# City of Rocky Mount Second & Third Floor Renovations

**City of Rocky Mount** 

101 Coastline Street Rocky Mount, North Carolina



PRE-BID DATE:	
PRE-BID TIME:	
LOCATION:	

Wednesday, September 8, 2021 10:00 AM Frederick E Turnage Administrative Complex Main Lobby 331 South Franklin Street Rocky Mount, North Carolina



08/19/2021

# BID DATE: BID TIME: LOCATION:

Thursday, September 23, 2021 3:00 PM Frederick E Turnage Administrative Complex Main Lobby 331 South Franklin Street Rocky Mount, North Carolina

# **BID SET**

August 2021 Architect's Project Number: 20022

Oakley Collier Architects, PA 109 Candlewood Road Rocky Mount, North Carolina 27804 1111 Haynes Street, Suite 109 Raleigh, North Carolina 27604



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#### **PROJECT PERSONNEL**

PROJECT:	City of Rocky Mount Frederick E Turnage Administrative Complex 331 South Franklin Street Rocky Mount, North Carolina
PROJECT NO:	20022
DATE:	August 2021
OWNER:	City of Rocky Mount P.O. Box 1180 Rocky Mount, North Carolina 27801
ARCHITECT:	Oakley Collier Architects, P.A. 109 Candlewood Road Rocky Mount, North Carolina 27804 (252) 937-2500
PME ENGINEER:	Atlantec Engineers

# **NOTICE TO BIDDERS**

Sealed proposals will be received by the City of Rocky Mount Purchasing Office in the Frederick E. Turnage Administrative Complex, 331 South Franklin Street, until **3:00** pm on **Thursday, September 23, 2021** (mail at the same address marked to the attention of Candice Kirtz) and immediately thereafter publicly opened and read for the furnishing of labor, material, and equipment entering into the construction of the

### Second and Third Floor Renovations City of Rocky Mount

The Second and Third Floor Renovations project consists of miscellaneous interior renovations to approximately 6,100 square feet of existing space in the Frederick E. Turnage Administrative Complex. Renovations include but are not limited to reconfiguring the existing spaces, including new office spaces, and conference rooms. The construction will consist of new metal stud walls, casework, painting, flooring, and ceilings. Associated plumbing, mechanical, and electrical work is included.

Bids will be received for Single Prime Contracts. All proposals shall be a lump sum.

# **Pre-Bid Meeting**

An open Pre-Bid Meeting for Second and Third Floor Renovations will be held on **Wednesday**, **September 8, 2021, at 10:00 A.M.** at the Fredrick E Turnage Administration Complex located at 331 South Franklin in Rocky Mount, NC. This meeting will address project-specific questions, issues, bidding procedures, and bid forms.

The City of Rocky Mount is seeking 10% minority business participation on this project. All bidders or their representatives are encouraged to attend the pre-bid meeting.

Complete plans and specifications for this project are available free of charge for a Digital Download or a \$200.00 (refundable) deposit by cash or certified check for hard copies. Either format can be obtained from Oakley Collier Architects, 109 Candlewood Road Rocky Mount, NC 27804 (252) 937-2500 beginning August 23, 2021, during regular office hours. Plans will also be available in the plan rooms of the Carolinas Associated General Contractors, Raleigh, NC, in the local North Carolina offices of Dodge Data & Analytics, and in the Construct Connect in Norcross, GA, and in Minority Plan Rooms in the NC Institute of Minority Economic Development, Inc in Durham, NC and in East Coast Digital – Minority Plan Room Provider, Greenville, NC.

All contractors are hereby notified that they must have a proper building license under the State laws governing their respective trades.

General Contractors are notified that Chapter 87, Article 1, General Statutes of North Carolina, will be observed in receiving and awarding general contracts. General contractors submitting bids on this project must have a license for "Building."

Each proposal shall be accompanied by a cash deposit or a certified check drawn on some bank or trust company insured by the Federal Deposit Insurance Corporation, of an amount equal to not less than five percent (5%) of the proposal or in lieu thereof a bidder may offer a bid bond of five percent (5%) of the bid executed by a surety company licensed under the laws of North Carolina to execute such bonds, conditioned that the surety will, upon demand forthwith make payment to the obligee upon said bond if the bidder fails to execute the contract in accordance with the bid bond. Said deposit shall be retained by the Owner as liquidated damages in the event of failure of the successful bidder to execute the contract within ten days after the award or to give satisfactory surety as required by law.

A Performance Bond and a Payment Bond will be required for one hundred percent (100%) of the contract price.

Payment - The amount retained shall be 10% of the value of work until 50% of the work has been completed. At 50% completion, further partial payments shall be made in full to the Contractor. No additional amounts may be retained unless the Architect certifies that the work is not proceeding satisfactorily but amounts previously retained shall not be paid to the Contractor. At 50% completion or any time thereafter when the progress of the work is not satisfactory, additional amounts may be retained, but in no event shall the total retainage be more than 10% of the value of work completed.

No bid may be withdrawn after the scheduled closing time for the receipt of bids for a period of 120 days.

The City of Rocky Mount reserves the right to reject any and all bids and to waive any informalities. The City of Rocky Mount will not discriminate against any bidder submitting a bid because of race, creed, color, national origin, or handicap.

- Owner: City of Rocky Mount Michael Baughn PO Box 1180 331 S. Franklin Street Rocky Mount, North Carolina 27802
- Architect: Oakley Collier Architects, PA 109 Candlewood Road Rocky Mount, North Carolina 27804

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# Instructions to Bidders

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

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

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

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#### ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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

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

It is intended that AIA Document G612<sup>™</sup>–2017, Owner's Instructions to the Architect, Parts A and B will be completed prior to using this document.

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#### ARTICLE 1 DEFINITIONS

**§ 1.1** Bidding Documents include the Bidding Requirements and the Proposed Contract Documents. The Bidding Requirements consist of the advertisement or invitation to bid, Instructions to Bidders, supplementary instructions to bidders, the bid form, and any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents enumerated in Article 8 of these Instructions.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, or in other Proposed Contract Documents apply to the Bidding Documents.

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

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

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents, to which Work may be added or deleted by sums stated in Alternate Bids.

**§ 1.6** An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from, or that does not change, the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

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

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the 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 By submitting a Bid, the Bidder represents that:

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

#### ARTICLE 3 BIDDING DOCUMENTS

#### § 3.1 Distribution

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

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

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

§ 3.1.3 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the advertisement or invitation to bid, or in supplementary instructions to bidders.

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

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

#### § 3.2 Modification or Interpretation of Bidding Documents

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

§ 3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing and shall be received by the Architect at least seven days prior to the date for receipt of Bids. (Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall submit requests for clarification and interpretation.)

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

#### § 3.3 Substitutions

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

#### § 3.3.2 Substitution Process

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

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

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

§ 3.3.3 The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

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

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

#### § 3.4 Addenda

§ 3.4.1 Addenda will be transmitted to Bidders known by the issuing office to have received complete Bidding Documents.

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

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

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

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

#### **ARTICLE 4 BIDDING PROCEDURES**

§ 4.1 Preparation of Bids

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

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

§ 4.1.3 Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.

§ 4.1.4 Edits to entries made on paper bid forms 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" or as required by the bid form.

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall neither make additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name and legal status of the Bidder. As part of the documentation submitted with the Bid, the Bidder shall provide evidence of its legal authority to perform the Work in the jurisdiction where the Project is located. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further name the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached, certifying the agent's authority to bind the Bidder.

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

#### § 4.2 Bid Security

§ 4.2.1 Each Bid shall be accompanied by the following bid security: (Insert the form and amount of bid security.)

**§ 4.2.2** The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and shall, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. In the event the Owner fails to comply with Section 6.2, the amount of the bid security shall not be forfeited to the Owner.

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

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

#### § 4.3 Submission of Bids

§ 4.3.1 A Bidder shall submit its Bid as indicated below: (Indicate how, such as by website, host site/platform, paper copy, or other method Bidders shall submit their Bid.)

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

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

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

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

#### § 4.4 Modification or Withdrawal of Bid

§ 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.

