTATIVE'S NAME(printed): \_\_\_\_\_

AUTHORIZED REPRESENTATIVE'S TITLE: \_\_\_\_\_

***NOTICE: Bid security must accompany this proposal if the Base Bid price is greater than of ~~\$25,000.~~ \$100,000. (change effective June 3, 2019.)***

**This form shall not be modified.**

**KPC KEE ROOF SYSTEMS AND SERVICES (KEE ROOFING SYSTEMS-2022)**

**PROPOSAL CERTIFICATION**

Having read all the conditions and requirements of the request for bid and in compliance with all general and specific terms and conditions of the request for bid, in consideration of the detailed description attached hereto, and subject to the statements thereof, the undersigned agrees that, upon proper acceptance by KEDC, of any part of the offer within the time stipulated, a contract shall thereby be created in accordance with the specifications for that part of the offer accepted.

You must return the following documents for your bid response to be considered complete:

1. This bid certification form completed and signed;
2. Completed Pricing worksheets;
3. Proof of insurance; and
4. Resident bidder affidavit **OR** certificate of authority to transact business in the Commonwealth.

**CERTIFICATION**

---

\_\_\_\_\_  
**Bidding Firm**

\_\_\_\_\_  
**Authorizing Signature**

\_\_\_\_\_  
**Address**

\_\_\_\_\_  
**Printed Name**

\_\_\_\_\_  
**City, State, Zip**

\_\_\_\_\_  
**Email Address**

\_\_\_\_\_  
**Phone #**

\_\_\_\_\_  
**Fax #**

Item #	Item	Warranty Period	Comments	Quantity	Measuring Unit	Units	Unit Cost
A1	Allowance #1	N/A	2% Contingency Allowance per 012100	%			
A2	Allowance #2	N/A	Quarterly Project Increase Percentage due to construction cost Allowance per 012100	%			
1	Roof scan	N/A	Minimum charge for roof scan for roofs less than 25,000 sq ft. Written report of found results to be provided.	<25,000	N/A	Each	
2	Roof scan	N/A	Written report of found results to be provided	>25,000 but <50,000	square foot	100 s.f.	
3	Roof scan	N/A	Written report of found results to be provided	>50,000 but <100,000	square foot	100 s.f.	
4	Roof scan	N/A	Written report of found results to be provided	>100,000	square foot	100 s.f.	
5	Complete roof tear-off	N/A	Complete tear-off of ballast, single ply roof membrane and maximum of 3" rigid insulation to expose roof deck	>1,000 but <10,000	square foot	100 s.f.	
6	Complete roof tear-off	N/A	Complete tear-off of ballast, single ply roof membrane and maximum of 3" rigid insulation to expose roof deck	>10,000 but <25,000	square foot	100 s.f.	
7	Complete roof tear-off	N/A	Complete tear-off of ballast, single ply roof membrane and maximum of 3" rigid insulation to expose roof deck	>25,000 but <50,000	square foot	100 s.f.	
8	Complete roof tear-off	N/A	Complete tear-off of ballast, single ply roof membrane and maximum of 3" rigid insulation to expose roof deck	>50,000 but <100,000	square foot	100 s.f.	
9	Complete roof tear-off	N/A	Complete tear-off of ballast, single ply roof membrane and maximum of 3" rigid insulation to expose roof deck	>100,000	square foot	100 s.f.	
10	Complete roof tear-off	N/A	Complete tear-off of single ply roof and maximum of 3" rigid insulation to expose roof deck	>1,000 but <10,000	square foot	100 s.f.	
11	Complete roof tear-off	N/A	Complete tear-off of single ply roof and maximum of 3" rigid insulation to expose roof deck	>10,000 but <25,000	square foot	100 s.f.	
12	Complete roof tear-off	N/A	Complete tear-off of single ply roof and maximum of 3" rigid insulation to expose roof deck	>25,000 but <50,000	square foot	100 s.f.	
13	Complete roof tear-off	N/A	Complete tear-off of single ply roof and maximum of 3" rigid insulation to expose roof deck	>50,000 but <100,000	square foot	100 s.f.	
14	Complete roof tear-off	N/A	Complete tear-off of single ply roof and maximum of 3" rigid insulation to expose roof deck	>100,000	square foot	100 s.f.	
15	Complete roof tear-off	N/A	Complete tear-off of coal tar pitch built up roof and maximum of 3" rigid insulation to expose roof	>1,000 but <10,000	square foot	100 s.f.	
16	Complete roof tear-off	N/A	Complete tear-off of coal tar pitch built up roof and maximum of 3" rigid insulation to expose roof	>10,000 but <25,000	square foot	100 s.f.	
17	Complete roof tear-off	N/A	Complete tear-off of coal tar pitch built up roof and maximum of 3" rigid insulation to expose roof deck	>25,000 but <50,000	square foot	100 s.f.	
18	Complete roof tear-off	N/A	Complete tear-off of coal tar pitch built up roof and maximum of 3" rigid insulation to expose roof deck	>50,000 but <100,000	square foot	100 s.f.	
19	Complete roof tear-off	N/A	Complete tear-off of coal tar pitch built up roof and maximum of 3" rigid insulation to expose roof	>100,000	square foot	100 s.f.	

20	Complete roof tear- off	N/A	Complete tear-off of built up asphalt roof membrane and maximum of 3" insulation to expose roof deck	>1,000 but <10,000	square foot	100 s.f.
21	Complete roof tear- off	N/A	Complete tear-off of built up asphalt roof membrane and maximum of 3" insulation to expose roof deck	>10,000 but <25,000	square foot	100 s.f.
22	Complete roof tear- off	N/A	Complete tear-off of built up asphalt roof membrane and maximum of 3" insulation to expose roof deck	>25,000 but <50,000	square foot	100 s.f.
23	Complete roof tear- off	N/A	Complete tear-off of built up asphalt roof membrane and maximum of 3" insulation to expose roof deck	>50,000 but <100,000	square foot	100 s.f.
24	Complete roof tear- off	N/A	Complete tear-off of built up asphalt roof membrane and maximum of 3" insulation to expose roof deck	>100,000	square foot	100 s.f.
25	Complete roof tear- off	N/A	Complete tear-off modified bitumen roof membrane and maximum of 3" insulation to expose roof deck	>1,000 but <10,000	square foot	100 s.f.
26	Complete roof tear- off	N/A	Complete tear-off modified bitumen roof membrane and maximum of 3" insulation to expose roof deck	>10,000 but <25,000	square foot	100 s.f.
27	Complete roof tear- off	N/A	Complete tear-off modified bitumen roof membrane and maximum of 3" insulation to expose roof deck	>25,000 but <50,000	square foot	100 s.f.
28	Complete roof tear- off	N/A	Complete tear-off modified bitumen roof membrane and maximum of 3" insulation to expose roof deck	>50,000 but <100,000	square foot	100 s.f.
29	Complete roof tear- off	N/A	Complete tear-off modified bitumen roof membrane and maximum of 3" insulation to expose roof deck	>100,000	square foot	100 s.f.
30	Complete roof tear- off	N/A	Complete tear-off polyurethane (PUF) roof maximum of 3" insulation to expose roof deck	>1,000 but <10,000	square foot	100 s.f.
31	Complete roof tear- off	N/A	Complete tear-off polyurethane (PUF) roof maximum of 3" insulation to expose roof deck	>10,000 but <25,000	square foot	100 s.f.
32	Complete roof tear- off	N/A	Complete tear-off polyurethane (PUF) roof maximum of 3" insulation to expose roof deck	>25,000 but <50,000	square foot	100 s.f.
33	Complete roof tear- off	N/A	Complete tear-off polyurethane (PUF) roof maximum of 3" insulation to expose roof deck	>50,000 but <100,000	square foot	100 s.f.
34	Complete roof tear- off	N/A	Complete tear-off polyurethane (PUF) roof maximum of 3" insulation to expose roof deck	>100,000	square foot	100 s.f.
35	New membrane over existing		20 Single Ply Roofs: Cut membrane into sections not more than 100 s.f., (MB or BUR do not cut) mechanically attach 1/2" recovery board, Mechanically attach 36 mil Kee Membrane.	>1,000 but <10,000	square foot	100 s.f.
36	New membrane over existing		20 Single Ply Roofs: Cut membrane into sections not more than 100 s.f., (MB or BUR do not cut) mechanically attach 1/2" recovery board, Mechanically attach 36 mil Kee Membrane.	>10,000 but <25,000	square foot	100 s.f.

37	New membrane over existing	20 Single Ply Roofs: Cut membrane into sections not more than 100 s.f., (MB or BUR do not cut) mechanically attach 1/2" recovery board, mechanically attach 36 mil Kee Membrane.	>25,000 but <50,000	square foot	100 s.f.
38	New membrane over existing	20 Single Ply Roofs: Cut membrane into sections not more than 100 s.f., (MB or BUR do not cut) mechanically attach 1/2" recovery board , mechanically attach 36 mil Kee Membrane.	>50,000 but <100,000	square foot	100 s.f.
39	New membrane over existing	20 Single Ply Roofs: Cut membrane into sections not more than 100 s.f., (MB or BUR do not cut) mechanically attach 1/2" recovery board, mechanically attach 36 mil Kee Membrane.	>100,000	square foot	100 s.f.
40	New membrane over existing	20 MB or smooth BUR: Adhere 36 mil fleece back Kee Membrane in splatter cold adhesive (full coverage)	>1,000 but <10,000	square foot	100 s.f.
41	New membrane over existing	20 MB or Smooth BUR: Adhere 36 mil fleece back Kee Membrane in splatter cold adhesive (full coverage)	>10,000 but <25,000	square foot	100 s.f.
42	New membrane over existing	20 MB or Smooth BUR: Adhere 36 mil fleece back Kee Membrane in splatter cold adhesive (full coverage)	>25,000 but <50,000	square foot	100 s.f.
43	New membrane over existing	20 MB or Smooth BUR: Adhere 36 mil fleece back Kee Membrane in splatter cold adhesive (full coverage)	>50,000 but <100,000	square foot	100 s.f.
44	New membrane over existing	20 MB or smooth BUR: Adhere 36 mil fleece back Kee Membrane in splatter cold adhesive (full coverage)	>100,000	square foot	100 s.f.
45	New membrane sheet swap out	20 Single Ply Roofs: Move ballast aside to reuse later. Remove existing membrane and flashing. Install new 36 mil Kee membrane loose laid, install filter fabric and redistribute ballast evenly.	>1,000 but <10,000	square foot	100 s.f.
46	New membrane sheet swap out	20 Single Ply Roofs: Move ballast aside to reuse later. Remove existing membrane and flashing, install new 36 mil Kee membrane loose laid, install filter fabric and redistribute ballast evenly.	>10,000 but <25,000	square foot	100 s.f.
47	New membrane sheet swap out	20 Single Ply Roofs: Move ballast aside to reuse later. Remove existing membrane and flashing, install new 36 mil Kee membrane loose laid, install filter fabric and redistribute ballast evenly.	>25,000 but <50,000	square foot	100 s.f.
48	New membrane sheet swap out	20 Single Ply Roofs: Move ballast aside to reuse later. Remove existing membrane and flashing, install new 36 mil Kee membrane loose laid, install filter fabric and redistribute ballast evenly.	>50,000 but <100,000	square foot	100 s.f.
49	New membrane sheet swap out	20 Single Ply Roofs: Move ballast aside to reuse later. Remove existing membrane and flashing, install new 36 mil Kee membrane loose laid, install filter fabric and redistribute ballast evenly.	>100,000	square foot	100 s.f.

50 New 2 Ply Kee Hybrid roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard recovery board placed in insulation adhesive, base ply in cold adhesive and 36 mil fleece back membrane sheet in cold adhesive	>1,000 but <10,000	square foot	100 s.f.
51 New 2 Ply Kee Hybrid roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard placed in insulation adhesive, base ply in cold adhesive and 36 mil fleece back membrane sheet in cold adhesive	>10,000 but <25,000	square foot	100 s.f.
52 New 2 Ply Kee Hybrid roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard placed in insulation adhesive, base ply in cold adhesive and 36 mil fleece back membrane sheet in cold adhesive	>25,000 but <50,000	square foot	100 s.f.
53 New 2 Ply Kee Hybrid roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard placed in insulation adhesive, base ply in cold adhesive and 36 mil fleece back membrane sheet in cold adhesive	>50,000 but <100,000	square foot	100 s.f.
54 New 2 Ply Kee Hybrid roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard placed in insulation adhesive, base ply in cold adhesive and 36 mil fleece back membrane sheet in cold adhesive	>100,000	square foot	100 s.f.
55 New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing wood roof deck, mechanically attach 36 mil Kee membrane sheet	>1,000 but <10,000	square foot	100 s.f.
56 New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing wood roof deck, mechanically attach 36 mil Kee membrane sheet	>10,000 but <25,000	square foot	100 s.f.
57 New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing wood roof deck, mechanically attach 36 mil Kee membrane sheet	>25,000 but <50,000	square foot	100 s.f.
58 New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing wood roof deck, mechanically attach 36 mil Kee membrane sheet	>50,000 but <100,000	square foot	100 s.f.
59 New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing wood roof deck, mechanically attach 36 mil Kee membrane sheet	>100,000	square foot	100 s.f.

<b>60</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to existing concrete roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>1,000 but <10,000	square foot	100 s.f.
<b>61</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to existing concrete roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>10,000 but <25,000	square foot	100 s.f.
<b>62</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to existing concrete roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>25,000 but <50,000	square foot	100 s.f.
<b>63</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to existing concrete roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>50,000 but <100,000	square foot	100 s.f.
<b>64</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to existing concrete roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>100,000	square foot	100 s.f.
<b>65</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to mechanically fastened base sheet to existing gypsum or LWIC roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>1,000 but <10,000	square foot	100 s.f.
<b>66</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to mechanically fastened base sheet to existing gypsum or LWIC roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>10,000 but <25,000	square foot	100 s.f.
<b>67</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to mechanically fastened base sheet to existing gypsum or LWIC roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>25,000 but <50,000	square foot	100 s.f.
<b>68</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to mechanically fastened base sheet to existing gypsum or LWIC roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>50,000 but <100,000	square foot	100 s.f.
<b>69</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to mechanically fastened base sheet to existing gypsum or LWIC roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>100,000	square foot	100 s.f.

70	New Single Ply roof system	20	New roof system consisting of R-25 NVS LWIC to acceptable substrate, mechanically fastened base sheet over new LWIC, adhere 36 mil Kee membrane sheet in cold adhesive	>1,000 but <10,000	square foot	100 s.f.
71	New Single Ply roof system	20	New roof system consisting of R-25 NVS LWIC to acceptable substrate, mechanically fastened base sheet over new LWIC, adhere 36 mil Kee membrane sheet in cold adhesive	>10,000 but <25,000	square foot	100 s.f.
72	New Single Ply roof system	20	New roof system consisting of R-25 NVS LWIC to acceptable substrate, mechanically fastened base sheet over new LWIC, adhere 36 mil Kee membrane sheet in cold adhesive	>25,000 but <50,000	square foot	100 s.f.
73	New Single Ply roof system	20	New roof system consisting of R-25 NVS LWIC to acceptable substrate, mechanically fastened base sheet over new LWIC, adhere 36 mil Kee membrane sheet in cold adhesive	>50,000 but <100,000	square foot	100 s.f.
74	New Single Ply roof system	20	New roof system consisting of R-25 NVS LWIC to acceptable substrate, mechanically fastened base sheet over new LWIC, adhere 36 mil Kee membrane sheet in cold adhesive	>100,000	square foot	100 s.f.
75	New Single Ply roof system	20	New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard mechanically attached to metal roof deck, mechanically attached 36 mil Kee membrane	>1000 but <10,000	square foot	100 s.f.
76	New Single Ply roof system	20	New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard mechanically attached to metal roof deck, mechanically attached 36 mil Kee membrane	>10,000 but <25,000	square foot	100 s.f.
77	New Single Ply roof system	20	New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard mechanically attached to metal roof deck, mechanically attached 36 mil Kee membrane	>25,000 but <50,000	square foot	100 s.f.
78	New Single Ply roof system	20	New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard mechanically attached to metal roof deck, mechanically attached 36 mil Kee membrane	>50,000 but <100,000	square foot	100 s.f.
79	New Single Ply roof system	20	New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard mechanically attached to metal roof deck, mechanically attached 36 mil Kee membrane	>100,000	square foot	100 s.f.
80	Wood Deck Removal	N/A	Complete removal of existing wood deck and install new wood decking	>1,000 but <10,000	square foot	100 s.f.



81	Wood Deck Removal	N/A	Complete removal of existing wood deck and install new wood decking	>10,000 but <25,000	square foot	100 s.f.
82	Wood Deck Removal	N/A	Complete removal of existing wood deck and install new wood decking	>25,000 but <50,000	square foot	100 s.f.
83	Wood Deck Removal	N/A	Complete removal of existing wood deck and install new wood decking	>50,000 but <100,000	square foot	100 s.f.
84	Wood Deck Removal	N/A	Complete removal of existing wood deck and install new wood decking	>100,000	square foot	100 s.f.
85	Wood Deck Repair	N/A	Repair a wood deck	N/A	Square foot	100 s.f.
86	Light-Weight Concrete Deck Removal	N/A	Complete removal of existing light-weight concrete and install new light-weight concrete	>1,000 but <10,000	square foot	100 s.f.
87	Light-Weight Concrete Deck Removal	N/A	Complete removal of existing light-weight concrete and install new lightweight concrete	>10,000 but <25,000	square foot	100 s.f.
88	Light-Weight Concrete Deck Removal	N/A	Complete removal of existing light-weight concrete and install new lightweight concrete	>25,000 but <50,000	square foot	100 s.f.
89	Light-Weight Concrete Deck Removal	N/A	Complete removal of existing light-weight concrete and install new lightweight concrete	>50,000 but <100,000	square foot	100 s.f.
90	Light-Weight Concrete Deck Removal	N/A	Complete removal of existing light-weight concrete and install new lightweight concrete	>100,000	square foot	100 s.f.
91	Light-Weight Concrete Deck Removal	N/A	Repair existing Light- weight Concrete Deck	N/A	square foot	100 s.f.
92	Gypsum Deck Removal	N/A	Complete removal of existing Gypsum Deck	>1,000 but <10,000	square foot	100 s.f.
93	Gypsum Deck Removal	N/A	Complete removal of existing Gypsum Deck	>10,000 but <25,000	square foot	100 s.f.
94	Gypsum Deck Removal	N/A	Complete removal of existing Gypsum Deck	>25,000 but <50,000	square foot	100 s.f.
95	Gypsum Deck Removal	N/A	Complete removal of existing Gypsum Deck	>50,000 but <100,000	square foot	100 s.f.
96	Gypsum Deck Removal	N/A	Complete removal of existing Gypsum Deck	>100,000	square foot	100 s.f.
97	Gypsum Deck Repair	N/A	Repair existing Gypsum deck	N/A	square foot	100 s.f.
98	Wet Insulation	N/A	Remove existing wet insulation as determined from roof scan and replace with specified product	unlimited	square foot	100 s.f.
99	Roof Removal	N/A	Remove two roofs from existing assembly	unlimited	square foot	square foot
100	Ballast/Pea Gravel Removal	N/A	Remove ballast or pea gravel from existing single ply, Mod Bit, or BUR roof with a vacuum truck and dispose of gravel off site.	Unlimited	Square foot	Square foot
101	Tapered Insulation	N/A	¼" per ft tapered insulation system with a ½" minimum start	unlimited	board foot	board foot
102	Tapered Insulation	N/A	1/8" per ft tapered insulation system with a ½" minimum start	Unlimited	Board ft	Board foot
103	Walk Pads	N/A	Provide and install walkway pads	unlimited	square foot	square foot
105	Expansion Joint	N/A	Provide and install bellows type building expansion joint	unlimited	lineal foot	lineal foot
106	Wall Flashing	N/A	Install 12" wall flashing using Kee flashing membrane.	unlimited	lineal foot	Per 10 lineal foot
107	200 Edge Fascia		20 24 gauge gravel stop drip edge with a Kynar finish (standard color) and a 6" face	unlimited	lineal foot	Per 12 lineal foot
108	AT Edge Fascia		20 24 gauge gravel stop drip edge with a Kynar finish (standard color) and a 6" face	unlimited	lineal foot	per 12 lineal foot

109	Edge Metal Increase		20	Provide a premium upcharge to use 22 ga steel – standard colors – kynar in lieu of 24 ga steel (for lines 121-130)	unlimited	lineal foot	Per 12 lineal foot
110	Drip Edge		20	24 gauge gravel stop drip edge with a metal clad finish (standard color) and a 6" face	unlimited	lineal foot	lineal foot
111	Coping		20	24 gauge metal coping with a Kynar finish (standard color), 12" wide with a continuous cleat	unlimited	lineal foot	lineal foot
112	Coping		20	22 gauge metal coping with a Kynar finish (standard color), 12" wide with a continuous cleat	unlimited	lineal foot	lineal foot
113	Counter Flashing	N/A		24 gauge metal counter flashing with a Kynar finish (standard color), 4" face	unlimited	lineal foot	lineal foot
114	Counter Flashing	N/A		22 gauge metal counter flashing with a Kynar finish (standard color), 4" face	unlimited	lineal foot	lineal foot
115	Counter Flashing	N/A		16 oz copper counter flashing, 4" face	unlimited	lineal foot	lineal foot
116	Thru-wall Scupper	N/A		24 gauge metal thru-wall scupper with a metal clad finish (standard color) 8"	unlimited	lineal foot	lineal foot
117	Thru-wall Scupper	N/A		22 gauge metal thru-wall scupper with a metal clad finish (standard color) 8"	unlimited	lineal foot	lineal foot
118	Conductor Head	N/A		24 gauge metal conductor head with a Kynar finish (standard color)	unlimited	lineal foot	lineal foot
119	Conductor Head	N/A		22 gauge metal conductor head with a Kynar finish (standard color)	unlimited	lineal foot	lineal foot
120	Box Gutter	N/A		24 gauge metal 7" box gutter with a Kynar finish (standard color)	unlimited	lineal foot	lineal foot
121	Box Gutter	N/A		22 gauge metal 7" box gutter with a Kynar finish (standard color)	unlimited	lineal foot	lineal foot
122	Down Spouts	N/A		24 gauge metal 4" x 4" down spouts with a Kynar finish (standard color)	unlimited	lineal foot	lineal foot
123	Down Spouts	N/A		22 gauge metal 4" x 4" down spouts with a Kynar finish (standard color)	unlimited	lineal foot	lineal foot
124	Metal Wall Panels		25	24 ga steel Kynar – Standard Colors – 12" panels including 18 ga galv vented hat channel and Self Adhering Underlayment  FW Series Panel	>1,000 but <10,000	square foot	100 s.f.
125	Metal Wall Panels		25	24 ga steel Kynar – Standard Colors – 12" panels including 18 ga galv vented hat channel and Self Adhering Underlayment  FW Series Panel	>10,000 but <25,000	square foot	100 s.f.
126	Metal Wall Panels		25	24 ga steel Kynar – Standard Colors – 12" panels including 18 ga galv vented hat channel and Self Adhering Underlayment  FW Series Panel	>25,000 but <50,000	square foot	100 s.f.
127	Metal Wall Panels		25	24 ga steel Kynar – Standard Colors – 12" or 16" panels including 18 ga galv vented hat channel and Self Adhering Underlayment  FW Series Panel	>50,000 but <100,000	square foot	100 s.f.

128	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors – 12” panels including 18 ga galv vented hat channel and Self Adhering Underlayment	>100,000	square foot	100 s.f.
			FW Series Panel			
129	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors – 16” panels including 18 ga galv vented hat channel and Self Adhering Underlayment	>1,000 but <10,000	square foot	100 s.f.
			Wave Panel			
130	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors – 16” panels including 18 ga galv vented hat channel and Self Adhering Underlayment	>10,000 but <25,000	square foot	100 s.f.
			Wave Panel			
131	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors – 16” panels including 18 ga galv vented hat channel and Self Adhering Underlayment	>25,000 but <50,000	square foot	100 s.f.
			Wave Panel			
132	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors – 16” panels including 18 ga galv vented hat channel and Self Adhering Underlayment	>50,000 but <100,000	square foot	100 s.f.
			Wave Panel			
133	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors -16” panels including 18 ga galv vented hat channel and Self Adhering Underlayment	>100,000	square foot	100 s.f.
			Wave Panel			
134	Walls Increase		25 Provide a premium upcharge to use 22 ga steel – standard colors – kynar in lieu of 24 ga steel (for lines 124-133)	-	Square foot	-
135	Walls Increase		25 Provide a premium upcharge for a color selection included the manufacturer’s full selection of solid colors – kynar – no specialty finishes or textures (for lines 124-133)	-	Square foot	-
136	Walls Increase for Insulated Panels		25 Provide a premium upcharge (for lines 124- 133) for suppling insulated panels in lieu of non-insulated panels.	-	Square foot	-
137	Raise Thru-wall flashing	N/A	Cut out 3 rows of brick and install new 16 oz (minimum) copper thru-wall flashing and install new brick to match existing	unlimited	lineal foot	lineal foot
138	Repoint Deteriorated Mortar Joints	N/A	Remove deteriorated mortar joint and repoint to match existing joint	unlimited	lineal foot	lineal foot
139	Masonry Waterproofing	N/A	Clean existing masonry and install a waterproofing/ damp proofing	unlimited	lineal foot	lineal foot
140	Replacing Masonry	N/A	Removing existing masonry and replace with new to match	unlimited	square foot	Square foot
141	Pipe Flashing	N/A	Install .75" - 6" pipe flashing	unlimited	piece	each
142	Curb Flashing	N/A	Install 4' x 6' curb flashing using 36 mil Kee membrane in cold adhesive with prefabbed corners	unlimited	piece	each
143	Penetration flashing	N/A	Install liquid applied flashing around 4"-6" pipe	unlimited	piece	each
144	Drain Flashing	N/A	Install 60 mil non-reinforced flashing	unlimited	piece	each
145	Drain Strainer	N/A	Install new cast iron drain strainer	unlimited	piece	each
146	RetroFit Drain	N/A	Install an OMG Hercules RetroFit drain	Unlimited	Piece	each

147	Roof Increase	N/A	Provide premium percent increase - (for items 35-79, 170-174 if any) for roofs with 2 levels.	-	square foot	-
148	Roof Increase	N/A	Provide premium percent increase - (for items 35-79, 165-169 if any) for roofs with 3 levels.	-	square foot	-
149	Roof Increase	N/A	Provide premium percent increase - (for items 35-79, 165-169 if any) for roofs with more than 3 levels.	-	square foot	-
150	Roof Increase		25 Provide increase for installing 50 mil Kee membrane( in lieu of 36 mil)	-	Square foot	-
151	Roof Increase		30 Provide increase for 60 mil Kee Membrane (in lieu of 36 mil)	-	Square foot	-
152	Roof Increase		20 Provide increase for 36 mil Kee Fleece Back Membrane and adhesive	-	Square foot	-
153	Roof Increase		25 Provide increase for 50 mil Kee Fleece Back Membrane and adhesive		Square foot	
154	Roof Increase		30 Provide increase for 60 mil Kee Fleece Back Membrane and adhesive	-	Square foot	-
155	Roof Increase	N/A	Provide increase for spudding gravel surface from BUR and asphalt floodcoat and removing from roof area.	-	Square foot	-
156	Roof Increase	N/A	Provide premium for premium color on 36, 50 and 60 mil Kee Membranes		Square foot	
157	Roof Decrease	N/A	Decrease for not installing base sheet on LWIC, gypsum or other.		Square foot	
158	Roof Increase / Decrease	N/A	Provide a percent increase or decrease (for lines 35- 39 if any) for installing the exact system over a Smooth BUR or Mod Bit or Granular Surfaced Mod Bit roof where existing gravel removal is not needed only removing loose minerals if any and install the ½'' cover board in High Rise Foam Insulation Adhesive in lieu of mechanical fasteners.	-	Square foot	-
159	Travel	-	Unit price for traveling over 50 miles per man day	-	day	day
160	Complete Roof Tear- off	n/a	Complete Tear-off of shingles to expose wood deck (under 9:12 slope)	unlimited	square foot	100 s.f.
161	New Shingles	Limited shingle warranty	Install full self-adhering ice & Water shield and new shingles per spec	>1,000 but <10,000	square foot	100 s.f.
162	New Shingles	Limited shingle warranty	Install full self-adhering ice & Water shield and new shingles per spec	>10,000 but <25,000	square foot	100 s.f.
163	New Shingles	Limited shingle warranty	Install full self-adhering ice & Water shield and new shingles per spec	>25,000 but <50,000	square foot	100 s.f.
164	New Shingles	Limited shingle warranty	Install full self-adhering ice & Water shield and new shingles per spec	>50,000 but <100,000	square foot	100 s.f.
165	New Shingles	Limited shingle warranty	Install full self adhering ice & Water shield and new shingles per spec	>100,000	square foot	100 s.f.
166	Simulated Metal Single Ply Roofing		20 New roof to consist of mechanically attached flute fill insulation and 1/2" recovery board, adhere 36 mil Kee fleece back membrane in cold adhesive.	>1,000 but <10,000	square foot	100 s.f.

167	Simulated Metal Single Ply Roofing	20	New roof to consist of mechanically attached flute fill insulation and 1/2" recovery board, adhere 36 mil Kee fleece back membrane in cold adhesive.	>10,000 but <25,000	square foot	100 s.f.
168	Simulated Metal Single Ply Roofing	20	New roof to consist of mechanically attached flute fill insulation and 1/2" recovery board, adhere 36 mil Kee fleece back membrane in cold adhesive.	>25,000 but <50,000	square foot	100 s.f.
169	Simulated Metal Single Ply Roofing	20	New roof to consist of mechanically attached flute fill insulation and 1/2" recovery board, adhere 36 mil Kee fleece back membrane in cold adhesive.	>50,000 but <100,000	square foot	100 s.f.
170	Simulated Metal Single Ply Roofing	20	New roof to consist of mechanically attached flute fill insulation and 1/2" recovery board, adhere 36 mil Kee fleece back membrane in cold adhesive.	>100,000	square foot	100 s.f.
171	Simulated Metal Single Ply Roofing Increase		Provide an Increase to install simulated ribs.	-	lineal foot	100 l.f.
172	Metal Soffit Panels	25	Unit cost to install flush metal soffit panels, 24 gauge kynar.	-	Square foot	-
			FW Panel			
173	Access Ladders		Roof ladder, security ladder guard			EA
174	Access Ladders		Roof ladder, steel or aluminum bolted to concrete, 20 feet and up, with cage; with intermediate landings as required by Code			EA
175	Access Ladders		Roof ladder, steel, bolted to concrete, up to 20 feet, without cage			EA
176	Professional Services		Asbestos Core Testing and analysis (testing only, excludes labor for sampling and repair)	Unlimited	Per sample / one core cut	EA
177	Professional Services		Aerial Roof Survey - Roof Pictures & Drawings Including Geometries, Slope, Calculated Area and Perimeter Measurements	>1,000 but <10,000	square foot	EA
178	Professional Services		Aerial Roof Survey - Roof Pictures & Drawings Including Geometries, Slope, Calculated Area and Perimeter Measurements	>10,000 but <25,000	square foot	EA
179	Professional Services		Aerial Roof Survey - Roof Pictures & Drawings Including Geometries, Slope, Calculated Area and Perimeter Measurements	>25,000 but <50,000	square foot	EA
180	Professional Services		Aerial Roof Survey - Roof Pictures & Drawings Including Geometries, Slope, Calculated Area and Perimeter Measurements	>50,000 but <100,000	square foot	EA
181	Professional Services		Aerial Roof Survey - Roof Pictures & Drawings Including Geometries, Slope, Calculated Area and Perimeter Measurements	>100,000	square foot	EA
182	Professional Services		Visual Roof Survey with core cuts (one per roof section) and photo report including findings, delivered and stored via an electronic data base.	>1,000 but <10,000	square foot	EA
183	Professional Services		Visual Roof Survey with core cuts (one per roof section) and photo report including findings, delivered and stored via an electronic data base.	>10,000 but <25,000	square foot	EA

184	Professional Services	Visual Roof Survey with core cuts (one per roof section) and photo report including findings, delivered and stored via an electronic data base.	>25,000 but <50,000	square foot	EA		
185	Professional Services	Visual Roof Survey with core cuts (one per roof section) and photo report including findings, delivered and stored via an electronic data base.	>50,000 but <100,000	square foot	EA		
186	Professional Services	Visual Roof Survey with core cuts (one per roof section) and photo report including findings, delivered and stored via an electronic data base.	>100,000	square foot	EA		
187	Professional Services	Shop drawings by roofing manufacturer including project specific details and roof plan.	>1,000 but <10,000	square foot	EA		
188	Professional Services	Roof Fastener Pull Tests	Unlimited	Square foot	EA		
189	Professional Services	Wind Uplift Design Calculations	unlimited	Square foot	Per project		
190	Professional Services	Roof or Gutter Drainage Capacity Calculations	Unlimited	Square foot	Per project		
191	Professional Services	On-Site Quality Control Inspections with Report from Manufacturer's Rep or RRO 2 Days per Week	Unlimited	Per Week	2 days		
192	Professional Services	Roof Asset Management with Reports and Budgeting Spreadsheets for capital planning (ie. 5- 10 year master roof plans)	Unlimited	Per School	One School		
193	Additional Insulation	Install 1" Additional	>1,000	square foot	100 s.f.		
194	Additional Insulation	Install 1" Additional	>10,000	square foot	100 s.f.		
195	Additional Insulation	Install 1" Additional Polyisocyanurate to Assembly	>25,000 but	square foot	100 s.f.		
196	Additional Insulation	Install 1" Additional	>50,000	square foot	100 s.f.		
197	Additional Insulation	Install 1" Additional	>100,000	square foot	100 s.f.		
198	Additional Insulation	Install 1.5" Additional Polyisocyanurate to Assembly Referenced in Line 35	>1,000 but <10,000		100 s.f.		
199	Additional Insulation	Install 1.5" Additional	>10,000		100 s.f.		
200	Additional Insulation	Install 1.5" Additional Polyisocyanurate to Assembly Referenced in Line 37	>25,000 but <50,000		100 s.f.		
201	Additional Insulation	Install 1.5" Additional Polyisocyanurate to Assembly Referenced in Line 38	>50,000 but <100,000		100 s.f.		
202	Additional Insulation	Install 1.5" Additional Polyisocyanurate to Assembly Referenced in Line 39	>100,000		100 s.f.		
203	Additional Insulation	Install 2" Additional Polyisocyanurate to Assembly Referenced in Line 35	>1,000 but <10,000	square foot	100 s.f.		
204	Additional Insulation	Install 2" Additional Polyisocyanurate to Assembly Referenced in Line 36	>10,000 but <25,000	square foot	100 s.f.		
205	Additional Insulation	Install 2" Additional Polyisocyanurate to Assembly Referenced in Line 37	>25,000 but <50,000	square foot	100 s.f.		
206	Additional Insulation	Install 2" Additional Polyisocyanurate to Assembly Referenced in Line 38	>50,000 but <100,000	square foot	100 s.f.		
207	Additional Insulation	Install 2" Additional Polyisocyanurate to Assembly Referenced in Line 39	>100,000	square foot	100 s.f.		
208	Additional Insulation	Install 2.5" Additional Polyisocyanurate to Assembly Referenced in Line 35	>1,000 but <10,000	square foot	100 s.f.		
209	Additional Insulation	Install 2.5" Additional Polyisocyanurate to Assembly Referenced in Line 36	>10,000 but <25,000	square foot	100 s.f.		

<b>210</b> Additional Insulation	Install 2.5" Additional Polyisocyanurate to Assembly Referenced in Line 37	>25,000 but <50,000	square foot	100 s.f.
<b>211</b> Additional Insulation	Install 2.5" Additional Polyisocyanurate to Assembly Referenced in Line 38	>50,000 but <100,000	square foot	100 s.f.
<b>212</b> Additional Insulation	Install 2.5" Additional Polyisocyanurate to Assembly Referenced in Line 39	>100,000	square foot	100 s.f.
<b>213</b> Additional Insulation	Install 3" Additional Polyisocyanurate to Assembly Referenced in Line 35	>1,000 but <10,000	square foot	100 s.f.
<b>214</b> Additional Insulation	Install 3" Additional Polyisocyanurate to Assembly Referenced in Line 36	>10,000 but <25,000	square foot	100 s.f.
<b>215</b> Additional Insulation	Install 3" Additional Polyisocyanurate to Assembly Referenced in Line 37	>25,000 but <50,000	square foot	100 s.f.
<b>216</b> Additional Insulation	Install 3" Additional Polyisocyanurate to Assembly Referenced in Line 38	>50,000 but <100,000	square foot	100 s.f.
<b>217</b> Additional Insulation	Install 3" Additional Polyisocyanurate to Assembly Referenced in Line 39	>100,000	square foot	100 s.f.
<b>218</b> 20 year warranty	20 Provide 20 year warranty	unlimited	square foot	Square foot
<b>219</b> 25 year warranty	25 Provide 25 year warranty (minimum requirements required)	unlimited	square foot	Square foot
<b>220</b> 30 year warranty	30 Provide 30 year warranty( minimum requirements required)	unlimited	square foot	Square foot

1. Single Ply Kee Membrane system over R-25 polyisocyanurate insulation as specified
2. Single Ply Kee Membrane over R-25 Lightweight concrete fill as specified.
3. Simulated Metal Roofing over R-25 polyisocyanurate insulation as specified.
4. Provide at least 2 prices and costs for reroofing projects that include removal of existing roof systems. (please specify existing roof system).

Item #	Item	Warranty Period	Comments	Quantity	Measuring Unit	Units	Unit Cost
A1	Allowance #1	N/A	2% Contingency Allowance per 012100	%			
A2	Allowance #2	N/A	Quarterly Project Increase Percentage due to construction cost Allowance per 012100	%			
1	Roof scan	N/A	Minimum charge for roof scan for roofs less than 25,000 sq ft. Written report of found results to be provided.	<25,000	N/A	Each	
2	Roof scan	N/A	Written report of found results to be provided	>25,000 but <50,000	square foot	100 s.f.	
3	Roof scan	N/A	Written report of found results to be provided	>50,000 but <100,000	square foot	100 s.f.	
4	Roof scan	N/A	Written report of found results to be provided	>100,000	square foot	100 s.f.	
5	Complete roof tear- off	N/A	Complete tear-off of ballast, single ply roof membrane and maximum of 3" rigid insulation to expose roof deck	>1,000 but <10,000	square foot	100 s.f.	
6	Complete roof tear- off	N/A	Complete tear-off of ballast, single ply roof membrane and maximum of 3" rigid insulation to expose roof deck	>10,000 but <25,000	square foot	100 s.f.	
7	Complete roof tear- off	N/A	Complete tear-off of ballast, single ply roof membrane and maximum of 3" rigid insulation to expose roof deck	>25,000 but <50,000	square foot	100 s.f.	
8	Complete roof tear- off	N/A	Complete tear-off of ballast, single ply roof membrane and maximum of 3" rigid insulation to expose roof deck	>50,000 but <100,000	square foot	100 s.f.	
9	Complete roof tear- off	N/A	Complete tear-off of ballast, single ply roof membrane and maximum of 3" rigid insulation to expose roof deck	>100,000	square foot	100 s.f.	
10	Complete roof tear- off	N/A	Complete tear-off of single ply roof and maximum of 3" rigid insulation to expose roof deck	>1,000 but <10,000	square foot	100 s.f.	
11	Complete roof tear- off	N/A	Complete tear-off of single ply roof and maximum of 3" rigid insulation to expose roof deck	>10,000 but <25,000	square foot	100 s.f.	
12	Complete roof tear- off	N/A	Complete tear-off of single ply roof and maximum of 3" rigid insulation to expose roof deck	>25,000 but <50,000	square foot	100 s.f.	
13	Complete roof tear- off	N/A	Complete tear-off of single ply roof and maximum of 3" rigid insulation to expose roof deck	>50,000 but <100,000	square foot	100 s.f.	
14	Complete roof tear- off	N/A	Complete tear-off of single ply roof and maximum of 3" rigid insulation to expose roof deck	>100,000	square foot	100 s.f.	
15	Complete roof tear- off	N/A	Complete tear-off of coal tar pitch built up roof and maximum of 3" rigid insulation to expose roof	>1,000 but <10,000	square foot	100 s.f.	
16	Complete roof tear- off	N/A	Complete tear-off of coal tar pitch built up roof and maximum of 3" rigid insulation to expose roof	>10,000 but <25,000	square foot	100 s.f.	
17	Complete roof tear- off	N/A	Complete tear-off of coal tar pitch built up roof and maximum of 3" rigid insulation to expose roof	>25,000 but <50,000	square foot	100 s.f.	
18	Complete roof tear- off	N/A	Complete tear-off of coal tar pitch built up roof and maximum of 3" rigid insulation to expose roof	>50,000 but <100,000	square foot	100 s.f.	
19	Complete roof tear- off	N/A	Complete tear-off of coal tar pitch built up roof and maximum of 3" rigid insulation to expose roof	>100,000	square foot	100 s.f.	



20	Complete roof tear- off	N/A	Complete tear-off of built up asphalt roof membrane and maximum of 3" insulation to expose roof deck	>1,000 but <10,000	square foot	100 s.f.
21	Complete roof tear- off	N/A	Complete tear-off of built up asphalt roof membrane and maximum of 3" insulation to expose roof deck	>10,000 but <25,000	square foot	100 s.f.
22	Complete roof tear- off	N/A	Complete tear-off of built up asphalt roof membrane and maximum of 3" insulation to expose roof deck	>25,000 but <50,000	square foot	100 s.f.
23	Complete roof tear- off	N/A	Complete tear-off of built up asphalt roof membrane and maximum of 3" insulation to expose roof deck	>50,000 but <100,000	square foot	100 s.f.
24	Complete roof tear- off	N/A	Complete tear-off of built up asphalt roof membrane and maximum of 3" insulation to expose roof deck	>100,000	square foot	100 s.f.
25	Complete roof tear- off	N/A	Complete tear-off modified bitumen roof membrane and maximum of 3" insulation to expose roof deck	>1,000 but <10,000	square foot	100 s.f.
26	Complete roof tear- off	N/A	Complete tear-off modified bitumen roof membrane and maximum of 3" insulation to expose roof deck	>10,000 but <25,000	square foot	100 s.f.
27	Complete roof tear- off	N/A	Complete tear-off modified bitumen roof membrane and maximum of 3" insulation to expose roof deck	>25,000 but <50,000	square foot	100 s.f.
28	Complete roof tear- off	N/A	Complete tear-off modified bitumen roof membrane and maximum of 3" insulation to expose roof deck	>50,000 but <100,000	square foot	100 s.f.
29	Complete roof tear- off	N/A	Complete tear-off modified bitumen roof membrane and maximum of 3" insulation to expose roof deck	>100,000	square foot	100 s.f.
30	Complete roof tear- off	N/A	Complete tear-off polyurethane (PUF) roof maximum of 3" insulation to expose roof deck	>1,000 but <10,000	square foot	100 s.f.
31	Complete roof tear- off	N/A	Complete tear-off polyurethane (PUF) roof maximum of 3" insulation to expose roof deck	>10,000 but <25,000	square foot	100 s.f.
32	Complete roof tear- off	N/A	Complete tear-off polyurethane (PUF) roof maximum of 3" insulation to expose roof deck	>25,000 but <50,000	square foot	100 s.f.
33	Complete roof tear- off	N/A	Complete tear-off polyurethane (PUF) roof maximum of 3" insulation to expose roof deck	>50,000 but <100,000	square foot	100 s.f.
34	Complete roof tear- off	N/A	Complete tear-off polyurethane (PUF) roof maximum of 3" insulation to expose roof deck	>100,000	square foot	100 s.f.
35	New membrane over existing		20 Single Ply Roofs: Cut membrane into sections not more than 100 s.f., (MB or BUR do not cut) mechanically attach 1/2" recovery board, Mechanically attach 36 mil Kee Membrane.	>1,000 but <10,000	square foot	100 s.f.
36	New membrane over existing		20 Single Ply Roofs: Cut membrane into sections not more than 100 s.f., (MB or BUR do not cut) mechanically attach 1/2" recovery board, Mechanically attach 36 mil Kee Membrane.	>10,000 but <25,000	square foot	100 s.f.

37	New membrane over existing	20 Single Ply Roofs: Cut membrane into sections not more than 100 s.f., (MB or BUR do not cut) mechanically attach 1/2" recovery board, mechanically attach 36 mil Kee Membrane.	>25,000 but <50,000	square foot	100 s.f.
38	New membrane over existing	20 Single Ply Roofs: Cut membrane into sections not more than 100 s.f., (MB or BUR do not cut) mechanically attach 1/2" recovery board , mechanically attach 36 mil Kee Membrane.	>50,000 but <100,000	square foot	100 s.f.
39	New membrane over existing	20 Single Ply Roofs: Cut membrane into sections not more than 100 s.f., (MB or BUR do not cut) mechanically attach 1/2" recovery board, mechanically attach 36 mil Kee Membrane.	>100,000	square foot	100 s.f.
40	New membrane over existing	20 MB or smooth BUR: Adhere 36 mil fleece back Kee Membrane in splatter cold adhesive (full coverage)	>1,000 but <10,000	square foot	100 s.f.
41	New membrane over existing	20 MB or Smooth BUR: Adhere 36 mil fleece back Kee Membrane in splatter cold adhesive (full coverage)	>10,000 but <25,000	square foot	100 s.f.
42	New membrane over existing	20 MB or Smooth BUR: Adhere 36 mil fleece back Kee Membrane in splatter cold adhesive (full coverage)	>25,000 but <50,000	square foot	100 s.f.
43	New membrane over existing	20 MB or Smooth BUR: Adhere 36 mil fleece back Kee Membrane in splatter cold adhesive (full coverage)	>50,000 but <100,000	square foot	100 s.f.
44	New membrane over existing	20 MB or smooth BUR: Adhere 36 mil fleece back Kee Membrane in splatter cold adhesive (full coverage)	>100,000	square foot	100 s.f.
45	New membrane sheet swap out	20 Single Ply Roofs: Move ballast aside to reuse later. Remove existing membrane and flashing. Install new 36 mil Kee membrane loose laid, install filter fabric and redistribute ballast evenly.	>1,000 but <10,000	square foot	100 s.f.
46	New membrane sheet swap out	20 Single Ply Roofs: Move ballast aside to reuse later. Remove existing membrane and flashing, install new 36 mil Kee membrane loose laid, install filter fabric and redistribute ballast evenly.	>10,000 but <25,000	square foot	100 s.f.
47	New membrane sheet swap out	20 Single Ply Roofs: Move ballast aside to reuse later. Remove existing membrane and flashing, install new 36 mil Kee membrane loose laid, install filter fabric and redistribute ballast evenly.	>25,000 but <50,000	square foot	100 s.f.
48	New membrane sheet swap out	20 Single Ply Roofs: Move ballast aside to reuse later. Remove existing membrane and flashing, install new 36 mil Kee membrane loose laid, install filter fabric and redistribute ballast evenly.	>50,000 but <100,000	square foot	100 s.f.
49	New membrane sheet swap out	20 Single Ply Roofs: Move ballast aside to reuse later. Remove existing membrane and flashing, install new 36 mil Kee membrane loose laid, install filter fabric and redistribute ballast evenly.	>100,000	square foot	100 s.f.

<b>50</b> New 2 Ply Kee Hybrid roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard recovery board placed in insulation adhesive, base ply in cold adhesive and 36 mil fleece back membrane sheet in cold adhesive	>1,000 but <10,000	square foot	100 s.f.
<b>51</b> New 2 Ply Kee Hybrid roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard placed in insulation adhesive, base ply in cold adhesive and 36 mil fleece back membrane sheet in cold adhesive	>10,000 but <25,000	square foot	100 s.f.
<b>52</b> New 2 Ply Kee Hybrid roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard placed in insulation adhesive, base ply in cold adhesive and 36 mil fleece back membrane sheet in cold adhesive	>25,000 but <50,000	square foot	100 s.f.
<b>53</b> New 2 Ply Kee Hybrid roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard placed in insulation adhesive, base ply in cold adhesive and 36 mil fleece back membrane sheet in cold adhesive	>50,000 but <100,000	square foot	100 s.f.
<b>54</b> New 2 Ply Kee Hybrid roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard placed in insulation adhesive, base ply in cold adhesive and 36 mil fleece back membrane sheet in cold adhesive	>100,000	square foot	100 s.f.
<b>55</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing wood roof deck, mechanically attach 36 mil Kee membrane sheet	>1,000 but <10,000	square foot	100 s.f.
<b>56</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing wood roof deck, mechanically attach 36 mil Kee membrane sheet	>10,000 but <25,000	square foot	100 s.f.
<b>57</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing wood roof deck, mechanically attach 36 mil Kee membrane sheet	>25,000 but <50,000	square foot	100 s.f.
<b>58</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing wood roof deck, mechanically attach 36 mil Kee membrane sheet	>50,000 but <100,000	square foot	100 s.f.

59	New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing wood roof deck, mechanically attach 36 mil Kee membrane sheet	>100,000	square foot	100 s.f.
60	New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to existing concrete roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>1,000 but <10,000	square foot	100 s.f.
61	New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to existing concrete roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>10,000 but <25,000	square foot	100 s.f.
62	New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to existing concrete roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>25,000 but <50,000	square foot	100 s.f.
63	New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to existing concrete roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>50,000 but <100,000	square foot	100 s.f.
64	New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to existing concrete roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>100,000	square foot	100 s.f.
65	New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to mechanically fastened base sheet to existing gypsum or LWIC roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>1,000 but <10,000	square foot	100 s.f.
66	New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to mechanically fastened base sheet to existing gypsum or LWIC roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>10,000 but <25,000	square foot	100 s.f.
67	New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to mechanically fastened base sheet to existing gypsum or LWIC roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>25,000 but <50,000	square foot	100 s.f.
68	New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to mechanically fastened base sheet to existing gypsum or LWIC roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>50,000 but <100,000	square foot	100 s.f.

<b>69</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation adhered in insulation adhesive to mechanically fastened base sheet to existing gypsum or LWIC roof deck, adhere 36 mil Kee membrane sheet in cold adhesive	>100,000	square foot	100 s.f.
<b>70</b> New Single Ply roof system	20 New roof system consisting of R-25 NVS LWIC to acceptable substrate, mechanically fastened base sheet over new LWIC, adhere 36 mil Kee membrane sheet in cold adhesive	>1,000 but <10,000	square foot	100 s.f.
<b>71</b> New Single Ply roof system	20 New roof system consisting of R-25 NVS LWIC to acceptable substrate, mechanically fastened base sheet over new LWIC, adhere 36 mil Kee membrane sheet in cold adhesive	>10,000 but <25,000	square foot	100 s.f.
<b>72</b> New Single Ply roof system	20 New roof system consisting of R-25 NVS LWIC to acceptable substrate, mechanically fastened base sheet over new LWIC, adhere 36 mil Kee membrane sheet in cold adhesive	>25,000 but <50,000	square foot	100 s.f.
<b>73</b> New Single Ply roof system	20 New roof system consisting of R-25 NVS LWIC to acceptable substrate, mechanically fastened base sheet over new LWIC, adhere 36 mil Kee membrane sheet in cold adhesive	>50,000 but <100,000	square foot	100 s.f.
<b>74</b> New Single Ply roof system	20 New roof system consisting of R-25 NVS LWIC to acceptable substrate, mechanically fastened base sheet over new LWIC, adhere 36 mil Kee membrane sheet in cold adhesive	>100,000	square foot	100 s.f.
<b>75</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard mechanically attached to metal roof deck, mechanically attached 36 mil Kee membrane	>1000 but <10,000	square foot	100 s.f.
<b>76</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard mechanically attached to metal roof deck, mechanically attached 36 mil Kee membrane	>10,000 but <25,000	square foot	100 s.f.
<b>77</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard mechanically attached to metal roof deck, mechanically attached 36 mil Kee membrane	>25,000 but <50,000	square foot	100 s.f.
<b>78</b> New Single Ply roof system	20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard mechanically attached to metal roof deck, mechanically attached 36 mil Kee membrane	>50,000 but <100,000	square foot	100 s.f.