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

§ 4.4.3 After the date and time designated for receipt of Bids, a Bidder who discovers that it made a clerical error in its Bid shall notify the Architect of such error within two days, or pursuant to a timeframe specified by the law of the jurisdiction where the Project is located, requesting withdrawal of its Bid. Upon providing evidence of such error to the reasonable satisfaction of the Architect, the Bid shall be withdrawn and not resubmitted. If a Bid is withdrawn pursuant to this Section 4.4.3, the bid security will be attended to as follows:

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

#### ARTICLE 5 CONSIDERATION OF BIDS

#### § 5.1 Opening of Bids

If stipulated in an advertisement or invitation to bid, or when otherwise required by law, Bids properly identified and received within the specified time limits will be publicly opened and read aloud. A summary of the Bids may be made available to Bidders.

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#### § 5.2 Rejection of Bids

Unless otherwise prohibited by law, the Owner shall have the right to reject any or all Bids.

#### § 5.3 Acceptance of Bid (Award)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest responsive and responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents. Unless otherwise prohibited by law, 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 best interests.

§ 5.3.2 Unless otherwise prohibited by law, the Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the lowest responsive and responsible Bidder on the basis of the sum of the Base Bid and Alternates accepted.

#### ARTICLE 6 POST-BID INFORMATION

#### § 6.1 Contractor's Qualification Statement

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request and within the timeframe specified by the Architect, a properly executed AIA Document A305<sup>™</sup>, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted for this Bid.

#### § 6.2 Owner's Financial Capability

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

#### § 6.3 Submittals

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

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

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

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder 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, withdraw the Bid or submit an acceptable substitute person or entity. The Bidder may also submit any required adjustment in the Base Bid or Alternate Bid to account for the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

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

#### ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

#### § 7.1 Bond Requirements

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder.

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

§ 7.1.3 The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

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

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

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

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

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond.

§ 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 to the bond a certified and current copy of the power of attorney.

#### ARTICLE 8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

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

AIA Document A101<sup>TM</sup>-2017, Standard Form of Agreement Between Owner and Contractor, unless .1 otherwise stated below.

(Insert the complete AIA Document number, including year, and Document title.)

- AIA Document A101<sup>TM</sup>\_2017, Exhibit A, Insurance and Bonds, unless otherwise stated below. .2 (Insert the complete AIA Document number, including year, and Document title.)
- .3 AIA Document A201<sup>TM</sup>–2017, General Conditions of the Contract for Construction, unless otherwise stated below. (Insert the complete AIA Document number, including year, and Document title.)
- AIA Document E203<sup>TM</sup>–2013, Building Information Modeling and Digital Data Exhibit, dated as 4 indicated below: (Insert the date of the E203-2013.)
- Drawings .5

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	Number	Title	Date	
.6	Specifications			
	Section	Title	Date Pag	ges
.7	Addenda:			
	Number	Date	Pages	

#### .8 Other Exhibits:

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

AIA Document E204<sup>TM</sup>–2017, Sustainable Projects Exhibit, dated as indicated below: [ ] (Insert the date of the E204-2017.)

[] The Sustainability Plan: Title Date Pages Supplementary and other Conditions of the Contract: [] Title Document Date Pages

.9 Other documents listed below:

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

#### SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

Note the following changes and additions to the printed AIA Document A701, Instructions to Bidders, 2018 Edition.

#### **ARTICLE 3 - BIDDING DOCUMENTS**

Add the following subparagraphs to Section 3.2:

"3.2.4 Whenever there are discrepancies between Drawings, or between the Drawings and Specifications, or conflicts within the Specifications, and such discrepancy is not called to the Architect's attention in time to permit clarification by Addendum, the bidder shall base his bid upon providing the better quality or greater quantity of work or material called for, shall submit a written statement with his proposal noting such discrepancies, and shall so furnish and install such better quality or greater quantity or greater in writing."

#### **ARTICLE 4 - BIDDING PROCEDURES**

Add the following to Subparagraph 4.1.1:

"Proposals shall be submitted on the extra proposal form attached to this Project Manual. The Form of Proposal bound into the Project Manual is for reference only and shall not be removed. Proposals submitted shall include the following items: Single-Prime General Contractor Form of Proposal, Bid Bond, and MBE forms."

Add the following Subparagraphs 4.2.4 and 4.2.5:

4.2.4 Bids shall be accompanied by a cash-deposit or a certified check drawn on and certified by a bank or trust company insured by the Federal Deposit Insurance Corporation, in an amount not less than 5 percent of the bid, or in lieu thereof, a bidder may offer a bid bond of 5 percent of bid.

"4.2.5 Certified checks and/or Bid Bonds shall be pinned or clipped to the Proposal Form."

Add the following to Subparagraph 4.3.1:

"Proposals shall be hand carried to the time and place indicated in the Contract Documents by a representative of the Contractor, in sealed envelopes bearing the address of the Owner, the name of the project, the bidder's name, and State license number. Bids shall be submitted in separate envelopes for single-prime and multi-prime bids. Each bid shall carry separate bid bonds. Bids may also be delivered by certified mail, receipt required."

Add the following to Subparagraph 4.4.1:

"No bid may be withdrawn after the scheduled closing time for receipt of bids for a period of one hundred twenty (60) days."

Add the following to Subparagraph 4.4.2:

"Proposals may be modified by an authorized representative of the bidder **IN PERSON AT PLACE OF BID OPENING PRIOR TO TIME OF OPENING BIDS ONLY**. Modifications submitted by any other means **WILL NOT BE CONSIDERED**."

#### **ARTICLE 5 - CONSIDERATION OF BIDS**

Subparagraph 5.3.1 – Delete and substitute the following 5.3.1:

"It is the intention of the Owner to award the contract to the most suited responsive bidder submitting the proposal to the Owner and whose construction skill and financial resources are fully equal to the task of executing the work in a rapid and satisfactory manner, and of completing the work within the time limit. 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 best interests."

Add the following to subparagraph 5.3.2:

"The Owner's acceptance of any or all alternates will not extend the stated contract time."

"The basis of contract award for the work required for the complete project will be the lowest singleprime bid. Failure of the Proposer to fully and accurately complete the bid form, including names of subcontractors will cause single prime bids to be rejected as non-responsive."

#### **ARTICLE 6 - POST BID INFORMATION**

Delete Paragraph 6.2

Add the following to Subparagraph 6.3.1:

"The successful Bidder(s), within 7 days following the opening of bids, shall submit a letter to the Architect which shall verify that the Contractor(s) complied with the Owner's Minority Business Guidelines and specify any other efforts to the Contractor(s) made to recruit minority subcontractors and minority suppliers for work on this project. This letter should include copies of any advertisements or correspondences the Contractor(s) has made to recruit minority subcontractors and suppliers. Further, a list of awards that have been or will be offered to minority subcontractors and suppliers and a list of others that were recruited shall be included."

Add the following to Subparagraph 6.3.4:

"The Bidder shall furnish upon request adequate data on any named entity on the list in order to permit the Architect and Owner to conduct a proper evaluation. Failure to object to a manufacturer shall not constitute a waiver of any of the requirements of the Contract Documents, and all products furnished by the listed manufacturer must conform to such requirements."

#### ARTICLE 7 - PERFORMANCE BOND AND PAYMENT BOND

Delete subparagraph 7.2.1 and replace with the following subparagraph 7.2.1

"The Bidder shall deliver the required bonds to the Owner prior to the date of execution of the Contract."

#### END OF SUPPLEMENTARY INSTRUCTIONS TO BIDDERS



# 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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#### ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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

For guidance in modifying this document to include supplementary conditions, see AIA Document A503<sup>™</sup>, Guide for Supplementary Conditions.

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#### **ARTICLE 1 GENERAL PROVISIONS** § 1.1 Basic Definitions

#### § 1.1.1 The Contract Documents

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

#### § 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.

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§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

**§ 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 retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and 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 the 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 suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, 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 suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

#### § 1.6 Notice

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§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

**§ 1.6.2** Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

#### § 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203<sup>™</sup>–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

#### § 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203<sup>TM</sup>\_2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document

G202<sup>TM</sup>–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

## **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 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

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

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§ 2.3.1 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.

§ 2.3.2 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.

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

§ 2.3.4 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.

§ 2.3.5 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.

§ 2.3.6 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.