79	New Single Ply roof system		20 New roof system consisting of 2 layers of 2.5" polyisocyanurate insulation mechanically attached to existing metal roof deck, 1/2" coverboard mechanically attached to metal roof deck, mechanically attached 36 mil Kee Membrane	>100,000	square foot	100 s.f.
80	Wood Deck Removal	N/A	Complete removal of existing wood deck and install new wood decking	>1,000 but <10,000	square foot	100 s.f.
81	Wood Deck Removal	N/A	Complete removal of existing wood deck and install new wood decking	>10,000 but <25,000	square foot	100 s.f.
82	Wood Deck Removal	N/A	Complete removal of existing wood deck and install new wood decking	>25,000 but <50,000	square foot	100 s.f.
83	Wood Deck Removal	N/A	Complete removal of existing wood deck and install new wood decking	>50,000 but <100,000	square foot	100 s.f.
84	Wood Deck Removal	N/A	Complete removal of existing wood deck and install new wood decking	>100,000	square foot	100 s.f.
85	Wood Deck Repair	N/A	Repair a wood deck	N/A	Square foot	100 s.f.
86	Light-Weight Concrete Deck Removal	N/A	Complete removal of existing light-weight concrete and install new light-weight concrete	>1,000 but <10,000	square foot	100 s.f.
87	Light-Weight Concrete Deck Removal	N/A	Complete removal of existing light-weight concrete and install new lightweight concrete	>10,000 but <25,000	square foot	100 s.f.
88	Light-Weight Concrete Deck Removal	N/A	Complete removal of existing light-weight concrete and install new lightweight concrete	>25,000 but <50,000	square foot	100 s.f.
89	Light-Weight Concrete Deck Removal	N/A	Complete removal of existing light-weight concrete and install new lightweight concrete	>50,000 but <100,000	square foot	100 s.f.
90	Light-Weight Concrete Deck Removal	N/A	Complete removal of existing light-weight concrete and install new lightweight concrete	>100,000	square foot	100 s.f.
91	Light-Weight Concrete Deck Removal	N/A	Repair existing Light-weight Concrete Deck	N/A	square foot	100 s.f.
92	Gypsum Deck Removal	N/A	Complete removal of existing Gypsum Deck	>1,000 but <10,000	square foot	100 s.f.
93	Gypsum Deck Removal	N/A	Complete removal of existing Gypsum Deck	>10,000 but <25,000	square foot	100 s.f.
94	Gypsum Deck Removal	N/A	Complete removal of existing Gypsum Deck	>25,000 but <50,000	square foot	100 s.f.
95	Gypsum Deck Removal	N/A	Complete removal of existing Gypsum Deck	>50,000 but <100,000	square foot	100 s.f.
96	Gypsum Deck Removal	N/A	Complete removal of existing Gypsum Deck	>100,000	square foot	100 s.f.
97	Gypsum Deck Repair	N/A	Repair existing Gypsum deck	N/A	square foot	100 s.f.
98	Wet Insulation	N/A	Remove existing wet insulation as determined from roof scan and replace with specified product	unlimited	square foot	100 s.f.
99	Roof Removal	N/A	Remove two roofs from existing assembly	unlimited	square foot	square foot
100	Ballast/Pea Gravel Removal	N/A	Remove ballast or pea gravel from existing single ply, Mod Bit, or BUR roof with a vacuum truck and dispose of gravel off site.	Unlimited	Square foot	Square foot
101	Tapered Insulation	N/A	1/4" per ft tapered insulation system with a 1/2" minimum start	unlimited	board foot	board foot
102	Tapered Insulation	N/A	1/8" per ft tapered insulation system with a 1/2" minimum start	Unlimited	Board ft	Board foot
103	Walk Pads	N/A	Provide and install walkway pads	unlimited	square foot	square foot

105	Expansion Joint	N/A	Provide and install bellows type building expansion joint	unlimited	lineal foot	lineal foot
106	Wall Flashing	N/A	Install 12" wall flashing using Kee flashing membrane.	unlimited	lineal foot	Per 10 lineal foot
107	200 Edge Fascia		20 24 gauge gravel stop drip edge with a Kynar finish (standard color) and a 6" face	unlimited	lineal foot	Per 12 lineal foot
108	AT Edge Fascia		20 24 gauge gravel stop drip edge with a Kynar finish (standard color) and a 6" face	unlimited	lineal foot	per 12 lineal foot
109	Edge Metal Increase		20 Provide a premium upcharge to use 22 ga steel – standard colors – kynar in lieu of 24 ga steel (for lines 121-130)	unlimited	lineal foot	Per 12 lineal foot
110	Drip Edge		20 24 gauge gravel stop drip edge with a metal clad finish (standard color) and a 6" face	unlimited	lineal foot	lineal foot
111	Coping		20 24 gauge metal coping with a Kynar finish (standard color), 12" wide with a continuous cleat	unlimited	lineal foot	lineal foot
112	Coping		20 22 gauge metal coping with a Kynar finish (standard color), 12" wide with a continuous cleat	unlimited	lineal foot	lineal foot
113	Counter Flashing	N/A	24 gauge metal counter flashing with a Kynar finish (standard color), 4" face	unlimited	lineal foot	lineal foot
114	Counter Flashing	N/A	22 gauge metal counter flashing with a Kynar finish (standard color), 4" face	unlimited	lineal foot	lineal foot
115	Counter Flashing	N/A	16 oz copper counter flashing, 4" face	unlimited	lineal foot	lineal foot
116	Thru-wall Scupper	N/A	24 gauge metal thru-wall scupper with a metal clad finish (standard color) 8"	unlimited	lineal foot	lineal foot
117	Thru-wall Scupper	N/A	22 gauge metal thru-wall scupper with a metal clad finish (standard color) 8"	unlimited	lineal foot	lineal foot
118	Conductor Head	N/A	24 gauge metal conductor head with a Kynar finish (standard color)	unlimited	lineal foot	lineal foot
119	Conductor Head	N/A	22 gauge metal conductor head with a Kynar finish (standard color)	unlimited	lineal foot	lineal foot
120	Box Gutter	N/A	24 gauge metal 7" box gutter with a Kynar finish (standard color)	unlimited	lineal foot	lineal foot
121	Box Gutter	N/A	22 gauge metal 7" box gutter with a Kynar finish (standard color)	unlimited	lineal foot	lineal foot
122	Down Spouts	N/A	24 gauge metal 4" x 4" down spouts with a Kynar finish (standard color)	unlimited	lineal foot	lineal foot
123	Down Spouts	N/A	22 gauge metal 4" x 4" down spouts with a Kynar finish (standard color)	unlimited	lineal foot	lineal foot
124	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors – 12" panels including 18 ga galv vented hat channel and Self Adhering Underlayment  FW Series Panel	>1,000 but <10,000	square foot	100 s.f.
125	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors – 12" panels including 18 ga galv vented hat channel and Self Adhering Underlayment  FW Series Panel	>10,000 but <25,000	square foot	100 s.f.

126	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors – 12” panels including 18 ga galv vented hat channel and Self Adhering Underlayment	>25,000 but <50,000	square foot	100 s.f.
			FW Series Panel			
127	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors – 12” or 16” panels including 18 ga galv vented hat channel and Self Adhering Underlayment	>50,000 but <100,000	square foot	100 s.f.
			FW Series Panel			
128	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors – 12” panels including 18 ga galv vented hat channel and Self Adhering Underlayment	>100,000	square foot	100 s.f.
			FW Series Panel			
129	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors – 16” panels including 18 ga galv vented hat channel and Self Adhering Underlayment	>1,000 but <10,000	square foot	100 s.f.
			Wave Panel			
130	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors – 16” panels including 18 ga galv vented hat channel and Self Adhering Underlayment	>10,000 but <25,000	square foot	100 s.f.
			Wave Panel			
131	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors – 16” panels including 18 ga galv vented hat channel and Self Adhering Underlayment	>25,000 but <50,000	square foot	100 s.f.
			Wave Panel			
132	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors – 16” panels including 18 ga galv vented hat channel and Self Adhering Underlayment	>50,000 but <100,000	square foot	100 s.f.
			Wave Panel			
133	Metal Wall Panels		25 24 ga steel Kynar – Standard Colors -16” panels including 18 ga galv vented hat channel and Self Adhering Underlayment	>100,000	square foot	100 s.f.
			Wave Panel			
134	Walls Increase		25 Provide a premium upcharge to use 22 ga steel – standard colors – kynar in lieu of 24 ga steel (for lines 124-133)	-	Square foot	-
135	Walls Increase		25 Provide a premium upcharge for a color selection included the manufacturer’s full selection of solid colors – kynar – no specialty finishes or textures (for lines 124-133)	-	Square foot	-
136	Walls Increase for Insulated Panels		25 Provide a premium upcharge (for lines 124- 133) for suppling insulated panels in lieu of non-insulated panels.	-	Square foot	-
137	Raise Thru-wall flashing	N/A	Cut out 3 rows of brick and install new 16 oz (minimum) copper thru-wall flashing and install new brick to match existing	unlimited	lineal foot	lineal foot
138	Repoint Deteriorated Mortar Joints	N/A	Remove deteriorated mortar joint and repoint to match existing joint	unlimited	lineal foot	lineal foot
139	Masonry Waterproofing	N/A	Clean existing masonry and install a waterproofing/ damp	unlimited	lineal foot	lineal foot



140	Replacing Masonry	N/A	Removing existing masonry and replace with new to match	unlimited	square foot	Square foot
141	Pipe Flashing	N/A	Install .75" - 6" pipe flashing	unlimited	piece	each
142	Curb Flashing	N/A	Install 4' x 6' curb flashing using 36 mil Kee membrane in cold adhesive with prefabbed corners	unlimited	piece	each
143	Penetration flashing	N/A	Install liquid applied flashing around 4"-6" pipe	unlimited	piece	each
144	Drain Flashing	N/A	Install 60 mil non-reinforced flashing	unlimited	piece	each
145	Drain Strainer	N/A	Install new cast iron drain strainer	unlimited	piece	each
146	RetroFit Drain	N/A	Install an OMG Hercules RetroFit drain	Unlimited	Piece	each
147	Roof Increase	N/A	Provide premium percent increase - (for items 35-79, 170-174 if any) for roofs with 2 levels.	-	square foot	-
148	Roof Increase	N/A	Provide premium percent increase - (for items 35-79, 165-169 if any) for roofs with 3 levels.	-	square foot	-
149	Roof Increase	N/A	Provide premium percent increase - (for items 35-79, 165-169 if any) for roofs with more than 3 levels.	-	square foot	-
150	Roof Increase		25 Provide increase for installing 50 mil Kee membrane( in lieu of 36 mil)	-	Square foot	-
151	Roof Increase		30 Provide increase for 60 mil Kee Membrane (in lieu of 36 mil)	-	Square foot	-
152	Roof Increase		20 Provide increase for 36 mil Kee Fleece Back Membrane and adhesive	-	Square foot	-
153	Roof Increase		25 Provide increase for 50 mil Kee Fleece Back Membrane and adhesive	-	Square foot	-
154	Roof Increase		30 Provide increase for 60 mil Kee Fleece Back Membrane and adhesive	-	Square foot	-
155	Roof Increase	N/A	Provide increase for spudding gravel surface from BUR and asphalt floodcoat and removing from roof area.	-	Square foot	-
156	Roof Increase	N/A	Provide premium for premium color on 36, 50 and 60 mil Kee Membranes	-	Square foot	-
157	Roof Decrease	N/A	Decrease for not installing base sheet on LWIC, gypsum or other.	-	Square foot	-
158	Roof Increase / Decrease	N/A	Provide a percent increase or decrease (for lines 35- 39 if any) for installing the exact system over a Smooth BUR or Mod Bit or Granular Surfaced Mod Bit roof where existing gravel removal is not needed only removing loose minerals if any and install the 1/2" cover board in High Rise Foam Insulation Adhesive in lieu of mechanical	-	Square foot	-
159	Travel	-	Unit price for traveling over 50 miles per man day	-	day	day
160	Complete Roof Tear- off	n/a	Complete Tear-off of shingles to expose wood deck (under 9:12 slope)	unlimited	square foot	100 s.f.
161	New Shingles	Limited shingle warranty	Install full self-adhering ice & Water shield and new shingles per spec	>1,000 but <10,000	square foot	100 s.f.
162	New Shingles	Limited shingle warranty	Install full self-adhering ice & Water shield and new shingles per spec	>10,000 but <25,000	square foot	100 s.f.
163	New Shingles	Limited shingle warranty	Install full self-adhering ice & Water shield and new shingles per spec	>25,000 but <50,000	square foot	100 s.f.

164	New Shingles	Limited shingle warranty	Install full self-adhering ice & Water shield and new shingles per spec	>50,000 but <100,000	square foot	100 s.f.
165	New Shingles	Limited shingle warranty	Install full self adhering ice & Water shield and new shingles per spec	>100,000	square foot	100 s.f.
166	Simulated Metal Single Ply Roofing		20 New roof to consist of mechanically attached flute fill insulation and 1/2" recovery board, adhere 36 mil Kee fleece back membrane in cold adhesive.	>1,000 but <10,000	square foot	100 s.f.
167	Simulated Metal Single Ply Roofing		20 New roof to consist of mechanically attached flute fill insulation and 1/2" recovery board, adhere 36 mil Kee fleece back membrane in cold adhesive.	>10,000 but <25,000	square foot	100 s.f.
168	Simulated Metal Single Ply Roofing		20 New roof to consist of mechanically attached flute fill insulation and 1/2" recovery board, adhere 36 mil Kee fleece back membrane in cold adhesive.	>25,000 but <50,000	square foot	100 s.f.
169	Simulated Metal Single Ply Roofing		20 New roof to consist of mechanically attached flute fill insulation and 1/2" recovery board, adhere 36 mil Kee fleece back membrane in cold adhesive.	>50,000 but <100,000	square foot	100 s.f.
170	Simulated Metal Single Ply Roofing		20 New roof to consist of mechanically attached flute fill insulation and 1/2" recovery board, adhere 36 mil Kee fleece back membrane in cold adhesive.	>100,000	square foot	100 s.f.
171	Simulated Metal Single Ply Roofing Increase		Provide an Increase to install simulated ribs.	-	lineal foot	100 l.f.
172	Metal Soffit Panels		25 Unit cost to install flush metal soffit panels, 24 gauge kynar.  FW Panel	-	Square foot	-
173	Access Ladders		Roof ladder, security ladder guard			EA
174	Access Ladders		Roof ladder, steel or aluminum bolted to concrete, 20 feet and up, with cage; with intermediate landings as required by Code			EA
175	Access Ladders		Roof ladder, steel, bolted to concrete, up to 20 feet, without cage			EA
176	Professional Services		Asbestos Core Testing and analysis (testing only, excludes labor for sampling and repair)	Unlimited	Per sample / one core cut	EA
177	Professional Services		Aerial Roof Survey - Roof Pictures & Drawings Including Geometries, Slope, Calculated Area and Perimeter	>1,000 but <10,000	square foot	EA
178	Professional Services		Aerial Roof Survey - Roof Pictures & Drawings Including Geometries, Slope, Calculated Area and Perimeter	>10,000 but <25,000	square foot	EA
179	Professional Services		Aerial Roof Survey - Roof Pictures & Drawings Including Geometries, Slope, Calculated Area and Perimeter	>25,000 but <50,000	square foot	EA
180	Professional Services		Aerial Roof Survey - Roof Pictures & Drawings Including Geometries, Slope, Calculated Area and Perimeter	>50,000 but <100,000	square foot	EA
181	Professional Services		Aerial Roof Survey - Roof Pictures & Drawings Including Geometries, Slope, Calculated Area and Perimeter	>100,000	square foot	EA

182	Professional Services	Visual Roof Survey with core cuts (one per roof section) and photo report including findings, delivered and stored via an electronic data base.	>1,000 but <10,000	square foot	EA		
183	Professional Services	Visual Roof Survey with core cuts (one per roof section) and photo report including findings, delivered and stored via an electronic data base.	>10,000 but <25,000	square foot	EA		
184	Professional Services	Visual Roof Survey with core cuts (one per roof section) and photo report including findings, delivered and stored via an electronic data base.	>25,000 but <50,000	square foot	EA		
185	Professional Services	Visual Roof Survey with core cuts (one per roof section) and photo report including findings, delivered and stored via an electronic data base.	>50,000 but <100,000	square foot	EA		
186	Professional Services	Visual Roof Survey with core cuts (one per roof section) and photo report including findings, delivered and stored via an electronic data base.	>100,000	square foot	EA		
187	Professional Services	Shop drawings by roofing manufacturer including project specific details and roof plan.	>1,000 but <10,000	square foot	EA		
188	Professional Services	Roof Fastener Pull Tests	Unlimited	Square foot	EA		
189	Professional Services	Wind Uplift Design Calculations	unlimited	Square foot	Per project		
190	Professional Services	Roof or Gutter Drainage Capacity Calculations	Unlimited	Square foot	Per project		
191	Professional Services	On-Site Quality Control Inspections with Report from Manufacturer's Rep or RRO 2 Days per Week	Unlimited	Per Week	2 days		
192	Professional Services	Roof Asset Management with Reports and Budgeting Spreadsheets for capital planning (ie. 5- 10 year master roof plans)	Unlimited	Per School	One School		
193	Additional Insulation	Install 1" Additional	>1,000	square foot	100 s.f.		
194	Additional Insulation	Install 1" Additional	>10,000	square foot	100 s.f.		
195	Additional Insulation	Install 1" Additional Polyisocyanurate to Assembly	>25,000 but	square foot	100 s.f.		
196	Additional Insulation	Install 1" Additional	>50,000	square foot	100 s.f.		
197	Additional Insulation	Install 1" Additional	>100,000	square foot	100 s.f.		
198	Additional Insulation	Install 1.5" Additional Polyisocyanurate to Assembly Referenced in Line 35	>1,000 but <10,000		100 s.f.		
199	Additional Insulation	Install 1.5" Additional	>10,000		100 s.f.		
200	Additional Insulation	Install 1.5" Additional Polyisocyanurate to Assembly Referenced in Line 37	>25,000 but <50,000		100 s.f.		
201	Additional Insulation	Install 1.5" Additional Polyisocyanurate to Assembly Referenced in Line 38	>50,000 but <100,000		100 s.f.		
202	Additional Insulation	Install 1.5" Additional Polyisocyanurate to Assembly Referenced in Line 39	>100,000		100 s.f.		
203	Additional Insulation	Install 2" Additional Polyisocyanurate to Assembly Referenced in Line 35	>1,000 but <10,000	square foot	100 s.f.		
204	Additional Insulation	Install 2" Additional Polyisocyanurate to Assembly Referenced in Line 36	>10,000 but <25,000	square foot	100 s.f.		
205	Additional Insulation	Install 2" Additional Polyisocyanurate to Assembly Referenced in Line 37	>25,000 but <50,000	square foot	100 s.f.		

206	Additional Insulation	Install 2" Additional Polyisocyanurate to Assembly Referenced in Line 38	>50,000 but <100,000	square foot	100 s.f.
207	Additional Insulation	Install 2" Additional Polyisocyanurate to Assembly Referenced in Line 39	>100,000	square foot	100 s.f.
208	Additional Insulation	Install 2.5" Additional Polyisocyanurate to Assembly Referenced in Line 35	>1,000 but <10,000	square foot	100 s.f.
209	Additional Insulation	Install 2.5" Additional Polyisocyanurate to Assembly Referenced in Line 36	>10,000 but <25,000	square foot	100 s.f.
210	Additional Insulation	Install 2.5" Additional Polyisocyanurate to Assembly Referenced in Line 37	>25,000 but <50,000	square foot	100 s.f.
211	Additional Insulation	Install 2.5" Additional Polyisocyanurate to Assembly Referenced in Line 38	>50,000 but <100,000	square foot	100 s.f.
212	Additional Insulation	Install 2.5" Additional Polyisocyanurate to Assembly Referenced in Line 39	>100,000	square foot	100 s.f.
213	Additional Insulation	Install 3" Additional Polyisocyanurate to Assembly Referenced in Line 35	>1,000 but <10,000	square foot	100 s.f.
214	Additional Insulation	Install 3" Additional Polyisocyanurate to Assembly Referenced in Line 36	>10,000 but <25,000	square foot	100 s.f.
215	Additional Insulation	Install 3" Additional Polyisocyanurate to Assembly Referenced in Line 37	>25,000 but <50,000	square foot	100 s.f.
216	Additional Insulation	Install 3" Additional Polyisocyanurate to Assembly Referenced in Line 38	>50,000 but <100,000	square foot	100 s.f.
217	Additional Insulation	Install 3" Additional Polyisocyanurate to Assembly Referenced in Line 39	>100,000	square foot	100 s.f.
218	20 year warranty	20 Provide 20 year warranty	unlimited	square foot	Square foot
219	25 year warranty	25 Provide 25 year warranty (minimum requirements required)	unlimited	square foot	Square foot
220	30 year warranty	30 Provide 30 year warranty (minimum requirements required)	unlimited	square foot	Square foot

1. Single Ply Kee Membrane system over R-25 polyisocyanurate insulation as specified
2. Single Ply Kee Membrane over R-25 Lightweight concrete fill as specified.
3. Simulated Metal Roofing over R-25 polyisocyanurate insulation as specified.
4. Provide at least 2 prices and costs for reroofing projects that include removal of existing roof systems. (please specify existing roof system).







# Kentucky Department of Education Version of AIA® Document A201™ – 2007

## General Conditions of the Contract for Construction

for the following PROJECT:  
*(Name and location or address)*

THE OWNER:  
*(Name, legal status and address)*

THE ARCHITECT:  
*(Name, legal status and address)*

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This version of AIA Document A201–2007 is modified by the Kentucky Department of Education. Publication of this version of AIA Document A201 does not imply the American Institute of Architects' endorsement of any modification by the Kentucky Department of Education. A comparative version of AIA Document A201–2007 showing additions and deletions by the Kentucky Department of Education is available for review on the Kentucky Department of Education Web site.

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

Init.



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## ARTICLE 1 GENERAL PROVISIONS

### § 1.1 Basic Definitions

#### § 1.1.1 The Contract Documents

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

#### § 1.1.2 The Contract

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

#### § 1.1.3 The Work

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

#### § 1.1.4 The Project

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

#### § 1.1.5 The Drawings

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

#### § 1.1.6 The Specifications

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

#### § 1.1.7 Instruments of Service

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

#### § 1.1.8 Initial Decision Maker

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

### § 1.2 Correlation and Intent of the Contract Documents

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

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

### § 1.3 Capitalization

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

### § 1.4 Interpretation

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

### § 1.5 Ownership and Use of Drawings, Specifications and Other Instruments of Service

§ 1.5.1 The Architect and the Architect’s consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect’s or Architect’s consultants’ reserved rights.

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

### § 1.6 Transmission of Data in Digital Form

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

## ARTICLE 2 OWNER

### § 2.1 General

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

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

### § 2.2 Information and Services Required of the Owner

#### § 2.2.1 (Not Used)

§ 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.2.4 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

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

### § 2.3 Owner's Right to Stop the Work

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

### § 2.4 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

## ARTICLE 3 CONTRACTOR

### § 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

### § 3.2 Review of Contract Documents and Field Conditions by Contractor

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

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for

information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

**§ 3.2.3** The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

**§ 3.2.4** If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

### **§ 3.3 Supervision and Construction Procedures**

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

**§ 3.3.2** The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

**§ 3.3.3** The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

### **§ 3.4 Labor and Materials**

**§ 3.4.1** Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

**§ 3.4.2** Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

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

### **§ 3.5 Warranty**

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further

warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

### § 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

### § 3.7 Permits, Fees, Notices and Compliance with Laws

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

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

### § 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

### § 3.8 Allowances

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

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

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

### § 3.9 Superintendent

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

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

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

### § 3.10 Contractor's Construction Schedules

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

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

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

### § 3.11 Documents and Samples at the Site

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

### § 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.

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

concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

### **§ 3.13 Use of Site**

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

### **§ 3.14 Cutting and Patching**

**§ 3.14.1** The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

**§ 3.14.2** The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

### **§ 3.15 Cleaning Up**

**§ 3.15.1** The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

**§ 3.15.2** If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

### **§ 3.16 Access to Work**

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

### **§ 3.17 Royalties, Patents and Copyrights**

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

### **§ 3.18 Indemnification**

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

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



## ARTICLE 4 ARCHITECT

### § 4.1 General

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

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

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

### § 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment, and, at the discretion of the Owner may be the Owner's representative during the one-year period for correction of Work described in Section 12.2. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

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

### § 4.2.4 Communications Facilitating Contract Administration

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

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance

with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

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

## ARTICLE 5 SUBCONTRACTORS

### § 5.1 Definitions

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

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

### § 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design)

proposed for each principal portion of the Work. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to any such proposed person or entity or (2) that the Architect requires additional time for review. Failure of the Owner or Architect to reply within the 14-day period shall constitute notice of no reasonable objection.

**§ 5.2.2** The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

**§ 5.2.3** If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

**§ 5.2.4** The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

### **§ 5.3 Subcontractual Relations**

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

### **§ 5.4 Contingent Assignment of Subcontracts**

**§ 5.4.1** Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

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

**§ 5.4.2** Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

**§ 5.4.3** Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

## ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

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

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

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

### § 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

### § 6.3 Owner's Right to Clean Up

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

## ARTICLE 7 CHANGES IN THE WORK

### § 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

§ 7.1.4 Proposed Change in the Work equal to or exceeding \$25,000 additive or deductive, shall be subject to approval by the Kentucky Department of Education prior to execution of the Change Order by the Owner.

## § 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

## § 7.3 Construction Change Directives

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

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

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

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit not to exceed fifteen (15%) of the net cost of the change. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

- .1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- .2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
- .5 Additional costs of supervision and field office personnel directly attributable to the change.

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

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

#### § 7.4 Minor Changes in the Work

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

### ARTICLE 8 TIME

#### § 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

#### § 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be

furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

### § 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration; or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

## ARTICLE 9 PAYMENTS AND COMPLETION

### § 9.1 Contract Sum

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

### § 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

### § 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage as stipulated in Section 9.3.4.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the

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Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

**§ 9.3.4** When Owner direct Purchase Orders are used, retainage that would otherwise be held on materials and equipment shall transfer to the Contractor, and the material suppliers will be paid the full amount of their invoices. The Owner shall retain ten percent (10%) from each Application for Payment, and an amount equal to ten percent (10%) of approved Purchase Order payments, up to fifty percent (50%) completion of the Work, then provided the Work is on schedule and satisfactory, and upon written request of the Contractor together with consent of surety and the recommendation of the Architect, the Owner shall approve a reduction in Retainage to five percent (5%) of the current Contract Sum plus Purchase Orders. No part of the five percent (5%) retainage shall be paid until after Substantial Completion of the Work, as defined in Section 9.8. herein. After Substantial Completion, if reasons for reduction in retainage are certified in writing by the Architect, a reduction to a lump sum amount less than the five percent (5%) retainage may be approved by the Owner when deemed reasonable. The minimum lump sum retainage shall be twice the estimated cost to correct deficient or incomplete work.

#### **§ 9.4 Certificates for Payment**

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

**§ 9.4.2** The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

#### **§ 9.5 Decisions to Withhold Certification**

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

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



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

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

#### § 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents or as required by state law, whichever is more restrictive, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor no later than seven days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

#### § 9.7 Failure of Payment

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

#### § 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The ability to occupy and utilize the Work or designated portion thereof shall require an

occupancy permit issued by the Kentucky Department of Housing, Building, and Construction and any other agencies that have statutory authority and approval requirements.

**§ 9.8.2** When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

**§ 9.8.3** Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

**§ 9.8.4** When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

**§ 9.8.5** The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

#### **§ 9.9 Partial Occupancy or Use**

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

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

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

#### **§ 9.10 Final Completion and Final Payment**

**§ 9.10.1** Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

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- .1 Upon receipt and approval of the final Application for Payment, for each Contract and Purchase Order, if any, the Architect will prepare, and the Architect and Owner shall complete their portion of the Kentucky Department of Education BG-4 Contract Closeout Form – 2013, and forward the board-approved BG-4 form to the Kentucky Department of Education with a copy of the final Certificate for Payment upon the Board authorizing the BG-4 form, accepting the Work, and approving final payment to the Contractor or Material Supplier.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

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

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

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

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

## ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

### § 10.1 Safety Precautions and Programs

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

### § 10.2 Safety of Persons and Property

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

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

#### § 10.2.8 Injury or Damage to Person or Property

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

#### § 10.3 Hazardous Materials

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.

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

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

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

#### § 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

### ARTICLE 11 INSURANCE AND BONDS

#### § 11.1 Contractor's Liability Insurance

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

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

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents. Such insurance shall be no less than the following amounts:

- |                      |  |
|----------------------|--|
| (1) Public Liability | \$200,000.00 one person/maximum each person<br>\$500,000.00 one accident/maximum each person |
| (2) Property Damage  | \$200,000.00 one accident/maximum<br>\$500,000.00 aggregate                                  |

§ 11.1.2.1 The insurance required by Section 11.1.1 shall be written for not less than the following limits, or greater if required by law:

- (1) Worker's Compensation:
  - a. State Statutory
  - b. Applicable Federal (e.g., Longshoreman's) Statutory
  - c. Employer's Liability \$500,000
- (2) Comprehensive or Commercial General Liability (including Premises-Operations; Independent Contractor's Protection; Product Liability and Completed Operations; Broad Form Property Damage):
  - a. General Aggregate (except Products-Completed Operations) \$1,000,000
  - b. Products-Completed Operations Aggregate \$1,000,000
  - c. Personal/Advertising Injury (per person/organization) \$1,000,000
  - d. Each Occurrence (Bodily Injury and Property Damage) \$1,000,000
  - e. Limit per Person Medical Expense \$10,000
  - f. Exclusions of Property in Contractors Care, Custody or Control will be eliminated.
  - g. Property Damage Liability Insurance will provide Coverage for Explosion, Collapse, and Underground Damage.
- (3) Contractual Liability:
  - a. General Aggregate \$1,000,000
  - b. Each Occurrence (Bodily Injury and Property Damage) \$1,000,000
- (4) Automobile Liability:
  - a. Bodily Injury \$500,000 Each Person  
\$1,000,000 Each Accident
  - b. Property Damage \$500,000 Each Accident, or  
a combined single limit of \$1,000,000
- (5) Liability coverage for the Owner, the Architect, the Architect's Consultants and others listed in the Supplementary Conditions will be provided (subject to customary exclusions for professional liability), by endorsement as additional insured's on the Contractor's Liability Policy.
- (6) Excess Liability Umbrella Form:
  - a. General Aggregate \$1,000,000
  - b. Each Occurrence \$1,000,000

§ 11.1.2.2 There shall be an endorsement in each of the above policies reading as follows: "It is hereby agreed that in the event of a claim arising under this policy, the company may not deny liability be reason of the insured being a state, county, municipal corporation or governmental agency."

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

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

#### § 11.2 Owner's Liability Insurance

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

#### § 11.3 Property Insurance

§ 11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

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

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

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

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

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or

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companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

#### **§ 11.3.2 Boiler and Machinery Insurance**

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

#### **§ 11.3.3 Loss of Use Insurance**

The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

**§ 11.3.4** If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

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

**§ 11.3.6** Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

**§ 11.3.7** Before an exposure to loss may occur, the Owner shall provide the Architect and the Kentucky Department of Education with certificates of insurance coverage required by this Section 11.3.

#### **§ 11.3.7 Waivers of Subrogation**

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

**§ 11.3.8** A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.



§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

§ 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.

#### § 11.4 Performance Bond and Payment Bond

§ 11.4.1 Unless otherwise provided, when the Contract Sum exceeds twenty-five thousand dollars (\$25,000) the Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder. A surety company authorized to do business in Kentucky shall execute bonds, and the cost thereof shall be included in the Contract Sum. Unless otherwise provided, the amount of each bond shall be equal to 100% of the Contract Sum plus Purchase Orders, or 100% of the Lump Sum Base Bid plus or minus accepted Alternates, whichever is greater.

§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

### ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

#### § 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

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

#### § 12.2 Correction of Work

##### § 12.2.1 Before or After Substantial Completion

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

##### § 12.2.2 After Substantial Completion

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

Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

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

### § 12.3 Acceptance of Nonconforming Work

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

## ARTICLE 13 MISCELLANEOUS PROVISIONS

### § 13.1 Governing Law

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

§ 13.1.1 None of the Contract Documents for this project shall be construed against the party preparing documents on the grounds that the party prepared or drafted the document, or any portion thereof.

### § 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

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

### § 13.3 Written Notice

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

**§ 13.4 Rights and Remedies**

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

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

**§ 13.5 Tests and Inspections**

**§ 13.5.1** Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

**§ 13.5.2** If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

**§ 13.5.3** If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

**§ 13.5.4** Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

**§ 13.5.5** If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

**§ 13.5.6** Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

**§ 13.6 Interest**

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as required by state law, or in the absence of law, at the legal rate prevailing at the time and place where the Project is located.

**§ 13.7 Time Limits on Claims**

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

**ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT**

**§ 14.1 Termination by the Contractor**

**§ 14.1.1** The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any

other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

#### § 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case

may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

#### § 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

#### § 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

### ARTICLE 15 CLAIMS AND DISPUTES

#### § 15.1 Claims

##### § 15.1.1 Definition

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

##### § 15.1.2 Notice of Claims

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

##### § 15.1.3 Continuing Contract Performance

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

##### § 15.1.4 Claims for Additional Cost

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

### § 15.1.5 Claims for Additional Time

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

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

### § 15.1.6 Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

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

### § 15.2 Initial Decision

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

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

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

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

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

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§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

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

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

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

### § 15.3 Mediation

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

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

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

### § 15.4 Arbitration

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

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

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

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

**§ 15.4.4 Consolidation or Joinder**

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

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

**§ 15.4.4.3** The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Contractor under this Agreement.

Sample





# Kentucky Department of Education Version of AIA<sup>®</sup> Document A101<sup>™</sup> – 2007

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



This version of AIA Document A101<sup>™</sup>–2007 is modified by the Kentucky Department of Education. Publication of this version of AIA Document A101–2007 does not imply the American Institute of Architects’ endorsement of any modification by the Kentucky Department of Education. A comparative version of AIA Document A101–2007 showing additions and deletions by the Kentucky Department of Education is available for review on the Kentucky Department of Education Web site.

Cite this document as “AIA Document A101<sup>™</sup>–2007, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum — KDE Version,” or “AIA Document A101<sup>™</sup>–2007 — KDE Version.”

# Kentucky Department of Education Version of AIA® Document A101 – 2007

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

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)*

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

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

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

The Owner and Contractor agree as follows.



This version of AIA Document A101–2007 is modified by the Kentucky Department of Education. Publication of this version of AIA Document A101 does not imply the American Institute of Architects' endorsement of any modification by the Kentucky Department of Education. A comparative version of AIA Document A101–2007 showing additions and deletions by the Kentucky Department of Education is available for review on the Kentucky Department of Education Web site.

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

Init.

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### ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Owner direct Purchase Orders, Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

### ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

### ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

**§ 3.1** The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.

*(Insert the date of commencement if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)*

If, prior to the commencement of the Work, the Owner requires time to file mortgages and other security interests, the Owner's time requirement shall be as follows:

**§ 3.2** The Contract Time shall be measured from the date of commencement.

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§ 3.3 The Contractor shall achieve Substantial Completion of the entire Work not later than ( ) days from the date of commencement, or as follows:  
*(Insert number of calendar days. Alternatively, a calendar date may be used when coordinated with the date of commencement. If appropriate, insert requirements for earlier Substantial Completion of certain portions of the Work. Either list requirements for earlier Substantial Completion here or refer to an exhibit attached to this Agreement.)*

Portion of Work

Substantial Completion Date

, subject to adjustments of this Contract Time as provided in the Contract Documents.

Liquidated Damages: As actual damages for delay in completion of Work are impossible to determine, the Contractor and his Surety shall be liable for and shall pay to the Owner the sum of

(\$ ), not as a penalty, but as fixed, agreed and liquidated damages for each calendar day of delay until the Contract Work is substantially completed as defined in the General Conditions of the Contract for Construction. The Owner shall have the right to deduct liquidated damages from money in hand otherwise due, or to become due, to the Contractor, or to sue and recover compensation for damages for failure to substantially complete the Work within the time stipulated herein. Said liquidated damages shall cease to accrue from the date of Substantial Completion.

**ARTICLE 4 CONTRACT SUM**

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor’s performance of the Contract. The Contract Sum shall be

(\$ ), subject to additions and deductions as provided in the Contract Documents.

*(List the base bid amount, sum of accepted alternates, total construction cost (the sum of base bid amount plus sum of accepted alternates), sum of Owner’s direct Purchase Orders. The Contract Sum shall equal the sum of Total Construction Cost, less Owner direct Purchase Orders. Either list this information here or refer to an exhibit attached to this Agreement.)*

	Amount
Base Bid	\$
Sum of Accepted Alternates	\$
Total Construction Cost (the sum of base bid amount plus sum of accepted alternates)	\$
Sum of Owner’s direct Purchase Orders	\$
Contract Sum (total construction cost less Owner direct Purchase Orders)	\$

Init.

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

*(State the numbers or other identification of 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. Either list alternates here or refer to an exhibit attached to this Agreement.)*

Number	Item Description	Amount
<b>Total of Alternates</b>		

§ 4.3 Unit prices, if any:

*(Identify and state the unit price; state quantity limitations, if any, to which the unit price will be applicable. Either list unit prices here or refer to an exhibit attached to this Agreement.)*

Item	Units and Limitations	Price per Unit (\$0.00)
------	-----------------------	-------------------------

§ 4.4 Allowances included in the Contract Sum, if any:

*(Identify allowance and state exclusions, if any, from the allowance price. Either list allowances here or refer to an exhibit attached to this Agreement.)*

Item	Price
------	-------

## ARTICLE 5 PAYMENTS

### § 5.1 PROGRESS PAYMENTS

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the \_\_\_\_\_ day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the \_\_\_\_\_ day of the \_\_\_\_\_ month. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than \_\_\_\_\_ ( \_\_\_\_\_ ) days after the Architect receives the Application for Payment.

State law (KRS 371.405) requires the Owner to pay undisputed Applications for Payment within forty-five (45) business days following receipt of the invoices. If the Owner fails to pay the Contractor within forty-five (45) business days following receipt of an undisputed Application for Payment, state law requires the Owner shall pay interest to the Contractor beginning on the forty-sixth business day after receipt of the Application for Payment, computed at the rate required by state law.

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- .1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of \_\_\_\_\_ percent ( \_\_\_\_\_ %). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Section 7.3.9 of AIA Document A201™-2007, General Conditions of the Contract for Construction — KDE Version;
- .2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of \_\_\_\_\_ percent ( \_\_\_\_\_ %);
- .3 Subtract the aggregate of previous payments made by the Owner; and
- .4 Subtract amounts, if any, for which the Architect has withheld or nullified a Certificate for Payment as provided in Section 9.5 of AIA Document A201-2007 — KDE Version.

§ 5.1.7 The progress payment amount determined in accordance with Section 5.1.6 shall be further modified under the following circumstances:

- .1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to the full amount of the Contract Sum, less such amounts as the Architect shall determine for incomplete Work, retainage applicable to such work and unsettled claims; and  
*(Section 9.8.5 of AIA Document A201-2007 — KDE Version requires release of applicable retainage upon Substantial Completion of Work with consent of surety, if any.)*

- .2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Section 9.10.3 of AIA Document A201–2007—KDE Version.

**§ 5.1.8** Reduction or limitation of retainage, if any, shall be as follows:

*When Owner direct Purchase Orders are used, retainage that would otherwise be held on materials and equipment shall transfer to the Contractor, and the material suppliers will be paid the full amount of their invoices. The Owner shall retain ten percent (10%) from each Application for Payment, and an amount equal to ten percent (10%) of approved Purchase Order payments, up to fifty percent (50%) completion of the Work, then provided the Work is on schedule and satisfactory, and upon written request of the Contractor together with consent of surety and the recommendation of the Architect, the Owner shall approve a reduction in Retainage to five percent (5%) of the current Contract Sum plus Purchase Orders. No part of the five percent (5%) retainage shall be paid until after Substantial Completion of the Work, as defined in the General Conditions of the Contract for Construction. After Substantial Completion, if reasons for reduction in retainage are certified in writing by the Architect, a reduction to a lump sum amount less than the five percent (5%) retainage may be approved by the Owner when deemed reasonable. The minimum lump sum retainage shall be twice the estimated cost to correct deficient or incomplete work.*

**§ 5.1.9** Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

**§ 5.2 FINAL PAYMENT**

**§ 5.2.1** Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 12.2.2 of AIA Document A201–2007 — KDE Version, and to satisfy other requirements, if any, which extend beyond final payment;
- .2 a final Certificate for Payment has been issued by the Architect; and
- .3 the Contractor provides the Owner with affidavits that all payrolls, bills for materials, supplies and equipment, and other indebtedness connected with the Work have been paid or otherwise satisfied, and with Consent of Surety for final payment.

**ARTICLE 6 DISPUTE RESOLUTION**

**§ 6.1 INITIAL DECISION MAKER**

The Architect will serve as Initial Decision Maker pursuant to Section 15.2 of AIA Document A201–2007 — KDE Version, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker.

*(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)*



## § 6.2 BINDING DISPUTE RESOLUTION

For any Claim subject to, but not resolved by, mediation pursuant to Section 15.3 of AIA Document A201–2007 — KDE Version, the method of binding dispute resolution shall be as follows:

*(Check the appropriate box. If the Owner and Contractor do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.)*

- Arbitration pursuant to Section 15.4 of AIA Document A201–2007 — KDE Version
- Litigation in a court of competent jurisdiction where the Project is located
- Other: *(Specify)*

## ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2007 — KDE Version.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2007 — KDE Version.

## ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2007 — KDE Version or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 Payments due and unpaid under the Contract shall bear interest from the date payment is due at such rate required by state law, or in the absence of law, at the legal rate prevailing at the time and place where the Project is located.  
*(Insert rate of interest agreed upon, if any.)*

§ 8.3 The Owner's representative:  
*(Name, address and other information)*

§ 8.4 The Contractor's representative:  
*(Name, address and other information)*

Init.

§ 8.5 Neither the Owner's nor the Contractor's representative shall be changed without ten days written notice to the other party.

§ 8.6 Other provisions:

#### ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 9.1.1 The Agreement is this executed AIA Document A101–2007, Standard Form of Agreement Between Owner and Contractor — KDE Version.

§ 9.1.2 The General Conditions are AIA Document A201–2007, General Conditions of the Contract for Construction — KDE Version.

§ 9.1.3 The Supplementary and other Conditions of the Contract:  
*(Either list Supplementary and other Conditions of the Contract here or refer to an exhibit attached to this Agreement.)*

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

§ 9.1.4 The Specifications:  
*(Either list the Specifications here or refer to an exhibit attached to this Agreement.)*

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

Init.

§ 9.1.5 The Drawings:

*(Either list the Drawings here or refer to an exhibit attached to this Agreement.)*

Number	Title	Date
--------	-------	------

§ 9.1.6 The Addenda, if any:

*(Either list the Addenda here or refer to an exhibit attached to this Agreement.)*

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

Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are also enumerated in this Article 9.

§ 9.1.7 Additional documents, if any, forming part of the Contract Documents:

- .1 AIA Document E201™–2007, Digital Data Protocol Exhibit, if completed by the parties, or the following
  
- .2 Other documents, if any, listed below:

Init.

*(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201–2007 — KDE Version provides that bidding requirements such as advertisement or invitation to bid, Instructions to Bidders, sample forms and the Contractor’s bid are not part of the Contract Documents unless enumerated in this Agreement. They should be listed here only if intended to be part of the Contract Documents.)*

- A. AIA Document A701–1997, Instructions to Bidders — KDE Version
- B. Contractor’s Form of Proposal
- C. KDE Purchase Order Summary Form

**ARTICLE 10 INSURANCE AND BONDS**

The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A201–2007 – KDE Version.

*(State bonding requirements, if any, and limits of liability for insurance required in Article 11 of AIA Document A201–2007 – KDE Version. Either list insurance and bond information here or refer to an exhibit attached to this Agreement.)*

Type of Insurance or Bond

Limit of Liability or Bond Amount (\$0.00)

This Agreement entered into as of the day and year first written above.

\_\_\_\_\_  
OWNER (Signature)

\_\_\_\_\_  
CONTRACTOR (Signature)

\_\_\_\_\_  
(Printed name and title)

\_\_\_\_\_  
(Printed name and title)

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# Kentucky Department of Education Version of AIA<sup>®</sup> Document B132<sup>™</sup> – 2009

## *Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition*



This version of AIA Document B132<sup>™</sup>–2009 is modified by the Kentucky Department of Education. Publication of this version of AIA Document B132–2009 does not imply the American Institute of Architects’ endorsement of any modification by the Kentucky Department of Education. A comparative version of AIA Document B132–2009 showing additions and deletions by the Kentucky Department of Education is available for review on the Kentucky Department of Education Web site.

Cite this document as “AIA Document B132<sup>™</sup>–2009, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition — KDE Version,” or “AIA Document B132<sup>™</sup>–2009 — KDE Version.”

# Kentucky Department of Education Version of AIA® Document B132™ – 2009

## *Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition*

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

BETWEEN the Architect's client identified as the Owner:  
*(Name, legal status, address and other information)*

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

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

The Construction Manager:  
*(Name, legal status, address and other information)*

The Owner and Architect agree as follows.



This version of AIA Document B132–2009 is modified by the Kentucky Department of Education. Publication of this version of AIA Document B132 does not imply the American Institute of Architects' endorsement of any modification by the Kentucky Department of Education. A comparative version of AIA Document B132–2009 showing additions and deletions by the Kentucky Department of Education is available for review on the Kentucky Department of Education Web site.

This document is intended to be used in conjunction with KDE versions of AIA Documents A132™–2009, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition; A232™–2009, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition; and C132™–2009, Standard Form of Agreement Between Owner and Construction Manager as Adviser.

AIA Document A232™–2009 — KDE Version is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

Init.

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2	ARCHITECT'S RESPONSIBILITIES
3	SCOPE OF ARCHITECT'S BASIC SERVICES
4	ADDITIONAL SERVICES
5	OWNER'S RESPONSIBILITIES
6	COST OF THE WORK
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8	CLAIMS AND DISPUTES
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10	MISCELLANEOUS PROVISIONS
11	COMPENSATION
12	SPECIAL TERMS AND CONDITIONS
13	SCOPE OF THE AGREEMENT

### ARTICLE 1 INITIAL INFORMATION

§ 1.1 This Agreement is based on the Initial Information set forth in this Section 1.1.

*(Note the disposition for the following items by inserting the requested information or a statement such as "not applicable," "unknown at time of execution" or "to be determined later by mutual agreement.")*

§ 1.1.1 The Owner's program for the Project:

*(Identify documentation or state the manner in which the program will be developed.)*

§ 1.1.2 The Project's physical characteristics:

*(Identify or describe, if appropriate, size, location, dimensions, or other pertinent information, such as geotechnical reports; site, boundary and topographic surveys; traffic and utility studies; availability of public and private utilities and services; legal description of the site; etc.)*

§ 1.1.3 The Owner's budget for the Cost of the Work, as defined in Section 6.1:

*(Provide total and, if known, a line item breakdown.)*

§ 1.1.4 The Owner's anticipated design and construction schedule:

- .1 Design phase milestone dates, if any:
  
- .2 Commencement of construction:
  
- .3 Substantial Completion date or milestone dates:
  
- .4 Other:

§ 1.1.5 The Owner intends to retain a Construction Manager adviser and:

*(Note that, if Multiple Prime Contractors are used, the term "Contractor" as referred to throughout this Agreement will be as if plural in number.)*

- One Contractor
- Multiple Prime Contractors
- Unknown at time of execution

§ 1.1.6 The Owner's requirements for accelerated or fast-track scheduling, multiple bid packages, or phased construction are set forth below:

*(List number and type of bid/procurement packages.)*

§ 1.1.7 Other Project information:

*(Identify special characteristics or needs of the Project not provided elsewhere, such as environmentally responsible design or historic preservation requirements.)*

§ 1.1.8 The Owner identifies the following representative in accordance with Section 5.4:

*(List name, address and other information.)*



§ 1.1.9 The persons or entities, in addition to the Owner's representative, who are required to review the Architect's submittals to the Owner are as follows:  
(List name, address and other information.)

§ 1.1.10 The Owner will retain the following consultants:  
(List name, legal status, address and other information.)

- .1 Construction Manager: The Construction Manager is identified on the cover page. If a Construction Manager has not been retained as of the date of this Agreement, state the anticipated date of retention:
  
- .2 Cost Consultant (if in addition to the Construction Manager):  
(If a Cost Consultant is retained, appropriate references to the Cost Consultant should be inserted in Sections 3.2.6, 3.2.7, 3.3.2, 3.3.3, 3.4.5, 3.4.6, 5.4, 6.3, 6.3.1, 6.4 and 11.6.)
  
- .3 Land Surveyor:
  
- .4 Geotechnical Engineer:
  
- .5 Civil Engineer:
  
- .6 Other consultants:  
(List any other consultants retained by the Owner, such as a Project or Program Manager, or scheduling consultant.)

§ 1.1.11 The Architect identifies the following representative in accordance with Section 2.3:  
(List name, address and other information.)

§ 1.1.12 The Architect will retain the consultants identified in Sections 1.1.12.1 and 1.1.12.2:  
(List name, legal status, address and other information.)

§ 1.1.12.1 Consultants retained under Basic Services:

.1 Structural Engineer:

.2 Mechanical Engineer:

.3 Electrical Engineer:

.4 Civil Engineer:

.5 Landscape Architect:

.6 Food Service Designer:

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§ 1.1.12.2 Consultants retained under Additional Services:

§ 1.1.13 Other Initial Information on which the Agreement is based:

§ 1.2 The Owner and Architect may rely on the Initial Information. Both parties, however, recognize that such information may materially change and, in that event, the Owner and the Architect shall appropriately adjust the schedule, the Architect's services and the Architect's compensation.

## ARTICLE 2 ARCHITECT'S RESPONSIBILITIES

§ 2.1 The Architect shall provide the professional services as set forth in this Agreement. The Architect shall also comply with 702 KAR 4:160, pertaining to services and actions required of the Architect.

§ 2.2 The Architect shall perform its services consistent with the professional skill and care ordinarily provided by architects practicing in the same or similar locality under the same or similar circumstances. The Architect shall perform its services as expeditiously as is consistent with such professional skill and care and the orderly progress of the Project.

§ 2.3 The Architect shall provide its services in conjunction with the services of a Construction Manager as described in AIA Document C132™–2009, Standard Form of Agreement Between Owner and Construction Manager as Advisor — KDE Version. The Architect shall not be responsible for actions taken by the Construction Manager.

§ 2.4 The Architect shall identify a representative authorized to act on behalf of the Architect with respect to the Project.

§ 2.5 Except with the Owner's knowledge and consent, the Architect shall not engage in any activity, or accept any employment, interest or contribution that would reasonably appear to compromise the Architect's professional judgment with respect to this Project.

§ 2.6 The Architect shall carry professional liability insurance in addition to insurance to protect themselves from claims under Worker's Compensation Acts, for claims for damages because of bodily injury, including death, to their employees, and for other liability normally covered by such insurance and shall furnish evidence of such insurance to the Owner.

§ 2.6.1 During the term of this Agreement, the Architect shall provide evidence of professional liability insurance coverage in the amounts stated in Section 2.6.2. In addition, the Architect agrees to attempt to maintain continuous professional liability coverage for the period of design and construction of this project, and for a period of two years following Substantial Completion, if such coverage is reasonably available at commercially affordable premiums. For the purposes of this Agreement, "reasonably available" and "commercially affordable" shall mean that more than half the architects practicing in the State are able to obtain such coverage.

§ 2.6.2 Professional liability coverage shall be provided in the following minimum amounts:

- |    |                                |   |
|----|--------------------------------|---|
| .1 | Projects \$1,000,000 or less   | \$500,000 per claim and<br>\$1,000,000 aggregate per annum.   |
| .2 | Projects exceeding \$1,000,000 | \$1,000,000 per claim and<br>\$2,000,000 aggregate per annum. |

§ 2.6.3 The Architect's Consultants shall carry professional liability coverage during the term of the Agreement as stated in Section 2.6.1, and shall furnish evidence of such insurance to the Owner. The minimum limit of liability for each of the Architect's Consultants is \$250,000 aggregate, except that structural design and mechanical-electrical-plumbing

consultants shall carry a minimum amount of \$1,000,000 aggregate for projects \$1,000,000, or less, and \$2,000,000 aggregate for projects exceeding \$1,000,000.

§ 2.6.4 The Architect shall carry Commercial General Liability Insurance with limits of \$500,000 per occurrence and \$1,000,000 aggregate. This policy shall be written or endorsed to include the following provisions:

- .1 The Owner shall be named as an additional insured,
- .2 Waiver of Subrogation,
- .3 Severability of Interest (Separation of Insureds), and
- .4 Cross Liability Endorsement.