#### § 2.4 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.

#### § 2.5 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 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 default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

#### **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 its 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.

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§ 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 2.3.4, 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 submit 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, subject to Section 15.1.7, 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. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be 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 notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative 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

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§ 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 approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 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

§ 3.5.1 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.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

#### § 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 14 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 that an equitable adjustment be made 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, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim 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.

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## § 3.8 Allowances

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

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all .1 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 notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice 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 and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably 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, or fails to provide submittals in accordance with the approved 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 make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and

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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 how 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 the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written 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 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.

§ 3.12.10.1 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 be entitled to rely

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upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately 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 and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and 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.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

### § 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, 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, or patching shall be restored to the condition existing prior to the cutting, fitting, or 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 construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its 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 and 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 the Owner shall be entitled to reimbursement from the Contractor.

#### § 3.16 Access to Work

The Contractor shall provide the Owner and Architect with 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 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 an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

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### § 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 Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 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.

#### § 4.2 Administration of the Contract

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

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, 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.

§ 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 promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) 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

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

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§ 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 13.4.2 and 13.4.3, whether or not the 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, 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 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 order 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 Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 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.

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# 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 the 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, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice 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 for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

## § 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract 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

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

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

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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 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 term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 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 any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its 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 or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has 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 notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work 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. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 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 that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

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§ 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. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

### § 7.2 Change Orders

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§7.2.1 A Change Order is a written instrument prepared by the Architect 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:

- Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to .1 permit evaluation:
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or .3 percentage fee; or
- .4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .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, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 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.

§ 7.3.7 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.

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

## **ARTICLE 8 TIME**

## § 8.1 Definitions

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§ 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, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 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 (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended 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

§ 9.1.1 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.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

#### § 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent 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. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

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

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§ 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 supplier, unless such Work has been performed by others whom the Contractor intends to pay.

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

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

### § 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole 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 in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. 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. 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 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

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§ 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

- defective Work not remedied; .1
- .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 suppliers for labor, materials or equipment;
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- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid .6 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 either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

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

§ 9.5.4 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 supplier 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 Contractor shall reflect such payment on its next Application for Payment.

### § 9.6 Progress Payments

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

§ 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 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 and suppliers 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 or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to 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 or provided by 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, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

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## § 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' 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 shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

## § 9.8 Substantial Completion

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

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

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

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

§ 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 the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the 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 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.

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§ 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 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. 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 the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and 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, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance 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 the lien, claim, security interest, or encumbrance, 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, corrected, 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 the 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

- liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled; .1
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- audits performed by the Owner, if permitted by the Contract Documents, after final payment. .4

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a 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

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- .1 employees on the Work and other persons who may be affected thereby;
- the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, .2 under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, payements, 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 implement, 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 the owners and users of adjacent sites and utilities of the safeguards.

§ 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. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is 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, notice of the 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 and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. 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 notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's 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 the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will

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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 by the amount of the Contractor's reasonable additional costs of shutdown, 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 hazardous 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 hazardous 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 reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances 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 reimburse 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 Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 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.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or

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expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

## § 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

## § 11.3 Waivers of Subrogation

§ 11.3.1 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; (2) the Architect and Architect's consultants; and (3) Separate Contractors, 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 those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification. contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 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, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

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## § 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

#### §11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement 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 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

### 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, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

#### § 12.2 Correction of Work

### § 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before 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 any 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 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

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that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

§ 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.

§ 12.2.3 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 of the Owner or Separate Contractors, whether completed or partially completed, 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, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

#### § 13.2 Successors and Assigns

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

#### § 13.3 Rights and Remedies

§ 13.3.1 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.

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

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### § 13.4 Tests and Inspections

§ 13.4.1 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 tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 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 13.4.1, 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 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 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.

§ 13.4.4 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.

§ 13.4.5 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.

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

#### § 13.5 Interest

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

## 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, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, 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 reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, 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.

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§ 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' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work 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' 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 or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .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 reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- Exclude the Contractor from the site and take possession of all materials, equipment, tools, and .1 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 under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause .1 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

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§ 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 notice from the Owner of such termination for the Owner's convenience, the Contractor shall cease operations as directed by the Owner in the notice; .1

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- .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 Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

## 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, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

## § 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

### § 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by 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 under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

## § 15.1.4 Continuing Contract Performance

§ 15.1.4.1 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.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

## § 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

## § 15.1.6 Claims for Additional Time

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§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 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.

§ 15.1.6.2 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.

## § 15.1.7 Waiver of 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 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

### § 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, 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. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a 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 the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

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

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1,

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§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, 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 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

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

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 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

Init.

**§ 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. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. 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

Init.

1

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party 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 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party 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 those of the Owner and Contractor under this Agreement.

## SUPPLEMENTARY GENERAL CONDITIONS

## STANDARD AIA FORMS

General Conditions of the Contract Standard Form A201 (Latest Edition) of the American Institute of Architects are hereby made a part of the specifications and are bound herein. The General Conditions including Modifications and Special Conditions herein, shall become a part of the contract, and shall apply to all Contractors and all subcontractors.

## SUPPLEMENTS TO AIA DOCUMENTS A201

The following supplements modify, change, delete from or add to the "General Conditions of the Contract for Construction, 'AIA Document A201.' Where any Article of the General Conditions is modified, or any Paragraph, Subparagraph or Clause thereof is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these supplements, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

## **ARTICLE 1 GENERAL PROVISIONS**

## **1.1 BASIC DEFINITIONS**

Add the following:

## 1.1.5.1 PRODUCT

The term "product" as used in the Contract Documents includes materials, systems and equipment.

## 1.1.6.1 PROJECT MANUAL

The term "Project Manual" as used in this section is the volume that includes the bidding requirements, Conditions of the Contract and the Specifications.

## 1.1.8 CONTRACTOR

The term "Contractor" shall mean the Contractor involved with this project.

## **1.1.9 GENERAL CONTRACTOR**

The term "General Contractor" shall mean the Contractor responsible for the General Contract Work.

## 1.1.10 SUBCONTRACTOR

The term "subcontractor" shall mean subcontractor employed by the Contractor.

## **ARTICLE 3 CONTRACTOR**

## 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

Add the following paragraph:

3.3.2.1 - The contractor agrees that no contractual relationship exists between the subcontractor and the owner in regard to the contract, and that the subcontractor acts on this work as an agent or employee of the contractor.

## 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

Add the following paragraphs:

3.12.11.1 - Products are generally specified by ASTM or other reference standard, and/or by manufacturer's name and model number or trade number. When specified only by reference standard, the Contractor may select any product meeting this standard, by any manufacturer. When several products or manufacturers are specified as being equally acceptable, the Contractor has the option of using any product and manufacturer combination listed.

3.12.11.2 - After the Contract has been executed, the Owner and Architect will consider a formal request for the substitution of products in place of those specified, under the following conditions:

1. The request is accompanied by complete data on the proposed substitution substantiating compliance with the Contract Documents including product identification and description, performance and test data, references and samples where applicable, and an itemized comparison of the proposed substitution with the products specified or named by Addenda, with data relating to Contract time schedule, design and artistic effect where applicable, and its relationship to separate contracts.

2. The request is accompanied by accurate cost data on the proposed substitution in comparison with the product specified, whether or not modification of the Contract Sum is to be a consideration.

3.12.11.3 - Requests for substitution based on Clause 3.12.11.2 above, when forwarded by the Contractor to the Architect, are understood to mean that the Contractor:

1. Represents that he has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified.

2. Will provide the same guarantee for the substitution that he would for that specified;

3. Certified that the cost data presented is complete and include all related costs under this Contract, but excludes costs under separate contracts and the Architect's redesign costs, and

that he waives all claims for additional costs related to the substitution which subsequently become apparent; and

4. Will coordinate the installation of the accepted substitute, making such changes as may be required for the work to be complete in all respects.

3.12.11.4 - Substitutions will not be considered if:

1. They are indicated or implied on shop drawing submissions without the formal request required in Clause 4.4.1.3 above; or

2. For their implementation they require a substantial revision of the Contract Documents in order to accommodate their use.

3.12.11.5 - When required, three samples of sufficient size to indicate general visual effect shall be submitted. Where samples must show a range of color, texture, finish, graining, or other similar property, submit three sets of pairs illustrating the full scope of this range. One set of "Approved" samples will be retained at the Architect's project office.

# 3.15 CLEANING UP

Add the following paragraph:

3.15.1.1 - The Contractor shall remove rubbish and leave the building broom clean, clean all glass, replace all broken glass, remove stains, spots, marks, and dirt from the decorated work: clean hardware, remove paint spots and smears from all surfaces, clean fixtures and wash all concrete, tile and cement floors, polish all resilient floors. Cleanup will be performed at the end of each day and will be monitored by the Owner and Architect.

# **ARTICLE 4 ARCHITECT**

# 4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT

Add the following paragraphs:

4.2.1.1 - All instructions to the contractor will be made only by or through the designer or his designated project representative. Observations made by official representatives of the owner shall be conveyed to the designer for review and coordination prior to issuance to the contractor.

4.2.1.2 - All work shall be inspected by designer and/or special inspector prior to being covered by the contractor. Contractor shall give a minimum two weeks' notice unless otherwise agreed to by all parties. If inspection fails, after the first re-inspection all costs associated with additional re-inspections shall be borne by the contractor.

4.2.1.3 - Where special inspection or testing is required by virtue of any state laws, instructions of the designer, specifications or codes, the contractor shall give adequate notice to the designer of the time

set for such inspection or test, if the inspection or test will be conducted by a party other than the designer. Such special tests or inspections will be made in the presence of the designer, or his authorized representative, and it shall be the contractor's responsibility to serve ample notice of such tests.

4.2.1.4 - Should any work be covered up or concealed prior to inspection and approval by the designer and/or special inspector such work shall be uncovered or exposed for inspection, if so requested by the designer in writing. Inspection of the work will be made upon notice from the contractor. All cost involved in uncovering, repairing, replacing, recovering and restoring to design condition, the work that has been covered or concealed will be paid by the contractor involved.

4.2.6.1 - Mechanics whose work is unsatisfactory to the owner, or unskilled or otherwise objectionable, shall be instantly dismissed from the work upon notice of the Architect.

## ARTICLE 5 SUBCONTRACTORS

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

5.2.1 - Change first sentence to read: Unless otherwise required by the Contract Documents or the Bidding Documents, the Contractor, within 5 days from the contract date, shall furnish to the owner and architect in writing the names or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the work.

## ARTICLE 7 CHANGES IN THE WORK

## 7.2 CHANGE ORDERS

Add the following paragraphs:

7.2.2 – In determining the values of changes, either additive or deductive, contractors are restricted to the use of the following methods:

- 1. Where the extra work involved is covered by unit prices quoted in the proposal, or subsequently agreed to by the Contractor, Designer, and Owner the value of the change shall be computed by application of unit prices based on quantities, estimated or actual as agreed of the items involved, except is such cases where a quantity exceeds the estimated quantity allowance in the contract by one hundred percent (100%) or more. In such cases, either party may elect to proceed under subparagraph 7.2.2.2 herein. If neither party elects to proceed under 7.2.2.2, then unit prices shall apply.
- 2. The contracting parties shall negotiate and agree upon the equitable value of the change prior to issuance of the change order, and the change order shall stipulate the corresponding lump sum adjustment to the contract price.

7.2.3 - Under Paragraph 7.2.2, the allowances for overhead and profit combined shall be as follows: all contractors (the single contracting entity (prime), his subcontractors(1st tier subs), or their subsubcontractors (2nd tier subs, 3rd tier subs, etc.)) shall be allowed a maximum of 10% on work they each self-perform; the prime contractor shall be allowed a maximum of 5% on contracted work of his 1st tier sub; 1<sup>st</sup> tier, 2nd tier, 3rd tier, etc. contractors shall be allowed a maximum of 2.5% on the contracted work of their subs. ; Under Method "c(1)", no additional allowances shall be made for overhead and profit. In the case of deductible change orders, under 7.2.2, the contractor shall include no less than five percent (5%) profit, but no allowances for overhead.

7.2.4 - The term "net cost" as used herein shall mean the difference between all proper cost additions and deductions. The "cost" as used herein shall be limited to the following:

- 1. The actual costs of materials and supplies incorporated or consumed as part of the work;
- 2. The actual costs of labor expended on the project site; labor expended in coordination, change order negotiation, record document maintenance, shop drawing revision or other tasks necessary to the administration of the project are considered overhead whether they take place in an office or on the project site.
- 3. The actual costs of labor burden, limited to the costs of social security (FICA) and Medicare/Medicaid taxes; unemployment insurance costs; health/dental/vision insurance premiums; paid employee leave for holidays, vacation, sick leave, and/or petty leave, not to exceed a total of 30 days per year; retirement contributions; worker's compensation insurance premiums; and the costs of general liability insurance when premiums are computed based on payroll amounts; the total of which shall not exceed thirty percent (30%) of the actual costs of labor;
- 4. The actual costs of rental for tools, excluding hand tools; equipment; machinery; and temporary facilities required for the work;
- 5. The actual costs of premiums for bonds, insurance, permit fees, and sales or use taxes related to the work.
- 6. Overtime and extra pay for holidays and weekends may be a cost item only to the extent approved by the owner.

7.2.5 - Should concealed conditions be encountered in the performance of the work below grade, or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the contract documents, the contract sum and time for completion may be equitably adjusted by change order upon claim by either party made within thirty (30) days after the condition has been identified. The cost of such change shall be arrived at by one of the foregoing methods. All change orders shall be supported by a unit cost breakdown showing method of arriving at net cost as defined in 7.2.4.

7.2.6 - In all change orders, the procedure will be for the designer to request proposals for the change order work in writing. The contractor will provide such proposal and supporting data in suitable format. The designer shall verify correctness. Delay in the processing of the change order due to lack of proper submittal by the contractor of all required supporting data shall not constitute grounds for a time extension or basis of a claim. Within fourteen (14) days after receipt of the contractor's accepted proposal including all supporting documentation required by the designer, the designer shall prepare

the change order and forward to the contractor for his signature or otherwise respond, in writing, to the contractor's proposal. Within seven (7) days after receipt of the change order executed by the contractor, the designer shall, certify the change order by his signature, and forward the change order and all supporting data to the owner for the owner's signature.

7.2.7 - A change order, when issued, shall be full compensation, or credit, for the work included, omitted or substituted. It shall show on its face the adjustment in time for completion of the project as a result of the change in the work.

# **ARTICLE 8 TIME**

# 8.2 PROGRESS AND COMPLETION

Delete and substitute the following:

8.2.3 - "The Contractors shall commence work to be performed under this agreement on a date to be specified in a written order from the architect or corresponding to the date of the Pre-construction conference and shall fully complete all work hereunder as follows:

150 Days

# 8.3 DELAYS AND EXTENSIONS OF TIME

Add the following paragraphs:

8.3.1.1 - Time extensions will not be granted for rain, wind, snow or other natural phenomena of normal intensity for the locality where work is performed. For purpose of determining extent of delay attributable to unusual weather phenomena, a determination shall be made by comparing the weather for the contract period involved with the average of the preceding five (5) year climatic range during the same time interval based on the National Oceanic and Atmospheric Administration National Weather Service statistics for the locality where work is performed and on daily weather logs kept on the job site by the contractor reflecting the effect of the weather on progress of the work and initialed by the designer's representative. No weather delays shall be considered after the building is dried in unless work claimed to be delayed is on the critical path of the baseline schedule or approved updated schedule. Time extensions for weather delays, acts of God, labor disputes, fire, delays in transportation, unavoidable casualties or other delays which are beyond the control of the Owner do not entitle the Contractor to compensable damages for delays. Any contractor claim for compensable damages for delays is limited to delays caused solely by the owner or its agents. Contractor caused delays shall be accounted for before owner or designer caused delays in the case of concurrent delays.

8.3.1.2 - Request for extension of time shall be made in writing to the designer, copies to the owner, within twenty (20) days following cause of delay. In case of continuing cause for delay, the Contractor shall notify the Designer, copies to the owner, of the delay within 20 days of the beginning of the delay and only one claim is necessary.