§ 2.6.5 The Architect shall carry Worker's Compensation Insurance as required by statute, including Employers Liability, with limits of

- .1 \$100,000 each accident,
- .2 \$500,000 disease—policy limit, and
- .3 \$100,000 disease—each employee.

§ 2.6.6 The Architect shall carry Automobile Liability Insurance, including coverage for hired and leased vehicles, with limits of \$500,000 per occurrence, and Non-Owned Automobile Liability Insurance, including coverage for hired and leased vehicles, with limits of \$500,000 per occurrence.

§ 2.6.7 The Architect may use umbrella or excess liability insurance to achieve the required coverage for Commercial General Liability and Automobile Liability, provided that such umbrella or excess insurance results in the same type of coverage as required for the individual policies.

§ 2.6.8 The above indicated minimum coverages shall be subject to the terms, exclusions and conditions of the policies. The Architect shall provide Certificates of Insurance to the Owner upon execution of the Agreement and prior to commencement of services. The certificates will show the Owner as an additional insured on the Commercial General Liability, Automobile Liability, umbrella or excess policies.

§ 2.6.9 The Architect and the Architect's Consultants shall provide a notarized non-collusion affidavit on current Kentucky Department of Education form to the Owner upon execution of the Agreement and prior to commencement of services.

### ARTICLE 3 SCOPE OF ARCHITECT'S BASIC SERVICES

§ 3.1 The Architect's Basic Services consist of those described in Article 3 and include usual and customary structural, mechanical, and electrical engineering services, including civil engineering, landscape, and kitchen design services required for the Project. Services not set forth in this Article 3 are Additional Services.

§ 3.1.1 The Architect shall manage the Architect's services, consult with the Owner and the Construction Manager, research applicable design criteria, attend Project meetings, communicate with members of the Project team and report progress to the Owner.

§ 3.1.2 The Architect shall coordinate its services with those services provided by the Owner, the Construction Manager and the Owner's other consultants. The Architect shall be entitled to rely on the accuracy and completeness of services and information furnished by the Owner, the Construction Manager, and the Owner's other consultants. The Architect shall provide prompt written notice to the Owner if the Architect becomes aware of any error, omission or inconsistency in such services or information.

§ 3.1.3 As soon as practicable after the date of this Agreement, the Architect shall submit to the Owner and the Construction Manager a schedule of the Architect's services for inclusion in the Project schedule prepared by the Construction Manager. The schedule of the Architect's services shall include design milestone dates, anticipated dates when cost estimates or design reviews may occur, and allowances for periods of time required (1) for the Owner's review, (2) for the Construction Manager's review, (3) for the performance of the Owner's consultants, and (4) for approval of submissions by authorities having jurisdiction over the Project.

§ 3.1.4 The Architect shall submit information to the Construction Manager and participate in developing and revising the Project schedule as it relates to the Architect's services.

§ 3.1.5 Once the Owner and the Architect agree to the time limits established by the Project schedule, the Owner and the Architect shall not exceed them, except for reasonable cause.

§ 3.1.6 The Architect shall not be responsible for an Owner's directive or substitution, or for the Owner's acceptance of non-conforming Work, made without the Architect's approval.

§ 3.1.7 The Architect shall, at appropriate times, in coordination with the Construction Manager, contact the governmental authorities required to approve the Construction Documents and the entities providing utility services to the Project. In designing the Project, the Architect shall respond to applicable design requirements imposed by such governmental authorities and by such entities providing utility services.

§ 3.1.8 The Architect shall assist the Owner and Construction Manager in connection with the Owner's responsibility for filing documents required for the approval of governmental authorities having jurisdiction over the Project.

### § 3.2 Schematic Design Phase Services

§ 3.2.1 The Architect shall review the program and other information furnished by the Owner and Construction Manager, and shall review laws, codes, and regulations applicable to the Architect's services.

§ 3.2.2 The Architect shall prepare a preliminary evaluation of the Owner's program, schedule, budget for the Cost of the Work, Project site, and the proposed procurement or delivery method and other Initial Information, each in terms of the other, to ascertain the requirements of the Project. The Architect shall notify the Owner of (1) any inconsistencies discovered in the information, and (2) other information or consulting services that may be reasonably needed for the Project.

§ 3.2.3 The Architect shall present its preliminary evaluation to the Owner and Construction Manager and shall discuss with the Owner and Construction Manager alternative approaches to design and construction of the Project, including the feasibility of incorporating environmentally responsible design approaches. The Architect shall reach an understanding with the Owner regarding the requirements of the Project.

§ 3.2.4 Based on the Project requirements agreed upon with the Owner, the Architect shall prepare and present to the Owner and Construction Manager, for the Owner's approval, a preliminary design illustrating the scale and relationship of the Project components.

§ 3.2.5 Based on the Owner's approval of the preliminary design, the Architect shall prepare Schematic Design Documents for the Owner's approval and the Construction Manager's review. The Schematic Design Documents shall consist of drawings and other documents including a site plan, if appropriate, and preliminary building plans, sections and elevations; and may include some combination of study models, perspective sketches, or digital modeling. Preliminary selections of major building systems and construction materials shall be noted on the drawings or described in writing. For school Projects on new sites, the Architect shall provide a campus master plan with the Schematic Design Documents.

§ 3.2.5.1 The Architect shall consider environmentally responsible design alternatives, such as material choices and building orientation, together with other considerations based on program and aesthetics, in developing a design that is consistent with the Owner's program, schedule and budget for the Cost of the Work. The Owner may obtain other environmentally responsible design services under Article 4.

§ 3.2.5.2 The Architect shall consider with the Owner and the Construction Manager the value of alternative materials, building systems and equipment, together with other considerations based on program and aesthetics in developing a design for the Project that is consistent with the Owner's schedule and budget for the Cost of the Work. The Architect shall revise the scope of Work to be within the approved BG-1 estimate of Construction Cost, or advise the Owner to submit to the Kentucky Department of Education a revised BG-1 financial page requesting approval of additional financial support.

§ 3.2.6 The Architect shall submit the Schematic Design Documents to the Owner and the Construction Manager. The Architect shall meet with the Construction Manager to review the Schematic Design Documents.

§ 3.2.7 Upon receipt of the Construction Manager's review comments and cost estimate at the conclusion of the Schematic Design Phase, the Architect shall take action as required under Section 6.4, identify agreed upon adjustments to the Project's size, quality or budget, and request the Owner's approval of the Schematic Design Documents. If revisions to the Schematic Design Documents are required to comply with the Owner's budget for the Cost of the Work

at the conclusion of the Schematic Design Phase, the Architect shall incorporate the required revisions in the Design Development Phase.

§ 3.2.8 In the further development of the Drawings and Specifications during this and subsequent phases of design, the Architect shall be entitled to rely on the accuracy of the estimates of the Cost of the Work, which are to be provided by the Construction Manager under the Construction Manager's agreement with the Owner.

### § 3.3 Design Development Phase Services

§ 3.3.1 Based on the Owner's approval of the Schematic Design Documents, and on the Owner's authorization of any adjustments in the Project requirements and the budget for the Cost of the Work pursuant to Section 5.4, the Architect shall prepare Design Development Documents for the Owner's approval and the Construction Manager's review. The Design Development Documents shall be based upon information provided, and estimates prepared by, the Construction Manager and shall illustrate and describe the development of the approved Schematic Design Documents and shall consist of drawings and other documents including plans, sections, elevations, typical construction details, and diagrammatic layouts of building systems to fix and describe the size and character of the Project as to architectural, structural, mechanical and electrical systems, and such other elements as may be appropriate. The Design Development Documents shall also include outline specifications that identify major materials and systems and establish in general their quality levels.

§ 3.3.2 Prior to the conclusion of the Design Development Phase, the Architect shall submit the Design Development Documents to the Owner and the Construction Manager. The Architect shall meet with the Construction Manager to review the Design Development Documents.

§ 3.3.3 Upon receipt of the Construction Manager's information and estimate at the conclusion of the Design Development Phase, the Architect shall take action as required under Sections 6.5 and 6.6 and request the Owner's approval of the Design Development Documents.

### § 3.4 Construction Documents Phase Services

§ 3.4.1 Based on the Owner's approval of the Design Development Documents, and on the Owner's authorization of any adjustments in the Project requirements and the budget for the Cost of the Work, the Architect shall prepare Construction Documents for the Owner's approval and the Construction Manager's review. The Construction Documents shall illustrate and describe the further development of the approved Design Development Documents and shall consist of Drawings and Specifications setting forth in detail the quality levels of materials and systems and other requirements for the construction of the Work. The Owner and Architect acknowledge that in order to construct the Work the Contractor will provide additional information, including Shop Drawings, Product Data, Samples and other similar submittals, which the Architect shall review in accordance with Section 3.6.4.

§ 3.4.2 The Architect shall incorporate into the Construction Documents the design requirements of governmental authorities having jurisdiction over the Project.

§ 3.4.3 During the development of the Construction Documents, if requested by the Owner, the Architect shall advise the Owner and the Construction Manager in the development and preparation of (1) bidding and procurement information that describes the time, place and conditions of bidding, including bidding or proposal forms; (2) the form of agreement between the Owner and Contractor; and (3) the Conditions of the Contract for Construction (General, Supplementary and other Conditions); and (4) compile a project manual that includes the Conditions of the Contract for Construction and may include bidding requirements and sample forms.

§ 3.4.4 Prior to the conclusion of the Construction Documents Phase, the Architect shall submit the Construction Documents to the Owner and the Construction Manager. The Architect shall meet with the Construction Manager to review the Construction Documents.

§ 3.4.5 Upon receipt of the Construction Manager's information and estimate at the conclusion of the Construction Documents Phase, the Architect shall take action as required under Section 6.7 and request the Owner's approval of the Construction Documents. The Architect shall prepare the appropriate application forms and submit them with the required Construction Documents to the applicable governmental authorities having jurisdiction over the Project.

### § 3.5 Bidding or Negotiation Phase Services

#### § 3.5.1 General

The Architect shall assist the Owner and Construction Manager in establishing a list of prospective contractors. Following the Owner's and the Kentucky Department of Education's approval of the Construction Documents, the Architect shall assist the Owner and Construction Manager in (1) obtaining either competitive bids or negotiated proposals; (2) confirming responsiveness of bids or proposals; (3) determining the successful bid or proposal, if any; and (4) awarding and preparing contracts for construction. The Architect shall prepare the Advertisement for Bids and give it to the Owner for placement in the newspaper having the largest local circulation.

#### § 3.5.2 Competitive Bidding

§ 3.5.2.1 Bidding Documents shall consist of bidding requirements and proposed Contract Documents.

§ 3.5.2.2 The Architect shall assist the Owner and Construction Manager in bidding the Project by

- .1 facilitating the reproduction of Bidding Documents for distribution to prospective bidders,
- .2 participating in a pre-bid conference for prospective bidders,
- .3 preparing responses to questions from prospective bidders and providing clarifications and interpretations of the Bidding Documents in the form of addenda, and
- .4 providing a written evaluation of bids received and recommendations regarding an award of Contract(s) for Construction.

§ 3.5.2.3 The Architect shall consider requests for substitutions, if the Bidding Documents permit substitutions, and shall consult with the Construction Manager and prepare and distribute addenda identifying approved substitutions to all prospective bidders.

#### § 3.5.3 Negotiated Proposals

§ 3.5.3.1 Negotiated proposal procedures may only be utilized for emergency construction, for construction estimated to cost no more than \$20,000, or, for those Owners who have adopted the Kentucky Model Procurement Code, under the terms and conditions of KRS 45A.370, KRS 45A.375, KRS 45A.380, and KRS 45A.385. Proposal Documents shall consist of proposal requirements, and proposed Contract Documents.

§ 3.5.3.2 The Architect shall assist the Owner and Construction Manager in obtaining proposals by

- .1 facilitating the reproduction of Proposal Documents for distribution to prospective contractors, and requesting their return upon completion of the negotiation process;
- .2 participating in selection interviews with prospective contractors;
- .3 participating in negotiations with prospective contractors; and
- .4 providing a written evaluation of proposals received and recommendations regarding an award of Contract(s) for Construction.

§ 3.5.3.3 The Architect shall consider requests for substitutions, if the Proposal Documents permit substitutions, and shall consult with the Construction Manager and prepare and distribute addenda identifying approved substitutions to all prospective contractors.

### § 3.6 Construction Phase Services

#### § 3.6.1 General

§ 3.6.1.1 The Architect shall provide administration of the Contract between the Owner and the Contractor as set forth below and in AIA Document A232™-2009, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition — KDE Version. If the Owner and Contractor modify AIA Document A232-2009 — KDE Version, those modifications shall not affect the Architect's services under this Agreement unless the Owner and the Architect amend this Agreement.

§ 3.6.1.2 The Architect shall advise and consult with the Owner and Construction Manager during the Construction Phase Services. The Architect shall have authority to act on behalf of the Owner only to the extent provided in this Agreement. The Architect shall not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, nor shall the Architect be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect shall be responsible for the Architect's negligent acts or omissions, but shall not have control over or charge of, and shall not be responsible for, acts or omissions of the Construction Manager, or the Contractor or of any other persons or entities performing portions of the Work.

§ 3.6.1.3 Subject to Section 4.3, the Architect's responsibility to provide Construction Phase Services commences with the award of the Contract for Construction and terminates on the date the Architect issues the final Certificate for Payment, except for the Architect's obligation to conduct an inspection of Work and report prior to the expiration of one year from the date of Substantial Completion per Section 3.6.6.4.

### § 3.6.2 Evaluations of the Work

§ 3.6.2.1 The Architect shall visit the site at intervals appropriate to the stage of construction, or as otherwise required in Section 4.3.3, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine, in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect shall not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of the site visits, the Architect shall keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner and the Construction Manager (1) known deviations from the Contract Documents and from the most recent construction schedule, and (2) defects and deficiencies observed in the Work.

§ 3.6.2.2 The Architect has the authority to reject Work that does not conform to the Contract Documents and shall notify the Construction Manager about the rejection. Whenever the Architect considers it necessary or advisable, the Architect, upon written authorization from the Owner and notification to the Construction Manager, shall have the authority to require inspection or testing of the Work in accordance with the provisions of the Contract Documents, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees or other persons or entities performing portions of the Work.

§ 3.6.2.3 The Architect shall interpret and decide matters concerning performance under, and requirements of, the Contract Documents in consultation with the Construction Manager, Owner, or Contractor through the Construction Manager. The Architect's response to such requests shall be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 3.6.2.4 Interpretations and decisions of the Architect shall be consistent with the intent of and reasonably inferable from the Contract Documents and shall be in writing or in the form of drawings. When making such interpretations and decisions, the Architect shall endeavor to secure faithful performance by both Owner and Contractor, shall not show partiality to either, and shall not be liable for results of interpretations or decisions rendered in good faith. The Architect's decisions on matters relating to aesthetic effect shall be final if consistent with the intent expressed in the Contract Documents.

§ 3.6.2.5 Unless the Owner and Contractor designate another person to serve as an Initial Decision Maker, as that term is defined in AIA Document A232-2009 — KDE Version, the Architect shall render initial decisions on Claims between the Owner and Contractor as provided in the Contract Documents.

### § 3.6.3 Certificates for Payment to Contractor

§ 3.6.3.1 The Architect shall review and certify an application for payment not more frequently than monthly. Within seven days after the Architect receives an application for payment forwarded from the Construction Manager, the Architect shall review and certify the application as follows:

- .1 Where there is only one Contractor responsible for performing the Work, the Architect shall review the Contractor's Application and Certificate for Payment that the Construction Manager has previously reviewed and certified. The Architect shall certify the amount due the Contractor and shall issue a Certificate for Payment in such amount.
- .2 Where there are Multiple Prime Contractors responsible for performing different portions of the Project, the Architect shall review a Project Application and Project Certificate for Payment, with a Summary of Contractors' Applications for Payment that the Construction Manager has previously prepared, reviewed and certified. The Architect shall certify the amounts due the Contractors and shall issue a Project Certificate for Payment in the total of such amounts.

§ 3.6.3.2 The Architect's certification for payment shall constitute a representation to the Owner, based on (1) the Architect's evaluation of the Work as provided in Section 3.6.2, (2) the data comprising the Contractor's Application for Payment or the data comprising the Project Application for Payment, and (3) the recommendation of the



Construction Manager, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject (1) to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, (2) to results of subsequent tests and inspections, (3) to correction of minor deviations from the Contract Documents prior to completion, and (4) to specific qualifications expressed by the Architect.

§ 3.6.3.3 The issuance of a Certificate for Payment or a Project Certificate for Payment shall not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) ascertained how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 3.6.3.4 The Architect shall maintain a record of the applications and certificates for payment.

#### § 3.6.4 Submittals

§ 3.6.4.1 The Architect shall review the Construction Manager's Project submittal schedule and shall not unreasonably delay or withhold approval. The Architect's action in reviewing submittals transmitted by the Construction Manager shall be taken in accordance with the approved submittal schedule or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review.

§ 3.6.4.2 In accordance with the Architect-approved Project submittal schedule, and after the Construction Manager reviews, approves and transmits the submittals, the Architect shall review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of such submittals is not for the purpose of determining the accuracy and completeness of other information such as dimensions, quantities, and installation or performance of equipment or systems, which are the Contractor's responsibility. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 3.6.4.3 If the Contract Documents specifically require the Contractor to provide professional design services or certifications by a design professional related to systems, materials or equipment, the Architect shall specify the appropriate performance and design criteria that such services must satisfy. The Architect shall review shop drawings and other submittals related to the Work designed or certified by the design professional retained by the Contractor that bear such professional's seal and signature when submitted to the Architect. The Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals.

§ 3.6.4.4 After receipt of the Construction Manager's recommendations, and subject to the provisions of Section 4.3, the Architect shall review and respond to requests for information about the Contract Documents. The Architect, in consultation with the Construction Manager, shall set forth in the Contract Documents the requirements for requests for information. Requests for information shall include, at a minimum, a detailed written statement that indicates the specific Drawings or Specifications in need of clarification and the nature of the clarification requested. The Architect's response to such requests shall be made in writing within any time limits agreed upon, or otherwise with reasonable promptness. If appropriate, the Architect shall prepare and issue supplemental Drawings and Specifications in response to requests for information.

§ 3.6.4.5 The Architect shall maintain a record of submittals and copies of submittals transmitted by the Construction Manager in accordance with the requirements of the Contract Documents.

#### § 3.6.5 Changes in the Work

§ 3.6.5.1 The Architect shall review and sign, or take other appropriate action, on Change Orders and Construction Change Directives prepared by the Construction Manager for the Owner's approval and execution in accordance with the Contract Documents.

§ 3.6.5.2 The Architect may authorize 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 changes shall be effected by written order issued by the Architect through the Construction Manager.

§ 3.6.5.3 The Architect shall maintain records relative to changes in the Work.

**§ 3.6.6 Project Completion**

§ 3.6.6.1 The Architect, assisted by the Construction Manager, shall conduct inspections, after certification of Substantial Completion by the Construction Manager, to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion prepared by the Construction Manager; receive from the Construction Manager and review written warranties and related documents required by the Contract Documents and assembled by the Contractor; and, after receipt of a final Contractor’s Application and Certificate for Payment or a final Project Application and Project Certificate for Payment from the Construction Manager, issue a final Certificate for Payment based upon a final inspection indicating the Work complies with the requirements of the Contract Documents.

§ 3.6.6.2 The Architect’s inspections shall be conducted with the Owner and Construction Manager to check conformance of the Work with the requirements of the Contract Documents and to verify the accuracy and completeness of the list submitted by the Construction Manager and Contractor of Work to be completed or corrected.

§ 3.6.6.3 When the Work is found to be substantially complete by the Construction Manager and Architect, and after certification by the Construction Manager and the Architect, the Architect shall inform the Owner about the balance of the Contract Sum remaining to be paid the Contractor, including the amount to be retained from the Contract Sum, if any, for final completion or correction of the Work.

§ 3.6.6.4. Prior to the expiration of one year from the date of Substantial Completion, the Architect shall, without additional compensation, conduct an inspection with the Owner to review the facility operations and performance, and record any nonconforming Work, and shall submit a written report of nonconforming Work to the Contractor, Owner and the Kentucky Department of Education. At the discretion of the Owner and for Reimbursable Expenses, the Architect may be the Owner's agent during the one-year period after Substantial Completion.

§ 3.6.6.5 As a record of the Work as constructed, the Architect shall prepare and deliver to the Owner a set of drawings showing significant changes in the Work during construction, based upon the drawings maintained by the Construction Manager at the site during construction, other data furnished by the Construction Manager to the Architect, Addenda, Construction Change Directives and Change Orders.

**ARTICLE 4 ADDITIONAL SERVICES**

§ 4.1 Additional Services listed below are not included in Basic Services but may be required for the Project. The services described under this Article shall only be provided if authorized and confirmed in writing by the Owner and accompanied by a written Board of Education Order. The Architect shall provide the listed Additional Services only if specifically designated in the table below as the Architect’s responsibility, and the Owner shall compensate the Architect as provided in Section 11.2.

*(Designate the Additional Services the Architect shall provide in the second column of the table below. In the third column indicate whether the service description is located in Section 4.2 or in an attached exhibit. If in an exhibit, identify the exhibit.)*

Services	Responsibility (Architect, Owner or Not Provided)	Location of Service Description (Section 4.2 below or in an exhibit attached to this document and identified below)
§ 4.1.1 Programming (B202™–2009)		
§ 4.1.2 Multiple preliminary designs		
§ 4.1.3 Measured drawings		
§ 4.1.4 Existing facilities surveys		
§ 4.1.5 (Not Used)		
§ 4.1.6 Building information modeling		

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Services	Responsibility (Architect, Owner or Not Provided)	Location of Service Description (Section 4.2 below or in an exhibit attached to this document and identified below)
§ 4.1.7 (Not Used)		
§ 4.1.8 (Not Used)		
§ 4.1.9 Architectural interior design (B252™–2007)		
§ 4.1.10 Value analysis (B204™–2007)		
§ 4.1.11 Detailed cost estimating		
§ 4.1.12 On-site project representation (B207™–2008)		
§ 4.1.13 Conformed construction documents		
§ 4.1.14 As-designed record drawings		
§ 4.1.15 (Not Used)		
§ 4.1.16 Post occupancy evaluation		
§ 4.1.17 Facility support services (B210™–2007)		
§ 4.1.18 Tenant-related services		
§ 4.1.19 Coordination of Owner’s consultants		
§ 4.1.20 (Not Used)		
§ 4.1.21 Security evaluation and planning (B206™–2007)		
§ 4.1.22 Commissioning (B211™–2007)		
§ 4.1.23 Extensive environmentally responsible design		
§ 4.1.24 LEED® certification (B214™–2012)		
§ 4.1.25 Historic preservation (B205™–2007)		
§ 4.1.26 Furniture, furnishings, and equipment design (B253™–2007)		

§ 4.2 Insert a description of each Additional Service designated in Section 4.1 as the Architect’s responsibility, if not further described in an exhibit attached to this document.

§ 4.3 Additional Services may be provided after execution of this Agreement, without invalidating the Agreement. Except for services required due to the fault of the Architect, any Additional Services provided in accordance with this Section 4.3 shall entitle the Architect to compensation pursuant to Section 11.3 and an appropriate adjustment in the Architect’s schedule.

§ 4.3.1 Upon recognizing the need to perform the following Additional Services, the Architect shall notify the Owner with reasonable promptness and explain the facts and circumstances giving rise to the need. The Architect shall not proceed to provide the following services until the Architect receives the Owner’s written authorization:

1. Services necessitated by a change in the Initial Information, previous instructions or recommendations given by the Construction Manager or the Owner, or approvals given by the Owner, or a material change in the Project including, but not limited to, size, quality, complexity, building systems, the Owner’s schedule or budget for Cost of the Work, constructability considerations, procurement or delivery method, or bid packages in addition to those listed in Section 1.1.6;

- .2 Making revisions in Drawings, Specifications, or other documents (as required pursuant to Section 6.7), when such revisions are required because the Construction Manager's estimate of the Cost of the Work exceeds the Owner's budget, except where such excess is due to changes initiated by the Architect in scope, capacities of basic systems, or the kinds and quality of materials, finishes or equipment;
- .3 Services necessitated by the Owner's request for extensive environmentally responsible design alternatives, such as unique system designs, in-depth material research, energy modeling, or LEED® certification;
- .4 Changing or editing previously prepared Instruments of Service necessitated by the enactment or revision of codes, laws or regulations or official interpretations;
- .5 Services necessitated by decisions of the Owner or Construction Manager not rendered in a timely manner or any other failure of performance on the part of the Owner, Construction Manager or the Owner's other consultants or contractors;
- .6 Preparing digital data for transmission to the Owner's consultants and contractors, or to other Owner authorized recipients;
- .7 Preparation of design and documentation for alternate bid or proposal requests proposed by the Owner or Construction Manager;
- .8 Preparation for, and attendance at, a public presentation, meeting or hearing;
- .9 Preparation for, and attendance at a dispute resolution proceeding or legal proceeding, except where the Architect is party thereto;
- .10 Evaluation of the qualifications of bidders or persons providing proposals;
- .11 Consultation concerning replacement of Work resulting from fire or other cause during construction; or
- .12 Assistance to the Initial Decision Maker, if other than the Architect.

§ 4.3.2 To avoid delay in the Construction Phase, the Architect shall provide the following Additional Services, notify the Owner with reasonable promptness, and explain the facts and circumstances giving rise to the need. If the Owner subsequently determines that all or parts of those services are not required, the Owner shall give prompt written notice to the Architect, and the Owner shall have no further obligation to compensate the Architect for those services:

- .1 Reviewing a Contractor's submittal out of sequence from the initial Project submittal schedule agreed to by the Architect;
- .2 Responding to the Contractor's requests for information that are not prepared in accordance with the Contract Documents or where such information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation;
- .3 Preparing Change Orders, and Construction Change Directives that require evaluation of Contractor's proposals and supporting data, or the preparation or revision of Instruments of Service;
- .4 Evaluating an extensive number of Claims as the Initial Decision Maker;
- .5 Evaluating substitutions proposed by the Owner, Construction Manager or Contractor and making subsequent revisions to Instruments of Service resulting therefrom; or
- .6 To the extent the Architect's Basic Services are affected, providing Construction Phase Services 60 days after (1) the date of Substantial Completion of the Work or (2) the anticipated date of Substantial Completion, identified in Initial Information, whichever is earlier.

§ 4.3.3 The Architect shall provide Construction Phase Services exceeding the limits set forth below as Additional Services. When the limits below are reached, the Architect shall notify the Owner:

- .1 ( ) reviews of each Shop Drawing, Product Data item, sample and similar submittals of the Contractor
- .2 ( ) visits to the site by the Architect over the duration of the Project during construction
- .3 ( ) inspections for any portion of the Work to determine whether such portion of the Work is substantially complete in accordance with the requirements of the Contract Documents
- .4 ( ) inspections for any portion of the Work to determine final completion

## ARTICLE 5 OWNER'S RESPONSIBILITIES

§ 5.1 The Owner shall provide full information regarding requirements for the Project, including Educational Specifications, interior and exterior space requirements and relationships, flexibility and expandability, special equipment and systems, site requirements, and the Owner's objectives, schedule and constraints. Within 15 days after receipt of a written request from the Architect, the Owner shall furnish the requested information as necessary and relevant for the Architect to evaluate, give notice of or enforce lien rights.

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§ 5.2 The Owner shall retain a Construction Manager to provide services, duties and responsibilities as described in AIA Document C132–2009, Standard Form of Agreement Between Owner and Construction Manager as Adviser — KDE Version. The Owner shall provide the Architect a copy of the executed agreement between the Owner and the Construction Manager, and any further modifications to the agreement.

§ 5.3 The Owner shall furnish the services of a Construction Manager that shall be responsible for creating the overall Project schedule. The Owner shall adjust the Project schedule, if necessary, as the Project proceeds.

§ 5.4 The Owner shall establish and periodically update an overall budget for the Project based on consultation with the Architect, Construction Manager, and the Owner's Fiscal Agent, as applicable, which shall include the Construction Cost, the Owner's other related costs and fees, and reasonable contingencies related to all of these costs. The Owner shall furnish the services of a Construction Manager that shall be responsible for preparing all estimates of the Cost of the Work. If the Owner significantly increases or decreases the Owner's budget for the Cost of the Work, the Owner shall notify the Architect and the Construction Manager. The Owner and the Architect, in consultation with the Construction Manager, shall thereafter agree to a corresponding change in the budget for the Cost of the Work or in the Project's scope and quality.

§ 5.4.1 The Owner acknowledges that accelerated, phased or fast-track scheduling provides a benefit, but also carries with it associated risks. Such risks include the Owner incurring costs for the Architect to coordinate and redesign portions of the Project affected by procuring or installing elements of the Project prior to the completion of all relevant Construction Documents, and costs for the Contractor to remove and replace previously installed Work. If the Owner selects accelerated, phased or fast-track scheduling, the Owner agrees to include in the budget for the Project sufficient contingencies to cover such costs.

§ 5.5 The Owner shall identify a representative authorized to act on the Owner's behalf with respect to the Project. The Owner, through Board Order, shall render decisions and approve the Architect's submittals in a timely manner in order to avoid unreasonable delay in the orderly and sequential progress of the Architect's services.

§ 5.6 The Owner shall furnish surveys to describe physical characteristics, legal limitations and utility locations for the site of the Project, and a written legal description of the site. The surveys and legal information shall include, as applicable, grades and lines of streets, alleys, pavements and adjoining property and structures; designated wetlands and flood plain limits as applicable; adjacent drainage; rights-of-way, restrictions, easements, encroachments, zoning, deed restrictions, boundaries and contours of the site; locations, dimensions and necessary data with respect to existing buildings, other improvements and trees; and information concerning available utility services and lines, both public and private, above and below grade, including inverts and depths. All the information on the survey shall be referenced to a Project benchmark.

§ 5.7 The Owner shall furnish the services of Geotechnical Engineers when such services are deemed necessary and requested by the Architect, the Architect's Consultants, or the Construction Manager, which may include but are not limited to test borings, test pits, determinations of soil bearing values, percolation tests, evaluations of hazardous materials, seismic evaluation, ground corrosion tests and resistivity tests, including necessary operations for anticipating subsoil conditions, with written reports and appropriate recommendations.

§ 5.8 The Owner shall coordinate the services of its own consultants with those services provided by the Architect. Upon the Architect's request, the Owner shall furnish copies of the scope of services in the contracts between the Owner and the Owner's consultants. The Owner shall furnish the services of consultants other than those designated in this Agreement, or authorize the Architect to furnish them as an Additional Service, when the Architect requests such services and demonstrates that they are reasonably required by the scope of the Project. The Owner shall require that its consultants maintain professional liability insurance and other liability insurance as appropriate to the services provided.

§ 5.9 The Owner shall furnish tests, inspections and reports required by law, government agencies or the Contract Documents, such as structural, mechanical, and chemical tests, tests for air and water pollution, and tests for hazardous materials.

§ 5.10 The Owner shall furnish all legal, insurance and accounting services, including auditing services, that may be reasonably necessary at any time for the Project.

§ 5.11 The Owner shall provide prompt written notice to the Architect and Construction Manager if the Owner becomes aware of any fault or defect in the Project, including errors, omissions or inconsistencies in the Architect's Instruments of Service.

§ 5.12 Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner shall endeavor to communicate with the Contractor through the Construction Manager, and shall contemporaneously provide the same communications to the Architect about matters arising out of or relating to the Contract Documents. Communications by and with the Architect's consultants shall be through the Architect.

§ 5.13 Before executing the Contract for Construction, the Owner shall coordinate the Architect's duties and responsibilities set forth in the Contract for Construction with the Architect's services set forth in this Agreement. The Owner shall provide the Architect a copy of the executed agreement between the Owner and Contractor, including the General Conditions of the Contract for Construction.

§ 5.14 The Owner shall provide the Architect access to the Project site prior to commencement of the Work and shall obligate the Construction Manager and Contractor to provide the Architect access to the Work wherever it is in preparation or progress.

#### ARTICLE 6 COST OF THE WORK

§ 6.1 The Cost of the Work shall be the total construction cost, or to the extent the Project is not completed, the estimated total construction cost recorded on the current BG-1 form to the Owner to construct all elements of the Project designed or specified by the Architect and shall include contractors' general conditions costs, overhead and profit. The Cost of the Work does include the compensation of the Construction Manager and Construction Manager's consultants. The Cost of the Work does not include the compensation of the Architect, the costs of the land, rights-of-way, financing, and contingencies for changes in the Work or other costs that are the responsibility of the Owner.

§ 6.2 The Owner's budget for the Cost of the Work is provided in Initial Information, and may be adjusted throughout the Project as required under Sections 5.4 and 6.4. Evaluations of the Owner's budget for the Cost of the Work represent the Architect's judgment as a design professional.

§ 6.3 The Owner shall require the Construction Manager to include appropriate contingencies for design, bidding or negotiating, price escalation, and market conditions in estimates of the Cost of the Work. The Architect shall be entitled to rely on the accuracy and completeness of estimates of the Cost of the Work the Construction Manager prepares as the Architect progresses with its Basic Services. The Architect shall prepare, as an Additional Service, revisions to the Drawings, Specifications or other documents required due to the Construction Manager's inaccuracies or incompleteness in preparing cost estimates. The Architect may review the Construction Manager's estimates solely for the Architect's guidance in completion of its services, however, the Architect shall report to the Owner any material inaccuracies and inconsistencies noted during any such review.

§ 6.3.1 If the Architect is providing detailed cost estimating services as an Additional Service, and a discrepancy exists between the Construction Manager's cost estimates and the Architect's cost estimates, the Architect and the Construction Manager shall work cooperatively to conform the cost estimates to one another.

§ 6.4 If, prior to the conclusion of the Design Development Phase, the Construction Manager's estimate of the Cost of the Work exceeds the Owner's budget for the Cost of the Work, the Architect, in consultation with the Construction Manager, shall make appropriate recommendations to the Owner to adjust the Project's size, quality or budget, and the Owner shall cooperate with the Architect in making such adjustments.

§ 6.5 If the estimate of the Cost of the Work at the conclusion of the Design Development Phase exceeds the Owner's budget for the Cost of the Work, the Owner shall

- .1 give written approval of an increase in the budget for the Cost of the Work and revise the BG-1 form accordingly;
- .2 in consultation with the Architect and Construction Manager, revise the Project program, scope, or quality as required to reduce the Cost of the Work; or
- .3 implement any other mutually acceptable alternative.

§ 6.6 If the Owner chooses to proceed under Section 6.5.2, the Architect, without additional compensation, shall incorporate the required modifications in the Construction Documents Phase as necessary to comply with the Owner's

budget for the Cost of the Work at the conclusion of the Design Development Phase Services, or the budget as adjusted under Section 6.5.1. The Architect's modification of the Construction Documents shall be the limit of the Architect's responsibility as a Basic Service under this Article 6.

§ 6.7 After incorporation of modifications under Section 6.6, the Architect shall, as an Additional Service, make any required revisions to the Drawings, Specifications or other documents necessitated by subsequent cost estimates that exceed the Owner's budget for the Cost of the Work, except when the excess is due to changes initiated by the Architect in scope, basic systems, or the kinds and quality of materials, finishes or equipment.

## ARTICLE 7 COPYRIGHTS AND LICENSES

§ 7.1 The Architect and the Owner warrant that in transmitting Instruments of Service, or any other information, the transmitting party is the copyright owner of such information or has permission from the copyright owner to transmit such information for its use on the Project. If the Owner and Architect intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions.

§ 7.2 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and shall retain all common law, statutory and other reserved rights, including copyrights. Submission or distribution of Instruments of Service to meet official regulatory requirements or for similar purposes in connection with the Project is not to be construed as publication in derogation of the reserved rights of the Architect and the Architect's consultants.

§ 7.3 Upon execution of this Agreement, the Architect grants to the Owner a nonexclusive license to use the Architect's Instruments of Service solely and exclusively for purposes of constructing, using, maintaining, altering and adding to the Project, provided that the Owner substantially performs its obligations, including prompt payment of all sums when due, under this Agreement. The Architect shall obtain similar nonexclusive licenses from the Architect's consultants consistent with this Agreement. The license granted under this section permits the Owner to authorize the Contractor, Construction Manager, Subcontractors, Sub-subcontractors, and material or equipment suppliers, as well as the Owner's consultants and separate contractors, to reproduce applicable portions of the Instruments of Service solely and exclusively for use in performing services or construction for the Project. If the Architect rightfully terminates this Agreement for cause as provided in Section 9.4, the license granted in this Section 7.3 shall terminate.

§ 7.3.1 In the event the Owner uses the Instruments of Service without retaining the authors of the Instruments of Service, the Owner releases the Architect and Architect's consultant(s) from all claims and causes of action arising from such uses. The Owner, to the extent permitted by law, further agrees to indemnify and hold harmless the Architect and its consultants from all costs and expenses, including the cost of defense, related to claims and causes of action asserted by any third person or entity to the extent such costs and expenses arise from the Owner's use of the Instruments of Service under this Section 7.3.1. The terms of this Section 7.3.1 shall not apply if the Owner rightfully terminates this Agreement for cause under Section 9.4.

§ 7.4 Except for the licenses granted in this Article 7, no other license or right shall be deemed granted or implied under this Agreement. The Owner shall not assign, delegate, sublicense, pledge or otherwise transfer any license granted herein to another party without the prior written agreement of the Architect. Any unauthorized use of the Instruments of Service shall be at the Owner's sole risk and without liability to the Architect and the Architect's consultants.

## ARTICLE 8 CLAIMS AND DISPUTES

### § 8.1 General

§ 8.1.1 The Owner and Architect shall commence all claims and causes of action, whether in contract, tort, or otherwise, against the other arising out of or related to this Agreement in accordance with the requirements of the method of binding dispute resolution selected in this Agreement 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 Architect waive all claims and causes of action not commenced in accordance with this Section 8.1.1.

§ 8.1.2 To the extent damages are covered by property insurance, the Owner and Architect waive all rights against each other and against the contractors, consultants, agents and employees of the other for damages, except such rights as they may have to the proceeds of such insurance as set forth in AIA Document A232-2009, General Conditions of the Contract for Construction — KDE Version. The Owner or the Architect, as appropriate, shall require of the

Construction Manager, contractors, consultants, agents and employees of any of them similar waivers in favor of the other parties enumerated herein.

§ 8.1.3 The Architect shall indemnify and hold the Owner and the Owner's officers and employees harmless from and against damages, losses and judgments arising from claims by third parties, including reasonable attorneys' fees and expenses recoverable under applicable law, but only to the extent they are caused by the negligent acts or omissions of the Architect, its employees and its consultants in the performance of professional services under this Agreement. The Architect's duty to indemnify the Owner under this provision shall be limited to the available proceeds of insurance coverage.

§ 8.1.4 The Architect and Owner waive consequential damages for claims, disputes or other matters in question arising out of or relating to this Agreement. This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination of this Agreement, except as specifically provided in Section 9.7.

## § 8.2 Mediation

§ 8.2.1 Any claim, dispute or other matter in question arising out of or related to this Agreement shall be subject to mediation as a condition precedent to binding dispute resolution. If such matter relates to or is the subject of a lien arising out of the Architect's services, the Architect may proceed in accordance with applicable law to comply with the lien notice or filing deadlines prior to resolution of the matter by mediation or by binding dispute resolution.

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

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

§ 8.2.4 If the parties do not resolve a dispute through mediation pursuant to this Section 8.2, the method of binding dispute resolution shall be the following:

*(Check the appropriate box. If the Owner and Architect do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, the dispute will be resolved in a court of competent jurisdiction.)*

- Arbitration pursuant to Section 8.3 of this Agreement
- Litigation in a court of competent jurisdiction where the Project is located
- Other: *(Specify)*

## § 8.3 Arbitration

§ 8.3.1 If the parties have selected arbitration as the method for binding dispute resolution in this Agreement any claim, dispute or other matter in question arising out of or related to this Agreement subject to, but not resolved by, mediation shall be subject to arbitration which shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement, unless the parties mutually agree otherwise. A demand for arbitration shall be made in writing, delivered to the other party to this Agreement, and filed with the person or entity administering the arbitration.



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

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

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

#### § 8.3.4 Consolidation or Joinder

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

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

§ 8.3.4.3 The Owner and Architect grant to any person or entity made a party to an arbitration conducted under this Section 8.3, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Architect under this Agreement.

### ARTICLE 9 TERMINATION OR SUSPENSION

§ 9.1 If the Owner fails to make payments to the Architect in accordance with this Agreement, such failure shall be considered substantial nonperformance and cause for termination or, at the Architect's option, cause for suspension of performance of services under this Agreement. If the Architect elects to suspend services, the Architect shall give seven days' written notice to the Owner before suspending services. In the event of a suspension of services, the Architect shall have no liability to the Owner for delay or damage caused the Owner because of such suspension of services. Before resuming services, the Architect shall be paid all sums due prior to suspension and any expenses incurred in the interruption and resumption of the Architect's services. The Architect's fees for the remaining services and the time schedules shall be equitably adjusted.

§ 9.2 If the Owner suspends the Project, the Architect shall be compensated for services performed prior to notice of such suspension. When the Project is resumed, the Architect shall be compensated for expenses incurred in the interruption and resumption of the Architect's services. The Architect's fees for the remaining services and the time schedules shall be equitably adjusted.

§ 9.3 If the Owner suspends the Project for more than 90 cumulative days for reasons other than the fault of the Architect, the Architect may terminate this Agreement by giving not less than seven days' written notice.

§ 9.4 Either party may terminate this Agreement upon not less than seven days' written notice should the other party fail substantially to perform in accordance with the terms of this Agreement through no fault of the party initiating the termination.

§ 9.5 The Owner may terminate this Agreement upon not less than seven days' written notice to the Architect for the Owner's convenience and without cause.

§ 9.6 In the event of termination not the fault of the Architect, the Architect shall be compensated for services performed prior to termination, together with Reimbursable Expenses then due.

§ 9.7 (Not Used)

§ 9.8 The Owner's rights to use the Architect's Instruments of Service in the event of a termination of this Agreement are set forth in Article 7 and Section 11.9.

#### ARTICLE 10 MISCELLANEOUS PROVISIONS

§ 10.1 This Agreement shall be governed by the law of the place where the Project is located, except that if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 8.3.

§ 10.2 Terms in this Agreement shall have the same meaning as those in AIA Document A232-2009, General Conditions of the Contract for Construction, Construction Manager as Adviser Edition — KDE Version.

§ 10.3 The Owner and Architect, respectively, bind themselves, their agents, successors, assigns and legal representatives to this Agreement. Neither the Owner nor the Architect shall assign this Agreement without the written consent of the other.

§ 10.4 If the Owner requests the Architect to execute certificates, the proposed language of such certificates shall be submitted to the Architect for review at least 14 days prior to the requested dates of execution. If the Owner requests the Architect to execute consents reasonably required to facilitate assignment to a lender, the Architect shall execute all such consents that are consistent with this Agreement, provided the proposed consent is submitted to the Architect for review at least 14 days prior to execution. The Architect shall not be required to execute certificates or consents that would require knowledge, services or responsibilities beyond the scope of this Agreement.

§ 10.5 Nothing contained in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either the Owner or Architect.

§ 10.6 Unless otherwise required in this Agreement, the Architect shall have no responsibility for the discovery, presence, handling, removal or disposal of, or exposure of persons to, hazardous materials or toxic substances in any form at the Project site.

§ 10.7 The Architect shall have the right to include photographic or artistic representations of the design of the Project among the Architect's promotional and professional materials. The Architect shall be given reasonable access to the completed Project to make such representations. However, the Architect's materials shall not include the Owner's confidential or proprietary information if the Owner has previously advised the Architect in writing of the specific information considered by the Owner to be confidential or proprietary.

§ 10.8 Except as provided under the Kentucky Open Records Act, KRS 61.870 to KRS 61.884, if the Architect or Owner receives information specifically designated by the other party as "confidential" or "business proprietary," the receiving party shall keep such information strictly confidential and shall not disclose it to any other person except to (1) its employees, (2) those who need to know the content of such information in order to perform services or construction solely and exclusively for the Project, or (3) its consultants and contractors whose contracts include similar restrictions on the use of confidential information.

#### ARTICLE 11 COMPENSATION

§ 11.1 For the Architect's Basic Services described under Article 3, the Owner shall compensate the Architect as follows: *(Insert amount of, or basis for, compensation.)*

§ 11.2 For Additional Services designated in Section 4.1, the Owner shall compensate the Architect as follows: *(Insert amount of, or basis for, compensation. If necessary, list specific services to which particular methods of compensation apply.)*

§ 11.3 For Additional Services that may arise during the course of the Project, including those under Section 4.3, the Owner shall compensate the Architect as follows:  
*(Insert amount of, or basis for, compensation.)*

§ 11.4 Compensation for Additional Services of the Architect's consultants when not included in Sections 11.2 or 11.3, shall be the amount invoiced to the Architect plus \_\_\_\_\_ percent ( \_\_\_\_\_ %), or as otherwise stated below:

§ 11.5 Where compensation for Basic Services is based on a stipulated sum or percentage of the Cost of the Work, the compensation for each phase of services shall be as follows:

Schematic Design Phase	Fifteen percent	(15%)
Design Development Phase	Twenty percent	(20%)
Construction Documents Phase	Forty percent	(40%)
Bidding or Negotiation Phase	Five percent	(05%)
Construction Phase	Twenty percent	(20%)
<hr/>	<hr/>	<hr/>
Total Basic Compensation	one hundred percent	(100%)

The Owner acknowledges that with an accelerated Project delivery or multiple bid package process, the Architect may be providing its services in multiple Phases simultaneously. Therefore, the Architect shall be permitted to invoice monthly in proportion to services performed in each Phase of Services, as appropriate.

§ 11.6 When compensation is based on a percentage of the Cost of the Work and any portions of the Project are deleted or otherwise not constructed, compensation for those portions of the Project shall be payable to the extent services are performed on those portions, in accordance with the schedule set forth in Section 11.5 based on (1) the lowest bona fide bid or negotiated proposal, or (2) if no such bid or proposal is received, the most recent estimate of the Construction Cost as recorded on the BG- 3 form approved by the Kentucky Department of Education such portions of the Project. The Architect shall be entitled to compensation in accordance with this Agreement for all services performed whether or not the Construction Phase is commenced.

§ 11.7 The hourly billing rates for services of the Architect and the Architect's consultants, if any, are set forth below. The rates shall be adjusted in accordance with the Architect's and Architect's consultants' normal review practices.  
*(If applicable, attach an exhibit of hourly billing rates or insert them below.)*

Employee or Category	Rate (\$0.00)
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Init.  
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**§ 11.8 Compensation for Reimbursable Expenses**

§ 11.8.1 Reimbursable Expenses are in addition to compensation for Basic and Additional Services and include expenses incurred by the Architect and the Architect's consultants directly related to the Project, as follows:

- .1 Transportation and authorized out-of-town travel and subsistence;
- .2 Long distance services, dedicated data and communication services, teleconferences, Project Web sites, and extranets;
- .3 Fees paid for securing approval of authorities having jurisdiction over the Project;
- .4 Printing, reproductions, plots, standard form documents;
- .5 Postage, handling and delivery;
- .6 Expense of overtime work requiring higher than regular rates, if authorized in advance by the Owner;
- .7 Renderings, models, mock-ups, professional photography, and presentation materials requested by the Owner;
- .8 Architect's Consultant's expense of professional liability insurance dedicated exclusively to this Project, or the expense of additional insurance coverage or limits requested by the Owner in excess of that required to be carried by the Architect and the Architect's Consultants by the Kentucky Department of Education;
- .9 All taxes levied on professional services and on reimbursable expenses;
- .10 Site office expenses; and
- .11 Other similar Project-related expenditures.

§ 11.8.2 For Reimbursable Expenses the compensation shall be the expenses incurred by the Architect and the Architect's consultants plus \_\_\_\_\_ percent ( \_\_\_\_\_ %) of the expenses incurred.

§ 11.8.3 Prior to incurring Reimbursable Expenses, the Architect shall estimate the cost of the reimbursable items, and obtain approval of the Owner's representative for the expenditures.

**§ 11.9 Compensation for Use of Architect's Instruments of Service**

If the Owner terminates the Architect for its convenience under Section 9.5, or the Architect terminates this Agreement under Section 9.3, the Owner shall pay a licensing fee as compensation for the Owner's continued use of the Architect's Instruments of Service solely for purposes of completing, using and maintaining the Project as follows:

**§ 11.10 Payments to the Architect**

§ 11.10.1 (Not Used)

§ 11.10.2 Unless otherwise agreed, payments for services shall be made monthly in proportion to services performed. Payments are due and payable upon presentation of the Architect's invoice. Amounts unpaid ( \_\_\_\_\_ ) days after the invoice date shall bear interest at the rate entered below, or in the absence thereof at the legal rate prevailing from time to time at the principal place of business of the Architect.  
*(Insert rate of monthly or annual interest agreed upon.)*

§ 11.10.3 The Owner shall not withhold amounts from the Architect's compensation to impose a penalty or liquidated damages on the Architect, or to offset sums requested by or paid to contractors for the cost of changes in the Work unless the Architect agrees or has been found liable for the amounts in a binding dispute resolution proceeding.

§ 11.10.4 Records of Reimbursable Expenses, expenses pertaining to Additional Services, and services performed on the basis of hourly rates shall be available to the Owner at mutually convenient times.

§ 11.10.5 The Architect shall pay each project Consultant within 10 days after receipt of each payment from the Owner for services rendered. Consultant's fees shall be based on a typical 80% x total fee for work categories paid to the Architect for which the Consultant is responsible. If the Architect's fee is a lump sum, the Consultant shall receive the same proportionate amount. If such payments are not made in a timely manner, the Consultant may make a written

request that the Owner issue joint checks for all subsequent payments to the Architect naming the Architect and the Consultant as payees.

§ 11.10.6 Prior to final payment, the Architect shall provide the Owner a written statement of release from each Consultant stating that all fees up to that point have been paid. (This clause does not apply to Consultants, i.e., geotechnical engineers, land surveyors, having direct contracts with the Owner.) The Architect shall be paid his construction phase fee at the same proportionate percentage as the construction's completion until final contract completion as designated by the submission and approval of the BG-4 form by the Owner, to the Kentucky Department of Education.

**ARTICLE 12 SPECIAL TERMS AND CONDITIONS**

Special terms and conditions that modify this Agreement are as follows:

**ARTICLE 13 SCOPE OF THE AGREEMENT**

§ 13.1 This Agreement represents the entire and integrated agreement between the Owner and the Architect and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both Owner and Architect.

§ 13.2 This Agreement is comprised of the following documents listed below:

- .1 AIA Document B132™–2009, Standard Form Agreement Between Owner and Architect, Construction Manager as Adviser Edition — KDE Version
- .2 Other documents:  
*(List other documents, if any, including additional scopes of service forming part of the Agreement.)*

This Agreement is entered into as of the day and year first written above.

\_\_\_\_\_  
OWNER *(Signature)*

\_\_\_\_\_  
ARCHITECT *(Signature)*

\_\_\_\_\_  
*(Printed name and title)*

\_\_\_\_\_  
*(Printed name and title)*



# Kentucky Department of Education Version of AIA Document A312™ – 2010

## Payment Bond

**CONTRACTOR:**  
*(Name, legal status and address)*

**SURETY:**  
*(Name, legal status and principal place of business)*

**OWNER:**  
*(Name, legal status and address)*

### CONSTRUCTION CONTRACT

Date:

Amount:

Description:  
*(Name and location)*

### 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:)*



This version of AIA Document A312–2010 is modified by the Kentucky Department of Education. Publication of this version of AIA Document A312 does not imply the American Institute of Architects' endorsement of any modification by the Kentucky Department of Education. A comparative version of AIA Document A312–2010 showing additions and deletions by the Kentucky Department of Education is available for review on the Kentucky Department of Education Web site.

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.

AIA Document A312–2010 combines two separate bonds, a Performance Bond and a Payment Bond, into one form. This is not a single combined Performance and Payment Bond.

**§ 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:

§ 18.1 Surety Company shall be licensed to conduct business in the Commonwealth of Kentucky.

§ 18.2 Insurance Agency and Agents issuing bond shall be registered and licensed to conduct business in the Commonwealth of Kentucky with the appropriate Power of Attorney included.

§ 18.3 Bond shall comply with all statutory requirements of the Commonwealth of Kentucky including the Kentucky Unemployment Insurance Law.