8.3.1.3 - The contractor shall notify his surety in writing of extension of time granted.

8.3.1.4 - No claim for time extension shall be allowed on account of failure of the designer to furnish drawings or instructions until twenty (20) days after demand for such drawings and/or instructions. Demand must be in written form clearly stating the potential for delay unless the drawings or instructions are provided. Any delay granted will begin after the twenty (20) day demand period is concluded.

## Liquidated Damages

Time extensions for weather delays do not entitle the Contractor to extended overhead recovery. As outlined in Article 3 of the AIA A101 Agreement, the Contractor agrees to pay <u>\$500.00</u> per day liquidated damages to the owner for each calendar day the Contractor shall be in default.

## ARTICLE 9 PAYMENTS AND COMPLETION

## 9.3 APPLICATIONS FOR PAYMENTS

Add the following paragraphs:

9.3.1 - The form of Application of Payment shall be on AIA Document G702 "Application and Certificate for Payment".

9.3.1.1 - Until final payment the Owner will pay ninety-five (95%) percent of the amount due the Contractor on account of progress payments. There will be no reduction in the (5) percent retainage withheld after substantial completion. Retainage will be released upon final completion and acceptance of the project and receipt of the Certificate of Compliance with the building inspection authority having jurisdiction over the project. The General Contractor shall be responsible for securing such certification.

## ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

## **10.1 SAFETY PRECAUTIONS AND PROGRAMS**

Add the following Subparagraphs 10.1.5 and 10.1.6 to Paragraph 10.1:

10.1.5 - If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop the Work in the affected area and report the condition to the Owner and Architect in writing. The Owner, Contractor and Architect shall then proceed in the same manner described in Subparagraph 10.1.2.

10.1.6 - The Owner shall be responsible for obtaining the services of a licensed laboratory to verify a 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 verify that it has been 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 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 a reasonable 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.

## ARTICLE 11 INSURANCE AND BONDS

## **11.1 CONTRACTOR'S LIABILITY INSURANCE:**

Modify the following:

11.1.1.8 - Liability insurance shall include all major divisions of coverage and be on a comprehensive basis including:

Premises-Operations (including X-C-U) Independent Contractor's protective.

Products and completed operations. Contractual-including specified provisions for the Contractors obligations under paragraph 4.18. Owned, non-owned and hired motor vehicles. Broad form coverage for property damage.

Add the following:

11.1.2.1 - Provide the following insurance limits:

Workers Compensation

Applicable Federal, State	\$ <u>Statutory</u>
Employer's Liability - Each Accident	\$ <u>1,000,000.00</u>
Disease Policy Limit	\$ <u>1,000,000.00</u>
Disease Limit per Each Employee	\$ <u>1,000,000.00</u>

Contractor's LIABILITY INSURANCE (clauses 1.1.1.2,.3,.4,.5,.6,.7) including CONTRACTUAL LIABILITY (subparagraph 11.1.2)

Form of insurance shall be: Comprehensive General Liability Comprehensive Automobile Liability

NOTE: The Owner and the Architect shall be included as additional insured parties on the Comprehensive General Liability Policy.

(1) BODILY INJURY	
Each Occurrence	\$ <u>1,000,000.00</u>
General Aggregate	\$ <u>2,000,000.00</u>
Product Liability Completed Operations Aggregate	\$ <u>2,000,000.00</u>
(2) PROPERTY DAMAGE - including completed operations broad form and X,C,U	
Each Occurrence	\$ <u>1,000,000.00</u>
Aggregate	\$ <u>2,000,000.00</u>
(3) PERSONAL INJURY	
Each Persons Aggregate	\$ <u>500,000.00</u>
General Aggregate	\$ <u>1,000,000.00</u>
Catastrophic Liability	\$ <u>1,000,000.00</u>
(4) AUTOMOBILE LIABILITY - owned, non-owned and hired	
Bodily Injury each person	\$ <u>2,000.000.00</u>
Bodily Injury each accident	\$2,000.000.00
Property Damaged each occurrence	\$ <u>500.000.00</u>

(5) INSTALLATION FLOATER - Per Project Requirements to Be Based Upon the Most Expensive Piece of Equipment to Be Provided.

(6) BUSINESS UMBRELLA POLICY Over Primary Insurance Retention

\$<u>2,000,000.00</u> \$<u>10,000.00</u>

# **11.3 PROPERTY INSURANCE**

Delete in its entirety and substitute:

11.3.1 - The Contractor shall purchase and maintain property insurance upon the entire work at the site to the full insurable value thereof. The insurance shall include the interest of the Owner, Architect/Engineer, the Contractor, and subcontractors in the work and shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss or damage including without duplication of coverage, theft, vandalism and malicious mischief. The Contractor shall effect and maintain similar property insurance on portions of the work stored off the site or in transit when such portions of the work are to be included in an Application for Payment under Subparagraph 9.3.2.

The Architect/Engineer will also be insured under this policy to insure their interests.

Fire, Extended Coverage, Vandalism and Malicious Mischief in the names of the Owner, Architect/Engineer and Contractor as their interests may appear with limits as follows:

Amount equal to the Contract Sum for the Work

Independent Contractors: Same limits as above.

Products and Completed Operation:

Same limits as above for one (1) year, commencing with issuance of final certificate of payment.

Contractual Liability:

Same limits as above.

11.3.1.1 - Furnish three (3) copies of Certificates herein required; specifically setting forth evidence of all coverage required by Subparagraphs 11.1.1.

11.3.1.2 - The form of the Certificate shall be ACORD 25-S supplemented as necessary with AIA Document G715. Furnish copies of any endorsements that are subsequently issued amending coverage of limits. The Contractor shall furnish to the Owner copies of any endorsements that are subsequently issued amending coverage or limits.

11.3.1.3 - If this insurance is written with stipulated amounts deductible under the terms of the policy, the Contractor shall pay the difference attributable to deductions in any payments made by the insurance carrier on claims paid by this insurance.

11.3.1.5 - The insurance required by Paragraph 11.3 is not intended to cover machinery, tolls or equipment owned or rented by the Contractor, which are utilized in the performance of the Work but not incorporated into the permanent improvements. The Contractor shall, at the Contractor's own expense, provide insurance coverage for owned or rented machinery, tools or equipment which shall be subject to the provisions of Subparagraph 11.3.7.

## **11.3.2 BOILER AND MACHINERY INSURANCE**

Modify as follows:

11.3.2 - Change the first sentence to read, "The Contractor shall purchase and maintain such boiler and machinery insurance as may be required by the contract documents or by law.

Modify as follows:

11.3.6 - In the last sentence change "will not be cancelled" to "shall not be cancelled".

Add the following paragraph:

11.3.12 - The Contractor shall file the original and one certified copy of all policies with the owner and architect before exposure to loss may occur. If the owner is damaged by the failure of the Contractor to
maintain such insurance and to so notify the owner, then the Contractor shall bear all reasonable costs properly attributable thereto.

# **11.4 PERFORMANCE BOND AND PAYMENT BOND:**

11.4.1.1 - Add the following sentence:

"Prior to signing contract, Contractor shall pay the premium for and furnish Performance and Payment Bond in the amount of the contract price on Form AIA 311 to cover faithful performance of the contract and payment of all obligations arising thereunder. Bonds shall be in such form as Owner may prescribe and with sureties as he may approve. Copy of Agent's Power-of-Attorney, giving him authority to sign bond and shall be furnished to the Architect. The Contractor shall provide six (6) copies."

# ARTICLE 15 CLAIMS AND DISPUTES

# **15.1.4 CLAIMS FOR ADDITIONAL COST**

Add the following paragraphs:

15.1.4.1 - Should the contractor consider that as a result of instructions given by the designer, he is entitled to extra cost above that stated in the contract, he shall give written notice thereof to the designer within seven (7) days without delay. The written notice shall clearly state that a claim for extra cost is being made and shall provide a detailed justification for the extra cost. The contractor shall not proceed with the work affected until further advised. No claims for extra compensation shall be considered unless the claim is so made. The designer shall render a written decision within seven (7) days of receipt of claim.