§ 18.4 No suit, action or proceeding by reason or any default whatever shall be brought on this bond after two (2) years from the date on which final payment of the contract fall due and provided further that if any alterations or additions which may be made under the contract or in the work to be done under it, or the giving by the Owner of any extension of time for the performance of the contract or any other forbearance on the part of either the Owner or the Principal shall not, in any way, release the Principal and Surety, or either of them, their heirs, executors, administrators, successors, or assigns for their liability hereunder. Notice to the Surety of any such alterations, extensions, or forbearance being expressly waived.

This obligation shall remain in force and effect until the performance of all covenants, terms and conditions herein stipulated and after such performance, it shall become null and void.

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

**CONTRACTOR AS PRINCIPAL**

**SURETY**

Company:

*(Corporate Seal)*

Company:

*(Corporate Seal)*

Signature: \_\_\_\_\_  
Name and Title: \_\_\_\_\_  
Address \_\_\_\_\_

Signature: \_\_\_\_\_  
Name and Title: \_\_\_\_\_  
Address \_\_\_\_\_

# Kentucky Department of Education Version of AIA Document A312™ – 2010

## Performance Bond

**CONTRACTOR:**  
*(Name, legal status and address)*

**SURETY:**  
*(Name, legal status and principal place of business)*

**OWNER:**  
*(Name, legal status and address)*

**CONSTRUCTION CONTRACT**  
Date:

Amount:

Description:  
*(Name and location)*

**BOND**  
Date:  
*(Not earlier than Construction Contract Date)*

Amount:

Modifications to this Bond:  None  See Section 16

**CONTRACTOR AS PRINCIPAL**      **SURETY**  
Company: *(Corporate Seal)*      Company: *(Corporate Seal)*

Signature: \_\_\_\_\_      Signature: \_\_\_\_\_  
Name and Title:      Name and Title:  
*(Any additional signatures appear on the last page of this Performance Bond.)*

*(FOR INFORMATION ONLY — Name, address and telephone)*  
**AGENT or BROKER:**      **OWNER'S REPRESENTATIVE:**  
*(Architect, Engineer or other party:)*



This version of AIA Document A312–2010 is modified by the Kentucky Department of Education. Publication of this version of AIA Document A312 does not imply the American Institute of Architects' endorsement of any modification by the Kentucky Department of Education. A comparative version of AIA Document A312–2010 showing additions and deletions by the Kentucky Department of Education is available for review on the Kentucky Department of Education Web site.

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.

AIA Document A312–2010 combines two separate bonds, a Performance Bond and a Payment Bond, into one form. This is not a single combined Performance and Payment Bond.

**§ 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:

§ 16.1 Surety Company shall be licensed to conduct business in the Commonwealth of Kentucky.

§ 16.2 Insurance Agency and Agents issuing bond shall be registered and licensed to conduct business in the Commonwealth of Kentucky with the appropriate Power of Attorney included.

§ 16.3 Bond shall comply with all statutory requirements of the Commonwealth of Kentucky including the Kentucky Unemployment Insurance Law.

§ 16.4 No suit, action or proceeding by reason or any default whatever shall be brought on this bond after two (2) years from the date on which final payment of the contract fall due and provided further that if any alterations or additions which may be made under the contract or in the work to be done under it, or the giving by the Owner of any extension of time for the performance of the contract or any other forbearance on the part of either the Owner or the Principal shall not, in any way, release the Principal and Surety, or either of them, their heirs, executors, administrators, successors, or assigns for their liability hereunder. Notice to the Surety of any such alterations, extensions, or forbearance being expressly waived.

This obligation shall remain in force and effect until the performance of all covenants, terms and conditions herein stipulated and after such performance, it shall become null and void.

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

**CONTRACTOR AS PRINCIPAL**

**SURETY**

Company:

*(Corporate Seal)*

Company:

*(Corporate Seal)*

Signature: \_\_\_\_\_  
 Name and Title: \_\_\_\_\_  
 Address \_\_\_\_\_

Signature: \_\_\_\_\_  
 Name and Title: \_\_\_\_\_  
 Address \_\_\_\_\_

**KENTUCKY DEPARTMENT OF EDUCATION  
NON-COLLUSION AFFIDAVIT  
702 KAR 4:160**

The undersigned agent, being duly sworn, states that neither he/she nor his/her firm has any relationship (financial or through kinship) to:

- Any school board member or the superintendent;
- Any or all prime contractors or material suppliers when using the construction management method of construction.

The undersigned further states that he/she has not entered into any agreement or collusion with any person relative to the price bid by anyone nor has he/she attempted to induce anyone to refrain from bidding.

Explain below any kinship or financial relationship you may have to any parties as mentioned above on this project.

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This affidavit is subject to KRS 45A.455 prohibition against conflict of interest, and gratuities and kickbacks.

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Name                      Title

---

Name of Company

Subscribed and Sworn to Me this  
\_\_\_\_\_ day of \_\_\_\_\_,  
20\_\_\_\_\_.

---

Notary Signature

My Commission expires:  
\_\_\_\_\_, 20\_\_\_\_\_.

Notary Seal



Environmental and Public Protection Cabinet  
Office of Housing, Buildings and Construction  
Division of Building Codes Enforcement  
101 Sea Hero Rd  
Frankfort, KY 40601

Case Number: \_\_\_\_\_  
Project Name: \_\_\_\_\_  
City/County: \_\_\_\_\_

**AFFIDAVIT OF ASSURANCES  
PURSUANT OF KRS 198B.060(10)**

Comes the Applicant, (Please Print Name) \_\_\_\_\_ and states pursuant to KRS 198B.060(10), that all contractors and subcontractors employed or that will be employed on any activity under the above referenced project shall be in compliance with the Commonwealth of Kentucky requirements for Workers' Compensation Insurance (according to KRS Chapter 342) and Unemployment Insurance (according to KRS Chapter 341).

This the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
CONTRACTOR, OWNER OR OWNER'S AGENT

The foregoing Affidavit of Assurance was acknowledged and sworn to before me by \_\_\_\_\_, Applicant, on this the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
NOTARY PUBLIC  
KENTUCKY STATE AT LARGE

MY COMMISSION EXPIRES \_\_\_\_\_, 20\_\_.

Note: This Affidavit of Assurances shall be submitted for any project under State jurisdiction and where there is no local building official. Persons claiming exemption to the Workers' Compensation Laws should file a Waiver with the Kentucky Department of Workers' Claims, Division of Security & Compliance, 657 1270 Louisville Road, Frankfort, Kentucky 40601. (800/554-8601).





**REQUIRED AFFIDAVIT FOR BIDDERS, OFFERORS AND CONTRACTORS**

**CLAIMING RESIDENT BIDDER STATUS**

**FOR BIDS AND CONTRACTS IN GENERAL:**

The bidder or offeror hereby swears and affirms under penalty of perjury that, in accordance with KRS 45A.494(2), the entity bidding is an individual, partnership, association, corporation, or other business entity that, on the date the contract is first advertised or announced as available for bidding:

1. Is authorized to transact business in the Commonwealth;
2. Has for one year prior to and through the date of advertisement
  - a. Filed Kentucky corporate income taxes;
  - b. Made payments to the Kentucky unemployment insurance fund established in KRS 341.49; and
  - c. Maintained a Kentucky workers' compensation policy in effect.

The BIDDING AGENCY reserves the right to request documentation supporting a bidder's claim of resident bidder status. Failure to provide such documentation upon request shall result in disqualification of the bidder or contract termination.

\_\_\_\_\_  
Signature Printed Name

\_\_\_\_\_  
Title Date

Company Name

Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Subscribed and sworn to before me by \_\_\_\_\_ (Affiant) \_\_\_\_\_ (Title)

of \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.  
(Company Name)

\_\_\_\_\_  
Notary Public  
[seal of notary] My commission expires: \_\_\_\_\_

**SECTION 010000 – KPC CONTRACTOR CRITERIA**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. The successful roofing contractor(s) shall demonstrate a three-year average of \$5 Million or more in annual completed contract work.
- B. The successful roofing contractor(s) shall confirm their capability to secure performance and payment bonds up to \$2,000,000 per project and an aggregate program limit of \$5,000,000. The successful roofing contractor(s) is required to provide a signed and notarized statement from their surety company that is listed in the U.S. Department of Treasury's List of Certified Companies and authorized to transact business in Kentucky. The surety company shall also have an A.M. Best Credit Rating of "a-" or better.
- C. The successful roofing contractor(s) must have an Experience Modification Rating (EMR) of 1.0 or lower. If the roofing contractor has an EMR of over 1.0, they must submit a corrective action plan that they anticipate will bring their EMR below 1.0 within the next 18 months.
- D. In each KPC service area throughout the Commonwealth of Kentucky, the successful roofing contractor(s) must demonstrate at least three (3) completed projects with point of contact references where the final contract value is at least \$50,000 or more. Each project reference shall include a narrative explaining how it is relevant to this qualification/bid package.
- E. The successful roofing contractor(s) must be capable of supplying a minimum of a two-year workmanship warranty at the completion of each new construction, reroofing or roof restoration project. Please attach a sample document with your response and provide a narrative explaining your firm's experience in receiving and track record in responding to warranty claims/callbacks.
- F. Please provide a narrative of your firm's ability to perform the type of projects contemplated by this qualification/bid package with your own labor force. Please explain how your own labor force will be used throughout each KPC service area in the Commonwealth of Kentucky. It should also include a discussion of when your firm will use subcontractors to fulfill workforce requirements and contract obligations.

1.3 PREFERRED ROOFING CONTRACTORS

- A. Preferred Construction Services, 3069 Ohio Dr, Henderson, KY 42420.
- B. Swift Roofing, 108 S. Park Cir., Valley Creek Busine, Elizabethtown, KY 42701.

KPC — KEE ROOF SYSTEMS AND SERVICES

- C. ABR Construction, 121 Crestview Ct, Nicholasville, KY 40356.
- D. Tri-State Roofing & Sheet Metal Company, 1624 Old Frankfort Pike, Lexington, Kentucky 40504,
- E. Bri-den Company, Inc., 110 Old Wallaceton Rd, Berea, KY 40403.
- F. Imbus Roofing, 5 Charlin Dr, Wilder, KY 41076.
- G. Eskola Roofing, 2933 NW Park Drive, Knoxville, TN 37921
- H. Kramer & Sons, 9171 Harrison Pike, Unit 12 Cleves, OH 45002.
- I. Highland Roofing, 4007 Produce Rd, Louisville, KY 40218.
- J. Geoghegan Roofing Corp, 1405 Garland Ave, Louisville, KY 40210.
- K. Quality Roofing, 9350 SSR-C, Senath, MO 63876
- L. Collier Roofing, 1523 Jones Ave, Nashville, TN 37207

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 010000**

## SECTION 011000 – PROFESSIONAL SERVICES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes Manufacturer's field services for roofing assemblies.
- B. Related Sections:
  - 1. Section 07 05 00 – Common Work Results for Thermal and Moisture Protection.
- C. Related Work Specified Elsewhere:
  - 1. Roofing Material: Section 07 52 00- Modified Bituminous Membrane Roofing.
  - 2. Roofing Material: Section 07 52 10 – Coal Tar-Modified Bituminous Membrane Roofing
  - 3. Roofing Material: Section 07 51 13 – Built-Up Asphalt Roofing – Hot-Applied
  - 4. Roofing Material: Section 07 51 14 – Built-Up Asphalt Roofing – Cold-Applied
  - 5. Roofing Material: Section 07 51 16 – Built-Up Coal Tar Roofing
  - 6. Roofing Material: Section 07 41 00 – Manufactured Metal Roofing Panels
  - 7. Roofing Material: Section 07 41 00.0100 – Manufactured Metal Roofing Panels
  - 8. Roofing Material: Section 07 41 00.001 – Manufactured Metal Roofing Panels

#### 1.3 REFERENCES

- A. International building Code (current edition) or local authority building code.
- B. American Society of Civil Engineers (ASCE): ASCE 7, Minimum Design Loads for Buildings and Other Structures.
- C. National Roofing Contractors Association (NRCA): Roofing and Waterproofing Manual.
- D. American National Standards Institute and Single Ply Roofing Institute (ANSI/SPRI): ANSI/SPRI ES-1 Testing and Certification Listing of Shop Fabricated Edge Metal.

#### 1.4 PROFESSIONAL SERVICES

- A. Asbestos Core Testing

## KPC — KEE ROOF SYSTEMS AND SERVICES

1. Provide a professional report created by a licensed environmental consulting agency testing for asbestos containing materials with the provided roof core materials per sample taken.
- B. Aerial Roof Survey
1. Provide a report including aerial photos, roof drawings including but not limited to; all dimensions of measure, slope, area per section, perimeter dimensions, penetrations, number of roof areas per slope, etc.
- C. Visual Roof Survey
1. Provide a report documenting a visual roof survey including but not limited to; a photo report of each roof section, findings of defects or potential neglected maintenance items, roof conditions, roof types, roofing materials, etc.
  2. Photo report to be delivered and stored on an online database such as Garland's RAMP Program.
- D. Manufacturer's Shop Drawings
1. Provide roofing system shop drawings for the proposed new roofing system; Metal roofing or walls, Mod Bit, BUR, Single Ply, or Shingles.
  2. Shop drawings to include project specific details for all roof sections, roof plan with all penetrations marked, roof slopes including tapered insulation plans, wind uplift criteria and fastening patterns for insulation and metal panels (if applicable).
- E. Architectural Design Services
1. Provide a full set of bidding documents for the specific project to include;
    - a. Provided by a Kentucky Licensed Design Professional
    - b. All Documents to be stamped
    - c. Full set of specifications for all items
    - d. Full set of roof drawings and other relation drawings as needed
    - 1) Including all required details
- F. Structural Analysis
1. Provide a report from a Kentucky Licensed Structural Engineer
  2. Report to be stamped
  3. Report to include allowable acceptable load capacity of the existing structure, taking into consideration the existing roof system if it is to remain for a roof recover.
- G. Roof Fastener Pull Tests
1. Provide a report/data from the results of this type of test per below;
  2. Standard Field Test Procedure for Determining the Withdrawal Resistance of Roofing Fasteners per ANSI/SPRI FX-1 2016
- H. Wind Uplift Calculations

## KPC — KEE ROOF SYSTEMS AND SERVICES

1. Provide Site Project Specific wind uplift criteria and a matching fastening pattern and/or ribbon pattern for any adhesives.
2. To be provided by the Roofing System Manufacturer.

### I. Interior Dew Point Calculations

1. Provide project specific dew point calculations for interior spaces to determine if a vapor barrier and/or added/new insulation should be included in the new roof design.

### J. Life Cycle Cost Comparison

1. Provide a life cycle cost comparison for multiple roof system types specific to a K-12 educational institution.
2. The comparison should consider the life expectancy of multiple different roof systems.

### K. Quality Control Inspections

1. Roof System Manufacturer to provide 2-3 inspections per working week while the project is in the installation phase (up until substantial completion).
2. Each week a photo report should be sent to the owner and/or architect documenting the visits and any items that are to be corrected prior to proceeding with installation of the system.

### L. Roof Asset Management Services

1. Provide a spreadsheet breaking down each facilities roofs, their overall condition, recommended maintenance dollars per year, and long term solution options.
2. Create 5, 10, 15 Campus Facility plan that gives budgets for all roof sections in the district.
3. Provides industry standard inflation rates in order for the school district to properly budget each year in advance.

## 1.5 SUBMITTALS FOR REVIEW

- A. Product Data: Provide manufacturer's technical product data for each type of roofing product specified. Include data substantiating that materials comply with specified requirements.
- B. Specimen Warranty: Provide an unexecuted copy of the warranty specified for this Project, identifying the terms and conditions required of the Manufacturer and the Owner.
- C. Roofing System Manufacture's Evaluation: Provide a comprehensive written assessment comparing available roofing solutions with validation of why the roofing system selection for the specific project is suitable and appropriate.
- D. Roofing System Manufacturer's Report Form: Provide a copy of the report form utilized by the roofing system manufacturer for progress inspections to monitor installation and quality.
- E. Online Reporting Capabilities: Provide a sample of the roofing system manufacturer's online roof inspection report as well as information about how long inspection reports are available to owner.

1.6 SUBMITTALS FOR INFORMATION

- A. Manufacturer's Installation Instructions: Submit installation instructions and recommendations indicating special precautions required for installing the membrane.
- B. Manufacturer's Certificate: Certify that roof system furnished is approved by Factory Mutual Global, Underwriters Laboratories, Warnock Hersey or approved third party testing facility in accordance with ASTM E108, Class [A or B or C] for external fire and meets local or nationally recognized building codes.
- C. Manufacturer's Certificate: Certify that materials are manufactured in the United States and conform to requirements specified herein, are chemically and physically compatible with each other, and are suitable for inclusion within the total roof system specified herein.
- D. Manufacturer's Certificate: Submit a certified copy of the roofing manufacturer's ISO 9001 compliance certificate.
- E. Written certification from the roofing system manufacturer certifying the applicator is currently authorized for the installation of the specified roof system.
- F. Design Loads: Submit copy of manufacturer's minimum design load calculations according to ASCE 7, Method 2 for Components and Cladding. In no case shall the design loads be taken to be less than those detailed in Design and Performance Criteria article of this specification.
- G. Qualification data for firms and individuals identified in Quality Assurance Article below.
- H. Test Reports: Submit ANSI/SPRI ES-1 Testing and Certification Listing of Shop Fabricated Edge Metal Products.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 011000**

## SECTION 012100 - ALLOWANCES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
  - 1. Contingency allowances.
- C. Related Requirements:
  - 1. Section 012200 "Unit Prices" for procedures for using unit prices, including adjustment of quantity allowances when applicable.
  - 2. Section 014000 "Quality Requirements" for procedures governing the use of allowances for field testing by an independent testing agency.

#### 1.3 DEFINITIONS

- A. Allowance is a quantity of work or dollar amount established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

#### 1.4 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection, or purchase and delivery, of each product or system described by an allowance must be completed by the Owner to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

#### 1.5 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.



1.6 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.7 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.
- C. Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit.
- D. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.8 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
  - 1. Include installation costs in purchase amount only where indicated as part of the allowance.
  - 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.
  - 3. Submit substantiation of a change in scope of Work, if any, claimed in Change Orders related to unit-cost allowances.
  - 4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
  - 1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of Work has changed from what could have been foreseen from information in the Contract Documents.

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2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

- A. Contingency Allowance No. 1: Provide a two-percent contingency allowance to be used by the Owner for miscellaneous items not identified by a unit price.
  1. Refer to the list of Unit Prices for the line item to report the allowance amount.
- B. Allowance No. 2: Provide a percent increase to be used by the Contractor for construction cost increases above maximum project guarantee pricing. Cost increases must be documented and supplied to owner if requested.
  1. Percentage increase can be used for each quarter compounded over previous quarters.
    - a. Quarters are based off calendar year.
      - 1) January-March
      - 2) April-June
      - 3) July-September
      - 4) October-December

**END OF SECTION 012100**

## SECTION 012200 - UNIT PRICES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Requirements:
  - 1. Section 012100 "Allowances" for procedures for using unit prices to adjust quantity allowances.
  - 2. Section 012600 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
  - 3. Section 014000 "Quality Requirements" for field testing by an independent testing agency.

#### 1.3 DEFINITIONS

- A. Unit price is an amount incorporated into the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

#### 1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Unit Prices: A schedule of unit prices is included in Section 004113 "KDE Form of Proposal".

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PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 012200**

## SECTION 012500 - SUBSTITUTION PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
  - 1. Section 012100 "Allowances" for products selected under an allowance.
  - 2. Section 012300 "Alternates" for products selected under an alternate.
  - 3. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

#### 1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents 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.

#### 1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
    - b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.

- c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
  - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
  - e. Samples, where applicable or requested.
  - f. Certificates and qualification data, where applicable or requested.
  - g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
  - h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
  - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
  - j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
  - k. Cost information, including a proposal of change, if any, in the Contract Sum.
  - l. 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.
  - m. 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.
2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
  - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

## 1.5 QUALITY ASSURANCE

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

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### 1.6 PROCEDURES

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

### 1.7 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
  - 1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - b. Substitution request is fully documented and properly submitted.
    - c. Requested substitution will not adversely affect Contractor's construction schedule.
    - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
    - e. Requested substitution is compatible with other portions of the Work.
    - f. Requested substitution has been coordinated with other portions of the Work.
    - g. Requested substitution provides specified warranty.
    - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Not allowed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 012500**

## SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Requirements:
  - 1. Section 012500 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

#### 1.3 MINOR CHANGES IN THE WORK

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

#### 1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
  - 2. Within time specified in Proposal Request or 20 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include costs of labor and supervision directly attributable to the change.
    - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.



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

#### 1.5 ADMINISTRATIVE CHANGE ORDERS

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

#### 1.6 CHANGE ORDER PROCEDURES

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

#### 1.7 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
  - 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

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- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
  - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 012600**

## **SECTION 012900 - PAYMENT PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
  - 1. Section 012100 "Allowances" for procedural requirements governing the handling and processing of allowances.
  - 2. Section 012200 "Unit Prices" for administrative requirements governing the use of unit prices.
  - 3. Section 012600 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
  - 4. Section 013200 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

#### **1.3 DEFINITIONS**

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

#### **1.4 SCHEDULE OF VALUES**

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
  - 1. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule.
  - 2. Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
  - 3. Subschedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide subschedules showing values coordinated with each element.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.

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1. 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.
2. Arrange schedule of values consistent with format of AIA Document G703.
3. Arrange the schedule of values in tabular form, with separate columns to indicate the following for each item listed:
  - a. Related Specification Section or Division.
  - b. Description of the Work.
  - c. Name of subcontractor.
  - d. Name of manufacturer or fabricator.
  - e. Name of supplier.
  - f. Change Orders (numbers) that affect value.
  - g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent. Round dollar amounts to whole dollars, with total equal to Contract Sum.
    - 1) Labor.
    - 2) Materials.
    - 3) Equipment.
4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
5. 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.
6. Allowances: Provide a separate line item in the schedule of values for each allowance. Show 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.
7. Purchase Contracts: Provide a separate line item in the schedule of values for each purchase contract. Show line-item value of purchase contract. Indicate Owner payments or deposits, if any, and balance to be paid by Contractor.
8. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

### 1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.

- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Times: Submit Application for Payment to Architect by the third Monday of the month or other day agreeable to the Owner. The period covered by each Application for Payment is one month, ending on the last day of the month.
  - 1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect.
- D. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
- E. 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.
- F. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
  - 1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment for stored materials.
  - 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
  - 3. Provide summary documentation for stored materials indicating the following:
    - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- G. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- H. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
  2. When an application shows completion of an item, submit conditional final or full waivers.
  3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
  4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
  5. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.
- I. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
  2. Schedule of values.
  3. Contractor's construction schedule (preliminary if not final).
  4. Combined Contractor's construction schedule (preliminary if not final) incorporating Work of multiple contracts, with indication of acceptance of schedule by each Contractor.
  5. Products list (preliminary if not final).
  6. Schedule of unit prices.
  7. Submittal schedule (preliminary if not final).
  8. List of Contractor's staff assignments.
  9. List of Contractor's principal consultants.
  10. Copies of building permits.
  11. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  12. Initial progress report.
  13. Report of preconstruction conference.
  14. Certificates of insurance and insurance policies.
  15. Performance and payment bonds.
  16. Data needed to acquire Owner's insurance.
- J. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 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 showing an accounting of changes to the Contract Sum.
  2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

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- K. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. 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.
  5. AIA Document G706A.
  6. AIA Document G707.
  7. Evidence that claims have been settled.
  8. 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.
  9. 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. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. General coordination procedures.
  - 2. RFIs.
  - 3. Digital project management procedures.
  - 4. Project meetings.
- B. Related Requirements:
  - 1. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
  - 2. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
  - 3. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

#### **1.3 DEFINITIONS**

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

#### **1.4 INFORMATIONAL SUBMITTALS**

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



telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of list in project meeting room, in temporary field office, in web-based Project software directory, and in prominent location in built facility. Keep list current at all times.

#### 1.5 GENERAL COORDINATION PROCEDURES

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

#### 1.6 REQUEST FOR INFORMATION (RFI)

- A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
  1. Architect will return without response those RFIs submitted to Architect by other entities controlled by Contractor.

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

3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."
  - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Use software log that is part of web-based Project software. Include the following:
  1. Project name.
  2. Name and address of Contractor.
  3. Name and address of Architect.
  4. RFI number including RFIs that were returned without action or withdrawn.
  5. RFI description.
  6. Date the RFI was submitted.
  7. Date Architect's response was received.
  8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

#### 1.7 DIGITAL PROJECT MANAGEMENT PROCEDURES

- A. Use of Architect's Digital Data Files: Digital data files of Architect's CAD drawings will be provided by Architect for Contractor's use during construction.
  1. Digital data files may be used by Contractor in preparing coordination drawings, Shop Drawings, and Project record Drawings.
  2. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Contract Drawings.
  3. Digital Drawing Software Program: Contract Drawings are available in AutoCad 2018, DWG format.
  4. Contractor shall execute a data licensing agreement in the form of AIA Document C106 Digital Data Licensing Agreement.
    - a. Subcontractors, and other parties granted access by Contractor to Architect's digital data files shall execute a data licensing agreement in the form of AIA Document C106.
  5. The following digital data files will be furnished for each appropriate discipline:
    - a. Floor plans.
    - b. Reflected ceiling plans.

- B. Web-Based Project Software: Use Architect's web-based Project software site for purposes of hosting and managing Project communication and documentation until Final Completion.
1. Web-based Project software site includes, at a minimum, the following features:
    - a. Compilation of Project data, including Contractor, subcontractors, Architect, architect's consultants, Owner, and other entities involved in Project. Include names of individuals and contact information.
    - b. Access control for each entity for each workflow process, to determine entity's digital rights to create, modify, view, and print documents.
    - c. Document workflow planning, allowing customization of workflow between project entities.
    - d. Creation, logging, tracking, and notification for Project communications required in other Specification Sections, including, but not limited to, RFIs, submittals, Minor Changes in the Work, Construction Change Directives, and Change Orders.
    - e. Track status of each Project communication in real time, and log time and date when responses are provided.
    - f. Procedures for handling PDFs or similar file formats, allowing markups by each entity. Provide security features to lock markups against changes once submitted.
    - g. Processing and tracking of payment applications.
    - h. Processing and tracking of contract modifications.
    - i. Creating and distributing meeting minutes.
    - j. Document management for Drawings, Specifications, and coordination drawings, including revision control.
    - k. Management of construction progress photographs.
    - l. Mobile device compatibility, including smartphones and tablets.
- C. PDF Document Preparation: Where PDFs are required to be submitted to Architect, prepare as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
  2. Name file with submittal number or other unique identifier, including revision identifier.
  3. Certifications: Where digitally submitted certificates and certifications are required, provide a digital signature with digital certificate on where indicated.

## 1.8 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times a minimum of 10 working days prior to meeting.
  2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
  3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.

- B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.
1. Attendees: Authorized representatives of Owner Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  2. Agenda: Discuss items of significance that could affect progress, including the following:
    - a. Responsibilities and personnel assignments.
    - b. Tentative construction schedule.
    - c. Phasing.
    - d. Critical work sequencing and long lead items.
    - e. Designation of key personnel and their duties.
    - f. Lines of communications.
    - g. Use of web-based Project software.
    - h. Procedures for processing field decisions and Change Orders.
    - i. Procedures for RFIs.
    - j. Procedures for testing and inspecting.
    - k. Procedures for processing Applications for Payment.
    - l. Distribution of the Contract Documents.
    - m. Submittal procedures.
    - n. Preparation of Record Documents.
    - o. Use of the premises and existing building.
    - p. Work restrictions.
    - q. Working hours.
    - r. Owner's occupancy requirements.
    - s. Responsibility for temporary facilities and controls.
    - t. Procedures for moisture and mold control.
    - u. Procedures for disruptions and shutdowns.
    - v. Construction waste management and recycling.
    - w. Parking availability.
    - x. Office, work, and storage areas.
    - y. Equipment deliveries and priorities.
    - z. First aid.
    - aa. Security.
    - bb. Progress cleaning.
  3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity when required by other sections and when required for coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.

2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
  - a. Contract Documents.
  - b. Options.
  - c. Related RFIs.
  - d. Related Change Orders.
  - e. Purchases.
  - f. Deliveries.
  - g. Submittals.
  - h. Review of mockups.
  - i. Possible conflicts.
  - j. Compatibility requirements.
  - k. Time schedules.
  - l. Weather limitations.
  - m. Manufacturer's written instructions.
  - n. Warranty requirements.
  - o. Compatibility of materials.
  - p. Acceptability of substrates.
  - q. Temporary facilities and controls.
  - r. Space and access limitations.
  - s. Regulations of authorities having jurisdiction.
  - t. Testing and inspecting requirements.
  - u. Installation procedures.
  - v. Coordination with other work.
  - w. Required performance results.
  - x. Protection of adjacent work.
  - y. Protection of construction and personnel.
3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.

1. Conduct the conference to review requirements and responsibilities related to Project closeout.
2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
  - a. Preparation of Record Documents.

- b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
  - c. Procedures for completing and archiving web-based Project software site data files.
  - d. Submittal of written warranties.
  - e. Requirements for preparing operations and maintenance data.
  - f. Requirements for delivery of material samples, attic stock, and spare parts.
  - g. Requirements for demonstration and training.
  - h. Preparation of Contractor's punch list.
  - i. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
  - j. Submittal procedures.
  - k. Coordination of separate contracts.
  - l. Owner's partial occupancy requirements.
  - m. Installation of Owner's furniture, fixtures, and equipment.
  - n. Responsibility for removing temporary facilities and controls.
4. Minutes: Entity conducting meeting will record and distribute meeting minutes.
- E. Progress Meetings: Conduct progress meetings at monthly intervals.
- 1. Coordinate dates of meetings with preparation of payment requests.
  - 2. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
  - 3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
    - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
      - 1) Review schedule for next period.
    - b. Review present and future needs of each entity present, including the following:
      - 1) Interface requirements.
      - 2) Sequence of operations.
      - 3) Status of submittals.
      - 4) Deliveries.
      - 5) Off-site fabrication.
      - 6) Access.
      - 7) Site use.
      - 8) Temporary facilities and controls.
      - 9) Progress cleaning.

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- 10) Quality and work standards.
  - 11) Status of correction of deficient items.
  - 12) Field observations.
  - 13) Status of RFIs.
  - 14) Status of Proposal Requests.
  - 15) Pending changes.
  - 16) Status of Change Orders.
  - 17) Pending claims and disputes.
  - 18) Documentation of information for payment requests.
4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
- a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 013100**



## **SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
  - 1. Contractor's Construction Schedule.
  - 2. Construction schedule updating reports.
  - 3. Daily construction reports.
  - 4. Material location reports.
  - 5. Site condition reports.
  - 6. Unusual event reports.

#### **1.3 DEFINITIONS**

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction Project. Activities included in a construction schedule consume time and resources.

#### **1.4 INFORMATIONAL SUBMITTALS**

- A. Format for Submittals: Submit required submittals in the following format:
  - 1. PDF file.
- B. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
- C. Construction Schedule Updating Reports: Submit with Applications for Payment.
- D. Daily Construction Reports: Submit at weekly intervals.
- E. Material Location Reports: Submit at monthly intervals.
- F. Site Condition Reports: Submit at time of discovery of differing conditions.
- G. Unusual Event Reports: Submit at time of unusual event.

1.5 COORDINATION

- A. Coordinate Contractor's Construction Schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.
  - 1. Secure time commitments for performing critical elements of the Work from entities involved.
  - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

1.6 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.
  - 1. Use Microsoft Project, Primavera, or Meridian Prolog, for current Windows operating system.
- B. Time Frame: Extend schedule from date established for the Notice to Proceed to date of final completion.
  - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Activities: Treat each floor or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
  - 1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
  - 2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
  - 3. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with submittal schedule.
  - 4. Startup and Testing Time: Include no fewer than 15 days for startup and testing.
  - 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
  - 6. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and final completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
  - 1. Phasing: Arrange list of activities on schedule by phase.
  - 2. Work Restrictions: Show the effect of the following items on the schedule:

- a. Coordination with existing construction.
  - b. Limitations of continued occupancies.
  - c. Uninterruptible services.
  - d. Use-of-premises restrictions.
  - e. Seasonal variations.
  - f. Environmental control.
3. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
- a. Subcontract awards.
  - b. Submittals.
  - c. Purchases.
  - d. Mockups.
  - e. Fabrication.
  - f. Sample testing.
  - g. Deliveries.
  - h. Installation.
  - i. Tests and inspections.
  - j. Adjusting.
  - k. Curing.
  - l. Startup and placement into final use and operation.
4. Construction Areas: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
- a. Structural completion.
  - b. Temporary enclosure and space conditioning.
  - c. Permanent space enclosure.
  - d. Completion of mechanical installation.
  - e. Completion of electrical installation.
  - f. Substantial Completion.
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion.
- F. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
1. Unresolved issues.
  2. Unanswered Requests for Information.
  3. Rejected or unreturned submittals.
  4. Notations on returned submittals.
  5. Pending modifications affecting the Work and the Contract Time.
- G. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.

1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
  2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
  3. As the Work progresses, indicate final completion percentage for each activity.
- H. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, equipment required to achieve compliance, and date by which recovery will be accomplished.
- I. Distribution: Distribute copies of approved schedule to Architect, Owner, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
  2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

#### 1.7 GANTT-CHART SCHEDULE REQUIREMENTS

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's Construction Schedule within 30 days of date established for the Notice to Proceed.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

#### 1.8 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
1. List of subcontractors at Project site.
  2. List of separate contractors at Project site.
  3. Approximate count of personnel at Project site.
  4. Equipment at Project site.
  5. Material deliveries.
  6. High and low temperatures and general weather conditions, including presence of rain or snow.
  7. Testing and inspection.
  8. Accidents.
  9. Meetings and significant decisions.
  10. Unusual events.

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11. Stoppages, delays, shortages, and losses.
  12. Meter readings and similar recordings.
  13. Emergency procedures.
  14. Orders and requests of authorities having jurisdiction.
  15. Change Orders received and implemented.
  16. Construction Change Directives received and implemented.
  17. Services connected and disconnected.
  18. Equipment or system tests and startups.
  19. Partial completions and occupancies.
  20. Substantial Completions authorized.
- B. Material Location Reports: At monthly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site. Indicate the following categories for stored materials:
1. Material stored prior to previous report and remaining in storage.
  2. Material stored prior to previous report and since removed from storage and installed.
  3. Material stored following previous report and remaining in storage.
- C. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.
- D. Unusual Event Reports: 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, responses by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.
1. Submit unusual event reports directly to Owner within one day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 013200**

## SECTION 013233 - PHOTOGRAPHIC DOCUMENTATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
  - 1. Preconstruction photographs.
  - 2. Periodic construction photographs.
  - 3. Final completion construction photographs.
- B. Related Requirements:
  - 1. Section 017700 "Closeout Procedures" for submitting photographic documentation as Project Record Documents at Project closeout.
  - 2. Section 017900 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.
  - 3. Section 024116 "Structure Demolition" for photographic documentation before building demolition operations commence.
  - 4. Section 024119 "Selective Demolition" for photographic documentation before selective demolition operations commence.
  - 5. Section 311000 "Site Clearing" for photographic documentation before site clearing operations commence.

#### 1.3 INFORMATIONAL SUBMITTALS

- A. Key Plan: Submit key plan of Project site and building with notation of vantage points marked for location and direction of each photograph. Indicate elevation or story of construction. Include same information as corresponding photographic documentation.
- B. Digital Photographs: Submit image files within three days of taking photographs.
  - 1. Submit photos by uploading to web-based project software site. Include copy of key plan indicating each photograph's location and direction.
  - 2. Identification: Provide the following information with each image description in file metadata tag and in web-based project software site:
    - a. Name of Project.
    - b. Name and contact information for photographer.
    - c. Name of Architect.

- d. Name of Contractor.
- e. Date photograph was taken.
- f. Description of location, vantage point, and direction.
- g. Unique sequential identifier keyed to accompanying key plan.

#### 1.4 QUALITY ASSURANCE

- A. Photographer Qualifications: An individual who has been regularly engaged as a professional photographer of construction projects for not less than three years.

#### 1.5 FORMATS AND MEDIA

- A. Digital Photographs: Provide color images in JPG format, produced by a digital camera with minimum sensor size of 12 megapixels, and at an image resolution of not less than 3200 by 2400 pixels, and with vibration-reduction technology. Use flash in low light levels or backlit conditions.
- B. Digital Images: Submit digital media as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
- C. Metadata: Record accurate date and time from camera.
- D. File Names: Name media files with date and sequential numbering suffix.

#### 1.6 CONSTRUCTION PHOTOGRAPHS

- A. Photographer: Engage a qualified photographer to take construction photographs.
- B. General: Take photographs with maximum depth of field and in focus.
  - 1. Maintain key plan with each set of construction photographs that identifies each photographic location.
- C. Preconstruction Photographs: Before commencement of excavation, commencement of demolition, and starting construction, take photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by Architect.
  - 1. Flag excavation areas and construction limits before taking construction photographs.
  - 2. Take 20 photographs to show existing conditions adjacent to property before starting the Work.
  - 3. Take 20 photographs of existing buildings either on or adjoining property to accurately record physical conditions at start of construction.
  - 4. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.

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- D. Periodic Construction Photographs: Take 20 photographs weekly coinciding with the cutoff date associated with each Application for Payment. Select vantage points to show status of construction and progress since last photographs were taken.
- E. Time-Lapse Sequence Construction Photographs: Take 20 photographs as indicated, to show status of construction and progress since last photographs were taken.
  - 1. Frequency: Take photographs weekly, on the same day each week.
  - 2. Vantage Points: Following suggestions by Architect and Contractor, photographer to select vantage points. During each of the following construction phases, take not less than two of the required shots from same vantage point each time to create a time-lapse sequence as follows:
    - a. Commencement of the Work, through completion of subgrade construction.
    - b. Above-grade structural framing.
    - c. Exterior building enclosure.
    - d. Interior Work, through date of Substantial Completion.
- F. Final Completion Construction Photographs: Take 50 photographs after date of Substantial Completion for submission as Project Record Documents. Architect will inform photographer of desired vantage points.
- G. Additional Photographs: Architect may request photographs in addition to periodic photographs specified.
  - 1. Three days' notice will be given, where feasible.
  - 2. In emergency situations, take additional photographs within 24 hours of request.
  - 3. Circumstances that could require additional photographs include, but are not limited to, the following:
    - a. Special events planned at Project site.
    - b. Immediate follow-up when on-site events result in construction damage or losses.
    - c. Photographs to be taken at fabrication locations away from Project site. These photographs are not subject to unit prices or unit-cost allowances.
    - d. Substantial Completion of a major phase or component of the Work.
    - e. Extra record photographs at time of final acceptance.
    - f. Owner's request for special publicity photographs.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 013233**



## SECTION 013300 - SUBMITTAL PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:

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

- B. Related Requirements:

- 1. Section 012900 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
- 2. Section 013100 "Project Management and Coordination" for submitting coordination drawings and subcontract list and for requirements for web-based Project software.
- 3. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
- 4. Section 013233 "Photographic Documentation" for submitting preconstruction photographs, periodic construction photographs, and final completion construction photographs.
- 5. Section 014000 "Quality Requirements" for submitting test and inspection reports, and schedule of tests and inspections.
- 6. Section 017700 "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.
- 7. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
- 8. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
- 9. Section 017900 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.

#### 1.3 DEFINITIONS

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

requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

#### 1.4 SUBMITTAL SCHEDULE

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

#### 1.5 SUBMITTAL FORMATS

- A. Submittal Information: Include the following information in each submittal:
1. Project name.
  2. Date.
  3. Name of Architect.
  4. Name of Contractor.
  5. Name of firm or entity that prepared submittal.
  6. Names of subcontractor, manufacturer, and supplier.
  7. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier; and alphanumeric suffix for resubmittals.

8. Category and type of submittal.
  9. Submittal purpose and description.
  10. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
  11. Drawing number and detail references, as appropriate.
  12. Indication of full or partial submittal.
  13. Location(s) where product is to be installed, as appropriate.
  14. Other necessary identification.
  15. Remarks.
  16. Signature of transmitter.
- B. Options: Identify options requiring selection by Architect.
- C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.
- D. Submittals for Web-Based Project Software: Prepare submittals as PDF files, or other format indicated by Project software website.

#### 1.6 SUBMITTAL PROCEDURES

- A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
1. Web-Based Project Software: Prepare submittals in PDF form, and upload to web-based Project software website. Enter required data in web-based software site to fully identify submittal.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
  3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
  4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the

Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Resubmittal Review: Allow 15 days for review of each resubmittal.
4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.
5. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 days for review of each submittal. Submittal will be returned to Architect before being returned to Contractor.

D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block and clearly indicate extent of revision.
3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.

E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

## 1.7 SUBMITTAL REQUIREMENTS

A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:
  - a. Manufacturer's catalog cuts.
  - b. Manufacturer's product specifications.
  - c. Standard color charts.
  - d. Statement of compliance with specified referenced standards.
  - e. Testing by recognized testing agency.
  - f. Application of testing agency labels and seals.
  - g. Notation of coordination requirements.
  - h. Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:
    - a. Wiring diagrams that show factory-installed wiring.
    - b. Printed performance curves.
    - c. Operational range diagrams.
    - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
  5. Submit Product Data before Shop Drawings, and before or concurrent with Samples.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data unless submittal based on Architect's digital data drawing files is otherwise permitted.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Identification of products.
    - b. Schedules.
    - c. Compliance with specified standards.
    - d. Notation of coordination requirements.
    - e. Notation of dimensions established by field measurement.
    - f. Relationship and attachment to adjoining construction clearly indicated.
    - g. Seal and signature of professional engineer if specified.
- C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other materials.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
  2. Identification: Permanently attach label on unexposed side of Samples that includes the following:
    - a. Project name and submittal number.
    - b. Generic description of Sample.
    - c. Product name and name of manufacturer.
    - d. Sample source.
    - e. Number and title of applicable Specification Section.
    - f. Specification paragraph number and generic name of each item.
  3. Web-Based Project Software: Prepare submittals in PDF form, and upload to web-based Project software website. Enter required data in web-based software site to fully identify submittal.
  4. 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.
- 5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
  - a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
- 6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
  - a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a project record Sample.
    - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
    - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
  - 1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
  - 2. Manufacturer and product name, and model number if applicable.
  - 3. Number and name of room or space.
  - 4. Location within room or space.
- E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- F. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.
- G. Certificates:

1. Certificates and Certifications Submittals: Submit a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity. Provide a notarized signature where indicated.
2. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
4. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
5. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
6. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.

H. Test and Research Reports:

1. Compatibility Test Reports: Submit 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.
2. Field Test Reports: Submit written reports 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 in the Contract Documents.
3. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
4. Preconstruction Test Reports: Submit 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 in the Contract Documents.
5. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. 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.
6. Research Reports: Submit 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:
  - a. Name of evaluation organization.
  - b. Date of evaluation.
  - c. Time period when report is in effect.
  - d. Product and manufacturers' names.
  - e. Description of product.
  - f. Test procedures and results.
  - g. Limitations of use.

1.8 DELEGATED-DESIGN SERVICES

- A. 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.
  - 1. If criteria indicated are insufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF file and three 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.
  - 1. 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.

1.9 CONTRACTOR'S REVIEW

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

1.10 ARCHITECT'S REVIEW

- A. Action Submittals: Architect will review each submittal, indicate corrections or revisions required, and return it.
  - 1. Submittals by Web-Based Project Software: Architect will indicate, on Project software website, the appropriate action.
- B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.



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- E. Architect will return without review submittals received from sources other than Contractor.
- F. Submittals not required by the Contract Documents will be returned by Architect without action.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 013300**

## SECTION 014000 - QUALITY REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

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

#### 1.3 DEFINITIONS

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

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

#### 1.4 DELEGATED-DESIGN SERVICES

- A. 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.
  - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

## 1.5 CONFLICTING REQUIREMENTS

- A. **Conflicting Standards and Other Requirements:** If compliance with two or more standards or requirements are specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for direction before proceeding.
- B. **Minimum Quantity or Quality Levels:** The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

## 1.6 ACTION SUBMITTALS

- A. **Shop Drawings:** For integrated exterior mockups.
  - 1. Include plans, sections, and elevations, indicating materials and size of mockup construction.
  - 2. Indicate manufacturer and model number of individual components.
  - 3. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.
- B. **Delegated-Design Services Submittal:** In addition to Shop Drawings, Product Data, and other required submittals, submit a statement 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, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

## 1.7 INFORMATIONAL SUBMITTALS

- A. **Contractor's Quality-Control Plan:** For quality-assurance and quality-control activities and responsibilities.
- B. **Qualification Data:** For Contractor's quality-control personnel.
- C. **Testing Agency Qualifications:** For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- D. **Schedule of Tests and Inspections:** Prepare in tabular form and include the following:
  - 1. Specification Section number and title.
  - 2. Entity responsible for performing tests and inspections.
  - 3. Description of test and inspection.
  - 4. Identification of applicable standards.
  - 5. Identification of test and inspection methods.

6. Number of tests and inspections required.
  7. Time schedule or time span for tests and inspections.
  8. Requirements for obtaining samples.
  9. Unique characteristics of each quality-control service.
- E. Reports: Prepare and submit certified written reports and documents as specified.
- F. Permits, Licenses, and Certificates: For Owner's record, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents established for compliance with standards and regulations bearing on performance of the Work.

#### 1.8 CONTRACTOR'S QUALITY-CONTROL PLAN

- A. Quality-Control Plan, General: Submit quality-control plan within 10 days of Notice to Proceed, and not less than five days prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities. Coordinate with Contractor's Construction Schedule.
- B. Quality-Control Personnel Qualifications: Engage qualified personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.
1. Project quality-control manager may also serve as Project superintendent.
- C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
- D. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:
1. Contractor-performed tests and inspections including Subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections. Distinguish source quality-control tests and inspections from field quality-control tests and inspections.
  2. Owner-performed tests and inspections indicated in the Contract Documents.
- E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- F. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results. Include work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.9 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
1. Date of issue.
  2. Project title and number.
  3. Name, address, telephone number, and email address of testing agency.
  4. Dates and locations of samples and tests or inspections.
  5. Names of individuals making tests and inspections.
  6. Description of the Work and test and inspection method.
  7. Identification of product and Specification Section.
  8. Complete test or inspection data.
  9. Test and inspection results and an interpretation of test results.
  10. Record of temperature and weather conditions at time of sample taking and testing and inspection.
  11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  12. Name and signature of laboratory inspector.
  13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, telephone number, and email address of technical 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.
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, telephone number, and email address of factory-authorized service representative making report.
  2. Statement that equipment complies with requirements.
  3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  4. Statement whether conditions, products, and installation will affect warranty.
  5. Other required items indicated in individual Specification Sections.

1.10 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
- C. 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, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- 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 in material, design, and extent to those indicated for this Project.
- 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 inspection indicated, as documented according to ASTM E329; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
- 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.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:

1. Contractor responsibilities include the following:
    - a. Provide test specimens representative of proposed products and construction.
    - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
    - c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
    - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
    - e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
    - f. When testing is complete, remove test specimens and test assemblies, mockups; do not reuse products on Project.
  2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- K. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
1. Build mockups of size indicated.
  2. Build mockups in location indicated or, if not indicated, as directed by Architect.
  3. Notify Architect seven days in advance of dates and times when mockups will be constructed.
  4. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed to perform same tasks during the construction at Project.
  5. Demonstrate the proposed range of aesthetic effects and workmanship.
  6. Obtain Architect's approval of mockups before starting corresponding work, fabrication, or construction.
    - a. Allow seven days for initial review and each re-review of each mockup.
  7. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
  8. Demolish and remove mockups when directed unless otherwise indicated.
- L. Integrated Exterior Mockups: Construct integrated exterior mockup according to approved Shop Drawings or as indicated on Drawings. Coordinate installation of exterior envelope materials and products for which mockups are required in individual Specification Sections, along with supporting materials. Comply with requirements in "Mockups" Paragraph.
- M. Room Mockups: Construct room mockups according to approved Shop Drawings or as indicated on Drawings incorporating required materials and assemblies, finished according to requirements. Provide required lighting and additional lighting where required to enable Architect to evaluate quality of the Work. Comply with requirements in "Mockups" Paragraph.



1.11 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 inspection they are engaged to perform.
  - 2. Payment for these services will be made by the Owner.
  - 3. Costs for retesting and reinspecting 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, whether specified or not, to verify and document that the Work complies with requirements.
  - 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. Engage a qualified testing agency to perform 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 24 hours in advance of time when Work that requires testing or inspection 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 inspection 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. 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.
  
- D. 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 locations 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.
  - 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 duties of Contractor.
- E. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."
- F. 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.
- G. Associated Contractor Services: Cooperate with agencies and representatives 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 inspection. 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 inspection equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.
  1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Coordinate and submit concurrently with Contractor's Construction Schedule. Update as the Work progresses.
  1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

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### PART 2 - PRODUCTS (Not Used)

### PART 3 - EXECUTION

#### 3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
  - 1. Date test or inspection was conducted.
  - 2. Description of the Work tested or inspected.
  - 3. Date test or inspection results were transmitted to Architect.
  - 4. Identification of testing agency conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.
  - 1. Submit log at Project closeout as part of Project Record Documents.

#### 3.2 REPAIR AND PROTECTION

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

**END OF SECTION 014000**

## SECTION 014200 - REFERENCES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 DEFINITIONS

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

#### 1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
- C. Copies of Standards: Each entity engaged in construction on Project should 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 publication source.

#### 1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Abbreviations and acronyms not included in this list shall mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States." The information in this list is subject to change and is believed to be accurate as of the date of the Contract Documents.

- 1. AABC - Associated Air Balance Council; [www.aabc.com](http://www.aabc.com).
- 2. AAMA - American Architectural Manufacturers Association; [www.aamanet.org](http://www.aamanet.org).
- 3. AAPFCO - Association of American Plant Food Control Officials; [www.aapfco.org](http://www.aapfco.org).
- 4. AASHTO - American Association of State Highway and Transportation Officials; [www.transportation.org](http://www.transportation.org).
- 5. AATCC - American Association of Textile Chemists and Colorists; [www.aatcc.org](http://www.aatcc.org).
- 6. ABMA - American Bearing Manufacturers Association; [www.americanbearings.org](http://www.americanbearings.org).
- 7. ABMA - American Boiler Manufacturers Association; [www.abma.com](http://www.abma.com).
- 8. ACI - American Concrete Institute; (Formerly: ACI International); [www.concrete.org](http://www.concrete.org).
- 9. ACPA - American Concrete Pipe Association; [www.concrete-pipe.org](http://www.concrete-pipe.org).
- 10. AEIC - Association of Edison Illuminating Companies, Inc. (The); [www.aeic.org](http://www.aeic.org).
- 11. AF&PA - American Forest & Paper Association; [www.afandpa.org](http://www.afandpa.org).
- 12. AGA - American Gas Association; [www.aga.org](http://www.aga.org).
- 13. AHAM - Association of Home Appliance Manufacturers; [www.aham.org](http://www.aham.org).
- 14. AHRI - Air-Conditioning, Heating, and Refrigeration Institute (The); [www.ahrinet.org](http://www.ahrinet.org).
- 15. AI - Asphalt Institute; [www.asphaltinstitute.org](http://www.asphaltinstitute.org).
- 16. AIA - American Institute of Architects (The); [www.aia.org](http://www.aia.org).
- 17. AISC - American Institute of Steel Construction; [www.aisc.org](http://www.aisc.org).
- 18. AISI - American Iron and Steel Institute; [www.steel.org](http://www.steel.org).
- 19. AITC - American Institute of Timber Construction; [www.aitc-glulam.org](http://www.aitc-glulam.org).
- 20. AMCA - Air Movement and Control Association International, Inc.; [www.amca.org](http://www.amca.org).
- 21. ANSI - American National Standards Institute; [www.ansi.org](http://www.ansi.org).
- 22. AOSA - Association of Official Seed Analysts, Inc.; [www.aosaseed.com](http://www.aosaseed.com).
- 23. APA - APA - The Engineered Wood Association; [www.apawood.org](http://www.apawood.org).
- 24. APA - Architectural Precast Association; [www.archprecast.org](http://www.archprecast.org).
- 25. API - American Petroleum Institute; [www.api.org](http://www.api.org).
- 26. ARI - Air-Conditioning & Refrigeration Institute; (See AHRI).
- 27. ARI - American Refrigeration Institute; (See AHRI).
- 28. ARMA - Asphalt Roofing Manufacturers Association; [www.asphaltroofing.org](http://www.asphaltroofing.org).
- 29. ASCE - American Society of Civil Engineers; [www.asce.org](http://www.asce.org).