15.1.4.2 - The contractor shall not act on instructions received by him from persons other than the designer, and any claims for extra compensation or extension of time on account of such instruction will not be honored. The designer shall not be responsible for misunderstandings claimed by the contractor of verbal instructions which have not been confirmed in writing, and in no case shall instructions be interpreted as permitting a departure from the contract documents unless such instruction is confirmed in writing and supported by a properly authorized change order.

## ADD THE FOLLOWING ARTICLES 16-24:

# ARTICLE 16 UTILITIES, STRUCTURES, SIGNS

The General Contractor shall call ULOCO at 1-800-632-4949 before conducting any sitework in order to avoid damaging existing underground utilities services.

The General Contractor shall provide necessary and adequate facilities and pay all costs for water, electricity, gas, oil, sewer, and other services that may be necessary and required for completion of the project according to the Contract Documents. Any permanent meters installed shall be Owner.

Meters shall be relisted in the Owner's name on the day following completion and acceptance of the General Contractor's work, and the Owner shall pay for services used after that date.

The Owner shall be reimbursed for all metered utility service charges paid by or attributed to the Owner after the meter is relisted in the Owner's name and prior and prior to completion and acceptance of the work of all contractors. Reimbursement shall be made by the contractor whose work has not been completed and accepted. If the work of two or more contractors has not been completed and accepted. If the work of two or more completed and accepted, reimbursement to the Owner shall be paid by the contractors involved on the basis of assessments by the Architect.

The General Contractor shall provide temporary plumbing, Heating and Electrical systems as required for his work and the work of other Prime Contractors until the permanent systems can be utilized for temporary purposes.

- A. Prior to acceptance of work by the Owner, each contractor shall remove and replace any parts of the permanent building systems damaged through use during construction.
- B. Temporary filters shall be installed in each of the heating and air conditioning units during construction.
- C. Extra effort shall be maintained to keep the building clean and under no circumstances shall air systems by operated if finishing operations are creating dust in excess of what would be considered normal if the building were occupied. Provide filter media on return air grilles. The intent is to present the duct system in a clean condition at final inspection.
- D. It shall be understood that any warranty on equipment presented to the Owner shall extend from the day of final acceptance by the Owner. The cost of warranting the equipment during operation in the finishing stages of construction shall be borne by the Contractor whose system is utilized.
- E. When the permanent lighting system is used during the finishing stages of construction, lamps shall be replaced and shall be new at the time of final inspection.

The General Contractor shall provide temporary toilet facilities for male and female employees as required. These facilities will be available to other contractors on the job and shall be kept in a neat sanitary condition at all times. Chemical toilets are acceptable.

The General Contractor shall erect a temporary field office, complete with lights, telephone, heat and air conditioning.

## ARTICLE 17 GUARANTEE

This Contractor shall guarantee in writing the materials and workmanship for a period of one year from the date of final acceptance by the Owner. This Contractor shall replace and/or repair, without cost to the Owner, any defective part or parts within the guarantee period.

# ARTICLE 18 STORAGE OF MATERIALS

The Contractor shall make provisions for storage of materials on the site. Consult the owner for available space on the site.

# ARTICLE 19 DEMOLITION

The General Contractor shall be responsible for all demolition and capping of all plumbing, HVAC and electrical lines.

# ARTICLE 20 GUARANTEES AND OPERATION INSTRUCTION

All guarantees, warranties, operation instructions, maintenance instructions, etc. shall be delivered to the architect in triplicate, bound in a suitable three ring notebook. Originals with photocopies are acceptable.

# ARTICLE 21 PARTIAL UTILIZATION BENEFICIAL OCCUPANCY

The Owner may desire to occupy all or a portion of the project when the work is substantially complete.

Prior to the final payment, the Owner may request the Contractor(s) in writing, through the Architect if applicable, to permit him to use a specified part of the project that he believes he may use without significant interference with construction of the other parts of the project. If the contractor(s) agree, the Architect will schedule a beneficial occupancy inspection after which the Architect may issue a Certificate of Substantial Completion. The certificate shall include the following documentation:

- 1. Date of substantial completion.
- 2. A tentative list of items to be completed or corrected before final payment.
- 3. Establishing responsibility between Contractor and Owner for maintenance, heat utilities and insurance.
- 4. Establishing the date for guarantees and warranties under terms of the Contract.
- 5. Consent of Surety.
- 6. Endorsement from Insurance Company permitting occupancy.

The Owner shall have the right to exclude the Contractor from any part of the project which the Architect has so certified to be substantially complete, but the Owner will allow the contractor reasonable access to complete or correct work to bring it into compliance with the contract.

Occupancy by the Owner under this Article will in no way relieve the Contractor from his contractual requirement to complete the project within the specified time. The Contractor will not be relieved of

liquidated damages because of beneficial occupancy. The Architect may prorate liquidated damages based on the percentage of project occupied.

# ARTICLE 22 CODES AND STANDARDS

Wherever reference is given to codes, or standard specifications or other data published by regulating agencies including but not limited to national Electrical Codes, North Carolina State Building Codes, Federal Specifications, ASTM Specifications, various Institute Specifications, etc., it shall be understood that such reference is to the latest edition including addenda published prior to the date of the contract documents.

## **ARTICLE 23 ASBESTOS CONTAINING MATERIALS**

Each Prime Contractor to provide an affidavit certifying that building materials, equipment, or any other component of this project does not contain asbestos.

# ARTICLE 24 RECORD DRAWINGS

The General Contractor shall maintain (1) set of marked up construction drawings and specifications in addition to the working set normally used on the job. These record drawings will be presented to the Architect in good legible and clean condition at the completion of the project for record purposes.

## END OF SUPPLEMENTARY GENERAL CONDITIONS

## FORM OF SINGLE PRIME GENERAL CONTRACTOR PROPOSAL

Second and Third Floor Renovations
<u>City of Rocky Mount</u>
<u>Architect's Project #20022</u>

Bidder:	
Date:	

The undersigned, as Bidder, hereby declares that the only person or persons interested in the Proposal as principal of principals is or are named herein and that no other person than herein mentioned has any interest in this Proposal or in the contract to be entered into; that this proposal is made without connection with any other person, company or parties making a bid or proposal; and that it is in all respects fair and in good faith without collusion or fraud. The Bidder further declares that he has examined the site of the Work and the Contract Documents relative thereto and has read all special provisions furnished prior to the opening of bids; that he has satisfied himself relative to the work to be performed.

The bidder proposes and agrees if this Proposal is accepted to contract with the <u>City of Rocky Mount</u> in the form of contract specified, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation, and labor necessary to complete the construction of the <u>Second</u> <u>and Third Floor Renovations</u>, in full accordance with the plans, specifications, and contract documents, to the full and entire satisfaction of the <u>City of Rocky Mount</u> with a definite understanding that no money will be allowed for extra work except as set forth in the General Conditions and Contract Documents for the sum of:

#### SINGLE PRIME CONTRACT:

**BASE BID** 

Dollars (\$)

Subcontractors:

Plumbing Subcontractor:

Mechanical Subcontractor:

Electrical Subcontractor:

License No.

The Bidder further proposes and agrees hereby to commence work under this contract on a date to be specified in a written order of the Architect and shall fully complete all work within <u>150</u> consecutive calendar days from date of commencement established in a Notice to Proceed.

BIDDER further agrees to pay as liquidated damages, the sum of \$500 for each consecutive calendar day thereafter as provided in Section 15 of the General Conditions.

#### UNIT PRICES

Unit prices quoted and accepted shall apply throughout the life of the contract, except as otherwise specifically noted. Unit prices shall be applied, as appropriate, to compute the total value of changes in the base bid quantity of the work all in accordance with the contract documents.

## **GENERAL CONTRACT:**

Unit Price No. 1: Data Outlet and Conduit	<u>(Unit)</u>	each	_Unit Price (\$)	
Cost for additional 5 occurrences included in	n Base Bid		Price(\$)	
Unit Price No. 2: Duplex Receptacle and Circuit	<u>(Unit)</u>	each	_Unit Price (\$)	
Cost for additional 5 occurrences included in	n Base Bid		Price(\$)	

The undersigned further agrees that in the case of failure on his part to execute the said contract and the bond within ten (10) consecutive calendar days after written notice being given on the award contract, the check, cash or bid bond accompanying this bid shall be paid into the funds of the Owner's account set aside for the project, as liquidated damages for such failure; otherwise the check, cash or bid bond accompanying this be returned to the undersigned.