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

74. ECIA - Electronic Components Industry Association; [www.eciaonline.org](http://www.eciaonline.org).
75. EIA - Electronic Industries Alliance; (See TIA).
76. EIMA - EIFS Industry Members Association; [www.eima.com](http://www.eima.com).
77. EJMA - Expansion Joint Manufacturers Association, Inc.; [www.ejma.org](http://www.ejma.org).
78. ESD - ESD Association; (Electrostatic Discharge Association); [www.esda.org](http://www.esda.org).
79. ESTA - Entertainment Services and Technology Association; (See PLASA).
80. ETL - Intertek (See Intertek); [www.intertek.com](http://www.intertek.com).
81. EVO - Efficiency Valuation Organization; [www.evo-world.org](http://www.evo-world.org).
82. FCI - Fluid Controls Institute; [www.fluidcontrolsinstitute.org](http://www.fluidcontrolsinstitute.org).
83. FIBA - Federation Internationale de Basketball; (The International Basketball Federation); [www.fiba.com](http://www.fiba.com).
84. FIVB - Federation Internationale de Volleyball; (The International Volleyball Federation); [www.fivb.org](http://www.fivb.org).
85. FM Approvals - FM Approvals LLC; [www.fmglobal.com](http://www.fmglobal.com).
86. FM Global - FM Global; (Formerly: FMG - FM Global); [www.fmglobal.com](http://www.fmglobal.com).
87. FRSA - Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc.; [www.floridarroof.com](http://www.floridarroof.com).
88. FSA - Fluid Sealing Association; [www.fluidsealing.com](http://www.fluidsealing.com).
89. FSC - Forest Stewardship Council U.S.; [www.fscus.org](http://www.fscus.org).
90. GA - Gypsum Association; [www.gypsum.org](http://www.gypsum.org).
91. GANA - Glass Association of North America; [www.glasswebsite.com](http://www.glasswebsite.com).
92. GS - Green Seal; [www.greenseal.org](http://www.greenseal.org).
93. HI - Hydraulic Institute; [www.pumps.org](http://www.pumps.org).
94. HI/GAMA - Hydronics Institute/Gas Appliance Manufacturers Association; (See AHRI).
95. HMMA - Hollow Metal Manufacturers Association; (See NAAMM).
96. HPVA - Hardwood Plywood & Veneer Association; [www.hpva.org](http://www.hpva.org).
97. HPW - H. P. White Laboratory, Inc.; [www.hpwhite.com](http://www.hpwhite.com).
98. IAPSC - International Association of Professional Security Consultants; [www.iapsc.org](http://www.iapsc.org).
99. IAS - International Accreditation Service; [www.iasonline.org](http://www.iasonline.org).
100. IAS - International Approval Services; (See CSA).
101. ICBO - International Conference of Building Officials; (See ICC).
102. ICC - International Code Council; [www.iccsafe.org](http://www.iccsafe.org).
103. ICEA - Insulated Cable Engineers Association, Inc.; [www.icea.net](http://www.icea.net).
104. ICPA - International Cast Polymer Alliance; [www.icpa-hq.org](http://www.icpa-hq.org).
105. ICRI - International Concrete Repair Institute, Inc.; [www.icri.org](http://www.icri.org).
106. IEC - International Electrotechnical Commission; [www.iec.ch](http://www.iec.ch).
107. IEEE - Institute of Electrical and Electronics Engineers, Inc. (The); [www.ieee.org](http://www.ieee.org).
108. IES - Illuminating Engineering Society; (Formerly: Illuminating Engineering Society of North America); [www.ies.org](http://www.ies.org).
109. IESNA - Illuminating Engineering Society of North America; (See IES).
110. IEST - Institute of Environmental Sciences and Technology; [www.iest.org](http://www.iest.org).
111. IGMA - Insulating Glass Manufacturers Alliance; [www.igmaonline.org](http://www.igmaonline.org).
112. IGSHPA - International Ground Source Heat Pump Association; [www.igshpa.okstate.edu](http://www.igshpa.okstate.edu).
113. ILI - Indiana Limestone Institute of America, Inc.; [www.iliai.com](http://www.iliai.com).
114. Intertek - Intertek Group; (Formerly: ETL SEMCO; Intertek Testing Service NA); [www.intertek.com](http://www.intertek.com).
115. ISA - International Society of Automation (The); (Formerly: Instrumentation, Systems, and Automation Society); [www.isa.org](http://www.isa.org).
116. ISAS - Instrumentation, Systems, and Automation Society (The); (See ISA).

117. ISFA - International Surface Fabricators Association; (Formerly: International Solid Surface Fabricators Association); [www.isfanow.org](http://www.isfanow.org).
118. ISO - International Organization for Standardization; [www.iso.org](http://www.iso.org).
119. ISSFA - International Solid Surface Fabricators Association; (See ISFA).
120. ITU - International Telecommunication Union; [www.itu.int/home](http://www.itu.int/home).
121. KCMA - Kitchen Cabinet Manufacturers Association; [www.kcma.org](http://www.kcma.org).
122. LMA - Laminating Materials Association; (See CPA).
123. LPI - Lightning Protection Institute; [www.lightning.org](http://www.lightning.org).
124. MBMA - Metal Building Manufacturers Association; [www.mbma.com](http://www.mbma.com).
125. MCA - Metal Construction Association; [www.metalconstruction.org](http://www.metalconstruction.org).
126. MFMA - Maple Flooring Manufacturers Association, Inc.; [www.maplefloor.org](http://www.maplefloor.org).
127. MFMA - Metal Framing Manufacturers Association, Inc.; [www.metalframingmfg.org](http://www.metalframingmfg.org).
128. MHIA - Material Handling Industry of America; [www.mhia.org](http://www.mhia.org).
129. MIA - Marble Institute of America; [www.marble-institute.com](http://www.marble-institute.com).
130. MMPA - Moulding & Millwork Producers Association; [www.wmmpa.com](http://www.wmmpa.com).
131. MPI - Master Painters Institute; [www.paintinfo.com](http://www.paintinfo.com).
132. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; [www.mss-hq.org](http://www.mss-hq.org).
133. NAAMM - National Association of Architectural Metal Manufacturers; [www.naamm.org](http://www.naamm.org).
134. NACE - NACE International; (National Association of Corrosion Engineers International); [www.nace.org](http://www.nace.org).
135. NADCA - National Air Duct Cleaners Association; [www.nadca.com](http://www.nadca.com).
136. NAIMA - North American Insulation Manufacturers Association; [www.naima.org](http://www.naima.org).
137. NBGQA - National Building Granite Quarries Association, Inc.; [www.nbgqa.com](http://www.nbgqa.com).
138. NBI - New Buildings Institute; [www.newbuildings.org](http://www.newbuildings.org).
139. NCAA - National Collegiate Athletic Association (The); [www.ncaa.org](http://www.ncaa.org).
140. NCMA - National Concrete Masonry Association; [www.ncma.org](http://www.ncma.org).
141. NEBB - National Environmental Balancing Bureau; [www.nebb.org](http://www.nebb.org).
142. NECA - National Electrical Contractors Association; [www.necanet.org](http://www.necanet.org).
143. NeLMA - Northeastern Lumber Manufacturers Association; [www.nelma.org](http://www.nelma.org).
144. NEMA - National Electrical Manufacturers Association; [www.nema.org](http://www.nema.org).
145. NETA - InterNational Electrical Testing Association; [www.netaworld.org](http://www.netaworld.org).
146. NFHS - National Federation of State High School Associations; [www.nfhs.org](http://www.nfhs.org).
147. NFPA - National Fire Protection Association; [www.nfpa.org](http://www.nfpa.org).
148. NFPA - NFPA International; (See NFPA).
149. NFRC - National Fenestration Rating Council; [www.nfrc.org](http://www.nfrc.org).
150. NHLA - National Hardwood Lumber Association; [www.nhla.com](http://www.nhla.com).
151. NLGA - National Lumber Grades Authority; [www.nlga.org](http://www.nlga.org).
152. NOFMA - National Oak Flooring Manufacturers Association; (See NWFA).
153. NOMMA - National Ornamental & Miscellaneous Metals Association; [www.nomma.org](http://www.nomma.org).
154. NRCA - National Roofing Contractors Association; [www.nrca.net](http://www.nrca.net).
155. NRMCA - National Ready Mixed Concrete Association; [www.nrmca.org](http://www.nrmca.org).
156. NSF - NSF International; [www.nsf.org](http://www.nsf.org).
157. NSPE - National Society of Professional Engineers; [www.nspe.org](http://www.nspe.org).
158. NSSGA - National Stone, Sand & Gravel Association; [www.nssga.org](http://www.nssga.org).
159. NTMA - National Terrazzo & Mosaic Association, Inc. (The); [www.ntma.com](http://www.ntma.com).
160. NWFA - National Wood Flooring Association; [www.nwfa.org](http://www.nwfa.org).
161. PCI - Precast/Prestressed Concrete Institute; [www.pci.org](http://www.pci.org).
162. PDI - Plumbing & Drainage Institute; [www.pdionline.org](http://www.pdionline.org).



163. PLASA - PLASA; (Formerly: ESTA - Entertainment Services and Technology Association); [www.plasa.org](http://www.plasa.org).
164. RCSC - Research Council on Structural Connections; [www.boltcouncil.org](http://www.boltcouncil.org).
165. RFCI - Resilient Floor Covering Institute; [www.rfci.com](http://www.rfci.com).
166. RIS - Redwood Inspection Service; [www.redwoodinspection.com](http://www.redwoodinspection.com).
167. SAE - SAE International; [www.sae.org](http://www.sae.org).
168. SCTE - Society of Cable Telecommunications Engineers; [www.scte.org](http://www.scte.org).
169. SDI - Steel Deck Institute; [www.sdi.org](http://www.sdi.org).
170. SDI - Steel Door Institute; [www.steeldoor.org](http://www.steeldoor.org).
171. SEFA - Scientific Equipment and Furniture Association (The); [www.sefalabs.com](http://www.sefalabs.com).
172. SEI/ASCE - Structural Engineering Institute/American Society of Civil Engineers; (See ASCE).
173. SIA - Security Industry Association; [www.siaonline.org](http://www.siaonline.org).
174. SJI - Steel Joist Institute; [www.steeljoist.org](http://www.steeljoist.org).
175. SMA - Screen Manufacturers Association; [www.smainfo.org](http://www.smainfo.org).
176. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association; [www.smacna.org](http://www.smacna.org).
177. SMPTE - Society of Motion Picture and Television Engineers; [www.smpte.org](http://www.smpte.org).
178. SPFA - Spray Polyurethane Foam Alliance; [www.sprayfoam.org](http://www.sprayfoam.org).
179. SPIB - Southern Pine Inspection Bureau; [www.spib.org](http://www.spib.org).
180. SPRI - Single Ply Roofing Industry; [www.spri.org](http://www.spri.org).
181. SRCC - Solar Rating & Certification Corporation; [www.solar-rating.org](http://www.solar-rating.org).
182. SSINA - Specialty Steel Industry of North America; [www.ssina.com](http://www.ssina.com).
183. SSPC - SSPC: The Society for Protective Coatings; [www.sspc.org](http://www.sspc.org).
184. STI - Steel Tank Institute; [www.steeltank.com](http://www.steeltank.com).
185. SWI - Steel Window Institute; [www.steelwindows.com](http://www.steelwindows.com).
186. SWPA - Submersible Wastewater Pump Association; [www.swpa.org](http://www.swpa.org).
187. TCA - Tilt-Up Concrete Association; [www.tilt-up.org](http://www.tilt-up.org).
188. TCNA - Tile Council of North America, Inc.; [www.tileusa.com](http://www.tileusa.com).
189. TEMA - Tubular Exchanger Manufacturers Association, Inc.; [www.tema.org](http://www.tema.org).
190. TIA - Telecommunications Industry Association (The); (Formerly: TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance); [www.tiaonline.org](http://www.tiaonline.org).
191. TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance; (See TIA).
192. TMS - The Masonry Society; [www.masonrysociety.org](http://www.masonrysociety.org).
193. TPI - Truss Plate Institute; [www.tpinst.org](http://www.tpinst.org).
194. TPI - Turfgrass Producers International; [www.turfgrasssod.org](http://www.turfgrasssod.org).
195. TRI - Tile Roofing Institute; [www.tilerroofing.org](http://www.tilerroofing.org).
196. UL - Underwriters Laboratories Inc.; [www.ul.com](http://www.ul.com).
197. UNI - Uni-Bell PVC Pipe Association; [www.uni-bell.org](http://www.uni-bell.org).
198. USAV - USA Volleyball; [www.usavolleyball.org](http://www.usavolleyball.org).
199. USGBC - U.S. Green Building Council; [www.usgbc.org](http://www.usgbc.org).
200. USITT - United States Institute for Theatre Technology, Inc.; [www.usitt.org](http://www.usitt.org).
201. WA - Wallcoverings Association; [www.wallcoverings.org](http://www.wallcoverings.org).
202. WASTEC - Waste Equipment Technology Association; [www.wastec.org](http://www.wastec.org).
203. WCLIB - West Coast Lumber Inspection Bureau; [www.wclib.org](http://www.wclib.org).
204. WCMA - Window Covering Manufacturers Association; [www.wcmanet.org](http://www.wcmanet.org).
205. WDMA - Window & Door Manufacturers Association; [www.wdma.com](http://www.wdma.com).
206. WI - Woodwork Institute; [www.wicnet.org](http://www.wicnet.org).
207. WSRCA - Western States Roofing Contractors Association; [www.wsrca.com](http://www.wsrca.com).

208. WWPA - Western Wood Products Association; [www.wwpa.org](http://www.wwpa.org).

B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.

1. DIN - Deutsches Institut fur Normung e.V.; [www.din.de](http://www.din.de).
2. IAPMO - International Association of Plumbing and Mechanical Officials; [www.iapmo.org](http://www.iapmo.org).
3. ICC - International Code Council; [www.iccsafe.org](http://www.iccsafe.org).
4. ICC-ES - ICC Evaluation Service, LLC; [www.icc-es.org](http://www.icc-es.org).

C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Information is subject to change and is up to date as of the date of the Contract Documents.

1. COE - Army Corps of Engineers; [www.usace.army.mil](http://www.usace.army.mil).
2. CPSC - Consumer Product Safety Commission; [www.cpsc.gov](http://www.cpsc.gov).
3. DOC - Department of Commerce; National Institute of Standards and Technology; [www.nist.gov](http://www.nist.gov).
4. DOD - Department of Defense; [www.quicksearch.dla.mil](http://www.quicksearch.dla.mil).
5. DOE - Department of Energy; [www.energy.gov](http://www.energy.gov).
6. EPA - Environmental Protection Agency; [www.epa.gov](http://www.epa.gov).
7. FAA - Federal Aviation Administration; [www.faa.gov](http://www.faa.gov).
8. FG - Federal Government Publications; [www.gpo.gov/fdsys](http://www.gpo.gov/fdsys).
9. GSA - General Services Administration; [www.gsa.gov](http://www.gsa.gov).
10. HUD - Department of Housing and Urban Development; [www.hud.gov](http://www.hud.gov).
11. LBL - Lawrence Berkeley National Laboratory; Environmental Energy Technologies Division; [www.eetd.lbl.gov](http://www.eetd.lbl.gov).
12. OSHA - Occupational Safety & Health Administration; [www.osha.gov](http://www.osha.gov).
13. SD - Department of State; [www.state.gov](http://www.state.gov).
14. TRB - Transportation Research Board; National Cooperative Highway Research Program; The National Academies; [www.trb.org](http://www.trb.org).
15. USDA - Department of Agriculture; Agriculture Research Service; U.S. Salinity Laboratory; [www.ars.usda.gov](http://www.ars.usda.gov).
16. USDA - Department of Agriculture; Rural Utilities Service; [www.usda.gov](http://www.usda.gov).
17. USDOJ - Department of Justice; Office of Justice Programs; National Institute of Justice; [www.ojp.usdoj.gov](http://www.ojp.usdoj.gov).
18. USP - U.S. Pharmacopeial Convention; [www.usp.org](http://www.usp.org).
19. USPS - United States Postal Service; [www.usps.com](http://www.usps.com).

D. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. CFR - Code of Federal Regulations; Available from Government Printing Office; [www.gpo.gov/fdsys](http://www.gpo.gov/fdsys).
2. DOD - Department of Defense; Military Specifications and Standards; Available from DLA Document Services; [www.quicksearch.dla.mil](http://www.quicksearch.dla.mil).
3. DSCC - Defense Supply Center Columbus; (See FS).

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 014200**

## **SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Requirements:
  - 1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

#### **1.3 USE CHARGES**

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to, Owner, Architect, occupants of Project, testing agencies, and authorities having jurisdiction.
- B. Sewer Service: Pay sewer-service use charges for sewer usage by all entities for construction operations.
- C. Water Service: Pay water-service use charges for water used by all entities for construction operations.
- D. Electric Power Service: Pay electric-power-service use charges for electricity used by all entities for construction operations.

#### **1.4 INFORMATIONAL SUBMITTALS**

- A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.
- B. Implementation and Termination Schedule: Within 15 days of date established for commencement of the Work, submit schedule indicating implementation and termination dates of each temporary utility.
- C. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.

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- D. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
- E. Moisture- and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold.
- F. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Include the following:
  - 1. Locations of dust-control partitions at each phase of work.
  - 2. HVAC system isolation schematic drawing.
  - 3. Location of proposed air-filtration system discharge.
  - 4. Waste-handling procedures.
  - 5. Other dust-control measures.

### 1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in ICC/ANSI A117.1.

### 1.6 PROJECT CONDITIONS

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

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Chain-Link Fencing: Minimum 2-inch, 0.148-inch-thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch-OD line posts and 2-7/8-inch-OD corner and pull posts.
- B. Portable Chain-Link Fencing: Minimum 2-inch, 0.148-inch-thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch-OD line posts and 2-7/8-inch-OD corner and pull posts, with 1-5/8-inch-OD top and bottom rails. Provide galvanized-steel bases for supporting posts.

- C. Fencing Windscreen Privacy Screen: Polyester fabric scrim with grommets for attachment to chain link fence, sized to height of fence, in color selected by Architect from manufacturer's standard colors.
- D. Dust-Control Adhesive-Surface Walk-Off Mats: Provide mats minimum 36 by 60 inches.
- E. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

## 2.2 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:
  - 1. Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
  - 2. Conference room of sufficient size to accommodate meetings of 10 individuals. Provide electrical power service and 120-V ac duplex receptacles, with no fewer than one receptacle on each wall. Furnish room with conference table, chairs, and 4-foot-square tack and marker boards.
  - 3. Drinking water and private toilet.
  - 4. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F.
  - 5. Lighting fixtures capable of maintaining average illumination of 20 fc at desk height.
- C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
  - 1. Store combustible materials apart from building.

## 2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
  - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
  - 2. Heating Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.

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3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return-air grille in system and remove at end of construction.

### PART 3 - EXECUTION

#### 3.1 TEMPORARY FACILITIES, GENERAL

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

#### 3.2 INSTALLATION, GENERAL

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

#### 3.3 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
  1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
  1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
- C. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.
- D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- E. Temporary Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed

construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

- F. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
  - 1. Prior to commencing work, isolate the HVAC system in area where work is to be performed.
    - a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
  - 2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
- G. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
  - 1. Install temporary electric power service overhead unless otherwise indicated.
- H. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
  - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- I. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install WiFi cell phone access equipment land-based telephone line(s) for each field office.
  - 1. At each telephone, post a list of important telephone numbers.
    - a. Police and fire departments.
    - b. Ambulance service.
    - c. Contractor's home office.
    - d. Contractor's emergency after-hours telephone number.
    - e. Architect's office.
    - f. Engineers' offices.
    - g. Owner's office.
    - h. Principal subcontractors' field and home offices.

### 3.4 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
  - 1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E136. Comply with NFPA 241.



2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas within construction limits indicated on Drawings.
1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.
- C. Temporary Use of Planned Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.
1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
  2. Prepare subgrade and install subbase and base for temporary roads and paved areas according to Section 312000 "Earth Moving."
  3. Recondition base after temporary use, including removing contaminated material, regrading, proofrolling, compacting, and testing.
  4. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Substantial Completion. Repair hot-mix asphalt base-course pavement before installation of final course according to Section 321216 "Asphalt Paving."
- D. Traffic Controls: Comply with requirements of authorities having jurisdiction.
1. Protect existing site improvements to remain including curbs, pavement, and utilities.
  2. Maintain access for fire-fighting equipment and access to fire hydrants.
- E. Parking: Use designated areas of Owner's existing parking areas for construction personnel.
- F. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
  2. Remove snow and ice as required to minimize accumulations.
- G. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
1. Identification Signs: Provide Project identification signs as indicated on Drawings.
  2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
    - a. Provide temporary, directional signs for construction personnel and visitors.
  3. Maintain and touch up signs so they are legible at all times.

- H. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
- I. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
  - 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- J. Temporary Elevator Use: Section 142400 "Hydraulic Elevators" for temporary use of new elevators.
- K. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate.
- L. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

### 3.5 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
  - 1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
  - 1. Comply with work restrictions specified in Section 011000 "Summary."
- C. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
  - 1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant-protection zones.
  - 2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
  - 3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
  - 4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

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- D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- E. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- F. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using materials approved by authorities having jurisdiction.
- G. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.
  - 1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations or as indicated on Drawings.
  - 2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.
- H. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.
- I. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- J. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- K. Covered Walkway: Covered walkways will be required at either occupied building at points of egress that are adjacent to construction activities with overhead operations. The covered walkways shall extend from the point of egress, through the construction zone, and to the safe public way. If overhead construction activities are not present, covered walkways are not required.
- L. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
  - 1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.
- M. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise.
  - 1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant-treated plywood on construction operations side.

2. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
  3. Insulate partitions to control noise transmission to occupied areas.
  4. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
  5. Protect air-handling equipment.
  6. Provide walk-off mats at each entrance through temporary partition.
- N. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.
1. Prohibit smoking in construction areas. Comply with additional limits on smoking specified in other Sections.
  2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
  3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

### 3.6 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.
1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.
  2. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
  3. Indicate methods to be used to avoid trapping water in finished work.
- B. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
1. Protect porous materials from water damage.
  2. Protect stored and installed material from flowing or standing water.
  3. Keep porous and organic materials from coming into prolonged contact with concrete.
  4. Remove standing water from decks.
  5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Period: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
  2. Keep interior spaces reasonably clean and protected from water damage.
  3. Periodically collect and remove waste containing cellulose or other organic matter.

4. Discard or replace water-damaged material.
  5. Do not install material that is wet.
  6. Discard and replace stored or installed material that begins to grow mold.
  7. Perform work in a sequence that allows wet materials adequate time to dry before enclosing the material in gypsum board or other interior finishes.
- D. Controlled Construction Period: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
  2. Use temporary or permanent HVAC system to control humidity within ranges specified for installed and stored materials.
  3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
    - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective and require replacing.
    - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
    - c. Remove and replace materials that cannot be completely restored to their manufactured moisture level within 48 hours.

### 3.7 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
  2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove

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materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.

3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

**END OF SECTION 015000**

**SECTION 015639 - TEMPORARY TREE AND PLANT PROTECTION**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes general protection and pruning of existing trees and plants that are affected by execution of the Work, whether temporary or permanent construction. B. Related Sections:

- 1. Section 311000 "Site Clearing" for removing existing trees and shrubs.

**1.3 DEFINITIONS**

- A. Caliper: Diameter of a trunk measured by a diameter tape at diameter at breast-height (DBH) 4.5' above the ground) for trees over 4" in diameter.
- B. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and indicated on Drawings.
- C. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and indicated on Drawings.
- D. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

**1.4 ACTION SUBMITTALS**

- A. Product Data: For each type of product indicated.
- B. Samples for Verification: For each type of the following:
  - 1. Organic Mulch: 1-quart volume of organic mulch; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch.
  - 2. Protection-Zone Fencing: Assembled Samples of based upon drawings and details.
  - 3. Protection-Zone Signage: Full-size Samples of each size and text, ready for installation.
- C. Tree Pruning Schedule: Written schedule detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction. All pruning work shall be performed in accordance with ANSI A300, Part 1 (Contractor shall obtain copy of Standard prior to beginning work).

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1. Species and size of tree.
2. Location on site plan. Include unique identifier for each.
3. Reason for pruning.
4. Description of pruning to be performed.
5. Description of maintenance following pruning.

### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified arborist and tree service firm.
- B. Certification: From arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.
- C. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.
- D. Existing Conditions: Documentation of existing trees and plantings indicated to remain, which establishes preconstruction conditions that might be misconstrued as damage caused by construction activities.
  1. Use sufficiently detailed photographs or videotape.
  2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.

### 1.6 QUALITY ASSURANCE

- A. Arborist Qualifications: Certified Arborist as certified by ISA, Certified Arborist-Municipal Specialist as certified by ISA, Current member of ASCA, or Registered Consulting Arborist as designated by ASCA.
- B. Tree Service Firm Qualifications: An experienced tree service firm that has successfully completed temporary tree and plant protection work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of the Work.
- C. Preinstallation Conference: Conduct conference at Project site.
  1. Review methods and procedures related to temporary tree and plant protection including, but not limited to, the following:
    - a. Construction schedule. Verify availability of materials, personnel, and equipment needed to make progress and avoid delays.
    - b. Enforcing requirements for protection zones.
    - c. Arborist's responsibilities.
    - d. Field quality control.



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### 1.7 PROJECT CONDITIONS

- A. The following practices are prohibited within protection zones:
  - 1. Storage of construction materials, debris, or excavated material.
  - 2. Parking vehicles or equipment.
  - 3. Foot traffic.
  - 4. Erection of sheds or structures.
  - 5. Impoundment of water.
  - 6. Excavation or other digging unless otherwise indicated.
  - 7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
- B. Do not direct vehicle or equipment exhaust toward protection zones.
- C. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones and organic mulch.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Topsoil: Natural or cultivated top layer of the soil profile or manufactured topsoil; containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 1 inch in diameter; and free of weeds, roots, and toxic and other non-soil materials.
  - 1. Obtain topsoil only from well-drained sites where topsoil is 4 inches deep or more; do not obtain from bogs or marshes.
- B. Topsoil: Imported or manufactured topsoil complying with ASTM D 5268.
- C. Organic Mulch: Free from deleterious materials and suitable as a top dressing for trees and shrubs, consisting of one of the following:
  - 1. Type: Shredded hardwood bark.
  - 2. Size Range: 2-3 inches maximum, 1/2 inch minimum.
  - 3. Color: Natural. No dye.
- D. Protection-Zone Fencing: Fencing fixed in position and meeting the following requirements. Previously used materials may be used when approved by Architect.
  - 1. Welded-wire Protection-Zone Fencing: Galvanized-steel fencing fabricated from minimum 2-inch opening, 12-14 gauge wire fabric; with hand-driven tee posts.
    - a. Height: 4 feet.

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2. Plastic Protection-Zone Fencing: Plastic construction fencing constructed of high-density extruded and stretched polyethylene fabric with 2-inch maximum opening in pattern and weighing a minimum of 0.4 lb/ft.; remaining flexible from minus 60 to plus 200 deg F; inert to most chemicals and acids; minimum tensile yield strength of 2000 psi and ultimate tensile strength of 2680 psi; secured with plastic bands or galvanized-steel or stainlesssteel wire ties; and supported by tubular or T-shape galvanized-steel posts spaced not more than 8 feet apart.

- a. Height: 4 feet.
- b. Color: High-visibility orange, nonfading.

E. Protection-Zone Signage: Shop-fabricated, rigid plastic or metal sheet with attachment holes prepunched and reinforced; legibly printed with nonfading lettering and as follows:

1. Size and Text: As shown on Drawings.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Erosion and Sedimentation Control: Examine the site to verify that temporary erosion- and sedimentation-control measures are in place. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- B. For the record, prepare written report, endorsed by arborist, listing conditions detrimental to tree and plant protection.

### 3.2 PREPARATION

- A. Locate and clearly identify trees, shrubs, and other vegetation to remain. Tie a 1-inch blue-vinyl tape around each tree trunk at 45 inches above the ground.
- B. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.
- C. Tree-Protection Zones: Mulch areas inside tree-protection zones (as indicated on drawings) and other areas indicated.
  1. Apply 12-inch average thickness of wood chips free of weed species. Do not place mulch within 4-feet of tree trunks.

### 3.3 TREE- AND PLANT-PROTECTION ZONES

- A. Protection-Zone Fencing: Install protection-zone fencing along edges of protection zones before materials or equipment are brought on the site and construction operations begin in a manner that

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will prevent people from easily entering protected area except by entrance gates. Construct fencing so as not to obstruct safe passage or visibility at vehicle intersections where fencing is located adjacent to pedestrian walkways or in close proximity to street intersections, drives, or other vehicular circulation. Verify possible conflicts with Architect.

- B. Protection-Zone Signage: Install protection-zone signage in visibly prominent locations in a manner approved by Architect. Install one sign spaced approximately every 20 feet on protection-zone fencing, but no fewer than two signs with each facing a different direction.
- C. Maintain protection zones free of weeds and trash.
- D. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Architect.
- E. Maintain protection-zone fencing and signage in good condition as acceptable to Architect and remove when construction operations are complete and equipment has been removed from the site.
  - 1. Do not remove protection-zone fencing, even temporarily, to allow deliveries or equipment access through the protection zone.
  - 2. Temporary access is permitted subject to preapproval in writing by arborist if a root buffer effective against soil compaction is constructed as directed by arborist. Maintain root buffer so long as access is permitted.

### 3.4 EXCAVATION

- A. General: Excavate at edge of protection zones and for trenches indicated within protection zones according to requirements in Section 312000 "Earth Moving."
- B. Trenching near Trees: Where utility trenches are required within protection zones, hand excavate under or around tree roots or tunnel under the roots by drilling, auger boring, or pipe jacking. Do not cut main lateral tree roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots as required for root pruning.
- C. Redirect roots in backfill areas where possible. If encountering large, main lateral roots, expose roots beyond excavation limits as required to bend and redirect them without breaking. If encountered immediately adjacent to location of new construction and redirection is not practical, cut roots approximately 3 inches back from new construction and as required for root pruning.
- D. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.

### 3.5 ROOT PRUNING

- A. Prune roots that are affected by temporary and permanent construction. Prune roots as follows:

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1. Cut roots manually by digging a trench and cutting exposed roots with sharp pruning instruments; do not break, tear, chop, or slant the cuts. Do not use a backhoe or other equipment that rips, tears, or pulls roots.
  2. Cut Ends: Do not paint cut root ends.
  3. Temporarily support and protect roots from damage until they are permanently redirected and covered with soil.
  4. Cover exposed roots with burlap and water regularly.
  5. Backfill as soon as possible according to requirements in Section 312000 "Earth Moving."
- B. Root Pruning at Edge of Protection Zone: Prune roots 12 inches outside of the protection zone, by cleanly cutting all roots to the depth of the required excavation.
- C. Root Pruning within Protection Zone: Clear and excavate by hand to the depth of the required excavation to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.

### 3.6 CROWN PRUNING

- A. Prune branches that are affected by temporary and permanent construction. Prune branches as follows:
1. Pruning Standards: Prune trees according to ANSI A300 (Part 1). Contractor shall obtain copy of Standard before beginning work.
  2. Cut branches with sharp pruning instruments; do not break or chop.
  3. Do not apply pruning paint to wounds.
- B. Chip removed branches and spread over areas identified by Architect.

### 3.7 REGRADING

- A. Lowering Grade: Where new finish grade is indicated below existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.
- B. Lowering Grade within Protection Zone: Where new finish grade is indicated below existing grade around trees, slope grade away from trees as recommended by arborist unless otherwise indicated.
1. Root Pruning: Prune tree roots exposed by lowering the grade. Do not cut main lateral roots or taproots; cut only smaller roots. Cut roots as required for root pruning.
- C. Raising Grade: Where new finish grade is indicated above existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.
- D. Minor Fill within Protection Zone: Where existing grade is 2 inches or less below elevation of finish grade, fill with topsoil. Place topsoil in a single uncompacted layer and hand grade to required finish elevations.

### 3.8 FIELD QUALITY CONTROL

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- A. Inspections: Engage a qualified ISA Certified arborist to direct plant-protection measures in the vicinity of trees, shrubs, and other vegetation indicated to remain and to prepare inspection reports.
- B. Violations of the Tree and/or Plant Protection zone boundaries and restrictions shall make the Contractor subject to an Owner-imposed fine as a part of the general contract. Owner and Contractor shall negotiate fine through the means identified in the Owner-Contractor agreement.

### 3.9 REPAIR AND REPLACEMENT

- A. General: Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Architect.
  - 1. Submit details of proposed root cutting and tree and shrub repairs.
  - 2. Have arborist perform the root cutting, branch pruning, and damage repair of trees and shrubs.
  - 3. Treat damaged trunks, limbs, and roots according to arborist's written instructions.
  - 4. Perform repairs within 24 hours.
  - 5. Replace vegetation that cannot be repaired and restored to full-growth status, as determined by Landscape Architect.
- B. Trees: Remove and replace trees indicated to remain that are more than 25 percent dead or in an unhealthy condition before the end of the corrections period or are damaged during construction operations that Architect determines are incapable of restoring to normal growth pattern.
  - 1. Provide new trees of same size and species as those being replaced for each tree that measures 6 inches or smaller in caliper size.
  - 2. Provide two new tree(s) of 6-inch caliper size for each tree being replaced that measures more than 6 inches in caliper size.
    - a. Species: Species selected by Architect.
  - 3. Plant and maintain new trees as specified in Section 329300 "Plants."
- C. Soil Aeration: Where directed by Architect, aerate surface soil compacted during construction. Aerate 10 feet beyond drip line and no closer than 48 inches to tree trunk. Drill 2-inch-diameter holes a minimum of 18 inches deep at 24 inches o.c. Backfill holes with an equal mix of augered soil and sand.

### 3.10 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove excess excavated material, displaced trees, trash and debris, and legally dispose of them off Owner's property.

**END OF SECTION 015639**

## **SECTION 016000 - PRODUCT REQUIREMENTS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
  - 1. Section 012100 "Allowances" for products selected under an allowance.
  - 2. Section 012300 "Alternates" for products selected under an alternate.
  - 3. Section 012500 "Substitution Procedures" for requests for substitutions.
  - 4. Section 014200 "References" for applicable industry standards for products specified.

#### **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. Comparable Product: Product that is demonstrated and approved by Architect 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 single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification.

- C. Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section, provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications. Submit a comparable product request, if applicable.

#### 1.4 ACTION SUBMITTALS

- A. Comparable Product Request Submittal: Submit request for consideration of each comparable product. Identify basis-of-design 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 "Comparable Products" Article.
  - 2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
    - a. Form of Architect's Approval of Submittal: As specified in Section 013300 "Submittal Procedures."
    - b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 013300 "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.
- B. Identification of Products: Except for required labels and operating data, do not attach or imprint manufacturer or product names or trademarks on exposed surfaces of products or equipment that will be exposed to view in occupied spaces or on the exterior.
  - 1. Labels: Locate required product labels and stamps on a concealed surface, or, where required for observation following installation, on a visually accessible surface that is not conspicuous.
  - 2. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on a visually accessible but inconspicuous surface. Include information essential for operation, including the following:
    - a. Name of product and manufacturer.

- b. Model and serial number.
  - c. Capacity.
  - d. Speed.
  - e. Ratings.
3. See individual identification sections in Divisions 21, 22, 23, and 26 for additional identification requirements.

#### 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. Protect 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.

#### 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. See other Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

## PART 2 - PRODUCTS

### 2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
  2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
  3. Owner reserves the right to limit selection to products with warranties meeting requirements of the Contract Documents.
  4. Where products are accompanied by the term "as selected," Architect will make selection.
  5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
  6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
    - a. Submit additional documentation required by Architect in order to establish equivalency of proposed products. Evaluation of "or equal" product status is by the Architect, whose determination is final.
- B. Product Selection Procedures:
1. Sole Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
    - a. Sole product may be indicated by the phrase: "Subject to compliance with requirements, provide the following: ..."

2. Sole Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
  - a. Sole manufacturer/source may be indicated by the phrase: "Subject to compliance with requirements, provide products by the following: ..."
3. Limited List of Products: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
  - a. Limited list of products may be indicated by the phrase: "Subject to compliance with requirements, provide one of the following: ..."
4. Non-Limited List of Products: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, which complies with requirements.
  - a. Non-limited list of products is indicated by the phrase: "Subject to compliance with requirements, available products that may be incorporated in the Work include, but are not limited to, the following: ..."
5. Limited List of Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
  - a. Limited list of manufacturers is indicated by the phrase: "Subject to compliance with requirements, provide products by one of the following: ..."
6. Non-Limited List of Manufacturers: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, which complies with requirements.
  - a. Non-limited list of manufacturers is indicated by the phrase: "Subject to compliance with requirements, available manufacturers whose products may be incorporated in the Work include, but are not limited to, the following: ..."
7. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
  - a. For approval of products by unnamed manufacturers, comply with requirements in Section 012500 "Substitution Procedures" for substitutions for convenience.

- 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 Section 012500 "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 COMPARABLE PRODUCTS

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

PART 3 - EXECUTION (Not Used)

**END OF SECTION 016000**

## SECTION 017300 - EXECUTION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:

1. Construction layout.
2. Field engineering and surveying.
3. Installation of the Work.
4. Cutting and patching.
5. Coordination of Owner-installed products.
6. Progress cleaning.
7. Starting and adjusting.
8. Protection of installed construction.

- B. Related Requirements:

1. Section 011000 "Summary" for limits on use of Project site.
2. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.
3. Section 024119 "Selective Demolition" for demolition and removal of selected portions of the building.
4. Section 078413 "Penetration Firestopping" for patching penetrations in fire-rated construction.

#### 1.3 DEFINITIONS

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

#### 1.4 PREINSTALLATION MEETINGS

- A. Cutting and Patching Conference: Conduct conference at Project site.

1. Prior to commencing work requiring cutting and patching, review extent of cutting and patching anticipated and examine procedures for ensuring satisfactory result from cutting and patching work. Require representatives of each entity directly concerned with cutting and patching to attend, including the following:
  - a. Contractor's superintendent.
  - b. Trade supervisor responsible for cutting operations.
  - c. Trade supervisor(s) responsible for patching of each type of substrate.
  - d. Mechanical, electrical, and utilities subcontractors' supervisors, to the extent each trade is affecting by cutting and patching operations.
2. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For land surveyor or professional engineer.
- B. Certificates: Submit certificate signed by land surveyor or professional engineer certifying that location and elevation of improvements comply with requirements.
- C. Cutting and Patching Plan: Submit plan describing procedures at least 10 days prior to the time cutting and patching will be performed. Include the following information:
  1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
  2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
  3. Products: List products to be used for patching and firms or entities that will perform patching work.
  4. Dates: Indicate when cutting and patching will be performed.
  5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate length of time permanent services and systems will be disrupted.
    - a. Include description of provisions for temporary services and systems during interruption of permanent services and systems.
- D. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

#### 1.6 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

- B. 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 Architect before proceeding. Shore, brace, and support structural elements 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 the following:
    - a. Primary operational systems and equipment.
    - b. Fire separation assemblies.
    - c. Air or smoke barriers.
    - d. Fire-suppression systems.
    - e. Plumbing piping systems.
    - f. Mechanical systems piping and ducts.
    - g. Control systems.
    - h. Communication systems.
    - i. Fire-detection and -alarm systems.
    - j. Conveying systems.
    - k. Electrical wiring systems.
    - l. 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. Sprayed fire-resistive material.
    - e. Equipment supports.
    - f. Piping, ductwork, vessels, and equipment.
    - g. 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.
- C. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

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

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
  - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services; and other utilities.
  - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
  - 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
  - 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
  - 3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
  - 1. Description of the Work.
  - 2. List of detrimental conditions, including substrates.
  - 3. List of unacceptable installation tolerances.
  - 4. Recommended corrections.

- D. 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 and Owner 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 Contractor, submit a request for information to Architect according to requirements in Section 013100 "Project Management and Coordination."

### 3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. General: Engage a land surveyor or professional engineer to lay out the Work using accepted surveying practices.
  - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
  - 2. Establish limits on use of Project site.
  - 3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
  - 4. Inform installers of lines and levels to which they must comply.
  - 5. Check the location, level and plumb, of every major element as the Work progresses.
  - 6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
  - 7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.



- D. **Building Lines and Levels:** Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. **Record Log:** Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

### 3.4 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.

### 3.5 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.
- 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. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- F. Tools and Equipment: Where possible, select tools or equipment that minimize production of excessive noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. 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.
- I. 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.
- J. Repair or remove and replace damaged, defective, or nonconforming Work.
  - 1. Comply with Section 017700 "Closeout Procedures" for repairing or removing and replacing defective Work.

### 3.6 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. 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.
  - 1. Existing Warranties include the roof of the Auxiliary Gym of Tilghman High School. Contact John Losher with Garland, (270) 210-4056, for additional information.
- C. Temporary Support: Provide temporary support of work to be cut.
- D. 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.
- E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Section 011000 "Summary."
- F. 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 prevent interruption to occupied areas.
- G. 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 and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  - 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
  - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
  - 6. Proceed with patching after construction operations requiring cutting are complete.
- H. 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.
  - 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. 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.
  4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
  5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

### 3.7 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.

### 3.8 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. Use containers intended for holding waste materials of type to be stored.
  4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
1. Remove liquid spills promptly.
  2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- 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.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 017419 "Construction Waste Management and Disposal."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.
- 3.9 STARTING AND ADJUSTING
- A. Coordinate startup and adjusting of equipment and operating components with requirements in Section 019113 "General Commissioning Requirements."
  - B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

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- 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.
- E. Manufacturer's Field Service: Comply with qualification requirements in Section 014000 "Quality Requirements."

### 3.10 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. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.
- C. Comply with manufacturer's written instructions for temperature and relative humidity.

**END OF SECTION 017300**

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

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for the following:
  - 1. Salvaging nonhazardous demolition and construction waste.
  - 2. Recycling nonhazardous demolition and construction waste.
  - 3. Disposing of nonhazardous demolition and construction waste.
- B. Related Requirements:
  - 1. Section 042000 "Unit Masonry" for disposal requirements for masonry waste.

#### **1.3 DEFINITIONS**

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

#### **1.4 MATERIALS OWNERSHIP**

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

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- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.

- 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

### 1.5 ACTION SUBMITTALS

- A. Waste Management Plan: Submit plan within 30 days of date established for the Notice to Proceed.

### 1.6 INFORMATIONAL SUBMITTALS

- A. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- B. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- C. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- D. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- E. Qualification Data: For refrigerant recovery technician.
- F. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.
- G. Refrigerant Recovery: Comply with requirements in Section 024116 "Structure Demolition" and Section 024119 "Selective Demolition" for refrigerant recovery submittals.

### 1.7 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Comply with requirements in Section 024116 "Structure Demolition" and Section 024119 "Selective Demolition."
- B. Regulatory Requirements: Comply with transportation and disposal regulations of authorities having jurisdiction.



1.8 WASTE MANAGEMENT PLAN

- A. General: Develop a waste management plan according to requirements in this Section. Plan shall consist of waste identification and waste reduction work plan analysis. Distinguish between demolition and construction waste. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing , and, construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
  - 1. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
  - 2. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
  - 3. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
  - 4. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
  - 5. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
  - 1. Comply with operation, termination, and removal requirements in Section 015000 "Temporary Facilities and Controls."
- B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.
  - 1. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

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

### 3.2 SALVAGING DEMOLITION WASTE

- A. Comply with requirements in Section 024116 "Structure Demolition" and Section 024119 "Selective Demolition" for salvaging demolition waste.
- B. Salvaged Items for Sale and Donation: Not permitted on Project site.
- C. Salvaged Items for Owner's Use: Salvage items for Owner's use and handle as follows:
  - 1. Clean salvaged items.
  - 2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
  - 3. Store items in a secure area until delivery to Owner.
  - 4. Transport items to Owner's storage area designated by Owner.
  - 5. Protect items from damage during transport and storage.

### 3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.
- C. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.
- D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.
  - 1. Provide appropriately marked containers or bins for controlling recyclable waste until removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
    - a. Inspect containers and bins for contamination and remove contaminated materials if found.
  - 2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.

3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Remove recyclable waste from Owner's property and transport to recycling receiver or processor as often as required to prevent overflowing bins.

### 3.4 RECYCLING DEMOLITION WASTE

- A. Asphalt Paving: Break up and transport paving to asphalt-recycling facility.
- B. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
  1. Pulverize concrete to maximum 1-1/2-inch size.
  2. Crush concrete and screen to comply with requirements in Section 312000 "Earth Moving" for use as satisfactory soil for fill or subbase.
- C. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
  1. Pulverize masonry to maximum 3/4-inch size.
    - a. Crush masonry and screen to comply with requirements in Section 312000 "Earth Moving" for use as satisfactory soil for fill or subbase.
  2. Clean and stack undamaged, whole masonry units on wood pallets.
- D. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
- E. Metals: Separate metals by type.
  1. Structural Steel: Stack members according to size, type of member, and length.
  2. Remove and dispose of bolts, nuts, washers, and other rough hardware.
- F. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
- G. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.
- H. Metal Suspension System: Separate metal members, including trim and other metals from acoustical panels and tile, and sort with other metals.
- I. Carpet: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.
  1. Store clean, dry carpet in a closed container or trailer provided by carpet reclamation agency or carpet recycler.
- J. Carpet Tile: Remove debris, trash, and adhesive.

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1. Stack tile on pallet and store clean, dry carpet in a closed container or trailer provided by carpet reclamation agency or carpet recycler.
- K. Piping: Reduce piping to straight lengths and store by material and size. Separate supports, hangers, valves, sprinklers, and other components by material and size.
- L. Conduit: Reduce conduit to straight lengths and store by material and size.
- M. Lamps: Separate lamps by type and store according to requirements in 40 CFR 273.

### 3.5 RECYCLING CONSTRUCTION WASTE

#### A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

#### B. Wood Materials:

1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
  - a. Comply with requirements in Section 329300 "Plants" for use of clean sawdust as organic mulch.

#### C. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location.

1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.
  - a. Comply with requirements in Section 329300 "Plants" for use of clean ground gypsum board as inorganic soil amendment.

#### D. Paint: Seal containers and store by type.

### 3.6 DISPOSAL OF WASTE

#### A. General: Except for items or materials to be salvaged or recycled, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.

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2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.

**END OF SECTION 017419**

## SECTION 017700 - CLOSEOUT PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Substantial Completion procedures.
  - 2. Final completion procedures.
  - 3. Warranties.
  - 4. Final cleaning.
  - 5. Repair of the Work.
- B. Related Requirements:
  - 1. Section 013233 "Photographic Documentation" for submitting final completion construction photographic documentation.
  - 2. Section 017823 "Operation and Maintenance Data" for additional operation and maintenance manual requirements.
  - 3. Section 017839 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
  - 4. Section 017900 "Demonstration and Training" for requirements to train the Owner's maintenance personnel to adjust, operate, and maintain products, equipment, and systems.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of cleaning agent.
- 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 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect. Label with manufacturer's name and model number.
  - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Owner's signature for receipt of submittals.
5. Submit testing, adjusting, and balancing records.
6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. 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.
3. Complete startup and testing of systems and equipment.
4. Perform preventive maintenance on equipment used prior to Substantial Completion.

5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
  6. Advise Owner of changeover in utility services.
  7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
  8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
  9. Complete final cleaning requirements.
  10. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Request 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.

#### 1.7 FINAL COMPLETION PROCEDURES

- 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 Section 012900 "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.
  3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  4. Submit pest-control final inspection report.
  5. Submit final completion photographic documentation.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.



1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
  - 1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
  - 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.
  - 4. Submit list of incomplete items in the following format:
    - a. PDF electronic file. Architect will return annotated file.

1.9 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
- D. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
  - 1. Submit by uploading to web-based project software site.
- E. Warranties in Paper Form:
  - 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-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

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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.

- F. 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.

## PART 3 - EXECUTION

### 3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
    - a. Clean Project site, 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 not planted, mulched, or 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. Clean exposed surfaces of diffusers, registers, and grills.
  - o. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.
  - p. Leave Project clean and ready for occupancy.
- C. Pest Control: Comply with pest control requirements in Section 015000 "Temporary Facilities and Controls." Prepare written report.
- D. Construction Waste Disposal: Comply with waste disposal requirements in Section 015000 "Temporary Facilities and Controls."

### 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.

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**END OF SECTION 017700**

## **SECTION 017823 - OPERATION AND MAINTENANCE DATA**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
  - 1. Operation and maintenance documentation manuals.
  - 2. Emergency manuals.
  - 3. Systems and equipment operation manuals.
  - 4. Systems and equipment maintenance manuals.
  - 5. Product maintenance manuals.
- B. Related Requirements:
  - 1. Section 013300 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.

#### **1.3 DEFINITIONS**

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

#### **1.4 CLOSEOUT SUBMITTALS**

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

1. Submit by uploading to web-based project software site. Enable reviewer comments on draft submittals.
  2. Submit three paper copies. Architect will return two copies.
- C. Initial Manual Submittal: Submit draft copy of each manual at least 30 days before commencing demonstration and training. Architect will comment on whether general scope and content of manual are acceptable.
- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.
1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's comments and prior to commencing demonstration and training.
- E. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

#### 1.5 FORMAT OF OPERATION AND MAINTENANCE MANUALS

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

2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment. Enclose title pages and directories in clear plastic sleeves.
4. Supplementary Text: Prepared on 8-1/2-by-11-inch white bond paper.
5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
  - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
  - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

#### 1.6 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Organization of Manuals: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
  1. Title page.
  2. Table of contents.
  3. Manual contents.
- B. Title Page: Include the following information:
  1. Subject matter included in manual.
  2. Name and address of Project.
  3. Name and address of Owner.
  4. Date of submittal.
  5. Name and contact information for Contractor.
  6. Name and contact information for Construction Manager.
  7. Name and contact information for Architect.
  8. Name and contact information for Commissioning Authority.
  9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
  10. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
  1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.

- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

## 1.7 EMERGENCY MANUALS

- A. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- B. Content: Organize manual into a separate section for each of the following:
  - 1. Type of emergency.
  - 2. Emergency instructions.
  - 3. Emergency procedures.
- C. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
  - 1. Fire.
  - 2. Flood.
  - 3. Gas leak.
  - 4. Water leak.
  - 5. Power failure.
  - 6. Water outage.
  - 7. System, subsystem, or equipment failure.
  - 8. Chemical release or spill.
- D. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- E. Emergency Procedures: Include the following, as applicable:
  - 1. Instructions on stopping.
  - 2. Shutdown instructions for each type of emergency.
  - 3. Operating instructions for conditions outside normal operating limits.
  - 4. Required sequences for electric or electronic systems.
  - 5. Special operating instructions and procedures.



1.8 SYSTEMS AND EQUIPMENT OPERATION MANUALS

- A. Systems and Equipment Operation Manual: Assemble a complete set of data indicating operation of each system, subsystem, and piece of equipment not part of a system. Include information required for daily operation and management, operating standards, and routine and special operating procedures.
  - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
  - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
  
- B. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
  - 1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
  - 2. Performance and design criteria if Contractor has delegated design responsibility.
  - 3. Operating standards.
  - 4. Operating procedures.
  - 5. Operating logs.
  - 6. Wiring diagrams.
  - 7. Control diagrams.
  - 8. Piped system diagrams.
  - 9. Precautions against improper use.
  - 10. License requirements including inspection and renewal dates.
  
- C. Descriptions: Include the following:
  - 1. Product name and model number. Use designations for products indicated on Contract Documents.
  - 2. Manufacturer's name.
  - 3. Equipment identification with serial number of each component.
  - 4. Equipment function.
  - 5. Operating characteristics.
  - 6. Limiting conditions.
  - 7. Performance curves.
  - 8. Engineering data and tests.
  - 9. Complete nomenclature and number of replacement parts.
  
- D. Operating Procedures: Include the following, as applicable:
  - 1. Startup procedures.
  - 2. Equipment or system break-in procedures.
  - 3. Routine and normal operating instructions.
  - 4. Regulation and control procedures.
  - 5. Instructions on stopping.
  - 6. Normal shutdown instructions.
  - 7. Seasonal and weekend operating instructions.
  - 8. Required sequences for electric or electronic systems.
  - 9. Special operating instructions and procedures.

- E. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- F. Piped Systems: Diagram piping as installed, and identify color coding where required for identification.

#### 1.9 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

- A. Systems and Equipment Maintenance Manuals: Assemble a complete set of data indicating maintenance of each system, subsystem, and piece of equipment not part of a system. Include manufacturers' maintenance documentation, preventive maintenance procedures and frequency, repair procedures, wiring and systems diagrams, lists of spare parts, and warranty information.
  - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
  - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- B. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranties and bonds as described below.
- C. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- D. Manufacturers' Maintenance Documentation: Include the following information for each component part or piece of equipment:
  - 1. Standard maintenance instructions and bulletins; include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
    - a. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
  - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
  - 3. Identification and nomenclature of parts and components.
  - 4. List of items recommended to be stocked as spare parts.
- E. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:

1. Test and inspection instructions.
  2. Troubleshooting guide.
  3. Precautions against improper maintenance.
  4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  5. Aligning, adjusting, and checking instructions.
  6. Demonstration and training video recording, if available.
- F. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
  2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
- G. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- H. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- I. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
1. Include procedures to follow and required notifications for warranty claims.
- J. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
1. Do not use original project record documents as part of maintenance manuals.
- 1.10 PRODUCT MAINTENANCE MANUALS
- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- B. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- C. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

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- D. Product Information: Include the following, as applicable:
  - 1. Product name and model number.
  - 2. Manufacturer's name.
  - 3. Color, pattern, and texture.
  - 4. Material and chemical composition.
  - 5. Reordering information for specially manufactured products.
  
- E. Maintenance Procedures: Include manufacturer's written recommendations and the following:
  - 1. Inspection procedures.
  - 2. Types of cleaning agents to be used and methods of cleaning.
  - 3. List of cleaning agents and methods of cleaning detrimental to product.
  - 4. Schedule for routine cleaning and maintenance.
  - 5. Repair instructions.
  
- F. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
  
- G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - 1. Include procedures to follow and required notifications for warranty claims.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 017823**

## **SECTION 017839 - PROJECT RECORD DOCUMENTS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for project record documents, including the following:
  - 1. Record Drawings.
  - 2. Record Specifications.
- B. Related Requirements:
  - 1. Section 017700 "Closeout Procedures" for general closeout procedures.
  - 2. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.

#### **1.3 CLOSEOUT SUBMITTALS**

- A. Record Drawings: Comply with the following:
  - 1. Number of Copies: Submit one set(s) of marked-up record prints.
- B. Record Specifications: Submit one paper copy or annotated PDF electronic files of Project's Specifications, including addenda and contract modifications.

#### **1.4 RECORD DRAWINGS**

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
  - 1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
    - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    - b. Accurately record information in an acceptable drawing technique.
    - c. Record data as soon as possible after obtaining it.

- d. Record and check the markup before enclosing concealed installations.
  - e. Cross-reference record prints to corresponding photographic documentation.
2. Content: Types of items requiring marking include, but are not limited to, the following:
    - a. Dimensional changes to Drawings.
    - b. Revisions to details shown on Drawings.
    - c. Depths of foundations.
    - d. Locations and depths of underground utilities.
    - e. Revisions to routing of piping and conduits.
    - f. Revisions to electrical circuitry.
    - g. Actual equipment locations.
    - h. Duct size and routing.
    - i. Locations of concealed internal utilities.
    - j. Changes made by Change Order or Construction Change Directive.
    - k. Changes made following Architect's written orders.
    - l. Details not on the original Contract Drawings.
    - m. Field records for variable and concealed conditions.
    - n. Record information on the Work that is shown only schematically.
  3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
  4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
  5. Mark important additional information that was either shown schematically or omitted from original Drawings.
  6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints: Organize record prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
  2. Identification: As follows:
    - a. Project name.
    - b. Date.
    - c. Designation "PROJECT RECORD DRAWINGS."
    - d. Name of Architect.
    - e. Name of Contractor.

## 1.5 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.

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2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
  3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
  4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
  5. Note related Change Orders, record Product Data, and record Drawings where applicable.
- B. Format: Submit record Specifications as annotated PDF electronic file or scanned PDF electronic file(s) of marked-up paper copy of Specifications.

### 1.6 MAINTENANCE OF RECORD DOCUMENTS

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

## PART 2 - PRODUCTS

## PART 3 - EXECUTION

**END OF SECTION 017839**

## **SECTION 024119 - SELECTIVE DEMOLITION**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section Includes:
  - 1. Demolition and removal of selected portions of building or structure.
  - 2. Demolition and removal of selected site elements.
  - 3. Salvage of existing items to be reused or recycled.
- B. Related Requirements:
  - 1. Section 017300 "Execution" for cutting and patching procedures.

#### **1.3 DEFINITIONS**

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

#### **1.4 MATERIALS OWNERSHIP**

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.



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1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For refrigerant recovery technician.
- B. Engineering Survey: Submit engineering survey of condition of building.
- C. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control and, for noise control. Indicate proposed locations and construction of barriers.
- D. Schedule of Selective Demolition Activities: Indicate the following:
  1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
  2. Interruption of utility services. Indicate how long utility services will be interrupted.
  3. Coordination for shutoff, capping, and continuation of utility services.
  4. Use of elevator and stairs.
  5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- E. Predemolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by demolition operations. Comply with Section 013233 "Photographic Documentation." Submit before Work begins.
- F. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.
- G. Warranties: Documentation indicating that existing warranties are still in effect after completion of selective demolition.

### 1.6 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.

### 1.7 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

### 1.8 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

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- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: Present in buildings and structures to be selectively demolished. A report on the presence of hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.
  - 1. Hazardous material remediation is specified elsewhere in the Contract Documents.
  - 2. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.
  - 3. Owner will provide material safety data sheets for suspected hazardous materials that are known to be present in buildings and structures to be selectively demolished because of building operations or processes performed there.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Maintain fire-protection facilities in service during selective demolition operations.

### 1.9 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties. Notify warrantor before proceeding. Existing warranties include the following:
  - 1. PTHS Roofing.
- B. Notify warrantor on completion of selective demolition, and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

### 1.10 COORDINATION

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

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

- B. Standards: Comply with ASSE A10.6 and NFPA 241.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
  - 1. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.
- D. Verify that hazardous materials have been remediated before proceeding with building demolition operations.
- E. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or video.
  - 1. Comply with requirements specified in Section 013233 "Photographic Documentation."
  - 2. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.

### 3.2 PREPARATION

- A. Refrigerant: Before starting demolition, remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction.

### 3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
  - 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
  - 2. Arrange to shut off utilities with utility companies.

3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
4. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
  - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
  - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
  - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
  - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
  - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
  - f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
  - g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

### 3.4 PROTECTION

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

3.5 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
  3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
  5. Maintain fire watch during and for at least 24 hours after flame-cutting operations.
  6. Maintain adequate ventilation when using cutting torches.
  7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  8. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
  9. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  10. Dispose of demolished items and materials promptly. Comply with requirements in Section 017419 "Construction Waste Management and Disposal."
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Removed and Salvaged Items:
1. Clean salvaged items.
  2. Pack or crate items after cleaning. Identify contents of containers.
  3. Store items in a secure area until delivery to Owner.
  4. Transport items to Owner's storage area designated by Owner.
  5. Protect items from damage during transport and storage.
- D. Removed and Reinstalled Items:
1. Clean and repair items to functional condition adequate for intended reuse.
  2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  3. Protect items from damage during transport and storage.
  4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

### 3.6 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, and then remove concrete between saw cuts.
- B. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, and then remove masonry between saw cuts.
- C. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, and then break up and remove.
- D. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings." Do not use methods requiring solvent-based adhesive strippers.

### 3.7 DISPOSAL OF DEMOLISHED MATERIALS

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

### 3.8 CLEANING

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

**END OF SECTION 024119**

## **SECTION 061053 - MISCELLANEOUS ROUGH CARPENTRY**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section Includes:
  - 1. Rooftop equipment bases and support curbs.
  - 2. Wood blocking and nailers.

#### **1.3 DEFINITIONS**

- A. Boards or Strips: Lumber of less than 2 inches nominal (38 mm actual) size in least dimension.
- B. Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) or greater size but less than 5 inches nominal (114 mm actual) size in least dimension.

#### **1.4 ACTION SUBMITTALS**

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
  - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.

#### **1.5 INFORMATIONAL SUBMITTALS**

- A. Evaluation Reports: For the following, from ICC-ES:
  - 1. Preservative-treated wood.

#### **1.6 QUALITY ASSURANCE**

- A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant-treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

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### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

## PART 2 - PRODUCTS

### 2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

### 2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2.
  - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- C. Application: Treat items indicated on Drawings, and the following:
  - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
  - 2. Wood sills, sleepers, blocking, and similar concealed members in contact with masonry or concrete.

### 2.3 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
  - 1. Blocking.
  - 2. Nailers.
  - 3. Rooftop equipment bases and support curbs.
- B. Dimension Lumber Items: Construction or No. 2 grade lumber of the following species:
  - 1. Mixed southern pine or southern pine; SPIB.
- C. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.



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- D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

### 2.4 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
  - 1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A153/A153M.
- B. Nails, Brads, and Staples: ASTM F1667.
- C. Screws for Fastening to Metal Framing: ASTM C1002 OR ASTM C954, length as recommended by screw manufacturer for material being fastened.
- D. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- E. Post-Installed Anchors: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC01, ICC-ES AC58, ICC-ES AC193 or ICC-ES AC308 as appropriate for the substrate.
  - 1. Material: Carbon-steel components, zinc plated to comply with ASTM B633, Class Fe/Zn 5.

### 2.5 MISCELLANEOUS MATERIALS

- A. Flexible Flashing: Composite, self-adhesive, flashing product consisting of a pliable, butyl rubber or rubberized-asphalt compound, bonded to a high-density polyethylene film, aluminum foil, or spunbonded polyolefin to produce an overall thickness of not less than 0.025 inch (0.6 mm).

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry accurately to other construction. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- B. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
- C. Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with

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function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

- D. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- E. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
  - 1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
  - 2. ICC-ES evaluation report for fastener.

### 3.2 INSTALLATION OF WOOD BLOCKING AND NAILER

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.

END OF SECTION 061053

SECTION 073110 – ASPHALT SHINGLES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
  - 1. Asphalt shingles.
  - 2. Manufacturer's recommended underlayment.
  - 3. Self-adhering sheet underlayment.
  - 4. Ridge vents.

1.3 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definitions of terms related to roofing work in this Section.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of asphalt shingle, ridge and hip cap shingles ridge vent and exposed valley lining indicated.
  - 1. Include similar Samples of trim and accessories involving color selection.
- C. Samples for Verification: For the following products, of sizes indicated, to verify color selected.
  - 1. Asphalt Shingle: Full-size asphalt shingle strip.
  - 2. Ridge and Hip Cap Shingles: Full-size ridge and hip cap asphalt shingle.
  - 3. Ridge Vent: 12-inch- (300-mm-) long Sample.
  - 4. Exposed Valley Lining: 12 inches (300 mm) square.
  - 5. Self-Adhering Underlayment: 12 inches (300 mm) square
  - 6. Contractor needs to provide sample boards for final approval
  - 7. Color: Customer to choose
- D. Qualification Data: For Installer, including certificate signed by asphalt shingle manufacturer stating that Installer is approved, authorized, or licensed to install roofing system indicated.

- E. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency or by manufacturer and witnessed by a qualified testing agency, for asphalt shingles.
- F. Maintenance Data: For asphalt shingles to include in maintenance manuals.
- G. Warranties: Special warranties specified in this Section.

#### 1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain specified products as required from warranting manufacturer as outlined in the specifications.
- B. Fire-Test-Response Characteristics: Provide asphalt shingle and related roofing materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.
  - 1. Exterior Fire-Test Exposure: Class A; ASTM E 108 or UL 790, for application and roof slopes indicated.
- C. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

#### 1.6 MANUFACTURER'S INSPECTIONS

- A. When the project is in progress, the base sheet system manufacturer will provide the following:
  - 1. Keep the Owner informed as to the progress and quality of the work as observed.
  - 2. Provide job site inspections everyday that work is performed.
  - 3. Report to the Owner in writing any failure or refusal of the Contractor to correct unacceptable practices called to the Contractor's attention.
  - 4. Confirm after completion that manufacturer has observed no applications procedures in conflict with the specifications other than those that may have been previously reported and corrected.
- B. DELIVERY, STORAGE, AND HANDLING
- C. Store roofing materials in a dry, well-ventilated, weathertight location according to asphalt shingle manufacturer's written instructions. Store underlayment rolls on end on pallets or other raised surfaces. Do not double-stack rolls.
  - 1. Handle, store, and place roofing materials in a manner to avoid significant or permanent damage to roof deck or structural supporting members.
- D. Protect unused under-layment from weather, sunlight, and moisture when left overnight or when roofing work is not in progress.

1.7 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit asphalt shingle roofing to be performed according to manufacturer's written instructions and warranty requirements.
  - 1. Install self-adhering sheet under-layment within the range of ambient and substrate temperatures recommended by manufacturer.

1.8 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace asphalt shingles that fail in materials or workmanship within specified warranty period. Materials failures include manufacturing defects and failure of asphalt shingles to self-seal after a reasonable time.
  - 1. Material Warranty Period: Lifetime Ltd. Transferable manufacturers warranty.
  - 2. Wind-Speed Warranty Period: Asphalt shingles will resist blow-off or damage caused by wind speeds up to 110 mph for 10 years from date of Substantial Completion.
  - 3. Algae-Discoloration Warranty Period: Asphalt shingles will not discolor 10 years from date of Substantial Completion.
- B. Special Project Warranty: Roofing Installer's warranty, on warranty form at end of this Section, signed by roofing Installer, covering Work of this Section, in which roofing Installer agrees to repair or replace components of asphalt shingle roofing that fail in materials or workmanship within the following warranty period:
  - 1. Warranty Period: two years from date of Substantial Completion.

1.9 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Asphalt Shingles: 100 sq. ft of each type, in unbroken bundles.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.

2.2 GLASS-FIBER-REINFORCED ASPHALT SHINGLES

- A. Laminated-Strip Asphalt Shingles: ASTM D 3462, laminated, multi-ply overlay construction, glass-fiber reinforced, mineral-granule surfaced, and self-sealing.

1. Available Products:
  - a. GAF- Timberline
  - b. Owens Corning- TruDefinition Duration shingles
  - c. CertainTeed-Landmark Solaris
2. Butt Edge: Straight cut.
3. Strip Size: Manufacturer's standard.
4. Algae Resistance: Granules treated to resist algae discoloration.
5. Color and Blends: Match Architect's samples.

B. Hip and Ridge Shingles: Manufacturer's standard units to match asphalt shingles.

### 2.3 UNDERLAYMENT MATERIALS

- A. Felts: ASTM D 4869, Type I, 60 Mil, asphalt-saturated organic felts, nonperforated.
  1. As recommended by shingle manufacturer.
- B. Self-Adhering Sheet Underlayment, Granular Surfaced: ASTM D 1970, minimum of 85-mil-thick sheet; glass-fiber-mat-reinforced, SBS-modified asphalt; mineral-granule surfaced; with release paper backing; cold applied. Provide primer for adjoining concrete or masonry surfaces to receive underlayment.
- C. Granular-Surfaced Valley Lining: ASTM D 3909, mineral-granular-surfaced, glass-felt-based, asphalt roll roofing; 39 inches wide.

### 2.4 ACCESSORIES

- A. Asphalt Roofing Cement: ASTM D 4586, Type II, asbestos free.
- B. Roofing Nails: ASTM F 1667; aluminum, stainless-steel, copper, or hot-dip galvanized steel wire shingle nails, minimum 0.120-inch- (3-mm-) diameter, barbed shank, sharp-pointed, with a minimum 3/8-inch- (9.5-mm-) diameter flat head and of sufficient length to penetrate 3/4 inch (19 mm) into solid wood decking or extend at least 1/8 inch (3 mm) through OSB or plywood sheathing.
  1. Where nails are in contact with metal flashing, use nails made from same metal as flashing.
- C. Felt Underlayment Nails: Aluminum, stainless-steel, or hot-dip galvanized steel wire with low profile capped heads or disc caps, 1-inch (25-mm) minimum diameter.

### 2.5 METAL FLASHING AND TRIM

- A. Sheet Metal Flashing and Trim: Comply with requirements in Division 7 Section "Sheet Metal Flashing and Trim."
  1. Sheet Metal: Copper or Anodized aluminum.

- B. Fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item.
  - 1. Step Flashings: Fabricate with a headlap of 2 inches (50 mm) and a minimum extension of 5 inches (125 mm) over the underlying asphalt shingle and up the vertical surface.
  - 2. Cricket Flashings: Fabricate with concealed flange extending a minimum 24 inches (600 mm) beneath upslope asphalt shingles and 6 inches (150 mm) above the roof plane.
  - 3. Open Valley Flashings: Fabricate in lengths not exceeding [10 feet (3 m)] with 1-inch- (25-mm-) high inverted-V profile at center of valley and equal flange widths of 10 inches (250 mm).
  - 4. Drip Edges: Fabricate in lengths not exceeding [10 feet (3 m)] with 2-inch (50-mm) roof deck flange and 1-1/2-inch (38-mm) fascia flange with 3/8-inch (9.6-mm) drip at lower edge.
- C. Vent Pipe Flashings: ASTM B 749, Type L51121, at least 1/16 inch (1.6 mm) thick. Provide lead sleeve sized to slip over and turn down into pipe, soldered to skirt at slope of roof and extending at least 4 inches (100 mm) from pipe onto roof.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
  - 1. Examine roof sheathing to verify that sheathing joints are supported by framing and blocking or metal clips and that installation is within flatness tolerances.
  - 2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and completely anchored; and that provision has been made for flashings and penetrations through asphalt shingles.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 UNDERLAYMENT INSTALLATION

- A. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free, on roof deck. Comply with low-temperature installation restrictions of underlayment manufacturer if applicable. Install over the entire roof surface, unless otherwise noted on the roof drawings for specific locations, lapped in direction to shed water. Lap sides not less than 3-1/2 inches (89 mm). Lap ends not less than 6 inches (150 mm) staggered 24 inches (600 mm) between courses. Roll laps with roller. Cover underlayment within seven days.
  - 1. Prime concrete and masonry surfaces to receive self-adhering sheet underlayment.
  - 2. Eaves: Extend from edges of eaves 36 inches beyond interior face of exterior wall.
  - 3. Rakes: Extend from edges of rake 36 inches beyond interior face of exterior wall.
  - 4. Valleys: Extend from lowest to highest point 18 inches on each side.
  - 5. Hips: Extend 18 inches on each side.

6. Ridges: Extend 36 inches on each side.
  7. Sidewalls: Extend beyond sidewall 18 inches and return vertically against sidewall not less than 4 inches
  8. Dormers, Chimneys, Skylights, and other Roof-Penetrating Elements: Extend beyond penetrating element 18 inches and return vertically against penetrating element not less than 4 inches.
  9. Roof Slope Transitions: Extend 18 inches on each roof slope.
- B. Metal-Flashed Open Valley Underlayment: Install two layers of 36-inchwide felt underlayment centered in valley. Stagger end laps between layers at least 72 inches. Lap ends of each layer at least 12 inches in direction to shed water, and seal with asphalt roofing cement. Fasten each layer to roof deck with roofing nails.
1. Lap roof deck felt underlayment over first layer of valley felt underlayment at least 6 inches.

### 3.3 METAL FLASHING INSTALLATION

- A. General: Install metal flashings and other sheet metal to comply with requirements in Division 7 Section "Sheet Metal Flashing and Trim."
1. Install metal flashings according to recommendations in ARMA's "Residential Asphalt Roofing Manual" and asphalt shingle recommendations in NRCA's "The NRCA Roofing and Waterproofing Manual."
- B. Apron Flashings: Extend lower flange over and beyond each side of downslope asphalt shingles and up the vertical surface.
- C. Step Flashings: Install with a headlap of 2 inches and extend over the underlying asphalt shingle and up the vertical surface. Fasten to roof deck only.
- D. Cricket Flashings: Install against the roof-penetrating element extending concealed flange beneath upslope asphalt shingles and beyond each side.
- E. Open Valley Flashings: Install centrally in valleys, lapping ends at least 8 inches in direction to shed water. Fasten upper end of each length to roof deck beneath overlap.
1. Secure hemmed flange edges into metal cleats spaced 2 inches apart and fastened to roof deck.
- F. Rake Drip Edges: Install rake drip edge flashings over underlayment and fasten to roof deck.
- G. Eave Drip Edges: Install eave drip edge flashings below underlayment and fasten to roof sheathing.
- H. Pipe Flashings: Form flashing around pipe penetrations and asphalt shingles. Fasten and seal to asphalt shingles as recommended by manufacturer.

### 3.4 ASPHALT SHINGLE INSTALLATION



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- A. Install asphalt shingles according to manufacturer's written instructions, recommendations in ARMA's "Residential Asphalt Roofing Manual," and asphalt shingle recommendations in NRCA's "The NRCA Roofing and Waterproofing Manual."
- B. Install starter strip along lowest roof edge, consisting of an asphalt shingle strip with tabs removed with self-sealing strip face up at roof edge.
  - 1. Extend asphalt shingles 1/2 inch over fascia at eaves and rakes.
  - 2. Install starter strip along rake edge.
- C. Install first and remaining courses of asphalt shingles stair-stepping diagonally across roof deck with manufacturer's recommended offset pattern at succeeding courses, maintaining uniform exposure.
- D. Fasten asphalt shingle strips with a minimum of six (6) roofing nails located according to manufacturer's written instructions.
  - 1. When ambient temperature during installation is below 50 deg F, seal asphalt shingles with asphalt roofing cement spots.
- E. Closed-Cut Valleys: Extend asphalt shingle strips from one side of valley 12 inches beyond center of valley. Use one-piece shingle strips without joints in the valley. Fasten with extra nail in upper end of shingle. Install asphalt shingle courses from other side of valley and cut back to a straight line 2 inches short of valley centerline. Trim upper concealed corners of cut-back shingle strips.
  - 1. Do not nail asphalt shingles within 6 inches of valley center.
  - 2. Set trimmed, concealed-corner asphalt shingles in a 3-inch-wide bed of asphalt roofing cement.
- F. Ridge Vents: Install continuous ridge vents over asphalt shingles according to manufacturer's written instructions. Fasten with roofing nails of sufficient length to penetrate sheathing.
- G. Ridge and Hip Cap Shingles: Maintain same exposure of cap shingles as roofing shingle exposure. Lap cap shingles at ridges to shed water away from direction of prevailing winds. Fasten with roofing nails of sufficient length to penetrate sheathing.
  - 1. Fasten ridge cap asphalt shingles to cover ridge vent without obstructing airflow.

END OF SECTION 073110

## SECTION 074213 – METAL WALL PANELS (WAVE PANEL)

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. Section Includes: Factory-formed wall panels and soffit and includes:

1. Factory-formed panels in vertical installation.
2. Metal flashings and trim.

Related Sections: Section(s) related to this section include:

3. Building Insulation: Division 7 Building Insulation Section.
4. Sealants: Division 7 Joint Sealers Sections.
5. Flashing & Sheet Metal: Division 7 Flashing & Sheet Metal

#### 1.2 REFERENCES

A. American Society for Testing and Materials (ASTM):

1. ASTM A653/A653M Standard Specification for Steel Sheets, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
2. ASTM A792/A792M Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy Coated by the Hot-Dip Process.
3. ASTM B209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
4. ASTM D2247 Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
5. ASTM E1680 Standard Test Method for Determining the Rate of Air Leakage Through Exterior Metal Systems Under Specified Pressure Differences Across the Specimen.
6. ASTM E1646 Standard Test Method for Water Penetration of Metal Systems by Uniform Static Air Pressure Difference.

#### 1.3 ADMINISTRATIVE REQUIREMENTS

A. Pre-installation Meetings:

1. Schedule meeting to discuss project requirements, substrate conditions, manufacturer's installation instructions and manufacturer's warranty requirements before start of work onsite. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.
2. Required attendees: Contractor, metal deck & metal installer, and any other subcontractors who have equipment penetrating the metal or work that requires

access or traffic to metal roof and wall areas.

#### 1.4 SYSTEM DESCRIPTION

- A. Panel Performance Requirements: Provide panels, which have been manufactured, fabricated and installed to withstand structural and thermal movement, wind loading and weather exposure to maintain manufacturer's performance criteria without defects, damage, failure or infiltration of water.
  - 1. Air infiltration: ASTM E283
  - 2. Water penetration: ASTM E331
  - 3. Uplift Tests: ASTM E 1592
  
- A. Finish Performance Requirements:
  - 1. Two coat coil applied, baked on full strength (70% resin, PVF2) fluorocarbon coating:
    - a. Consisting of a nominal 0.25 mil dry film thickness primer, and a nominal dry film thickness of 0.7 -0.8 mil color coat for a total 0.9 to 1.1 mil total system dry film thickness.
    - b. Color change and fade resistance: No cracking, peeling, blistering or loss of adhesion when tested in accordance with ASTM G23; color change, after removal of surface deposits such as dirt or chalk, maximum 5 NBS units.
    - c. Humidity resistance: No blistering, peeling or loss of adhesion after 1000 hours testing, in accordance with ASTM D2247.

#### 1.5 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
  
- B. Product Data: Submit manufacturer's product data for specified products.
  
- C. Shop Drawings: Submit shop drawings showing layout, profiles and product components, including anchorage, accessories, finish colors and textures.
  - 1. Indicate layout of metal panels and metal panel sizes, including custom-fabricated metal panels if indicated; indicate each item of trim and accessories.
  - 2. Indicate in detailed drawings profile and gauge of interior and exterior sheets, and locations and types of fasteners; indicate locations, gauges, shapes and methods of attachment of metal panels, trim and accessory items.
  - 3. Include sealant location and denote those that are factory and field applied.
  - 4. Indicate products/materials required for construction activities and field worked conditions of this section not supplied by manufacturer of products of this section.
  
- E. Samples: Submit selection and verification samples for finishes, colors and textures.
  
- F. Warranties:
  - 1. Finish Warranty

I. Buy American Certification: Manufacturer's letters of compliance that supplied products comply  
With requirements.

J. Closeout Submittals: Submit the following:

1. Warranty: Warranty documents specified herein.

## 1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Provider of "hands on" installer training programs at manufacturer facility.
2. Minimum of ten years' experience in manufacturing metal wall systems.
3. Provider of product produced in a permanent factory environment with fixed roll-forming equipment.

B. Installer Qualifications:

1. Experience on at least five projects of similar size, type and complexity as this project that have been in service for a minimum of two years with satisfactory performance of the metal panel system.
2. Employer of workers for this project who are competent in techniques required by manufacturer for installation indicated and who shall be supervised at all times when material is being installed.

D. Buy American Compliance: Materials provided under Work of this Section shall comply with the following requirements:

1. Buy American Act of 1933 BAA-41 U.S.C §§ 10a – 10d.
2. Buy American provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

## 1.7 DELIVERY, STORAGE & HANDLING

A. General: Comply with Division 1 Product Requirements Sections.

1. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.

B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact. Identify fabricated components with UL 90 label where appropriate.

C. Delivery and Acceptance Requirements: Ensure all panels are received in good condition. In cases where damage is visible, note all paperwork; inform architect and project superintendent.

D. Packing, Shipping, Handling and Unloading:

1. Bundle panels in waterproof wrapping paper when nested, or wooden crates when panels cannot be nested.
2. Package trim and accessories in waterproof wrapping paper.

E. Storage and Protection: Store materials protected from exposure to harmful conditions. Store material in dry, above-ground location.

1. Stack prefinished material to prevent twisting, bending, abrasion, scratching and denting. Elevate one end of each skid to allow for moisture runoff.
2. Store products of this section in manufacturer's unopened packaging until installation of products
3. Maintain dry, heated storage area for products of this section until installation of products.
4. Remove strippable plastic film before storage under high-heat conditions.

## 1.8 PROJECT CONDITIONS

- A. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements, fabrication schedule with construction progress to avoid construction delays.
- B. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed in accordance with manufacturers' written instructions and warranty requirements.

## 1.9 WARRANTY

A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

1. Panel Material: Furnish manufacturers 25 year warranty covering the panel against rupture, structural failure, or perforation.
2. Panel Coating:
  - a. Polyvinylidene Fluoride: Furnish manufacturer's 40-year warranty covering cracking, checking, and peeling, and 30 year warranty covering fade and chalk on the two coat coil applied, baked on full strength (70% resin, PVF2) fluorocarbon coating. Manufacturer's warranty may exclude surface deterioration due to physical damage and corrosive environments.

B. Special Warranty: Installer's standard form in which installer agrees to repair or replace panels that fail due to poor workmanship or faulty installation within the specified warranty period.

1. Warranty Period: 2 years from date of Substantial Completion.

## PART 2 PRODUCTS

### 2.1 METAL PANELS

- A. Manufacturer: McElroy Metal, Inc.
  - 1. Contact: 1500 Hamilton Rd., Bossier City, LA 71111; Telephone: (800) 562-3576, (318) 747-8097; Fax: (318) 747-8099; E-mail: [info@mcelroymetal.com](mailto:info@mcelroymetal.com); website: [www.mcelroymetal.com](http://www.mcelroymetal.com).
  - 2. Tremco Incorporated.
  - 3. Centria.
  
- B. Forming: Use continuous end rolling method. No end laps are permitted on panels without architect approval. No portable rollforming machines will be permitted on this project, no installer—owner or installer-rented machines will be permitted. It is the intent of the Architect to provide factory-manufactured panel systems only for this project.

### 2.2 MANUFACTURED UNITS

- A. McElroy Metal Wave Panel:
  - 1. Profile: .75" (20 mm) deep pan concealed fastener wall panel.
  - 2. Size: 16" (406 mm) cover width, lengths indicated on drawings.
  
- B. Clips and Fasteners: Supply items required for installation of panels in accordance with manufacturer's installation instructions and other indicated items; supply galvanized clips and long-life fasteners.

### 2.3 MATERIALS

- A. Material: Galvalume steel sheet conforming to ASTM A792, AZ55 coating for bare; AZ50 coating for painted 24 gauge sheet thickness.

### 2.4 METAL WALL PANEL ACCESSORIES

- A. General: Provide complete metal panel assembly incorporating trim, copings, fasciae, gutters and downspouts, and miscellaneous flashings, in manufacturer's standard profiles. Provide required fasteners, closure strips, and sealants as indicated in manufacturer's written instructions.
  
- B. Flashing and Trim: Match material, thickness, and finish of metal panel face sheet.
  
- C. Panel Fasteners: Self-tapping screws and other acceptable corrosion-resistant fasteners recommended by metal panel manufacturer. Where exposed fasteners cannot be avoided, supply fasteners with EPDM or neoprene gaskets, with heads matching color of metal panels by means of factory-applied coating.

- D. Joint Sealers: Manufacturer's standard or recommended liquid and preformed sealers and tapes, and as follows:
  - 1. Tape Sealers: Manufacturer's standard non-curing butyl tape, AAMA 809.2.
  - 2. Concealed Joint Sealant: Non-curing butyl, AAMA 809.2.
- E. Steel Sheet Miscellaneous Framing Components: ASTM C 645, with ASTM A 653/A 653M, G60 (Z180) hot-dip galvanized zinc coating.
- F. Metal Accessories: Approved by metal panel manufacturer. Refer to [Section 07 72 00] "Metal Accessories" for requirements for metal accessories.

## 2.5 FABRICATION

- A. General: Provide factory fabricated and finished metal panels and accessories meeting performance requirements, indicated profiles, and structural requirements.
- B. Fabricate metal panel joints configured to accept sealant providing weathertight seal and preventing metal-to-metal contact and minimizing noise resulting from thermal movement.
- C. Form panels in continuous lengths for full length of detailed runs, except where otherwise indicated on approved shop drawings.
- D. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's written instructions, approved shop drawings, and project drawings. Form from materials matching metal panel substrate.

## 2.6 FINISHES

- A. Two coat coil applied, baked on full strength (70% resin, PVF2) fluorocarbon coating consisting of a nominal 0.25 mil dry film thickness primer, and a nominal dry film thickness of 0.7 -0.8 mil color coat for a total 0.9 to 1.1 mil total system dry film thickness. Finish to be selected from manufacturer's standard color selection. The back side of the material should be 0.25 mil primer and a 0.25 mil polyester wash coat.
  - 1. Metal Panel Color:
    - a. Selected from full range of manufacturer's standard colors.
    - b. Color: [Specify color.].
    - c. Color: As indicated on panel schedule.
  - 2. Metal Related Trim/Accessories Color:
    - a. Selected from full range of manufacturer's standard colors.
    - b. Color: [Specify color.].
    - c. Color: As indicated on panel schedule.
- B. Bare Galvalume steel sheet conforming to ASTM A792, AZ55

## 2.7 RELATED MATERIALS

- A. General: Coordinate use of related materials:
  - 1. Underlayment: Refer to Division 7 Metaling Section
  - 2. Plywood Deck: Refer to Division 6 Rough Carpentry Section
  - 3. Sealants: Refer to Division 7 Joint Sealants Section

## 2.8 SOURCE QUALITY

- A. Source Quality: Obtain metal panel products from a single manufacturer.
- B. Quality Control: Obtain metal panels, trim and other accessories from a manufacturer capable of providing on-site technical support and installation assistance.

## PART 3 EXECUTION

### 3.1 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, recommendations and installation instructions for substrate verification, preparation requirements and installation.
  - 1. Strippable Film: Remove manufacturer's protective film, if any, from surfaces of metal panels.
- B. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
  - 1. Verification of Conditions:
    - a. Panel support systems are ready for construction activities of this section and within specified tolerances.
    - b. Rough-in utilities are in correct locations.
  - 2. Installer's Examination:
    - a. Have installer of this section examine conditions under which construction activities of this section are to be performed, then submit written notification if such conditions are unacceptable.

### 3.2 PREPARATION

- A. Coordination: Coordinate metal panel work with other trades to provide a noncorrosive and leak-free metal installation.
  - 1. Install substrate boards, hat channels in accordance with manufacturer's recommendations.
  - 2. Coordinate work, with installation of other associated work, to ensure quality application.
  - 3. Coordinate work with installation of associated metal flashings and building walls.
  - 4. Coordinate work to minimize foot traffic and construction activity on installed finished surfaces.



5. Dissimilar Metals: Prevent galvanic action of dissimilar metals.

### 3.3 INSTALLATION

- A. General: Install metal panels to profiles, patterns and drainage indicated and required for leak-free performance. Provide for structural and thermal movement of work. Seal joints for leak-free metal installation.
  1. Shim or otherwise plumb substrates receiving metal panels.
  2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws.
  3. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal panels are installed.
  4. Locate and space fasteners in uniform vertical and horizontal alignment.
  5. Install flashing and trim as metal panel work proceeds.
  6. Install continuous length panels if at all possible. If splices are required, locate panel splices over, but not attached to, structural supports and only with prior Architect approval.
  7. Align bottoms of metal panels and fasten with blind rivets, bolts, or self-tapping screws.
  8. Fasten flashings and trim around openings and similar elements with self-tapping screws.
  9. Fix panels at location depicted on reviewed shop drawings.
  10. Allow for required panel clearance at penetrations for thermal movement.
  11. Allow for required panel clearance at penetrations for thermal movement.
  12. Fasteners: Conceal fasteners where possible in exposed work. Cover and seal fasteners and anchors for watertight and leak-free metal installation.
  13. Sealant-Type Joints: Provide sealant-type joint where indicated. Form joints to conceal sealant. Comply with Division 7 Joint Sealants Section for sealant installation.
- B. Metal Installation:
  1. Install metal panels plumb, true and in correct alignment with structural framing, in accordance with shop drawings and manufacturer's printed installation instructions.
  2. Install metal panels using manufacturer's concealed fastening system or non-corroding fasteners color-matched to panel.
  3. Install trim using concealed fasteners where possible; sight-exposed non-corroding fasteners color-matched to trim are permitted on vertical surfaces only.
- C. Installation Tolerances:
  1. Variation from Plumb: Maximum 1/8" (3.2 mm) in 20 feet (6.096 m).
  2. Variation from Level: Maximum 1/8" (3.2 mm) in 20 feet (6.096 m).
  3. Variation from True Plane: Maximum 1/8" (3.2 mm) in 20 feet (6.096 m).
- D. Underlayment Installation
  1. Underlayment to be supplied by metal panel manufacturer.
  2. Self-adhered High-Temperature Underlayment: Provide self-adhering, cold-applied, sheet underlayment, a minimum of 40 mils thick adhesive, with release-paper backing. Provide primer when recommended by underlayment manufacturer.
  3. Thermal Stability: Stable after testing at 240 degree F; ASTM D1970.
  4. Low-Temperature Flexibility: Passes after testing at minus 20 degree F; ASTM D1970.

## KPC — KEE ROOF SYSTEMS AND SERVICES

- E. Accessory Installation: Install accessories using techniques recommended by manufacturer and which will assure positive anchorage to building and weather tight mounting. Provide for thermal movement. Coordinate installation with flashings and other components
- F. Flashing and Trim Installation: Comply with performance requirements, manufacturer's written installation instructions, and the SMACNA "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and install units to true level. Install work with laps, joints, and seams that will be permanently watertight.

### 3.4 FIELD QUALITY REQUIREMENTS

- A. Site Tests: (Post-Installation Testing): Owner reserves right to perform post-installation testing of installed metal panel installation.
- B. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer's instructions.

### 3.5 CLEANING

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas.
- B. Repair or replace damaged installed products.
- C. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance.
- D. Remove construction debris from project site and legally dispose of debris.
- E. Remove strippable coating and perform dry wipe-down cleaning of panels as erected.

### 3.6 PROTECTION

- A. Protection: Protect installed product's finish surfaces from damage during construction:
  - 1. Protect installed products from damage by subsequent construction activities.
  - 2. Replace products having damage other than minor finish damage.
  - 3. Repair products having minor damage to finish in accordance with panel Manufacturer's recommendation
  - 4. Architect shall be sole judge of acceptability of repair to damaged finishes; replace products having rejected repairs

### 3.7 SCHEDULES

- A. Schedules: Refer to panel schedule attached to this section.

END OF SECTION

**SECTION 074214 – METAL WALL PANELS AND SOFFIT (FW PANEL)**

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Factory-formed metal wall panels and soffit:
  - 1. Factory-formed panels in vertical installation.
  - 2. Building Insulation: Division 7 Building Insulation Section.
  - 3. Sealants: Division 7 Joint Sealers Sections.
  - 4. Flashing & Sheet Metal: Division 7 Flashing & Sheet Metal

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
  - 1. ASTM A653/A653M Standard Specification for Steel Sheets, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
  - 2. ASTM A792/A792M Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy Coated by the Hot-Dip Process.
  - 3. ASTM B209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
  - 4. ASTM D2247 Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
  - 5. ASTM E1680 Standard Test Method for Determining the Rate of Air Leakage Through Exterior Metal Systems Under Specified Pressure Differences Across the Specimen.
  - 6. ASTM E1646 Standard Test Method for Water Penetration of Metal Systems by Uniform Static Air Pressure Difference.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Pre-installation Meetings:
  - 1. Schedule meeting to discuss project requirements, substrate conditions, manufacturer's installation instructions and manufacturer's warranty requirements before start of work onsite. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.
  - 2. Required attendees: Contractor, metal deck & metal installer, and any other subcontractors who have equipment penetrating the metal or work that requires access or traffic to metal roof and wall areas.

#### 1.4 SYSTEM DESCRIPTION

- A. Panel Performance Requirements: Provide panels, which have been manufactured, fabricated and installed to withstand structural and thermal movement, wind loading and weather exposure to maintain manufacturer's performance criteria without defects, damage, failure or infiltration of water.
  
- B. Finish Performance Requirements:
  - 1. Two coat coil applied, baked on full strength (70% resin, PVF2) fluorocarbon coating:
    - a. Consisting of a nominal 0.25 mil dry film thickness primer, and a nominal dry film thickness of 0.7 -0.8 mil color coat for a total 0.9 to 1.1 mil total system dry film thickness.
    - b. Color change and fade resistance: No cracking, peeling, blistering or loss of adhesion when tested in accordance with ASTM G23; color change, after removal of surface deposits such as dirt or chalk, maximum 5 NBS units.
    - c. Humidity resistance: No blistering, peeling or loss of adhesion after 1000 hours testing, in accordance with ASTM D2247.

#### 1.5 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
  
- B. Product Data: Submit manufacturer's product data for specified products.
  
- C. Shop Drawings: Submit shop drawings showing layout, profiles and product components, including anchorage, accessories, finish colors and textures.
  - 1. Indicate layout of metal panels and metal panel sizes, including custom-fabricated metal panels if indicated; indicate each item of trim and accessories.
  - 2. Indicate in detailed drawings profile and gauge of interior and exterior sheets, and locations and types of fasteners; indicate locations, gauges, shapes and methods of attachment of metal panels, trim and accessory items.
  - 3. Include sealant location and denote those that are factory and field applied.
  - 4. Indicate products/materials required for construction activities and field worked conditions of this section not supplied by manufacturer of products of this section.
  
- E. Samples: Submit selection and verification samples for finishes, colors and textures.
  - 1. Selection Samples: For each product requiring color selection, 2 sets of manufacturer's sample chips representing full range of colors and finishes available.
  - 2. Verification Samples: For each color and finish selected, 2 chips indicating match to selected color and finish.

F. Warranties:

1. Substrate Warranty
2. Finish Warranty

G. Test and Evaluation Reports: Showing compliance with specified performance characteristics and physical properties.

H. Quality Assurance Submittals: Submit the following:

1. Contractor Certificates: Contractor's certification that:
  - a. Manufacturer of products of this section meets specified qualifications.
  - b. Installer of products of this section meets specified qualifications.
2. Manufacturer's Instructions: Manufacturer's installation instructions.
3. Manufacturer's Field Reports: Manufacturer's field reports if required.

I. Buy American Certification: Manufacturer's letters of compliance that supplied products comply  
With requirements.

J. Closeout Submittals: Submit the following:

1. Warranty: Warranty documents specified herein.

## 1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications:

1. Provider of "hands on" installer training programs at manufacturer facility.
2. Minimum of ten years' experience in manufacturing wall systems.
3. Provider of product produced in a permanent factory environment with fixed roll-forming equipment.

B. Installer Qualifications:

1. Experience on at least five projects of similar size, type and complexity as this project that have been in service for a minimum of two years with satisfactory performance of the metal panel system.
2. Employer of workers for this project who are competent in techniques required by manufacturer for installation indicated and who shall be supervised at all times when material is being installed.

D. Buy American Compliance: Materials provided under Work of this Section shall comply with the following requirements:

1. Buy American Act of 1933 BAA-41 U.S.C §§ 10a – 10d.
2. Buy American provisions of Section 1605 of the American Recovery and Reinvestment Act of 2009 (ARRA).

## 1.7 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements Sections.
  - 1. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact. Identify fabricated components with UL 90 label where appropriate.
- C. Delivery and Acceptance Requirements: Ensure all panels are received in good condition. In cases where damage is visible, note all paperwork; inform architect and project superintendent.
- D. Packing, Shipping, Handling and Unloading:
  - 1. Bundle panels in waterproof wrapping paper when nested, or wooden crates when panels cannot be nested.
  - 2. Package trim and accessories in waterproof wrapping paper.
- E. Storage and Protection: Store materials protected from exposure to harmful conditions. Store material in dry, above-ground location.
  - 1. Stack prefinished material to prevent twisting, bending, abrasion, scratching and denting. Elevate one end of each skid to allow for moisture runoff.
  - 2. Store products of this section in manufacturer's unopened packaging until installation of products
  - 3. Maintain dry, heated storage area for products of this section until installation of products.
  - 4. Remove strippable plastic film before storage under high-heat conditions.

## 1.8 PROJECT CONDITIONS

- A. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements, fabrication schedule with construction progress to avoid construction delays.
- B. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed in accordance with manufacturers' written instructions and warranty requirements.

## 1.9 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
  - 1. Panel Material: Furnish manufacturers 25 year warranty covering the panel against rupture, structural failure, or perforation.
  - 2. Panel Coating:
    - a. Polyvinylidene Fluoride: Furnish manufacturer's 40-year warranty covering cracking, checking, and peeling, and 30 year warranty covering fade and chalk on the two coat coil applied, baked on full strength (70% resin, PVF2)

fluorocarbon coating. Manufacturer's warranty may exclude surface deterioration due to physical damage and corrosive environments.

- B. Special Warranty: Installer's standard form in which installer agrees to repair or replace panels that fail due to poor workmanship or faulty installation within the specified warranty period.

1. Warranty Period: <Insert number of years> years from date of Substantial Completion.

## PART 2 PRODUCTS

### 2.1 METAL WALL PANELS

A. Manufacturers:

1. McElroy Metal, Inc. (Basis of Design)
  - a. Contact: 1500 Hamilton Rd., Bossier City, LA 71111; Telephone: (800) 562-3576, (318) 747-8097; Fax: (318) 747-8099; E-mail: [info@mcelroymetal.com](mailto:info@mcelroymetal.com); website: [www.mcelroymetal.com](http://www.mcelroymetal.com).
2. Tremco Incorporated.
3. Centria

- B. Forming: Use continuous end rolling method. No end laps are permitted on panels without architect approval. No portable rollforming machines will be permitted on this project, no installer—owner or installer-rented machines will be permitted. It is the intent of the Architect to provide factory-manufactured panel systems only for this project.

### 2.2 MANUFACTURED UNITS

A. McElroy Metal FW Panel:

1. Profile: 1 1/2" (38 mm) deep flush panel with tongue and groove engagement
2. Pan Options: [Inverted Plank, Flat, Vee-Grooves]
3. Reveal Options: [1" to 3"]
4. Cover Width: 12" (304 mm) cover width for 1" reveal
5. Lengths indicated on drawings.

### 2.3 MATERIALS

- A. Material: Galvalume steel sheet conforming to ASTM A792, AZ55 coating for bare; AZ50 coating for painted; 24 gauge sheet thickness.

### 2.4 METAL ROOF PANEL ACCESSORIES

- A. General: Provide complete metal panel assembly incorporating trim, copings, fasciae, gutters and downspouts, and miscellaneous flashings, in manufacturer's standard profiles. Provide required fasteners, closure strips, and sealants as indicated in manufacturer's written

instructions.

- B. Flashing and Trim: Match material, thickness, and finish of metal panel face sheet.
- C. Panel Fasteners: Self-tapping screws and other acceptable corrosion-resistant fasteners recommended by metal panel manufacturer. Where exposed fasteners cannot be avoided, supply fasteners with EPDM or neoprene gaskets, with heads matching color of metal panels by means of factory-applied coating.
- D. Joint Sealers: Manufacturer's standard or recommended liquid and preformed sealers and tapes, and as follows:
  - 1. Tape Sealers: Manufacturer's standard non-curing butyl tape, AAMA 809.2.
  - 2. Concealed Joint Sealant: Non-curing butyl, AAMA 809.2.
- E. Steel Sheet Miscellaneous Framing Components: ASTM C 645, with ASTM A 653/A 653M, G60 (Z180) hot-dip galvanized zinc coating.
- F. Metal Accessories: Approved by metal panel manufacturer. Refer to [Section 07 72 00] "Metal Accessories" for requirements for metal accessories.

## 2.5 FABRICATION

- A. General: Provide factory fabricated and finished metal panels and accessories meeting performance requirements, indicated profiles, and structural requirements.
- B. Fabricate metal panel joints configured to accept sealant providing weathertight seal and preventing metal-to-metal contact and minimizing noise resulting from thermal movement.
- C. Form panels in continuous lengths for full length of detailed runs, except where otherwise indicated on approved shop drawings.
- D. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's written instructions, approved shop drawings, and project drawings. Form from materials matching metal panel substrate.

## 2.6 FINISHES

- A. Two coat coil applied, baked on full strength (70% resin, PVF2) fluorocarbon coating consisting of a nominal 0.25 mil dry film thickness primer, and a nominal dry film thickness of 0.7 -0.8 mil color coat for a total 0.9 to 1.1 mil total system dry film thickness. Finish to be selected from manufacturer's standard color selection. The back side of the material should be 0.25 mil primer and a 0.25 mil polyester wash coat.
  - 1. Metal Panel Color:
    - a. Selected from full range of manufacturer's standard colors.
    - b. Color: [Specify color.].
    - c. Color: As indicated on panel schedule.



2. Metal Related Trim/Accessories Color:
  - a. Selected from full range of manufacturer's standard colors.
  - b. Color: [Specify color].
  - c. Color: As indicated on panel schedule.

B. Bare Galvalume steel sheet conforming to ASTM A792, AZ55

## 2.7 RELATED MATERIALS

A. General: Coordinate use of related materials:

1. Underlayment: Refer to Division 7 Metaling Section
2. Plywood Deck: Refer to Division 6 Rough Carpentry Section
3. Sealants: Refer to Division 7 Joint Sealants Section

## 2.8 SOURCE QUALITY

- A. Source Quality: Obtain metal panel products from a single manufacturer.
- B. Quality Control: Obtain metal panels, trim and other accessories from a manufacturer capable of providing on-site technical support and installation assistance.

## PART 3 EXECUTION

- A. Compliance: Comply with manufacturer's product data, recommendations and installation instructions for substrate verification, preparation requirements and installation.
  1. Strippable Film: Remove manufacturer's protective film, if any, from surfaces of metal panels.
- B. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
  1. Verification of Conditions:
    - a. Panel support systems are ready for construction activities of this section and within specified tolerances.
    - b. Rough-in utilities are in correct locations.
    - c. Delay construction activities of this section until unacceptable conditions have been corrected.
    - d. Beginning construction activities of this section indicates installer's acceptance of conditions.

## 3.2 PREPARATION

- A. Coordination: Coordinate metal panel work with other trades to provide a noncorrosive and leak-free metal installation.

1. Install hat channels in accordance with manufacturer's recommendations.
2. Coordinate work, with installation of other associated work, to ensure quality application.
3. Coordinate work with installation of associated metal flashings and building walls.
4. Dissimilar Metals: Prevent galvanic action of dissimilar metals.

### 3.3 INSTALLATION

A. General: Install metal panels to profiles, patterns and drainage indicated and required for leak-free performance. Provide for structural and thermal movement of work. Seal joints for leak-free metal installation.

1. Shim or otherwise plumb substrates receiving metal panels.
2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws.
3. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal panels are installed.
4. Locate and space fasteners in uniform vertical and horizontal alignment.
5. Install flashing and trim as metal panel work proceeds.
6. Install continuous length panels if at all possible. If splices are required, locate panel splices over, but not attached to, structural supports and only with prior Architect approval.
7. Align bottoms of metal panels and fasten with blind rivets, bolts, or self-tapping screws.
8. Fasten flashings and trim around openings and similar elements with self-tapping screws.
9. Fix panels at location depicted on reviewed shop drawings.
10. Allow for required panel clearance at penetrations for thermal movement.
11. Align pipe penetrations to occur in the flat of the metal panel. Report and have corrected improperly placed penetrations before proceeding with panel installation. Remove and replace metal panels which have improperly placed penetration flashings.
12. Allow for required panel clearance at penetrations for thermal movement.
13. Fasteners: Conceal fasteners where possible in exposed work. Cover and seal fasteners and anchors for watertight and leak-free metal installation.
14. Sealant-Type Joints: Provide sealant-type joint where indicated. Form joints to conceal sealant. Comply with Division 7 Joint Sealants Section for sealant installation.

B. Metal Installation:

1. Install metal panels plumb, true and in correct alignment with structural framing, in accordance with shop drawings and manufacturer's printed installation instructions.
2. Install metal panels using manufacturer's concealed fastening system or non-corroding fasteners color-matched to panel.
3. Install trim using concealed fasteners where possible; sight-exposed non-corroding fasteners color-matched to trim are permitted on vertical surfaces only.

C. Installation Tolerances:

1. Variation from Plumb: Maximum 1/8" (3.2 mm) in 20 feet (6.096 m).
2. Variation from Level: Maximum 1/8" (3.2 mm) in 20 feet (6.096 m).
3. Variation from True Plane: Maximum 1/8" (3.2 mm) in 20 feet (6.096 m).

D. Underlayment Installation

1. Underlayment to be supplied by metal panel manufacturer.
2. Self-adhered High-Temperature Underlayment: Provide self-adhering, cold-applied, sheet underlayment, a minimum of 40 mils thick adhesive, with release-paper backing. Provide primer when recommended by underlayment manufacturer.
3. Thermal Stability: Stable after testing at 240 degree F; ASTM D1970.
4. Low-Temperature Flexibility: Passes after testing at minus 20 degree F; ASTM D1970.