Attach certified check, cash or bid bond to this proposal.

Respectfully submitted this	day of	_20
Name of firm or corporation making bid		
WITNESS:	Ву:	

	Title:
Proprietorship or Partnership	(Owner, Partner, Pres., V. Pres.)
	Address:
	Liconco No:
	Federal ID No:
(Corporate Seal)	
ATTEST:	
Ву:	
Title: (Corp. Sec. or Asst. Sec. Only)	
Addenda received and used in computing	bid:
Addendum No. 1	Addendum No. 3
Addendum No. 2	Addendum No. 4
For All Official Notices:	
Name and Title	
Name of Firm/Corporation	
Street Address, City, State and Zip	
Telephone and Fax Numbers	

# Identification of HUB Certified/ Minority Business Participation

I,\_\_\_\_\_\_(Name of Bidder) do hereby certify that on this project, we will use the following HUB Certified/ minority business as construction subcontractors, vendors, suppliers or providers of professional services.

Firm Name, Address and Phone #	Work Type	*Minority Category	**HUB Certified (Y/N)

\*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

\*\* HUB Certification with the state HUB Office required to be counted toward state participation goals.

The total value of minority business contracting will be (\$)\_\_\_\_\_

#### Attach this form and AFFIDAVIT A or this form and AFFIDAVIT B to the bid.

Attach to Bid Attach to Bid

# City of Rocky Mount AFFIDAVIT A – Listing of Good Faith Efforts

County of \_\_\_\_\_

Affidavit of

(Name of Bidder)

I have made a good faith effort to com	under the following areas	checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- ↓ 1 (10 pts) Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- **2** --(10 pts) Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- **3** (15 pts) Broken down or combined elements of work into economically feasible units to facilitate minority participation.

▲ 4 – (10 pts) Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.

- **5** (10 pts) Attended prebid meetings scheduled by the public owner.
- **6** (20 pts) Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- □ 7 (15 pts) Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.

8 – (25 pts) Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.

- 9 (20 pts) Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- □ 10 (20 pts) Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date:	Name of Authorized Officer:		
	Signature:		
	Title:		
SEAL	State of, County of Subscribed and sworn to before me thisd Notary Public My commission expires	ay of	20

# Attach to Bid Attach to Bid

# City of Rocky Mount -- AFFIDAVIT B-- Intent to Perform Contract with Own Workforce.

County of \_\_\_\_\_

Affidavit of \_\_\_\_\_\_ (Name of Bidder) I hereby certify that it is our intent to perform 100% of the work required for the

contract.

(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement. The Bidder agrees to make a Good Faith Effort to utilize minority suppliers where possible.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date:	_Name of Authorized Officer:			
SEAL	Signature:			
State of	, County of			_
Subscribed and swo	rn to before me this	day of	20	
Notary Public				
My commission expi	res			

# DO NOT USE AFFIDAVIT 'B' UNLESS YOU ARE ONLY PROVIDING LABOR AND NOT PURCHASING ANY MATERIALS OR SUPPLIES

# City of Rocky Mount - AFFIDAVIT C - Portion of the Work to be Performed by HUB Certified/Minority Businesses County of \_\_\_\_\_

## (Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by HUB certified/minority businesses as defined in GS143-128.2(g) and 128.4(a),(b),(e) is equal to or greater than 10% of the bidders total contract price, then the bidder must complete this affidavit.

This affidavit shall be provided by the apparent lowest responsible, responsive bidder within 72 hours after notification of being low bidder.

Affidavit of \_\_\_\_\_\_(Name of Bidder)

I do hereby certify that on the

(Project Name)
Project ID#\_\_\_\_\_Amount of Bid \$\_\_\_\_\_

I will expend a minimum of \_\_\_\_\_% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. Attach additional sheets if required

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

\*Minority categories: Black, African American (B), Hispanic (H), Asian American (A) American Indian (I), Female (F) Socially and Economically Disadvantaged (D)

\*\* HUB Certification with the state HUB Office required to be counted toward state participation goals.

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date <u>:</u>	_Name of Authorized Officer:			
	Signature:			
SEAL	Title:			
	State of, County of _			
	Subscribed and sworn to before me this	day of	20	
	Notary Public			
	My commission expires			

# City of Rocky Mount

# **AFFIDAVIT D – Good Faith Efforts**

County of

# (Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by HUB Certified/ minority business is not achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of I do hereby certify that on the (Name of Bidder)

Project ID#\_\_\_\_\_Amount of Bid \$\_\_\_\_\_

(Project Name)

I will expend a minimum of % of the total dollar amount of the contract with HUB certified/ minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

\*Minority categories: Black, African American (B), Hispanic (H), Asian American (A) American Indian (I),

Female (F) Socially and Economically Disadvantaged (D)

#### \*\* HUB Certification with the state HUB Office required to be counted toward state participation goals.

- Examples of documentation that may be required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:
- A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.

B. Copies of quotes or responses received from each firm responding to the solicitation.

C. A telephone log of follow-up calls to each firm sent a solicitation.

D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.

E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.

F. Copy of pre-bid roster

G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.

H. Letter detailing reasons for rejection of minority business due to lack of qualification.

I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay

agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date <u>:</u>	_Name of Authorized Officer:_			
	Signature:			
	Title:_			
SEAL	State of Subscribed and sworn to before Notary Public My commission expires	_, County of me this	day of	20



# **Bid Bond**

CONTRACTOR: (Name, legal status and address) SURETY:

(Name, legal status and principal place of business)

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

BOND AMOUNT: \$

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

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

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

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

#### ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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.

Init.

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# Signed and sealed this day of ,

	(Contractor as Prin	cipal)	(Seal)
(Witness)	 (Title)		
	(Surety)		(Seal)
(Witness)	(Title)		
6			

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# $\mathbb{AIA}^{\circ}$ Document A101<sup> $\square$ </sup> – 2017

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.

#### ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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

The parties should complete A101<sup>™</sup>–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201<sup>™</sup>-2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

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- 2 THE WORK OF THIS CONTRACT
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- 4 CONTRACT SUM
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- 7 **TERMINATION OR SUSPENSION**
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#### EXHIBIT A INSURANCE AND BONDS

#### **ARTICLE 1 THE CONTRACT DOCUMENTS**

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), 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: (Check one of the following boxes.)

- [ ] The date of this Agreement.
- 1 A date set forth in a notice to proceed issued by the Owner. ſ
- [ ] Established as follows:

(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

#### § 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work: (Check one of the following boxes and complete the necessary information.)

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§ 4.6 Other: (Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.) AIA Document A101<sup>TM</sup> – 2017. Copyright © 1915, 1918, 1925, 1937, 1951, 1958, 1961, 1963, 1967, 1974, 1977, 1987, 1991, 1997, 2007 and 2017 by The American Institute of Architects. All rights reserved. WARNING: This AIA® Document is protected by U.S. Copyright Law and International Treaties. Unauthorized reproduction or distribution of this AIA® Document, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law. This document was produced by AIA software at 09:00:53 ET on 11/21/2018 under Order No.6883209444 which expires on 04/08/2019, and is not for resale. User Notes:

any, shall be assessed as set forth in Section 4.5.

# **ARTICLE 4 CONTRACT SUM**

Portion of Work

§ 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.

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if

# § 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item

Item

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement. (Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

§ 4.3 Allowances, if any, included in the Contract Sum: (Identify each allowance.)

Item

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

Price

Item

§ 4.5 Liquidated damages, if any: (Insert terms and conditions for liquidated damages, if any.)

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

By the following date: [ ]

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Substantial Completion Date

3

Init.

1

Units and Limitations

Price per Unit (\$0.00)

Price

Price

**Conditions for Acceptance** 

### **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 amount certified 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 of the amount certified shall be made by the Owner not later than ( ) days after the Architect receives the Application for Payment.

(Federal, state or local laws may require payment within a certain period of time.)