### 3.4 FIELD QUALITY REQUIREMENTS

- A. Site Tests: (Post-Installation Testing): Owner reserves right to perform post-installation testing of installed metal panel installation.
- B. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer's instructions.

### 3.5 CLEANING

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas.
- B. Repair or replace damaged installed products.
- C. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance.
- D. Remove construction debris from project site and legally dispose of debris.
- E. Remove strippable coating and perform dry wipe-down cleaning of panels as erected.

### 3.6 PROTECTION

- A. Protection: Protect installed product's finish surfaces from damage during construction:
  1. Protect installed products from damage by subsequent construction activities.
  2. Replace products having damage other than minor finish damage.
  3. Repair products having minor damage to finish in accordance with panel Manufacturer's recommendation
  4. Architect shall be sole judge of acceptability of repair to damaged finishes; replace products having rejected repairs.

### 3.7 SCHEDULES

- A. Schedules: Refer to panel schedule attached to this section.

END OF SECTION

**SECTION 075400 – SINGLE PLY KEE MEMBRANE ROOFING**

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Fully adhered Thermoplastic KEE Roof System
- B. Mechanically attached Thermoplastic KEE Roof System
- C. Ballasted Thermoplastic KEE Roof System
- D. Simulated Metal Thermoplastic Roof System

**1.2 RELATED DOCUMENTS**

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

**1.3 REFERENCES**

- A. ASTM International (ASTM):
  - 1. ASTM D6754 - Standard Specification for Ketone Ethylene Ester Based Sheet Roofing.
- B. American Society of Civil Engineers (ASCE):
  - 1. ASCE 7 - Minimum Design Loads for Buildings and Other Structures.
- C. UL - Fire Resistance Directory.
  - 1. UL-790 - Standard Test Method for Fire Tests of Roof Coverings.

**1.4 SUBMITTALS**

- A. Product Data:
  - 1. Most recent published technical literature and guide specifications issued by manufacturer.
  - 2. Storage and handling requirements and recommendations.
  - 3. Dimensioned shop drawings, including roof plan detailing perimeter enhancement, flashing methods, terminations and acceptance by manufacturer.
  - 4. Written approval from Manufacturer confirming any accessories submitted, not manufactured or expressly approved in manufacturer literature are acceptable and compatible with the proposed Roofing System.
  - 5. Safety Data Sheets (SDS) relating to all products, chemicals and solvents.
- B. Verification Samples: Two representative units of each type, size, pattern and color.
- C. Shop Drawings: Include details of materials, construction and finish. Include relationship with adjacent construction.
- D. For Project Registration and Warranty Acceptance: Manufacturer will review the following.
  - 1. Complete copy of project architectural specifications or Authorized Applicator's proposal outlining design parameters.
  - 2. Complete list of accessories or materials not manufactured or expressly authorized for use in manufacturer literature.

3. Dimensioned outline of the roof indicating all Detail references.
4. Dimensioned shop drawings illustrating Non-manufacturer details. Details that do not conform with standard manufacturer details shall be returned with appropriate recommendations.

#### 1.5 QUALITY ASSURANCE

- A. Roofing Systems shall be installed only by an Applicator, authorized by manufacturer to install Roofing Systems prior to bid or contract award. Herein, the term Authorized Manufacturer Applicator is synonymous with Applicator.
- B. Authorized Applicator's key personnel shall have received specialized training by Manufacturer.
- C. Roofing systems shall be installed in accordance with the most current guide specifications and details as amended or authorized by manufacturer for specific project requirements.
- D. There shall be no deviations from approved contract specifications or shop drawings without prior written approval by the Owner/Owner representative and Manufacturer.
- E. Unauthorized deviations may subject the roof system to warranty ineligibility.
- F. Any work found to be substandard or in violation of the manufacturer's specifications shall be subject to rejection including complete removal and replacement with new materials at the expense of the Contractor.
- G. A quality assurance inspection of the roof system shall be performed by Manufacturer for acceptance and approval. This inspection shall be performed upon completion and certification by the Applicator that the Roofing System has reached 100 percent completion, a quality installation has been completed in accordance with the approved contract specifications, and all field welds have been probed and inspected.
- H. All field seams shall be visible and available to Manufacturer's Technical Representative at the time of final inspection.

#### 1.6 COORDINATION

- A. Prior to installation of materials, a pre-roofing conference shall be held with the Authorized Applicator, and Owner or Owner's Representatives to discuss the specified roofing system, coordinate its proper application and the expectations of all parties involved. The Authorized Applicator and the Owner or Owner's representative shall notify all parties a minimum of fourteen days prior to the meeting.
- B. Plan and coordinate the installation of the roofing system with other trades in such a manner to avoid membrane damage, keeping the complete installation weather tight and in accordance with all approved details and warranty requirements.
- C. Manufacturer shall be available to make recommendations necessary to ensure compliance with project specifications and specification alternatives due to unforeseen job conditions.
- D. Field services are provided at the discretion of manufacturer. A minimum two weeks' notice is required to evaluate and coordinate any request for onsite technical assistance.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver all materials to the job site in manufacturer's original, unopened containers, with legible labels and in sufficient quantity to allow for continuity of work.
- B. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
  - 1. Store rolls of membrane lying down, elevated above the roof deck and completely protected from moisture with tarpaulins. Manufacturer's packaging is not considered adequate for outdoor storage.
  - 2. Elevate Insulation and cover board materials on pallets and fully protect from moisture with tarpaulins. Manufacturer's packaging is not considered adequate protection from moisture.
  - 3. Store adhesives and sealants between 50 and 80-degrees F (10 and 26.7 degrees C) prior to use.
  - 4. Store flammable materials in cool dry areas away from sparks and open flames.
  - 5. Follow all precautions as outlined in manufacturer's material safety data sheets.
- C. Materials, having been determined by the Owner or Owner's representative to be damaged, shall be immediately removed from the construction site and replaced at no cost to the Owner.

1.8 JOB CONDITIONS

- A. Safety:
  - 1. Take necessary precautions regarding worker health and safety when using solvents, adhesives or hot asphalt.
  - 2. Worker safety is paramount.
  - 3. Membrane is slippery when wet, exhibits dew, frost, ice or other form of moisture.
  - 4. Comply with OSHA requirements for roof construction and fall protection.
  - 5. Store flammable liquid and materials away from open sparks, flames and extreme heat.
  - 6. Take necessary precautions when using solvents and adhesives.
  - 7. Daily site cleanup to minimize debris and hazardous congestion.
- B. Protection:
  - 1. Schedule installation sequence to limit access and utilization of installed membrane for material storage, construction staging, mechanical and excessive foot traffic.
  - 2. Provide proper protection on newly completed roofing.
  - 3. Minimize traffic on freshly laid roofing.
  - 4. Protect walls, rooftop units, windows and other components during installation.
- C. Additional Precautions:
  - 1. Adverse weather conditions, e.g. extreme temperature, high winds, high humidity and moisture, could have a detrimental effect on adhesives, general production efforts and the quality of the finished installation.
  - 2. Daily production schedules shall be limited to what can be made 100 percent watertight at the end of each day, including flashing and night seals.
  - 3. All surfaces to receive the new roof system, including insulation and flashing, shall be free from all dirt, debris and be thoroughly dry.
  - 4. Comply with local EPA requirements as published by local, state and federal authorities.

5. During the construction process temporary ballast, especially in the perimeter and corner areas may be required to provide protection against high winds.

#### 1.9 DESIGN CONDITIONS

- A. This specification is applicable to only those building roofs that have decking of sufficient structural integrity, capable of supporting specified Roofing System.
- B. Applications and project specifications require review by manufacturer for acceptance prior to commitment to provide a commercial warranty.
- C. Project: Registration, must be completed, signed by an Authorized Applicator, submitted to and approved by manufacturer before any consideration for warranty or the release of any materials can be authorized.
- D. Special Design Considerations:
  1. The building Owner may be required to submit an engineering study, or Statement of Sound Roof Structure, to manufacturer, indicating that the structure is able to accommodate additional live and dead loads including snow and water retention.
  2. Moisture conditions in existing roofs, new structural concrete or new lightweight insulating concrete that would impair or prohibit the desired performance of the new roof system.
  3. Coal tar recover or direct contact with bituminous materials.
  4. Positive slope to promote adequate drainage to avoid the potential damage to the substrate or components.
  5. Roof areas subject to heavy or excessive mechanical traffic.
- E. Exterior Fire Test Exposure: Roof system shall achieve a FM or UL Class rating for roof slopes indicated as follows:
  1. FM Approvals Class A Rating.
  2. Underwriters Laboratory Class A Rating.
- F. Energy Star: Roof System shall comply with the initial and aged reflectivity required by the U.S. Federal Government's Energy Star program.
- G. Environmental Considerations:
  1. Severe environmental exposure e.g. coastal or high wind areas.
  2. Chemical discharge not listed on the company's chemical resistance publication.
  3. Environmental conditions such as fog, dew, rain or snow and freezing temperatures can have a detrimental effect on the application and performance of adhesives.
  4. Compliance with EPA and OSHA requirements as published by local, state and federal authorities.
  5. Adhesives can be described as temperamental. The Contractor must be aware of potential environmental variables when installing adhered roofing systems.
  6. Pay attention to and follow adhesive storage and application precautions and guidelines.
  7. Do not apply waterborne adhesives if the ambient air temperature is expected to drop below 32 degrees F (0 degrees C) within 72 hours of application.
  8. The use of polystyrene insulation and coverboard assemblies for adhered roofing systems incorporating solvent borne adhesives shall also include a minimum 10-mil polyethylene solvent barrier between the insulation and coverboard.

## 1.10 WARRANTY

- A. Upon Inspection and Acceptance by a Manufacturer Technical Service Representative: Manufacturer will issue the preauthorized warranty, subject to the terms and conditions of the sample warranty.
  - 1. Warranty Type:
    - a. Standard Warranty provides the building owner protection against the cost of repairing leaks as a direct result of either defects in the membrane or the workmanship involved in its installation for a period of 20-years.
  - 2. Maintenance Requirements: A set of instructions included detailing preventative maintenance requirements on the part of the building Owner and noting a list of harmful substances that may damage the Kee membrane.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis of Design: FiberTite, Seaman Corporation. 1000 Venture Blvd, Wooster, OH 44691
- B. The Garland Company
- C. Tremco Incorporated
- D. Ecology Roofing System

### 2.2 GENERAL

- A. All products and components for the Roofing System shall be supplied or approved by manufacturer.
- B. Components other than those manufactured and supplied by manufacturer shall be submitted for review, prior to ordering. Any products not specifically authorized in writing for the project by manufacturer, shall be considered unacceptable and their performance excluded from the warranty.
- C. Roofing Systems may be installed over or directly to pre-approved insulation, cover board or composites thereof. Contact manufacturer for additional information regarding compatible substrates.

### 2.3 MEMBRANE

- A. Standards Compliance: ASTM D6754 - 15 Standard Specification for Ketone Ethylene Ester (KEE) Based Sheet Roofing.
- B. Acceptable Substrate:
  - 1. Authorized rigid insulation or cover board.
  - 2. Insulated steel decking.
  - 3. Existing aggregate surfaced bituminous roof with authorized insulation or cover board.
  - 4. Authorized base sheet with an adhered insulation and coverboard assembly.
  - 5. Structural concrete, insulated or non-insulated.



6. Existing smooth surfaced or granulated bituminous roof or existing single ply roof membrane.
7. Exterior grade plywood; insulated or non-insulated.
8. Cementitious fiber or gypsum, insulated or non-insulated.
9. Cellular, lightweight insulating concrete.

C. Kee Membranes:

1. Nominal 36-mil (0.91 mm) ketone ethylene ester (KEE) membrane, reinforced with a 5.0-oz yd<sup>2</sup> (169.5 grams per sq m) knitted polyester fabric and meets or exceeds all requirements outlined in ASTM D 6754 Standard Specification for Ketone Ethylene Ester (KEE) Based Sheet Roofing.
  - a. Breaking Strength, N (lbf) 1557 (350)  
ASTM D 751 proc. B -strip
2. Nominal 50-mil (1.27 mm) ketone ethylene ester (KEE) membrane, reinforced with a 6.5-oz yd<sup>2</sup> (220.4 grams per sq m) knitted polyester fabric. FiberTite-XT greatly exceeds all requirements outlined ASTM D 6754 Standard Specification for Ketone Ethylene Ester (KEE) Based Sheet Roofing.
  - a. Breaking Strength, N (lbf) 1779 (400)  
ASTM D 751 proc. B -strip
3. Nominal 60-mil (1.5 mm) ketone ethylene ester (KEE) membrane, reinforced with a 6.5-oz yd<sup>2</sup> (220.4 grams per sq m) knitted polyester fabric. FiberTite-XT greatly exceeds all requirements outlined ASTM D 6754 Standard Specification for Ketone Ethylene Ester (KEE) Based Sheet Roofing.
  - a. Breaking Strength, N (lbf) 1779 (400)  
ASTM D 751 proc. B -strip
4. FiberTite and FiberTite-XT membranes are all available in fleeceback versions for adhered and mechanically fastened roofing. FiberTite-FB membranes have a heat bonded 4 oz. (113.4 grams) polyester backing. FiberTite-FB membranes exceed the physical property requirements and definitions as outlined in ASTM D7654 Standard Specification for Ketone Ethylene Ester (KEE) Based Sheet Roofing per the individual sub-assembly/base membrane listed above.

2.4 ANCILLARY MATERIALS

A. Adhesives:

1. Alpha-Tite: VOC compliant solvent borne, contact (two-sided) bonding adhesive for bonding smooth-back membranes to properly prepared and preauthorized horizontal and vertical substrates.
2. 190e: VOC compliant solvent borne, contact (two-sided) bonding adhesive, for bonding smooth-back membranes to properly prepared and preauthorized horizontal and vertical substrates.
3. 601 PG: Dual component, low pressure spray applied (spatter) urethane adhesive. Adhesive is a non-solvent, elastomeric, urethane adhesive, specifically designed for bonding FB (fleece-back) membranes to preauthorized horizontal substrates.
4. 290: VOC compliant solvent borne adhesive, one side application (substrate only), designed for bonding FB (fleeceback) membranes to properly prepared and preauthorized horizontal substrates.

5. 390: Rubberized asphalt water borne emulsion adhesive, VOC compliant, one side application (substrate only), designed for bonding FB (fleeceback) membranes to properly prepared and pre-authorized horizontal substrates.
  6. 490: Polymeric water borne, VOC compliant adhesive, one side application (substrate only), designed for bonding FB (fleeceback) membranes to properly prepared and pre-authorized horizontal substrates.
  7. CR-20: Dual component elastomeric polyurethane froth adhesive for bonding FB (fleece-back) membranes (spatter application) to properly prepared and preauthorized horizontal substrates.
  8. SBS Adhesive: A cold-process low-VOC, low-odor and solvent-free SBS modified adhesive for bonding SBS Base Sheets to approved substrates.
  9. 201 Mastic: Trowel grade elastomeric adhesive and sealant used to adhere flashing membranes to pre-approved vertical substrates.
- B. Fasteners:
1. Securing membranes to steel, wood and structural concrete decks.
    - a. MAGNUM Series: No. 15-13, buttress threaded, No. 3 Phillips head fastener constructed of case-hardened carbon steel with a reduced diameter drill point and corrosion resistant coating.
  2. Securing insulation to steel, wood and structural concrete decks.
    - a. HD: No. 14-13, heavy duty threaded steel No. 3 Phillips truss, self-tapping corrosion resistant fastener.
  3. Secure insulation, base sheet or membrane to steel, wood, cement fiber, tectum fiberglass and lightweight plank decks.
    - a. Peel Rivets: Thread-less, high magnesium alloy fastener.
  4. Secure membrane to existing metal roofing system's structural members.
    - a. Purlin Fasteners.
    - b. Retro-Driller
  5. Secure base sheets to gypsum and cellular lightweight insulating concrete decks.
    - a. BS Fasteners: Coated fastener and stress plate
- C. Stress Plates: Used to anchor membranes.
1. Magnum Plus: 1.5 x 2.75 inch (38 x 70 mm) Barbed Rectangular Stress Plate with radial corners; 18-gauge AZ-50 galvalume steel.
  2. Magnum R275: 2.75 inch (70 mm) Barbed Round Stress Plate; 20-gauge galvanized steel.
  3. Magnum 2S: 2.375 inch (60 mm) Barbed Round Stress Plate; 20 gauge galvanized steel.
  4. 3-inch (76 mm) Metal Round Insulation Stress Plates: Finish: AZ-50 galvalume. Flat and flush profile for use on rigid board surfaces.
  5. IW 3-inch (60 mm) G90 steel plates with a proprietary polymeric adhesive coating specially designed for induction welding membranes.
- D. Additional Components:
1. Flashing Terminations Sealant: 101. Single-component gun-grade polyether.
  2. Sealant for Pitch Pans: SLS Sealant. Single -component self-leveling polyether.
  3. Fabricated Metal Flashing: Clad Metal. 48 x 120-inch (1219 x 3048 mm) sheets.
    - a. Steel: 24-gauge hot dipped G-90.
    - b. Aluminum 300H14: 0.040 inch (1.02 mm) thick laminated with a 0.02 mil (0.0005 mm) polymeric coating.

4. Pre-molded Flashings: Injection molded vent stack, split Wrapid Flash and inside and outside corner flashing using vinyl compound.
5. Non-Reinforced Membrane: Field fabrication membrane, 60 mil (1.5 mm) non-reinforced vinyl membrane.
6. Forti-Lock: A rapid-curing, proprietary formulation of polymethyl-methacrylate (PMMA) liquid flashing resin. Forti-Lock is combined with Forti-Lock Primer and Forti-Lock Fleece reinforcing fabric to form a flexible and monolithic, reinforced membrane used in aberrant flashing and detail applications.
7. Forti-Lock Metal Primer: An acrylic primer used with various metal substrates to promote adhesion of Forti-Lock™ waterproofing and surfacing components
8. Forti-Lock Fleece: a proprietary non-woven polyester reinforcement used in Forti-Lock liquid flashing applications. Walkway and Protection Pads: Tuff Track. High grade walkway and protection material with slip-resistant design.
9. Termination Bar: Membrane flashings restraint and termination seals. 0.125 x 1 x 120 inch (3 x 25 x 3048 mm) 6060-T5 extruded aluminum bar with pre-punched slots, 8 inches (203 mm) on center.
10. Metal Fascia System: Two piece "snap-on" pre-formed, architectural Kynar metal edge systems.
11. Value Insulation: Polyisocyanurate and extruded polystyrene flat or tapered insulation.
12. 601 and 601 PG: Dual component, single bead (ribbon applied) urethane insulation adhesive. Adhesive is a non-solvent, elastomeric, urethane adhesive, specifically designed for bonding single or multiple layers of roof insulation and insulation composites or cover boards to structural roof decks and base sheets.
13. Seam Cleaner: Seam Cleaner is to be used with clean white cotton cloths or rags to clean contamination from the seam areas of the membrane prior to welding.
14. Simulated Metal Roofing Profile (Rib): Co-Extruded Ornamental Profile with a KEE compatible heat-activated adhesive as provided by manufacturer.
  - a. Extruded profile shall be provided in 100 feet (30.5 m) continuous lengths and match fleece back membrane color.
15. T Joint Covers: Pre-cut 4 x 4 inch (102 x 102 mm) 60 mil (1.5 mm) non-reinforced membrane to reinforce areas where three overlapping sheets of membrane intersect.
16. VaporTite: A self-adhered bitumen and SBS polymeric Class I Vapor Retarder.
17. SA Primer: A blend of synthetic polymers, solvents and resins, low VOC primer for VaporTite self-adhered vapor retarder.

## 2.5 VAPOR RETARDERS

- A. Vapor Retarders:
  1. The decision regarding the inclusion of a vapor retarder within the roof system shall fall within the responsibility of the design professional. Consult N.R.C.A. or other technical resource for appropriate guidelines.
  2. Vapor retarder for use in a roof system shall comply with identifiable code and/or insurance requirements.
  3. Preapproved vapor retarders shall be installed, where specified or required, to meet project design requirements and provide a suitable surface for installation of the Roofing System.
  4. Acceptable products must be preapproved or approved in writing by manufacturer.
  5. Pre-authorized Products:
    - a. VaporTite.(Basis of Design)
    - b. SBS Poly 3.7 Base Sheet (Basis of Design)

## 2.6 INSULATION

- A. For the purpose, of this guide specification, unless explicitly defined otherwise, the term insulation is used interchangeably to refer to rigid insulation materials, in single or multiple layers of tapered or flat, cover board, thermal barriers and or multilayered composites
- B. Insulation shall be installed, where specified or required to provide a suitable surface for the FiberTite Roofing Systems and meet desired thermal values.
- C. Products must be pre-approved in writing by manufacturer and comply with minimal characteristics and classification listed for the products below:
  - 1. Polyisocyanurate Rigid Insulation (ASTM C1289):
    - a. Value III Polyisocyanurate Rigid Insulation.
    - b. Value H Polyisocyanurate Rigid Insulation.
    - c. Value A Polyisocyanurate Rigid Insulation.
  - 2. XPS Rigid Insulation (ASTM D1621):
    - a. Value XPS Rigid Insulation
  - 3. Gypsum Core Cover Board and or Substrate Board (ASTM C473):
    - a. National Gypsum DEXcell FA.
    - b. Georgia-Pacific Gypsum LLC Dens Deck Prime.
    - c. United States Gypsum Company SECUROCK.
- D. Adhesives for Insulation Attachment: Preauthorized by manufacturer.
  - 1. Meet minimum roofing system design requirements, evidenced by testing in conjunction with the proposed substrate and or composite.
  - 2. Provide written specifications regarding the safe handling, storage and surface preparation for a quality application of the product.
  - 3. Insulation Adhesives:
    - a. Polyurethane Adhesive: A dual component polyurethane, dispensed from a portable pressurized container or traditional foam equipment.
      - 1) Preapproved Products:
        - a) 601.
        - b) 601 PG
    - b. Hot Asphalt:
      - 1) Asphalt shall be Type III or Type IV steep asphalt, according to ASTM D312.
      - 2) Asphalt shall be applied within 25 degrees F (minus 3.9 degrees C) of the asphalt manufacturer's recommended Equiviscous Temperature (EVT). Asphalt applied within 25 degrees F (minus 3.9 degrees C) of the EVT, under normal environmental conditions; will provide a nominal 23 to 25 lbs (10.4 to 11.3 kg) of asphalt per 100 sq ft (9.3 sq ft).
      - 3) The roofing contractor is responsible for maintaining the temperature tolerances at the kettle as well as the rooftop at all times.
      - 4) Cold weather application can cause significant drops in the temperature of the asphalt during transport to the roof and points of application. Insulated equipment is recommended during cold weather applications.

- 5) All projects utilizing hot asphalt for insulation securement require written authorization, prior to the bidding process, by manufacturer issuing warranty.

## 2.7 RELATED MATERIALS

- A. Wood Nailers: No. 2 or better construction grade lumber.
  1. Installation of other types of treated lumber should be verified with a design professional.
  2. Wood treatment: Borate or as designated on the project construction drawings.
  3. Creosote or asphaltic type preservatives are not acceptable.
  4. Top Nailer Thickness; 1.5 inches (38 mm) minimum.

## 2.8 BASE SHEET

- A. Base Sheets:
  1. Preapproved base sheet shall be installed, where specified or required, to provide a suitable surface for installation over or adhering the insulation or FB Roofing System.
  2. Acceptable products must be preapproved or approved in writing by manufacturer and comply with the following minimal characteristics and classifications.
    - a. ASTM D4601 Type II Asphalt Coated Glass-Fiber Base Sheet.
    - b. ASTM D4897 Type II Asphalt Coated Glass-Fiber Venting Base Sheet.
    - c. ASTM D6163, Type 1, Grade S, FiberTite SBS Membrane
    - d. ASTM D6164, Type 1, Grade S, FiberTite SBS Membrane
- B. Ballast:

Nominal 2.5 inch (63.5 mm) smooth river bottom stone consisting of a ballast gradation size No. 2, as specified in ASTM D7665 / D7655M.

Freeze and Thaw resistant concrete roof pavers, specifically designed and manufactured for use in ballasted membrane systems.

Heavyweight, non-interlocking pavers weighing 22 lbs per sq ft (1.05 kPa) or more which are unrestrained by adjacent units.

Lightweight, interlocking pavers weighing less than 22 lbs per sq ft (1.05 kPa) which incorporate physical dependency with adjacent pavers.

Concrete pavers shall be installed according to the manufacturer's most recent published specification.

## PART 3 EXECUTION

### 3.1 GENERAL

- A. Authorized Applicator: Ensure strict compliance with: General Guide Specifications for Installation of Manufacturer's Roofing Systems and governing system application specification.
  1. Provide suitable substrate surface for proper installation of roofing system, roof insulation and specified components.
  2. Coordinate installation ensuring system remains watertight at end of each working day.

- B. Application of manufacturer materials constitutes an agreement that Authorized Applicator has inspected and found the substrate suitable for installation of roofing system.

### 3.2 SUBSTRATE PREPARATION

- A. Authorized Applicator: Verify the deck condition or existing roof construction is suitable for the specified installation.
- B. Manufacturer requires fastener withdrawal values (pull out tests) on roofing projects to verify suitability of decking to accept a mechanically fastened insulation or membrane roof system.
- C. Examine surfaces for inadequate anchorage, low areas that will not drain properly, foreign material, ice, wet insulation, unevenness or any other defect which would prevent the proper execution and quality application roofing system as specified.
- D. Prepared substrate shall be smooth, dry, and free of debris or any other irregularities which would interfere with proper installation.
- E. The application of adhesives or hot asphalt directly to structural concrete, gypsum, Tectum, lightweight insulating concrete, existing smooth or granulated BUR materials may require sealing or priming with an appropriate elastomeric or asphalt primer prior to application.
- F. Adhesives will not bond to wet, damp or inadequately cured lightweight insulating concrete or poured structural concrete.
- G. Do not proceed with any part of the application until all defects and preparation work have been corrected and complete.

### 3.3 SUBSTRATE PREPARATION (NEW CONSTRUCTION)

- A. Steel Deck:
  - 1. Steel decking shall conform to FM guidelines for Class-1 insulated steel deck construction.
  - 2. Steel decking shall be constructed of a minimum 22-gauge cold rolled steel sheets with factory G-90 galvanized coating.
  - 3. Panel profiles (ribs) shall be formed to minimize deflection and provide suitable strength and integrity to support anticipated structural live and dead loads.
  - 4. Steel decking shall be installed in compliance with specified design criteria and local building code requirements.
  - 5. Steel decking that is less than 22-gauge may be considered for application by manufacturer. Fastener withdrawal tests shall be performed on all non-FM Approved steel decking, (decking less than 22-gauge) to determine suitability and appropriate fastener patterns and densities for mechanical attachment of the new components of the Adhered Roofing Systems.
- B. Structural Concrete (Poured or Pre-cast):
  - 1. Decking shall be installed in strict conformance with industry standards, practices and/or pre-cast panel manufacturer's installation requirements.
  - 2. Decking shall be installed to provide positive slope and subsequent positive drainage of the new Adhered Roofing Systems.
  - 3. Finished decking shall be properly cured and dried prior to the installation of approved insulation.

4. Finished surfaces to receive new roof system shall be smooth and level without significant surface depressions or irregularities. Camber differentials greater than 3/16 inch (5 mm) must be leveled using a cementitious grout.
  5. Finished surfaces shall be dry, free of moisture, dust, loose debris and any other irregularities that may hinder the proper performance of the new Roofing Systems.
- C. Lightweight Structural Concrete:
1. Care is to be taken when roofing over lightweight structural concrete due to the excessive moisture retention of the aggregate.
  2. Manufacturer does not recommend bonding insulation directly to lightweight structural concrete.
  3. A venting vapor retarder is required when installing a Roofing System over lightweight structural concrete.
  4. Manufacturer may accept the installation of an approved base sheet adhered in Adhesive over lightweight structural concrete.
  5. The Roofing Systems may use a mechanically fastened insulation and composite with an adhered membrane or a conventional mechanically fastened Roofing System.
- D. Wood:
1. Wood decking shall conform to FM guidelines for Class-1 impregnated wood decking. FM Class 1 decking consists of a minimum 2-inch (51 mm) thick wood plank or minimum 3/4-inch (19 mm) plywood.
  2. Wood decking that is less than 3/4 inch (19 mm) will be considered for application by manufacturer. Fastener withdrawal tests shall be performed on all non-FM Approved wood decking (wood plank less than 2 inch (51 mm) thick or plywood less than 3/4 inch (19 mm) thick) to determine suitability and appropriate fastener patterns for the components of the new Adhered Roofing Systems.
  3. Wood decking shall be sound, well-seasoned or kiln-dried and of proper thickness to accommodate design loads (including wind up-lift) according to specified design criteria and local building code requirements.
  4. Wood decking should be installed to provide positive slope and subsequent positive drainage of the new Adhered Roofing Systems.
- E. Cementitious Fiber:
1. Molded panels shall be installed in strict accordance with the manufacturer's installation requirements.
  2. Decking should be installed to provide positive slope and subsequent positive drainage of the new Roofing System.
  3. Vertical alignment between adjacent panels shall provide a uniform substrate. Alignment differences shall be no greater than 0.125 inch (3 mm) and shall be leveled with cementitious grout.
  4. Fastener withdrawal tests shall be performed on all cement fiber decking to determine suitability for and appropriate fastener patterns for the components of the new Roofing System.
- F. Gypsum Concrete:
1. Gypsum decks shall be installed in strict accordance with standard industry practice, the manufacturer's installation requirements and local building code requirements.

2. Decking should be installed to provide positive slope and subsequent positive drainage of the new Roofing System.
  3. The gypsum fill shall be reinforced with wire mesh at a proper depth within the fill.
  4. Finished decking shall maintain a minimum thickness (not including the form board) of 2 inches (51 mm).
  5. Fastener withdrawal tests shall be performed on all gypsum decking to determine suitability and appropriate fastener patterns for the components of the new Roofing System.
- G. Lightweight Insulating Cellular Concrete:
1. Lightweight Insulating Cellular Concrete, herein after referred to as LWIC, shall be installed by trained applicators, approved in writing by the LWIC Manufacturer.
  2. LWIC shall be installed in strict accordance with the LWIC manufacturer's installation requirements and standard industry practices.
  3. The finished LWIC installation shall exhibit an oven dry density of a nominal 50 lbs per cu ft (7.85 kN per cu m) and a minimum compressive strength equal to or greater than 300 psi (2068 kPa).
  4. Newly installed LWIC shall be protected from the intrusion of free water and rain infiltration.
  5. Intruded water must be removed prior to the installation of the new Roofing System. Consult the appropriate LWIC manufacturer for methodology.
  6. The LWIC shall be installed to provide positive slope and subsequent positive drainage of the new Roofing System.
  7. Finished LWIC shall be a minimum thickness of 2 inches (51 mm), properly cured and dry with a moisture content less than 20 percent by weight and falling toward a target equilibrium of 7 percent, prior to the installation of the new Roofing System.
  8. Finished surfaces shall be treated using a Poly-Vinyl Alcohol (PVA) or other sealer per LWIC manufacturer's recommendations to ensure uniform curing and surface hardness.
  9. It shall be the Authorized Contractor's responsibility to ensure that the LWIC is properly installed and complies with this specification. The application of materials constitutes the Contractor's acceptance of the LWIC.
  10. All LWIC decks shall be vented using one-way breather vents; large opening vents, greater than 6 inch (152 mm) diameter, shall be installed at a rate of 1 vent per 1,500 sf (139.35 sq m) and small opening vents, less than 6 inch (152 mm) diameter shall be installed at a rate of 1 vent per 1,000 sf (92.9 sq m) of installed membrane.
  11. Roof vents shall be approved by manufacturer, installed and flashed in strict accordance with manufacturer recommendations.
  12. Mechanically attached Roofing Systems, LWIC, shall be attached into the supporting structural decking. LWIC is not considered to be a structural component.
  13. If a Roofing System is to be installed using mechanical attachment of a base sheet, insulation or cover board, fastener withdrawal tests shall be performed to determine the suitability and appropriate fastener patterns.

### 3.4 SUBSTRATE PREPARATION (REROOFING)

- A. General:
1. Applicator shall inform the building Owner or Owner Representative of any issues regarding the condition and structural integrity of the existing decking.



2. The building Owner or Owner Representative shall make and be responsible for the determination as to the proper method of treatment or replacement.
  3. Re-roofing applications require fastener withdrawal tests to substantiate proposed attachment patterns for the new mechanically fastened insulation systems and membranes.
  4. Re-roofing applications that require modification to the deck or insulation system should be installed to provide positive slope and subsequent positive drainage of the new Adhered Roofing Systems.
  5. All terminations of the Adhered Roofing Systems must be constructed to prevent water from penetrating behind or beneath the new roofing system. This includes water from above, beside, below and beneath the new system.
- B. Removal of Existing Roof Systems:
1. Remove all existing roofing materials, insulation, flashing, metal and deteriorated wood blocking and legally dispose off-site.
  2. Remove only enough roofing to accommodate the day's work and ensure the exposed area can be made 100 percent watertight at the end of the day or first sign of inclement weather.
- C. Recover of Existing Roof Systems:
1. Remove loose aggregate and debris by power broom and vacuum and legally dispose of offsite.
  2. Remove and replace wet or deteriorated insulation and wood blocking.
  3. Clean exposed metal surfaces such as pipes, pipe sleeves, drains, duct work, etc., by removing loose paint, rust and any asphalt or coal tar pitch of any kind. Remove and properly discard lead sleeves at soil stacks.
  4. If the existing roof is coal tar pitch, has been repaired with coal tar pitch or has been re-saturated with coal tar pitch, a minimum 10 mil polyethylene pitch vapor retarder shall be installed before recovering.
- D. Steel and Wood Decks:
1. Rotted or deteriorated decking shall be removed and replaced with like kind.
  2. Areas of structurally acceptable steel decking exhibiting slight surface rust shall be properly cleaned, primed and painted prior to installing the approved insulation.
  3. All decking shall be inspected for proper attachment and excessive deflection that would compromise the uplift performance of the new FiberTite Adhered Roofing System.
  4. Attachment and deflection deficiencies shall be repaired and brought into compliance with current, local building code requirements.
- E. Structural Concrete:
1. Deteriorated decking shall be repaired or replaced with appropriate materials according to standard industry regulations and practices.
  2. Repair any depressions or areas where reinforcing has become exposed.
  3. When new insulation system is to be installed using an approved adhesive.
    - a. Cracks and or camber differentials greater than 3/16 inch (5 mm) shall be repaired using an appropriate cementitious grout or fill, feathered to promote a smooth transition.
    - b. Joints between prestressed panel units and over bulb-tees shall be taped, stripped or grouted with an appropriate cementitious fill.

- c. All surface irregularities shall be leveled to ensure complete contact with the decking for insulation bonded in hot asphalt or approved adhesives.
  4. Where insulation is to be mechanically attached, camber differentials or surface irregularities of up to 1/2 inch (13 mm) shall be acceptable.
- F. Lightweight Insulating Concrete:
1. Wet lightweight shall be removed and replaced with appropriate compatible material.
  2. Surface to receive new roofing system shall be smooth and free of ridges, depressions and other irregularities.
  3. Repair any depressions, irregularities and excessive deflections with compatible material.

### 3.5 WOOD NAILERS

- A. Install treated lumber at same heights as insulation layer or adjacent construction plus or minus 0.25 inch (6 mm). Install continuous treated wood nailers at all perimeters, around roof projections and penetrations as shown in approved details.
- B. Wood Nailers Installed Directly on the Substrate: Carefully examine substrates to confirm the entire area provides a suitable fastening surface. Repair defects by appropriate trades prior to installation.
- C. Nailers (W x H): 3.5 x 1.5 inches (89 x 38 mm). Installed and anchored in such a manner to resist a force of 250 lbs per linear foot (2.919 kN per m) of wood blocking in any direction.
- D. Nailers along parapets, curbs and expansion joints are recommended for insulated decking. Consult manufacturer for optional and alternate membrane termination and securement methods.

### 3.6 BASE SHEET

- A. General:
  1. Approved base sheet, when required or specified, shall be applied only to properly prepared and preapproved substrates.
  2. Install no more than can be covered or made 100 percent water tight during the same working day.
  3. Field pull-out tests must be performed for mechanically attached base sheets to determine fastener withdrawal performance.
  4. Base sheets shall be installed starting at the low point of the roof deck.
  5. Base sheet shall be side lapped, a minimum of 3 inches (75 mm), and properly shingled to shed water.
- B. Mechanically Attached Base Sheet:
  1. All base ply fasteners and stress plates for the mechanical attachment of base sheets shall be provided by manufacturer.
  2. For 1-90 attachment, approved base sheet is secured to the deck in the field of the roof, with Fasteners, spaced a maximum of 7 inches (178 mm) on center through the minimum 3-inch (76 mm) side laps and staggered at a maximum 7 inch (178 mm) on center in two rows within the field of the sheet.
  3. The number of fasteners securing the base sheet shall be increased over the field spacing by 70 percent in the perimeter and 160 percent in the corners of the roof area.

4. Fastening increases can be obtained by adding rows of fasteners or additional fasteners along each row.
- C. Torch Applied Base Sheet:
1. SBS Base Sheets shall be applied only to properly prepared and preapproved substrates, free of any debris, dirt, grease, oil or moisture.
  2. Follow all safety guidelines and or NRCA CERTA requirements when torching
  3. Base sheet shall be fully bonded to the substrate.
- D. Base Sheet Adhered with Hot Asphalt:
1. Hot asphalt shall be applied only to properly prepared and preapproved substrates, free of any debris, dirt, grease, oil or moisture.
  2. Base sheet shall be embedded into a fluid, continuous application of hot Type III steep asphalt at a minimum application rate of 25 lbs (11.3 kg) per 100 sq ft (9.3 sq m).
  3. Base sheet shall be fully bonded to the substrate.

### 3.7 VAPOR RETARDERS

- A. General:
1. Approved vapor retarder, when required or specified, shall be applied only to properly prepared and preapproved substrates.
  2. Install no more than can be covered or made 100 percent water tight during the same working day.
  3. Vapor retarders shall be installed starting at the low point of the roof deck.
  4. Vapor retarder shall be side lapped, a minimum of 3 inches (75 mm), and properly shingled to shed water.
- B. VaporTite: Install one ply sheet over the entire prepared substrate. Shingle in direction of slope of roof to shed water on each area of roof.
- C. Hot Applied Vapor Retarder: Install one ply sheet in 25 lbs. per square (11.3kg) of ASTM D 312 Type III bitumen over the entire prepared substrate. Shingle in direction of slope of roof to shed water on each area of roof.
- D. Torch Applied Vapor Retarder: Install one ply of torch grade SBS Base Sheet using a suitable heat source to the entire surface. Shingle in direction of slope of roof to shed water on each area of roof
- E. Cold Applied Vapor Retarder: Install one ply SBS Base Sheet in SBS Adhesive over the entire prepared substrate. Shingle in direction of slope of roof to shed water on each area of roof.
- F. Two Ply Fiberglass Vapor Retarder: Install two fiberglass ply sheets in 25 lbs. per square (11.3kg) of ASTM D 312 Type III bitumen shingled uniformly to achieve two plies over the entire prepared substrate. Shingle in direction of slope of roof to shed water on each area of roof.

### 3.8 ROOF INSULATION INSTALLATION

- A. General:
1. Insulation Boards: Adhered in approved adhesives. Maximum 4 x 4 ft (1219 x 1219 mm).

2. Insulation Boards: Mechanically fastened. 4 x 4 ft (1219 x 1219 mm) or 4 x 8 ft (1219 x 2438 mm).
  3. Gypsum Coverboards: Adhered in approved adhesives. 4 x 4 ft (1219 x 1219 mm) or 4 x 8 ft (1219 x 2438 mm).
  4. Gypsum Coverboards: Mechanically fastened. 4 x 4 ft (1219 x 1219 mm) or 4 x 8 ft (1219 x 2438 mm).
  5. Roof Insulation and Coverboards: Installed where by the long dimension of the boards run in parallel alignment and the short dimensions are staggered a minimum of 12 inches (305 mm).
  6. Install insulation with minimum joint dimensions and tightly butted where possible.
    - a. Maximum Joint Widths: 3/8 inch (9.5 mm).
    - b. Damaged Corners: Cut out and replaced with an insulation piece a minimum of 12 x 12 inches (305 x 305 mm). Pieces that are cut from larger panels and are smaller than one square foot are not acceptable.
  7. Install no more than can be covered during the same working day.
  8. Taper roof insulation to drain sumps using tapered edge strips.
    - a. If insulation layer is 1.5 inches (38 mm) or less, taper 12 inches (305 mm) from drain bowl.
    - b. If insulation thickness exceeds 1.5 inches (38 mm), taper 18 inches (457 mm) from drain bowl.
    - c. Taper boards or pieces must be adhered or mechanically fastened with a minimum of two fasteners per board.
  9. When a cover board or multiple layers are installed each layer must be offset from the previous layer a minimum of 12 inches (305 mm) on center.
  10. At the end of each working day, provide a watertight cover on all unused insulation as to avoid moisture penetration.
- B. Preliminary Attachment of Insulation for Mechanically Attached Roofing Systems:
1. Insulation and coverboard shall be applied to or installed over properly prepared and preapproved substrates, free of any debris, dirt, grease, oil or moisture.
  2. All fasteners and stress plates for the mechanical attachment of insulation and cover board materials shall be Fasteners as provided by manufacturer.
  3. All fasteners and stress plates shall be FM approved for mechanical attachment of insulation and comply with FM Standard 4470 for corrosion resistance.
  4. General 1-90 attachment criteria require preliminary attachment for insulation and cover boards for mechanically attached membrane roofing systems. Insulation and cover board within the field of the roof requires 6 fasteners and stress plates per 48 x 96 inches (1219 x 2348 mm) insulation board.
  5. Perimeter areas do not require an increase in the fastener density when the membrane is mechanically attached.
  6. Corner areas do not require an increase in the fastener density when the membrane is mechanically attached.
  7. Fasteners shall be installed straight, tight and perpendicular to the decking complying with minimum penetration requirements of specific deck types. Do not over torque fasteners.
  8. Fasteners shall be installed using depth sensing tool attachments to ensure proper installation.
  9. It may be possible to utilize adhesives for the preliminary attachment of the insulation layers on non-steel deck projects. The insulation and coverboard manufacturer must recommend and approve the specific board and adhesive combination in writing prior to manufacturer granting approval for this method of preliminary securement.

- B. Induction Welded Insulation Attachment; Plate Installation (for insulation and coverboard):
1. Insulation shall be applied to and installed over properly prepared and pre-approved substrates, free of any debris, dirt, grease, oil or moisture.
  2. Install fasteners and IW isoweld stress plates for the mechanical attachment of insulation or cover board materials and subsequent induction bond of Roofing Membrane shall be Fasteners as provided by manufacturer.
  3. Fasteners and stress plates shall be FM approved for mechanical attachment of insulation and comply with FM Standard 4470 for corrosion resistance.
  4. Install IW isoweld plates in a straight grid pattern using chalk lines. Proper plate layout will improve welding effectiveness.
  5. General 1-90 attachment for insulation, cover board, and membrane in the field of the roof requires one fastener and stress plate per 6 sq ft (0.56 sq m) of insulation.
  6. Perimeter areas require a fastener tributary area decrease that is no greater than 60 percent of the field tributary per fastener.
  7. Corner areas require a fastener tributary area decrease that is no greater than 40 percent of the field tributary per fastener.
  8. Fasteners shall be installed flush with the substrate and not overdriven to the point of promoting plate deformation.
  9. Fasteners shall be installed using depth sensing tool attachments to ensure proper installation.
- C. Loose Laid Insulation:
1. Insulation shall be applied to or installed over properly prepared and pre-approved substrates, free of any debris, dirt, grease, oil or moisture.
  2. Ballast applications require that the base layer of insulation, in multiple layer applications, be loose laid, staggering all joints. All insulation joints in subsequent layers shall also be staggered (above and below) within the multiple layers.

### 3.9 INSTALLATION OF MEMBRANES

- A. Quality Control:
1. It is the responsibility of the Authorized Applicator to initiate and maintain a Quality Control program to govern all aspects of the installation.
  2. The project foreman and or supervisor will be responsible for the daily execution of the Quality Control program which will include but is not limited to the supervision, inspection and probing of all heat welded seams incorporated within roofing system.
  3. If inconsistencies in quality of the application of the composite, membrane or welds are found, work shall cease until corrective actions are taken to ensure the continuity the installation.
- B. General:
1. Coordinate work ensuring that sequencing of installation promotes a 100 percent watertight installation at the end of each day.
  2. Roofing systems to be designed utilizing and determined to be compliant with the procedures outlined within the current publication of ASCE7 Standard. Alternative designs may be determined using the criteria within Factory Mutual Research Loss Prevention Data.
  3. Fasteners for Mechanically Fastened Roofing Systems are to engage the top flange of the steel deck profile.

4. An Adhered or Mechanically Attached Roofing Systems may utilize 74-in or 100-in smooth back roll goods.
5. An Adhered or Mechanically Attached Roofing System may utilize 72-fleece back roll goods.
6. Restrictions regarding outside ambient air temperature are relative only to the exposure limits of the workers or adhesives when necessary.
7. When using adhesives outside ambient air temperature shall be above 40 degrees F (4.4 degrees C) and rising. Curing or drying time of the adhesive will be affected by ambient temperatures and must be taken into consideration.
8. Humidity can affect the drying time of solvent borne adhesives or cause condensation to form on the newly applied adhesive.
9. No moisture may be present on the adhesives prior to mating or application of membranes.
10. Adhered membrane systems are to be broomed in place first and then completed by pressing the membrane into the adhesive with a weighted, foam covered lawn roller or 50 lb (22.7 kg) linoleum roller. Lawn rollers should be filled with between 6 and 8 gallons (22.7 and 30.3 L) of water.
11. Roofing systems shall only be installed over properly prepared and sound substrates, free from excessive surface roughness, dirt, debris and moisture.

**C. Adhered Membrane:**

1. The Authorized Applicator shall assume full responsibility for any and all irregularities, defects or quality issues that arise due to failure to following published "installation guidelines" for the proper installation of adhered membrane roofing systems.
2. **Membrane (Smooth-back) Adhered with Alpha-Tite Bonding Adhesive:**
  - a. Position the Membrane and fold the sheet back upon itself to allow a workable exposure of the underside of the sheet.
  - b. Apply a 100 percent continuous coat of bonding adhesive to the exposed bottom side of the membrane and a mirrored area of the substrate.
  - c. The amount of membrane and substrate that can be coated with adhesive will be determined by application method, ambient temperature, humidity and available manpower.
  - d. Adhesive is applied by rolling, using a 3/8-in (9.5 mm) nap roller.
  - e. Do not dump adhesive or pour from the cans.
  - f. Apply the adhesive to ensure a smooth, even 100 percent coverage of the substrate and membrane.
  - g. Roll the adhesive to ensure a smooth, even 100 percent coverage of the substrate and membrane with no voids, skips, globs, puddles or similar irregularities.
  - h. Adhesive coverage should average 100 square feet per gallon of applied adhesive with a 50 sq ft per gallon (1.23 sq m per L) net coverage, plus or minus 10 percent, for the membrane and substrate combined.
  - i. Allow the adhesive to flash off completely and become tacky.
  - j. Allow a 15-20 minutes flash time (at 70° F and 50% relative humidity). Using the finger-push method, check the adhesive by applying pressure with a finger, pushing across the adhesive. The adhesive is to be tacky, but not string or be liquid.

- k. When the adhesive is sufficiently cured, carefully maneuver the glued portion of the membrane onto the glued substrate surface, avoiding any wrinkles or air pockets.
- l. On vertical surfaces, broom the adhered portion of the membrane to ensure full contact and complete the bonding process by firmly pressing the bonded membrane into place using a clean paint roller.
- m. On horizontal surfaces, broom the adhered portion of the membrane to ensure full contact and complete the bonding process by firmly pressing the bonded membrane into place with a weighted, foam-covered, lawn roller or 50 lb. (22.7 kg.) linoleum roller.
- n. Repeat the process for the remaining unbonded portion of the membrane, lapping subsequent, adjacent rolls of membrane a minimum of 3 inches (76 mm), ensuring proper shingling of the membrane to shed water along the laps.
- o. No adhesive shall be applied to the lap seam areas of the membrane. Areas contaminated with adhesive are difficult to clean, will impair proper welding of the seams and require a membrane patch or strip.
- p. Do not use bad or marginal adhesives. Contact manufacturer if the quality of the adhesive is suspect.

**3. Membrane (Smooth-back) Adhered with 190e Bonding Adhesive:**

- a. Position the Membrane and fold the sheet to allow a workable exposure of the underside of the sheet.
- b. Apply a 100 percent continuous coat of bonding adhesive to the exposed bottom side of the membrane and a mirrored area of the substrate.
- c. The amount of membrane and substrate that can be coated with adhesive will be determined by application method, ambient temperature, humidity and available manpower.
- d. Adhesive may be applied by spraying and back rolling or just rolling. Do not dump adhesive or pour from the cans.
- e. Roller applied adhesive shall utilize a solvent resistant 3/8 inch (9.5 mm) inch nap roller, spreading the adhesive to ensure a smooth, even 100 percent coverage of the substrate and membrane.
- f. Spray applied adhesive must be spread out by roller to ensure a smooth, even 100 percent coverage of the substrate and membrane with no voids, skips, globs, puddles or similar irregularities.
- g. Adhesive coverage should average 100 square feet per gallon of applied adhesive with a 50 sq ft per gallon (1.23 sq m per L) net coverage, plus or minus 10 percent, for the membrane and substrate combined.
- h. Allow the adhesive to dry or cure to a point of being tacky, but not stringy to the touch on both surfaces. Do not allow adhesive to completely dry out on either surface.
- i. When sufficiently cured, carefully maneuver the glued portion of the membrane onto the glued substrate surface, avoiding any wrinkles or air pockets.
- j. Broom the adhered portion of the membrane to ensure full contact and complete the bonding process by firmly pressing the bonded membrane into place with a weighted, foam-covered, lawn roller.

- k. Repeat the process for the remaining unbonded portion of the membrane, lapping subsequent, adjacent rolls of membrane a minimum of 3 inches (76 mm), ensuring proper shingling of the membrane to shed water along the laps.
- l. No adhesive shall be applied to the lap seam areas of the membrane. Areas contaminated with adhesive are difficult to clean, will impair proper welding of the seams and require a membrane patch or strip.
- m. Do not use bad or marginal adhesives. Contact manufacturer if the quality of the adhesive is suspect.

**4. Fleece Back Membrane Adhered in 601 PG Adhesive:**

- a. For all FB membranes, unroll and position two rolls of FB over the properly installed and prepared substrate.
- b. Ensure rolls are straight and the minimum 3 inches (76 mm) overlap between rolls is maintained.
- c. Fold (butterfly) the rolls back in the long direction, half way upon themselves to expose the substrate and the underlying polyester fleece backing.
- d. Apply continuous spatter pattern of 601 PG adhesive to the substrate between the sheets of membrane; dispensing the adhesive in a spattered pop-corn spray pattern.
- e. Spatter pattern shall achieve a nominal 80 percent coverage of textured coating at approximately 0.25 of an inch (6 mm) nominal thickness. The balance of the substrate will get coated as the adhesive spreads during the brooming and rolling process.
- f. Avoid spattering the back of the fleece-back membrane.
- g. Do not allow adhesive to contaminate membrane overlaps. For example, use a sheet of insulation board to mask the spray area if required along adjoining membrane areas.
- h. Clean overspray immediately with acetone while the adhesive is still wet.
- i. Fold and maneuver the FB membrane into the wet adhesive, (approximate open time for the adhesive is 3 to 5 minutes depending on environmental conditions) avoiding wrinkles or air pockets in the FB membrane.
- j. Broom the membrane into the wet adhesive and complete the bonding process by firmly pressing the bonded membrane into place with a 50 lb (22.7 kg) linoleum roller of 50 lb (22.7 kg) weighted, foam covered lawn roller.
- k. Repeat the process for the remaining unbonded portion of the membrane.
- l. Lap subsequent, adjacent rolls of membrane a minimum 3 inches (76 mm), ensuring proper shingling of the membrane to shed water along the laps.
- m. No adhesive shall be applied to the lap seam areas of the membrane. Areas contaminated with adhesive require a membrane patch or strip.
- n. 601 PG adhesive is designed for use only when the substrate and ambient temperatures are a minimum 32 degrees F (0 degrees C) and rising and the adhesive components are at least 70 degrees F (21.1 degrees C).
- o. Do not use bad or marginal adhesives. Contact manufacturer if quality of the adhesive is suspect.

**5. Fleece Back Membrane Adhered in CR-20 Adhesive:**

- a. For all FB membranes, unroll and position two rolls of FB over the properly installed and prepared substrate.
- b. Ensure rolls are straight and the minimum 3 inches (76 mm) overlap between rolls is maintained.



- c. Peel (butterfly) the rolls back in the long direction, half way upon themselves to expose the substrate and the underlying polyester fleece backing.
- d. Apply continuous spatter pattern of CR-20 adhesive to the substrate between the rolls; dispensing the adhesive in a spattered pop-corn spray pattern.
- e. Spatter pattern shall achieve a nominal 80 percent coverage of textured coating at approximately 0.25 of an inch (6 mm) nominal thickness. The balance of the substrate will get coated as the adhesive spreads during the brooming and rolling process.
- f. Avoid spattering the back of the fleece-back membrane.
- g. Do not allow adhesive to contaminate membrane overlaps. Use a sheet of insulation board to mask the spray area if required along adjoining membrane areas.
- h. Overspray may be cleaned immediately with acetone while the adhesive is still wet.
- i. Fold and maneuver the FB membrane into the wet adhesive, (approximate open time for the adhesive is 5 to 10 minutes depending on environmental conditions) avoiding wrinkles or air pockets in the FB membrane.
- j. Broom the membrane into the wet adhesive and complete the bonding process by firmly pressing the bonded membrane into place with a 50 lb (22.7 kg) linoleum roller of 50 lb (22.7 kg) weighted, foam covered lawn roller.
- k. Repeat the process for the remaining unbonded portion of the membrane, lapping subsequent, adjacent rolls of membrane a minimum 3 inches (76 mm), ensuring proper shingling of the membrane to shed water along the laps.
- l. No adhesive shall be applied to the lap seam areas of the membrane. Areas contaminated with adhesive require a membrane patch or strip.
- m. Polyset CR-20 adhesive is designed for use only when the substrate and ambient temperatures are a minimum 40 degrees F (4.4 degrees C) and rising and the chemical cylinders are at least 70 degrees F (21.1 degrees C).
- n. Do not use bad or marginal adhesives. Contact manufacturer if the quality of the adhesive is suspect.

**6. Fleece Back Membrane Adhered with 290 Adhesive.**

- a. For all FB membranes, unroll approximately 30 feet (9.14 m) of the FB membrane and position the roll over the properly installed and prepared substrate. Pull the tail back over the roll to expose a workable area; approx. 30 ft (9.14 m) of substrate.
- b. Apply a 100 percent continuous coat of adhesive to the substrate.
- c. The amount substrate that can be coated with a workable amount of adhesive will be determined by application method, ambient temperature, humidity and available manpower.
- d. To ensure proper application and curing of the adhesive, the outside air temperature shall be above 40 degrees F (4.4 degrees C) and rising.
- e. 290 adhesive may be applied by spraying and back rolling or just rolling. Do not dump adhesive or pour from the cans.
- f. Roller applied adhesive shall utilize a solvent resistant 3/8 inch (9.5 mm) nap roller.

- g. Spray applied adhesive must also be rolled out by roller to ensure a smooth, even 100 percent coverage of the substrate with no voids, skips, globs, puddles or similar irregularities.
- h. Allow the solvents in the adhesive to slightly dissipate and cure only to the point that the adhesive is sticky but still wet Do not allow adhesive to dry.
- i. Adhesives shall not be installed over moist or wet substrates.
- j. Broom the membrane into the wet adhesive and complete the bonding process by firmly pressing the bonded membrane into place with a 50 lb (22.7 kg) linoleum roller of 50 lb (22.7 kg) weighted, foam covered lawn roller.
- k. Repeat the process for the remaining unbonded portion of the membrane, lapping subsequent, adjacent rolls of membrane a minimum of 3 inches (76 mm), ensuring proper shingling of the membrane to shed water along the laps.
- l. No adhesive shall be applied to the lap seam areas of the membrane. Areas contaminated with adhesive require a membrane patch or strip.
- m. Do not use bad or marginal adhesives. Contact manufacturer if the quality of the adhesive is suspect.

**7. Fleece Back Membrane Adhered in 390 Adhesive:**

- a. For all FB membranes, unroll approximately 30 feet of the FB membrane and position the roll over the properly installed and prepared substrate. Pull the tail back over the roll to expose a workable area, approx. 30 ft (9.1 m) of substrate.
- b. Apply a 100 percent continuous coat of adhesive to the substrate.
- c. The amount of substrate that can be coated with a workable amount of adhesive will be determined by application method, ambient temperature, humidity and available manpower.
- d. To ensure proper application and curing of the adhesive, the outside air temperature shall be 50 degrees F (10 degrees C) and rising with no chance of dropping below freezing during the subsequent 48 hour time period.
- e. 390 adhesive may be applied by using a heavy, 3/8-inch (9.5 mm) inch nap roller or brush. Do not dump adhesive or pour from the cans.
- f. Roll or brush a smooth, even coat of adhesive over the substrate, ensuring 100 percent coverage of the substrate.
- g. Allow the adhesive to become sticky but still wet. Do not allow a film to develop on the adhesive or allow adhesive to dry out.
- h. Water borne adhesives (390) can be directly affected by moisture. Water based adhesives shall not to be installed over or on substrates that are moist or wet or on systems or substrates that have residual moisture.
- i. Broom the adhered portion of the membrane to ensure full contact and complete the bonding process by firmly pressing the bonded membrane into place with a weighted, foam-covered, lawn roller.
- j. Repeat the process for the remaining u-bonded portion of the membrane, lapping subsequent, adjacent rolls of membrane a minimum of 3 inches (76 mm), ensuring proper shingling of the membrane to shed water along the laps.
- k. No adhesive shall be applied to the lap seam areas of the membrane. Areas contaminated with adhesive require a membrane patch or strip.
- l. Do not use bad or marginal adhesives. Contact manufacturer if the quality of the adhesive is suspect.

**8. Fleece Back Membrane Adhered in 490 Adhesive:**

- a. For FB membranes unroll approximately 30 feet (9.14 m) of the FB membrane and position the roll over the properly installed and prepared substrate. Pull the tail back over the roll to expose a workable area; approx. 30 ft (9.14 m) of substrate.
- b. Apply a 100 percent continuous coat of adhesive to the substrate.
- c. The amount of substrate that can be coated with a workable amount of adhesive will be determined by application method, ambient temperature, humidity, and available manpower.
- d. To ensure proper application and curing of the adhesive, the outside air temperature shall be above 40 degrees F (4.4 degrees C) and rising.
- e. 490 adhesive is to be applied by spraying and back rolling or just rolling. Do not "dump" adhesive or pour from the cans.
- f. Roller applied adhesive shall utilize a solvent resistant 3/8-inch (9.5 mm) nap roller.
- g. Adhesive must be rolled out to ensure a smooth, even 100 percent coverage of the substrate with no voids, skips, globs, puddles, or similar irregularities.
- h. Allow the adhesive to set up only to the point that the adhesive is slightly cured but still wet. Do not allow adhesive to skin or dry out.
- i. Water borne adhesives (490) can be directly affected by moisture. Water based adhesives shall not be installed over or on substrates that are moist or wet or on systems or substrates that have residual moisture.
- j. Broom the adhered portion of the membrane to ensure full contact and complete the bonding process by firmly pressing the bonded membrane into place with a weighted, foam-covered, lawn roller.
- k. Repeat the process for the remaining un-bonded portion of the membrane, lapping subsequent, adjacent rolls of membrane a minimum of 3 inches (76 mm), ensuring proper shingling of the membrane to shed water along the laps.
- l. No adhesive shall be applied to the lap seam areas of the membrane. Areas contaminated with adhesive require a membrane patch.
- m. Do not use bad or marginal adhesives. Contact manufacturer if the quality of the adhesive is suspect.

**9. Fleece Back Membrane Adhered in Hot Asphalt:**

- a. For FB membranes, un-roll approximately 30 feet (9.1 m) of the FB membrane and position the roll over the properly installed and prepared substrate. Pull the tail back over the roll to expose a workable area, approx. 30 ft (9.1 m) of substrate.
- b. Apply a 100 percent continuous coat of adhesive to the substrate.
- c. Correct Equiviscous Temperature (EVT) must be maintained at point of application. Type III steep asphalt shall be applied within 25 degrees F (minus 3.9 degrees C) of the asphalt manufacturer's recommended EVT.
- d. Asphalt is to be applied by either mopping or mechanical spreaders.
- e. Adhesive must be spread to ensure a smooth, even 100 percent coverage of the substrate with no voids, skips, globs, puddles, or similar irregularities.
- f. Do not allow asphalt to contaminate the lap seam areas of the membrane. Contaminated areas will inhibit proper welding of the seams.
- g. Carefully maneuver the membrane into the adhesive on the substrate surface, avoiding any wrinkles or air pockets.

- h. Broom the adhered portion of the membrane to ensure full contact and complete the bonding process by firmly pressing the bonded membrane into place with a weighted, foam-covered, lawn roller.
- i. Repeat the process for the remaining un-bonded portion of the membrane, lapping subsequent, adjacent rolls of membrane a minimum of 3 inches (76 mm), ensuring proper shingling of the membrane to shed water along the laps.
- j. No adhesive shall be applied to the lap seam areas of the membrane. Areas contaminated with asphalt require a membrane patch.

**D. Membrane Mechanically Attached (Class 1 Decks):**

1. Rolls of Roofing Membrane are to be positioned and installed straight and snug but not taut. Stretching of the membrane places undue stress on the mechanical fasteners.
2. The properly positioned membrane shall be attached using Magnum Fasteners and Magnum Stress Plates installed through the membrane and insulation assembly and engage the structural decking.
3. The Magnum stress plates shall be installed straight and parallel to existing structural purlin members. All stress plates must set completely on the membrane allowing a minimum of 0.5 inch (13 mm) from the edge and allow sufficient room to facilitate welding.
4. Fastener row spacing, and intervals shall be established to resist design pressures, determined in compliance with procedures outlined within the current publication of ASCE Standard 7. Alternative designs may be determined using the criteria within Factory Mutual Research Loss Prevention Data.
5. Table MA 01/21-1 lists general default attachment requirements for the field of the roof, as applied to structural roof decks referred to as Class 1; minimum 3/4-inch (19 mm) plywood, minimum 22-gauge steel or minimum 3,000 psi (20684 kPa) concrete.
6. Perimeter zone and corner zone enhancement is required on all mechanically fastened roofing systems. Perimeters and corners are defined as follows:
7. Perimeter: 10 percent of the width of the roof areas or 40 percent of the height of the roof area, whichever is less to a minimum of 4 feet (1219 mm). Perimeter zones run parallel to all external roof edges including those with parapet walls.
8. Corner zones are the square intersection of perimeters.
9. Projects having variable roof levels shall treat the outer boundary of each level as a perimeter. Internal expansion joints, firewalls or adjoining building walls greater than 3 feet (914 mm) are not considered perimeter areas.
10. Perimeters and corners may be enhanced by:
11. Installing half rolls of membrane fastened as prescribed by project requirements.
12. Adding additional rows of fasteners through the top of the membrane system within the perimeter at prescribed intervals area and sealing with a 6-inch (152 mm) strip.
13. Individual project, insurance and building code requirements can vary substantially. Manufacturer can offers design assistance and evaluation for determining acceptable fastener patterns.
14. For additional design and attachment options please contact FiberTite Technical Services.
15. Table MA 01/21 - 1:
  - a. Steel: 22 Gauge Greater:
    - 1) Design Pressure:  $\leq$  -30 psf. (1.436 kPa) FM 1-60.
      - a) Steel Deck: 80 ksi (551.6 mPa).
        - 1) Row Intervals / Lap Structure: 95 inches (2413 mm) on center - open.
        - 2) Lap Fastening: 18 inches (457 mm) on center.

- b) Steel Deck: 33 ksi (227.5 mPa).
  - 1) Row Intervals / Lap Structure: 95 inches (2413 mm) on center - open.
  - 2) Lap Fastening: 12 inches (305 mm) on center.
- 2) Design Pressure:  $> -30$  but  $\leq -45$  psf. (2.155 kPa) FM 1-90.
  - a) Steel Deck: 80 ksi (551.6 mPa).
    - 1) Row Intervals / Lap Structure: 95 inches (2413 mm) on center - open.
    - 2) Lap Fastening: 12 inches (305 mm) on center.
  - b) Steel Deck: 33 ksi (227.5 mPa).
    - 1) Row Intervals / Lap Structure: 69 inches (1753 mm) on center - open.
    - 2) Lap Fastening: 12 inches (305 mm) on center.

**E. Heat Induction Membrane Installation:**

1. Unroll and position the membrane onto the properly prepared substrate, over the previously installed IW isoweld plates.
2. Install the membrane in a flat, relaxed position avoiding excess wrinkles and stretching.
3. Weld membranes to IW isoweld plates using only approved SFS isoweld equipment.
4. Adjoining rolls shall overlap a minimum of 2 inch (51 mm), properly shingled with the flow of water wherever possible.
5. Stager the factory seams in custom rolls to prevent adjacent factory welds from falling on top of one another.
6. The field membrane shall be properly affixed to wood blocking or restrained in an approved manner at all roof perimeters, walls, expansion joints, curbs and penetrations having any one dimension greater than 24-inch (610 mm) in length. Do not use approved IW plates for transitional attachment. (See Current Manufacturer's Construction Details).

**F. Mechanically Attached Metal Recover**

**Through Fastened (Closed Lap):**

1. Loose lay the rolls of Roofing Membrane over the mechanically attached coverboard.
2. Coverboards and/or insulation require preliminary attachment at a minimum of 6 fasteners per 4' x 8' board.
3. Align the rolls to the purlin system. The membrane should be positioned snug but not taut.
4. Align subsequent and adjoining rolls to stager overlap 5 inches (127 mm).
5. The properly positioned membrane shall be attached using Purlin Fasteners or Retro-Drillers and Magnum Stress Plates installed through the membrane, insulation assembly and existing metal roof panels to engage the structural purlin.
6. The Magnum stress plates shall be installed straight and centered to existing structural purlins.
7. Fastener row spacing, and intervals shall be established to resist design pressures, determined in compliance with procedures outlined within the current publication of ASCE7. Alternative designs may be determined using the criteria within FM Loss Prevention Data.
8. Metal re-cover projects require enhanced perimeter and corner enhancement.

9. The width of the perimeter area shall be calculated to be either 10 percent of the width of the roof section or 40 percent of the building or section height above ground, whichever is less to a minimum of 10 feet (3048 mm).
10. Perimeter and corner enhancement shall be accomplished by installing additional rows of fasteners through the top of the membrane system within the perimeter and corner zones, into the structural purlins.
11. The following fastener attachment patterns are for general construction when purlins are space at a nominal 5 feet (1524 mm) on center and accommodate compliance with 1-90 membrane attachment.
  - a. Field: The field area of the roof shall be defined as all areas not considered perimeter or corners.
  - b. Install Purlin Fasteners or Retro Drillers and Stress Plates through the top of the membrane system in a straight line with fastener rows intervals no greater than 60-in (1524 mm) apart. (every purlin) with fasteners spaced no greater than 18 inches (305 mm) on center. Seal fastener rows by heat welding a nominal 6 inch (152 mm) cover strip over the fasteners.
  - c. Perimeter: The perimeter area of the roof shall be defined as the outer parallel boundary of the roof section, including the eave, peak and rake edge.
  - d. Install Purlin Fasteners or Retro Drillers and Stress Plates through the top of the membrane system in a straight line with fastener rows a maximum of 60-in (1524 mm) apart (every purlin) with fasteners spaced no greater than 12 inches (305 mm) on center. Seal fastener rows by heat welding a nominal 6 inch (152 mm) cover strip over the fasteners.
  - e. Corner: The corner area shall be defined as the square area created when the perimeter area is overlapped at a directional change at the outer parallel boundary of the roof section or edge.
  - f. Install Purlin Fasteners or Retro Drillers and Stress Plates through the top of the membrane system in a straight line with fastener rows a maximum of 60-in (1524 mm) apart (every purlin) with fasteners spaced no greater than 6 inches (152 mm) on center.

**G. Conventional Lap Fastened (Open Lap):**

1. Rolls of Roofing Membrane are to be positioned parallel to the purlins and installed straight and snug but not taut. Stretching of the membrane places undue stress on the mechanical fasteners.
2. Adjoining rolls shall overlap a minimum of 5 inches (127 mm) but in no case more than 2 inches (51 mm) beyond the purlin and attachment line of the lap.
3. Adjoining rolls shall be properly shingled with the flow of water where possible.
4. The properly positioned membrane shall be attached using Purlin Fasteners and Magnum Stress Plates installed through the membrane and insulation assembly and engage the structural purlins.
5. The Magnum stress plates shall be installed straight and parallel to existing structural purlin members. All stress plates must set completely on the membrane allowing a minimum of 0.5 inch (13 mm) from the edge and allow sufficient room to facilitate welding.
6. Fastener row spacing, and intervals shall be established to resist design pressures, determined in compliance with procedures outlined within the current publication of ASCE 7.
7. Alternative designs may be determined using the criteria within FM Loss Prevention Data.

**H. Membrane Installation (Induction Weld):**

1. Install Purlin Fasteners or Retro Drillers and IW isoweld Plates through the insulation into the structural purlins per project specifications.
2. Unroll and position the membrane onto the properly prepared substrate, covering the previously installed IW isoweld plates.
3. Install the membrane in a flat, relaxed position avoiding excess wrinkles and stretching.
4. Adjoining rolls shall overlap a minimum of 2 inches, properly shingled with the flow of water wherever possible.
5. Stager the factory seams in custom rolls to prevent adjacent factory welds from falling on top of one another.
6. The field membrane shall be properly affixed to wood blocking or restrained in an approved manner at all roof perimeters, walls, expansion joints, curbs and penetrations having any one dimension greater than 24 inches in length. Do not use Induction Weld plates for transitional attachment. (See Current FiberTite Construction Details)

**I. Installation of Simulated Metal Roofing Profile:**

1. Preparation:
  - a. The surface of the FB fleece back membrane shall be clean and dry for the proper installation of the SMRP.
  - b. The SMRP shall be installed in equidistant and parallel lengths.
  - c. Best spacing of the SMRP is determined by using incremental distances between fleece back membrane laps.
  - d. Installation of SMRP at overlaps will be nominally spaced at 69-inch (1753 mm) intervals.
  - e. Cut and preassemble SMRP to desired lengths.
  - f. Segments of SMRP can be joined using a plastic dowel.
  - g. Using washable chalk, snap-mark lines at predetermined specified intervals between the overlaps.
  - h. Number of Interval Segments:
    - 1) SMRP's Between Overlaps: 1.
      - a) Nominal "On Center" Distance Between SMRP's: 34.50 inch (876 mm).
    - 2) SMRP's Between Overlaps: 2.
      - a) Nominal "On Center" Distance Between SMRP's: 23.00 inch (584 mm).
    - 3) SMRP's Between Overlaps: 3.
      - a) Nominal "On Center" Distance Between SMRP's: 17.25 inch (438 mm).
2. Application:
  - a. Unroll the Rib Profile and place next to the chalk line or membrane overlap edge.
  - b. Position SMRP so the bottom of the SMRP is lying flat and free to tension.
  - c. Once Aligned, adhere the beginning 2 to 4 inches (51 to 102 mm) of the SMRP to the fleece back roofing membrane.
  - d. Pull the SMRP taught, aligned to the chalk line to keep the profile straight for the welder.
  - e. Using a hot air apparatus, adhere the SMRP's continuous, straight and parallel.
  - f. Do not overheat the fleece back membrane while adhering the heat activated adhesive strip on the SMRP.

- g. Do not install the SMRP on or over welded overlaps.
- h. Do not rush the heat activation process and take time necessary to ensure aesthetics are achieved.
- i. SMRP splice joints and exposed ends can be detailed by using and welding small strips and pieces of the same colored membrane.

**J. Ballasted Membrane:**

1. Ballast shall be loose laid and sufficient to provide 100 percent coverage of the membrane.
2. A minimum 2 inch (51 mm) high gravel stop or approved ballast restraint shall be installed at exterior perimeter edges.
3. Perimeter shall be defined as a rectangular area along and parallel to the exterior edge of the roof. The width of the rectangle shall be determined as 10 percent of the building width or 40 percent of the building height, whichever is less to a minimum of 10 feet (3048 mm).
4. Corner shall be defined as a square external corner section of the roof. The width of the square shall be determined as 10 percent of the building width or 40 percent of the building height, whichever is less to a minimum of 10 feet (3048 mm).
5. When applicable, a special mechanical termination shall be constructed between areas of loose laid, mechanically attached or adhered roof sections.
6. The building's degree of exposure to the effects of wind will vary according to specific design wind speed, building height, parapets, permeability and geographic location.
7. For design pressures greater than 40 psf (1.9 kPa), coastal applications or buildings with significant openings, please consult manufacturer.
  - a. Unroll and position the membrane onto the properly prepared substrate, insulation or coverboard.
  - b. Install the membrane in a flat, relaxed position avoiding excess wrinkles and stretching.
  - c. Adjoining rolls shall overlap a minimum of 3 inches (76 mm), properly shingled with the flow of water wherever possible.
  - d. The field membrane shall be properly affixed to wood blocking or restrained in an approved manner at all roof perimeters, walls, expansion joints, curbs and penetrations having any one dimension greater than 24 inches (610 mm) in length. (See Current Manufacturer Construction Details.)
8. The following is a list of minimum guidelines for ballasted Roof Systems. Final design and approval shall rest with the local building official or within the local building code having jurisdiction over the project.
  - a. Design Pressure: Less Than or Equal to Minus 20 psf (958 Pa):
    - 1) Roof Area: Field:
      - a) Stone Ballast, No. 2, 2.5 inch (63.5 mm): 10 psf (478 Pa).
      - b) Pavers, Interlocking: 10 psf (478 Pa).
      - c) Pavers, Non-Interlocking: 22 psf (1053 Pa).
    - 2) Roof Perimeter:
      - a) Stone Ballast, No. 2, 2.5 inch (63.5 mm): 12 psf (575 Pa).
      - b) Pavers, Interlocking: 10 psf (478 Pa).
      - c) Pavers, Non-Interlocking: 22 psf (1053 Pa).
    - 3) Roof Corners:
      - a) Stone Ballast, No. 2, 2.5 inch (63.5 mm): 12 psf (718 Pa).
      - b) Pavers, Interlocking: 10 psf (478 Pa).
      - c) Pavers, Non-Interlocking: 22 psf (1053 Pa).



- b. Design Pressure: Less Than or Equal to Minus 30 psf (1436 Pa):
  - 1) Roof Area: Field:
    - a) Stone Ballast, No. 2, 2.5 inch (63.5 mm): 12 psf (575 Pa).
    - b) Pavers, Interlocking: 10 psf (478 Pa).
    - c) Pavers, Non-Interlocking: 22 psf (1053 Pa).
  - 2) Roof Perimeter:
    - a) Stone Ballast, No. 2, 2.5 inch (63.5 mm): 12 psf (718 Pa).
    - b) Pavers, Interlocking: 10 psf (478 Pa).
    - c) Pavers, Non-Interlocking: 22 psf (1053 Pa).
  - 3) Roof Corners:
    - a) Stone Ballast, No. 2, 2.5 inch (63.5 mm): 18 psf (862 Pa).
    - b) Pavers, Interlocking: 10 psf (478 Pa).
    - c) Pavers, Non-Interlocking: 22 psf (1053 Pa).
- c. Design Pressure: Less Than or Equal to Minus 40 psf (1915 Pa):
  - 1) Roof Area: Field:
    - a) Stone Ballast, No. 2, 2.5 inch (63.5 mm): 12 psf (718 Pa).
    - b) Pavers, Interlocking: Special design only.
    - c) Pavers, Non-Interlocking: 22 psf (1053 Pa).
  - 2) Roof Perimeter:
    - a) Stone Ballast, No. 2, 2.5 inch (63.5 mm): MA or FA Only.
    - b) Pavers, Interlocking: MA or FA only.
    - c) Pavers, Non-Interlocking: MA or FA only.
  - 3) Roof Corners:
    - a) Stone Ballast, No. 2, 2.5 inch (63.5): MA or FA only.
    - b) Pavers, Interlocking: MA or FA only.
    - c) Pavers, Non-Interlocking: MA or FA only.

D. Welding:

- 1. General:
  - a. Field seams exceeding 10 ft (9.3 m) in length shall be welded with an approved automatic welder.
  - b. Field seams must be clean and dry prior to initiating any field welding.
  - c. Remove foreign materials from the seams (dirt, oils, etc.) with Acetone or authorized alternative.
  - d. Use clean white cotton cloths and allow approximately five minutes for solvents to dissipate before initiating the automatic welder. Do not use denim or synthetic rags for cleaning.
  - e. Welding shall be performed only by qualified personnel to ensure the quality and continuity of the weld.
  - f. Contaminated areas within a seam will inhibit proper welding and will require a membrane patch or strip.
- 2. Hot Air Hand Welding:
  - a. The lap or seam area of the membrane may be intermittently tack welded to hold the membrane in place.
  - b. The back, interior edge of the membrane shall be welded first, with a thin, continuous weld to concentrate heat along the exterior edge of the lap during the final welding pass.
  - c. The nozzle of the hand-held hot air welder shall be inserted into the lap at a 45-degree angle to the lap. Once the polymer on the material begins to flow, a hand roller shall be used to apply pressure at a right angle to the tip of the hand

- welder. Properly welded seams shall utilize a 1.5 inch (38 mm) wide nozzle, to create a homogeneous weld, a minimum of 1.5 inch (38 mm) in width.
- d. Smaller nozzles may be used for corners, and field detailing, maintaining a minimum 1-inch (25 mm) weld.
3. Automatic Hot Air Machine Welding:
    - a. Proper welding of the Roofing Membrane can be achieved with a variety of automatic welding equipment.
    - b. Follow all manufacturers' instructions for the safe operation of the automatic welder.
    - c. Follow local code requirements for electric supply, grounding and surge protection.
    - d. The use of a dedicated, portable generator is highly recommended to ensure a consistent electrical supply, without fluctuations that can interfere with weld consistency.
    - e. Properly welded seams shall utilize a 1.5 inch (38 mm) wide nozzle, to create a homogeneous weld, a minimum of 1.5 inch (38 mm) in width.
  4. Induction Welding:
    - a. Calibrate the induction welding tool by making test welds with the membrane and the IW isoweld stress plates. Make test welds using variable settings on the welder and then performing peel tests to examine continuity of the weld to the plate. Test welds should be conducted periodically during install; especially after any break or any significant change weather.
    - b. The lowest energy setting that creates the most comprehensive and continuous bond is the preferred setting.
    - c. All membrane shall be cleaned and dry prior to induction welding.
    - d. Immediately upon completion of the induction weld cycle at each stress plate, place the cooling magnet directly centered over the welded membrane and plate assembly.
    - e. Repeat the welding and magnet cooling process for every IW isoweld plate in the installation assembly.
- E. Inspection:
1. The job foreman or supervisor shall initiate daily inspections of all completed work which shall include but is not limited to the probing of all field welding with a dull pointed instrument to assure the quality of the application and ensure that any equipment or operator deficiencies are immediately resolved.
  2. Ensure all aspects of installation (sheet layout, attachment, welding, flashing details, etc.) are in strict accordance with the most current Roofing Systems Specifications and Details.
  3. Excessive patching of field seams because of inexperienced or poor workmanship will not be accepted at time of Final Inspection for Warranty Acceptance.
  4. Any deviation from pre-approved specifications or details requires written authorization from the manufacturer prior to application to avoid any warranty disqualification.
  5. It is the Applicator, job foreman, supervisor, or quality control personnel's responsibility to perform a final self-inspection on all seams prior to requesting the inspection for warranty issuance by the manufacturer.
- F. T-Joint Cover Installation:
1. Installation of T-Joint Covers is mandatory on Membrane Systems nominal 50 mil (1.3 mm) or greater, vegetated roofs, ballast roofs or where T-Joints have not been

properly sealed to exhibit a minimum 1.5 inch (38 mm) defined crease along the T-Joint.

2. Install T-Joint Covers, centered and aligned so edges are parallel to roof system seams.
3. The T-Joint Cover shall be 100 percent welded.

### 3.10 FLASHING

- A. Clean vents, pipes, conduits, tubes, walls, and stacks to bare metal. Protrusions must be properly secured to roof deck with approved fasteners. Remove and discard lead, pipes and drain flashing. Flash penetrations according to approved details.
- B. Remove loose or deteriorated cant strips and flashings.
- C. Flash curbs, parapets and interior walls in strict accordance with approved details.
- D. All flashing shall be adhered to properly prepared, approved substrates with Alpha-Tite bonding adhesive, 190e bonding adhesive or 201 mastic applied in sufficient quantity to ensure total adhesion.
- E. The base flange of all membrane flashing shall extend out on to the plane of the deck, beyond the wood nailers to a maximum width of 8 inches (203 mm).
- F. Vertical flashing shall be terminated no less than 8 inches (203 mm) above the plane of the deck with approved termination bar and counter-flashing or metal cap flashing.
- G. When using 201 as the adhesive, vertical wall flashing termination shall not exceed 40 inches (1016 mm) without supplemental mechanical attachment of the flashing between the deck and the termination point of the flashing.
- H. Complete all inside and outside corner flashing details with preformed corners or an approved field fabrication detail.
- I. Probe all seams with a dull, pointed probe to ensure the weld has created a homogeneous bond.
- J. Install penetration accessories in strict accordance with approved details. Ensure penetration accessories have not impeded in any way the working specification. Refer to the related trade for the technical specification.

### 3.11 METAL FLASHING

- A. All perimeter edge details are to be fabricated from Clad Metal or utilize a prefabricated Fascia System or manufacturer approved system.
- B. Ensure all fascia extend a minimum of 2 inches (51 mm) lower than the bottom of the wood nailers.
- C. Fasten all metal flashing to wood nailers or approved substrate with approved fasteners 8 inches on center.
- D. Solidly weld FiberClad expansion joints with a 6-inch (152 mm) strip of membrane welded to the Fiber Clad, covering the bond breaker tape (cover plates are optional).

- E. Roof Drains:
  - 1. Flash all roof drains in accordance with roof drain details.
  - 2. Replace all worn or broken parts that may cut the membrane or prevent a watertight seal. This includes the clamping ring and strainer basket.
  - 3. Replace all drain bolts or clamps used to hold the drain compression ring to the drain bowl.
  - 4. Non-reinforced 60 mil (1.52 mm) membrane shall be used for flashing the drain assembly. Drain assemblies and basins or sumps must be free of any asphalt or coal tar pitch residue prior to installation.
  - 5. The drain target sheet should be sized and installed to provide for a minimum of 12 inches (203 mm) of exposed 60 mil (1.52 mm) on all sides of the drain.
  
- F. Liquid Flashing
  - 1. For aberrant penetrations and pitch pan avoidance, follow guidelines and details for substrate preparation and installation of liquid flashing on pre-authorized aberrant penetrations.
    - a. Proper mechanical restraint is required for the roof membrane around the penetration prior to the installation of the Liquid Flashing.
    - b. Metal Primer: is required for all metal tie-ins and applications with high mechanical stresses, on detail work with small contact areas, metal components with large linear thermal expansion or edge metal terminations.
  
- G. Pitch Pans:
  - 1. Every reasonable effort shall be made to eliminate the need for pitch pans including the removal of existing pans. Contact manufacturer for specific design alternatives and recommendations.
  - 2. In the event of no alternative, fabricate pitch pans from Clad metal, installed in accordance with details, ensuring proper attachment, maintaining a minimum of 2-inch (51 mm) clearance around the penetration.
  - 3. Pitch Pans shall be filled with non-shrinking grout to within 1 inch (25 mm) of the top of the pan. Allow the grout to dry and fill remainder of the pan with SLS pourable sealant.
  - 4. Pitch Pans and the sealant will require periodic maintenance by the building Owner's maintenance personnel.

### 3.12 EXPANSION JOINTS

- A. Flash all expansion joints in accordance with authorized details. Fasten all expansion joint material according to specifications. Ensure the expansion material has sufficient material to expand to the widest point in expansion without causing undue stress on the expansion joint material.
  
- B. If the expansion joint is a preformed system, the manufacturer, description and a drawing illustrating the method of installation must be included when the project registration is submitted.

### 3.13 SEALANTS

- A. Apply authorized sealants to all surface mounted reglets and per project requirements. Sealants are to shed water. Follow all manufacturer's instructions and installation guides.
  
- B. Use primer when recommended by the manufacturer.

- C. Sealants will require periodic maintenance by the building Owner's maintenance personnel.

### 3.14 TEMPORARY SEALS

- A. At the end of each working day or at the sign of rain, install temporary, 100 percent watertight seals where the completed new roofing adjoins the uncovered deck or existing roof surface.
- B. The Authorized Applicator shall create and maintain the temporary seal in such a manner to prevent water from traveling beneath the new or existing roof system.
- C. The use of plastic roofing cement is permissible when sealing to an existing built up roof.
- D. If water is allowed to enter beneath the newly completed roofing, the affected areas shall be removed and replaced at no additional expense to the building Owner.
- E. Prior to the commencement of work, cut out and remove all contaminated membrane, insulation, roof cement or sealant and properly dispose of offsite.

### 3.15 WALKWAYS

- A. Walkways and protection pads shall be installed at staging areas for rooftop equipment maintenance or areas subject to regular foot traffic.
- B. Walkway Installation:
  - 1. Roofing membrane to receive walkway material shall be clean and dry.
  - 2. Cut and position the FiberTite walkway material as directed by the specifications or agreement.
  - 3. Hot air weld the entire perimeter of the walk way to the previously cleaned roofing membrane. Avoid excessive heating of the walk way material to prevent scorching the underlying roofing membrane.
- C. Protection Pad Installation:
  - 1. Roofing membrane to receive protection pad material shall be clean and dry.
  - 2. Prior to installing the protection pads, 0.25 x 24 x 48-inch (6 x 610 x 1219 mm), weld a 6 x 6-inch (152 x 152 mm) strip of membrane to each of the four corners of the back side of the pad. Position the strips in such a way that they overhang the edge of the pad a minimum of 2 inches (51 mm) around the 90-degree corner.
  - 3. Position the protection pads as directed by the specifications or agreement and weld the visible portion of the previously applied stripping to the roofing membrane.

### 3.16 LIGHTNING PROTECTION

- A. The installation of lightning protection must be coordinated with the Authorized Applicator, certified lightning contractor and the building Owner.
- B. The lightning protection must be installed in such a manner that base plates, air terminals and cables do not penetrate the roofing membrane without the use of pre-approved flashing details.
- C. Cables and air terminals may be attached to the membrane using base plates and 101 sealant.

- D. Recommendations regarding the selection of adhesives or alternative affixing of lightning protection systems to the membrane does not in any way imply a warranty covering their performance or ability of the adhesives to remain affixed to the membrane.

### 3.17 COMPLETION

- A. Remove any and all debris, excess materials and scrap of any kind from the roof and surrounding premises prior to demobilization.
- B. Inspect all field welds, detailing and terminations to ensure a 100 percent the watertight installation.

### 3.18 FINAL INSPECTION FOR WARRANTY

- A. Upon completion of the project, the Authorized Applicator shall register the completion of the project with Technical Services.
- B. Upon notice of completion, an representative will schedule an inspection with a representative of the Authorized Applicator to thoroughly review the installation and verify compliance with manufacturer's specifications.
- C. Any corrections or modifications necessary for compliance with the specifications and acceptance for warranty (punch list) will be noted on the Final Inspection for Warranty Form.
- D. Upon completion of all punch list items and final acceptance of the installation, a warranty as authorized by the approved Project Registration will be issued.

END OF SECTION



SECTION 076200 - EDGE METAL, SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Provide all labor, equipment, and materials to fabricate and install the following.
  - 1. Edge strip and flashing
  - 2. Fascia, scuppers, and trim
  - 3. Coping cap at parapets
  - 4. Expansion joint and area divider covers
  - 5. Fascia and edge material
  - 6. Gutters, scuppers and down spouts
- B. Related Sections:
  - 1. Division 07 Section Common Work Results for Thermal and Moisture Protection
- C. Related Work Specified Elsewhere:
  - 1. Division 06 Section - Rough Carpentry
  - 2. Division 07 Section – KEE Single Ply Roofing Membrane
  - 3. Division 07 Section - Roof Accessories
  - 4. Division 07 Section - Joint Sealants
  - 5. Division 07 Section - Manufactured Metal Wall Panels

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM)
  - 1. ASTM A653 Standard Specification for Steel Sheet, Zinc-Coated (galvanized) or Zinc-Iron Alloy-Coated (galvannealed) by the Hot-Dip Process.
  - 2. ASTM A792 Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy Coated by the Hot-Dip Process.
  - 3. ASTM B209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
  - 4. ASTM B221 Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- B. American National Standards Institute and Single Ply Roofing Institute (ANSI/SPRI)



1. ANSI/SPRI ES-1 Testing and Certification Listing of Shop Fabricated Edge Metal
- C. Factory Mutual Research Corporation (FMRC)
  1. FM 1-49 Loss Prevention Data Sheet
- D. Underwriters Laboratories (UL)
- E. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
  1. 1993 Edition Architectural Sheet Metal Manual
- F. National Roofing Contractors Association (NRCA)
  1. Roofing and Waterproofing Manual
- G. American Society of Civil Engineers (ASCE)
  1. ASCE 7 Minimum Design Loads for Buildings and Other Structures

#### 1.4 SUBMITTALS FOR REVIEW

- A. Product Data:
  1. Provide manufacturer's specification data sheets for each product.
  2. Metal material characteristics and installation recommendations.
  3. Submit color chart prior to material ordering and/or fabrication so that equivalent colors to those specified can be approved.
- B. Samples: Submit two (2) samples, illustrating typical metal edge, coping, gutters, fascia extenders for material and finish.
- C. Shop Drawings
  1. For manufactured and ANSI/SPRI ES-1 compliant shop fabricated gravel stops, fascia, scuppers, and all other sheet metal fabrications.
  2. Indicate material profile, jointing details, fastening methods, flashing, terminations, and installation details.
  3. Indicate type, gauge and finish of metal
- D. Specimen Warranty: Provide an unexecuted copy of the warranty specified for this Project, identifying the terms and conditions required of the Manufacturer and the Owner.

#### 1.5 SUBMITTALS FOR INFORMATION

- A. Design Loads: Any material submitted as equal to the specified material must be accompanied by a report signed and sealed by a professional engineer licensed in the state in which the installation is to take place. This report shall show that the submitted equal meets the wind uplift and perimeter attachment requirements according to ASCE 7 and that the submitted equal

edge metal system is compliant with the ANSI/SPRI ES-1 standard. Substitution requests submitted without licensed engineer approval will be rejected for non-conformance.

- B. Factory Mutual Research Corporation's (FMRC) wind uplift resistance classification: The roof perimeter flashing shall conform to the requirements as defined by the FMRC Loss Prevention Data Sheet 1-49.
- C. A letter from the manufacturing company certifying that the materials furnished for this project are the same as represented in tests and supporting data.
- D. Mill production reports certifying that the steel thicknesses are within allowable tolerances of the nominal or minimum thickness or gauge specified.
- E. Certification of work progress inspection. Refer to Quality Assurance Article below.
- F. Certifications.
  - 1. Submit roof manufacturer's certification that metal fasteners furnished are acceptable to roof manufacturer.
  - 2. Submit roof manufacturer's certification that metal furnished is acceptable to roofing manufacturer as a component of roofing system and is eligible for roof manufacturer's system warranty.

#### 1.6 CONTRACT CLOSEOUT SUBMITTALS

- A. General: Comply with Requirements of Section 01 78 00 – Closeout Submittals
- B. Special Project Warranty: Provide specified warranty for the Project, executed by the authorized agent of the Manufacturer.
- C. Roofing Maintenance Instructions. Provide a manual of manufacturer's recommendations for maintenance of installed roofing systems.
- D. Insurance Certification: Assist Owner in preparation and submittal of roof installation acceptance certification as may be necessary in connection with fire and extended coverage insurance on roofing and associated work.

#### 1.7 QUALITY ASSURANCE

- A. Engage an experienced roofing contractor specializing in sheet metal flashing work with a minimum of five (5) years experience.
- B. Maintain a full-time supervisor/foreman who is on the job-site at all times during installation. Foreman must have a minimum of five (5) years experience with the installation of similar system to that specified.
- C. Source Limitation: Obtain components from a single manufacturer. Secondary products which cannot be supplied by the specified manufacturer shall be approved in writing by the primary manufacturer prior to bidding.

- D. Upon request fabricator/installer shall submit work experience and evidence of financial responsibility. The Owner's representative reserves the right to inspect fabrication facilities in determining qualifications.

#### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's original, unopened containers or packages with labels intact and legible.
- B. Stack pre-formed and pre-finished material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- C. Prevent contact with materials which may cause discoloration or staining.

#### 1.9 PROJECT CONDITIONS

- A. Determine that work of other trades will not hamper or conflict with necessary fabrication and storage requirements for pre-formed metal edge system.

#### 1.10 DESIGN AND PERFORMANCE CRITERIA

- A. Thermal expansion and contraction:
  - 1. Completed metal edge flashing system, shall be capable of withstanding expansion and contraction of components caused by changes in temperature without buckling, producing excess stress on structure, anchors or fasteners, or reducing performance ability.

#### 1.11 WARRANTIES

- A. Owner shall receive one (1) warranty from manufacturer of roofing materials covering all of the following criteria. Multiple warranties are not acceptable.
  - 1. Pre-finished metal material shall require a written twenty (20)- year warranty covering fade, chalking and film integrity. The material shall not show a color change greater than 5 NBS color units per ASTM D2244 or chalking excess of 8 units per ASTM D659. If either occurs material shall be replaced per warranty, at no cost to the Owner.
  - 2. Changes: Changes or alterations in the edge metal system without prior written consent from the manufacturer shall render the system unacceptable for a warranty.
  - 3. Warranty shall commence on date of substantial completion or final payment, whichever is agreed by contract.
  - 4. The Contractor shall provide the Owner with a notarized written warranty assuring that all sheet metal work including caulking and fasteners to be watertight and secure for a period of two years from the date of final acceptance of the building. Warranty shall include all materials and workmanship required to repair any leaks that develop, and make good any damage to other work or equipment caused by such leaks or the repairs thereof.

5. Installing roofing contractor shall be responsible for the installation of the edge metal system in general accordance with the membrane manufacturer's recommendations.
6. Installing contractor shall certify that the edge metal system has been installed per the manufacturer's printed details and specifications.
7. One manufacturer shall provide a single warranty for all accessory metal for metal edges and copings and membrane roof areas.

## PART 2 - PRODUCTS

### 2.1 PRODUCTS, GENERAL

- A. Basis of Design: Materials, manufacturer's product designations, and/or manufacturer's names specified herein shall be regarded as the minimum standard of quality required for work of this Section. Comply with all manufacturer and contractor/fabricator quality and performance criteria specified in Part 1.
- B. Substitutions: Products proposed as equal to the products specified in this Section shall be submitted in accordance with Bidding Requirements and Division 01 provisions.
  1. Equivalency of performance criteria, warranty terms, submittal procedures, and contractual terms will constitute the basis of acceptance.
  2. The Owner's decision regarding substitutions will be considered final. Unauthorized substitutions will be rejected.

### 2.2 ACCEPTABLE MANUFACTURERS

- A. FiberTite, Seaman Corporation (Basis-of-Design) 1000 Venture Blvd, Wooster, OH 44691
- B. The Garland Company
- C. Tremco Inc.

### 2.3 MATERIALS

- A. General: Product designations for the materials used in this section shall be based on performance characteristics of the Metal edge system supplied by FiberTite, Seaman Corporation, Wooster, OH, and shall form the basis of the contract documents.
- B. Materials: Minimum gauge of steel or thickness of Aluminum to be specified in accordance with Architectural Sheet Metal Manual, Sheet Metal and Air Conditioning Contractor's National Association, Inc. recommendations.
- C. Premanufactured Fascia
  - A. AT Fascia:
    1. Decorative metal fascia with continuous extruded aluminum bar. To terminate adhered or mechanically attached single-ply roofing at perimeter. The system shall be watertight with no exposed fasteners. Model(s) shall be for adhered or mechanically attached, (choose from the following sizes): F-2040, F-

- 2055, F-2070, F-2085. The rise above the nailer for all models is 1-1/4". Fascia model number denotes inches; (i.e. F-2055 has a 5-1/2" face height).
2. Fascia metal gauge (choose): .040" thick formed aluminum or 24 ga. galvanized steel with Kynar 500 finish.
  3. Fascia: standard 12'-0" (3.65 m) lengths.
  4. Extruded bar: Shall be continuous 6063-T6 alloy aluminum at 12'-0" (3.65 m) standard lengths. All bar miters are welded.
  5. Fasteners: #9 x 2" stainless steel fasteners provided with drivers. No exposed fasteners permitted.
  6. Exterior fascia finishes: (For aluminum choose) natural mill finish, Kynar 500 from manufacturer's standard colors, custom color Kynar 500, or clear or color anodized. (For 24 gauge galvanized steel choose) Kynar 500 standard color from manufacturer's standard colors.
- B. Snap-on 200 Fascia:
1. Decorative metal fascia with continuous galvanized steel waterdam to terminate single-ply roofing at perimeter. The system shall be watertight with concealed splice plates and no exposed fasteners.
  2. For standard sizes with 2" rise above the roof edge for all membrane attachments: (FA-F50, FA-F65, FA-F80, FA-F95, FA-F110, FA-F125). Fascia model numbers denote inches; (i.e. FA-F50 has a 5" face height).
  3. Custom sizes by request.
  4. Fascia metal gauge : .040", .050", or .063" thick formed aluminum; or 22 gauge or 24 gauge galvanized steel with Kynar 500 finish.
  5. Fascia: standard 12'-0" (3.65 m) lengths with matching concealed joint splice plates.
  6. Waterdam: Shall be continuous 24 gauge commercial type G-90 galvanized steel at 12'-0" (3.65 m) standard lengths.
  7. Fasteners: 1-1/4" ring shank nails provided. No exposed fasteners permitted.
  8. Exterior fascia finishes: Natural mill finish, Kynar 500 from manufacturer's standard colors, custom color Kynar 500, or Clear or Color Anodized. For 22 gauge or 24 gauge galvanized steel choose Kynar 500 standard color from manufacturer's standard colors.
- D. Tapered Coping Cap Cover and Splice Plate
- A. FiberTite Tapered Coping:
1. Metal coping cap with galvanized steel anchor/support cleats for capping any parapet wall. The system shall be watertight, maintenance free, and does not require exposed fasteners. Joints shall be a butt type with concealed splice plates. Standard model is (PTCR) for all sizes.
  2. Metal options: (.040", .050", or .063" aluminum; 24 ga. or 22 ga. galvanized steel with Kynar coatings; custom metal by request).
  3. Coping cap: length of 12'-0" (3.65 m), widths to 24" manufactured to job requirements. True radii may be built to template.
  4. Coping vertical face and back leg: 2-2/4" to 12-1/2" manufactured to job requirements.
  5. Concealed splice plates: 8" wide. Finish to match finish of coping cap with factory applied dual non-curing sealant strips.
  6. Anchor/Support Cleat: 20 ga. prepunched galvanized cleat with stainless steel spring mechanically locked to cleat normally 12" (305 mm) wide @ 6'-0" (1525 mm) on center. Mechanically fastened as indicated and detailed.

7. Fasteners: #9 x 1-1/2" stainless steel fasteners provided with drivers. No exposed fasteners shall be permitted. Fasteners shall be electrolytically compatible.
8. Finishes: Shall be : natural aluminum mill finish; standard pre-coated Kynar 500 from manufacturer's color list; standard post-coated Kynar 500 from industry standard two-coat colors.

#### 2.4 RELATED MATERIALS AND ACCESSORIES

- A. Metal Primer: Zinc chromate type.
- B. Sealant: Specified in Section 07900 or on drawings.
- C. Underlayment: ASTM D2178, No 15 asphalt saturated roofing felt.
- D. Self-Adhering Underlayment, one of the following:
  1. 60 mil minimum transition strip
  2. 45 mil high temperature underlayment with cross laminated polymer surface
- E. Slip Sheet: Rosin sized building paper.
- F. Fasteners:
  1. Corrosion resistant screw fastener as recommended by metal manufacturer. Finish exposed fasteners same as flashing metal.
  2. Fastening shall conform to Factory Mutual requirements or as stated on section details, whichever is more stringent.
- G. Gutter and Downspout Anchorage Devices: Material as specified for system

### PART 3 - EXECUTION

#### 3.1 PROTECTION

- A. Isolate metal products from dissimilar metals, masonry or concrete with bituminous paint, tape, or slip sheet. Use gasketed fasteners where required to prevent corrosive reactions.

#### 3.2 GENERAL

- A. Secure fascia to wood nailers.
- B. Fastening of metal to walls and wood blocking shall comply with building code standards.
- C. All accessories or other items essential to the completeness of sheet metal installation, whether specifically indicated or not, shall be provided and of the same material as item to which applied.

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- D. Allow sufficient clearances for expansion and contraction of linear metal components. Secure metal using fasteners as required by the system. Exposed face fastening will be rejected.

### 3.3 INSPECTION

- A. Verify that curbs are solidly set and nailing strips located.
- B. Perform field measurements prior to fabrication.
- C. Coordinate work with work of other trades.
- D. Verify that substrate is dry, clean and free of foreign matter.
- E. Commencement of installation shall be considered acceptance of existing conditions.

### 3.4 MANUFACTURED SHEET METAL SYSTEMS

- A. Furnish and install manufactured fascia and coping cap systems in strict accordance with manufacturer's printed instructions.
- B. Provide factory-fabricated accessories including, but not limited to, fascia extenders, miters, scuppers, joint covers, etc. refer to Source limitation provision in Part 1.

### 3.5 SHOP-FABRICATED SHEET METAL

- A. Metal work shall be shop fabricated to configurations and forms in accordance with recognized sheet metal practices.
- B. Hem exposed edges.
- C. Angle bottom edges of exposed vertical surfaces to form drip.
- D. Lap corners with adjoining pieces fastened and set in sealant.
- E. Form joints for gravel stop fascia system, coping cap with a 3/8" opening between sections. Back the opening with an internal drainage plate formed to the profile of fascia piece.
- F. Install sheet metal to comply with referenced ANSI/SPRI, SMACNA and NRCA standards.
- G. FLASHING MEMBRANE INSTALLATION
- H. Metal Edge System:
  - 1. Position Roofing membrane over the roof edge covering nailers completely. Install membrane with proper material and procedure according to manufacturer's recommendations.
  - 2. Prior to installing the base anchor, assure a level plane is present. If not, shim the roof edge surface as required.

3. Extruded base anchor: Apply Sealant to the bottom surface of the top flange of the extruded anchor per manufacturer instructions.
4. Set the extruded anchor on the edge and face fasten through pre-punched slots.
5. Install Sealant at the ends of the base frame to prevent water from running between base anchor joints.
6. Install fascia cover.
7. Install splice plate and accessories.

I. Tapered Coping Cap Detail

1. Position roofing Membrane over the wall edge covering nailers completely, fastening per manufacturer's recommendations. Install membrane with proper material and procedure according to manufacturer's recommendations.
2. Install corner clips, sealants and splice plate first.
3. Install miters and move outward per manufacturer's recommendations.
4. Install tapered anchor clips.
5. Installed coping cap per manufacturer's recommendations.

3.6 CLEANING

- A. Clean installed work in accordance with the manufacturer's instructions.
- B. Replace damaged work than cannot be restored by normal cleaning methods.

C. CONSTRUCTION WASTE MANAGEMENT

- D. Remove and properly dispose of waste products generated. Comply with requirements of authorities having jurisdiction.

3.7 FINAL INSPECTION

- A. At completion of installation and associated work, meet with Contractor, Architect, installer, installer of associated work, Owner, roofing system manufacturer's representative, and other representatives directly concerned with performance of roofing system.
- B. Inspect work and flashing of roof penetrations, walls, curbs, and other equipment. List all items requiring correction or completion and furnish copy of list to each party in attendance.
- C. Repair or replace deteriorated or defective work found at time above inspection as required to a produce an installation which is free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- D. Notify the Owner upon completion of corrections.
- E. Following the final inspection, provide written notice of acceptance of the installation from the roofing system manufacturer.
- F. Immediately correct roof leakage during construction. If the Contractor does not respond within twenty-four (24) hours, the Owner will exercise rights to correct the Work under the terms of the Conditions of the Contract.



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END OF SECTION 076200