§ 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 of values 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 In accordance with AIA Document A201<sup>TM</sup>–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- That portion of the Contract Sum properly allocable to completed Work; .1
- .2 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; and
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- The aggregate of any amounts previously paid by the Owner; .1
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201-2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

#### § 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

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§ 5.1.7.1.1 The following items are not subject to retainage:

(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:

(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:

(Insert any other conditions for release of retainage upon Substantial Completion.)

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201-2017.

§ 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

- the Contractor has fully performed the Contract except for the Contractor's responsibility to correct .1 Work as provided in Article 12 of AIA Document A201-2017, and to satisfy other requirements, if any, which extend beyond final payment; and
- a final Certificate for Payment has been issued by the Architect. .2

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

#### § 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located. (Insert rate of interest agreed upon, if any.)

%

#### **ARTICLE 6 DISPUTE RESOLUTION**

#### § 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201-2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the 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.)

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#### § 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201-2017, the method of binding dispute resolution shall be as follows: (Check the appropriate box.)

- Arbitration pursuant to Section 15.4 of AIA Document A201-2017 - E E
  - [] Litigation in a court of competent jurisdiction
  - [] Other (Specify)

If the Owner and Contractor do not select a method of binding dispute resolution, 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.

#### **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 A201–2017.

§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows: (Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

#### ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative: (Name, address, email address, and other information)

§ 8.3 The Contractor's representative:

(Name, address, email address, and other information)

Init. 1

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§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

#### § 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101<sup>™</sup>–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101<sup>TM</sup>-2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with AIA Document E203<sup>™</sup>\_2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203–2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

§ 8.7 Other provisions:

#### **ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS**

§ 9.1 This Agreement is comprised of the following documents:

- AIA Document A101<sup>TM</sup>-2017, Standard Form of Agreement Between Owner and Contractor .1
- .2 AIA Document A101<sup>TM</sup>–2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201<sup>TM</sup>–2017, General Conditions of the Contract for Construction
- .4 AIA Document E203<sup>TM</sup>–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:

(Insert the date of the E203-2013 incorporated into this Agreement.)

.5 Drawings

	Number	Title	Date
6	Specifications		
	Section	Title	Date Pages
7	Addenda, if any:		
	Number	Date	Pages

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.8 Other Exhibits:

1

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

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AIA Document E204<sup>™</sup>–2017, Sustainable Projects Exhibit, dated as indicated below: [ ] (Insert the date of the E204-2017 incorporated into this Agreement.)

[] The Sustainability Plan:

	Title	Date	Pages	
E	] Supplementary and other Condit	ions of the Contract:		
	Document	Title	Date	Pages

.9 Other documents, if any, listed below:

> (List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201<sup>TM</sup>\_2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

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)



# 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 SURETY CONTRACTOR AS PRINCIPAL (Corporate Seal) Company: (Corporate Seal) Company: Signature: Signature: Name and Name and Title: 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:)

#### ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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.

§ 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

- the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring .1 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
- the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the .3 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:

- After investigation, determine the amount for which it may be liable to the Owner and, as soon as .1 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

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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

- the responsibilities of the Contractor for correction of defective work and completion of the .1 **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.

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§ 16 Modifications to this bond are as follows:

CONTRACTOR AS PRINCIPAL Company: (Corporate Seal)	SURETY Company:	(Corporate Seal)
Signature: Name and Title: Address:	Signature: Name and Title: Address:	

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

Init. 1

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# **Payment Bond**

#### CONTRACTOR: (Name, legal status and address)

SURETY:

(Name, legal status and principal place of business)

8

#### OWNER:

(Name, legal status and address)

CONSTRUCTION CONTRACT Date: Amount: \$ Description: (Name and location)

#### BOND

Date: (Not earlier than Construction Contract Date) Amount \$

Modifications t	o this Bond:		None		See Section 18
CONTRACTOR	AS PRINCIPAL		SURE	TY	
Company:	(Corpora	te Seal)	Com	pany:	(Corporate Seal)

Signature: Signature: Name and Name and Title: Title: (Any additional signatures appear on the last page of this Payment Bond.)

(FOR INFORMATION ONLY — Name, address and telephone) AGENT or BROKER: OWNER'S REPRESENTATIVE: (Architect, Engineer or other party:)

#### ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

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.

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§ 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.

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§ 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

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

- the name of the Claimant; .1
- .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:

Company: (Corporat	te Seal) Company:	(Corporate Seal)
Signature:	Signature:	
Address:	Address:	

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# $\operatorname{AIA}^{\circ}$ Document G704<sup>TM</sup> – 2017

# **Certificate of Substantial Completion**

<b>PROJECT:</b> (name and address) 0000	<b>CONTRACT INFORMATION:</b> Contract For: General Construction Date:	<b>CERTIFICATE INFORMATION:</b> Certificate Number: Date:
OWNER: (name and address)	ARCHITECT: (name and address)	<b>CONTRACTOR:</b> (name and address)

The Work identified below has been reviewed and found, to the Architect's best knowledge, information, and belief, to be substantially complete. Substantial Completion is the stage in the progress of the Work when the Work or designated portion is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The date of Substantial Completion of the Project or portion designated below is the date established by this Certificate. *(Identify the Work, or portion thereof, that is substantially complete.)* 

**ARCHITECT** (Firm Name)

rm Name) SIGNATURE

PRINTED NAME AND TITLE

DATE OF SUBSTANTIAL COMPLETION

#### WARRANTIES

The date of Substantial Completion of the Project or portion designated above is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below:

(Identify warranties that do not commence on the date of Substantial Completion, if any, and indicate their date of commencement.)

#### WORK TO BE COMPLETED OR CORRECTED

A list of items to be completed or corrected is attached hereto, or transmitted as agreed upon by the parties, and identified as follows: *(Identify the list of Work to be completed or corrected.)* 

The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. Unless otherwise agreed to in writing, the date of commencement of warranties for items on the attached list will be the date of issuance of the final Certificate of Payment or the date of final payment, whichever occurs first. The Contractor will complete or correct the Work on the list of items attached hereto within () days from the above date of Substantial Completion.

Cost estimate of Work to be completed or corrected: \$0.00

The responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work, insurance, and other items identified below shall be as follows:

(Note: Owner's and Contractor's legal and insurance counsel should review insurance requirements and coverage.)

The Owner and Contractor hereby accept the responsibilities assigned to them in this Certificate of Substantial Completion:

<b>CONTRACTOR</b> (Firm Name)	SIGNATURE	PRINTED NAME AND TITLE	DATE
<b>OWNER</b> (Firm Name)	SIGNATURE	PRINTED NAME AND TITLE	DATE

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#### SECTION 01 10 00 SUMMARY

#### PART 1 GENERAL

#### 1.01 PROJECT

- A. Project Name: Second & Third Floor Renovations.
- B. Name: City of Rocky Mount
- C. Architect's Name: Oakley Collier Architects, PA.
- D. The project consists of miscellaneous interior renovations to approximately 6,100 square feet of the existing space on the second & third floor of the Rocky Mount City Hall. Renovations include but are not limited to the reconfiguration of the existing spaces inclusive of new office spaces, reception desk, and conference room. The construction will consist of new stud walls, casework, painting, flooring, and ceilings. Associated plumbing, mechanical and electrical work is included.

#### **1.02 CONTRACT DESCRIPTION**

A. Contract Type: A single prime contract based on stipulated sum

#### 1.03 WORK BY OWNER

- A. Items noted NIC (Not in Contract) will be supplied and installed by Owner before Substantial Completion. Some items include:
- B. Items noted OSCI (Owner Supplied Contractor Installed) will be supplied by the and owner and installed by the Contractor:
- C. Items noted CSCI (Contractor Supplied Contractor Installed) will be supplied and installed by the Contractor.

#### 1.04 OWNER OCCUPANCY

- A. Owner intends to continue to occupy adjacent portions of the existing building during the entire construction period.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

#### 1.05 CONTRACTOR USE OF SITE AND PREMISES

- A. Construction Operations: Limited to areas noted on Drawings.
- B. Arrange use of site and premises to allow:
  - 1. Work by Others.
- C. Provide access to and from site as required by law and by Owner:
  - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
  - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.
- D. Utility Outages and Shutdown:
  - 1. Limit disruption of utility services to hours the building is unoccupied.
  - 2. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
  - 3. Prevent accidental disruption of utility services to other facilities.

#### PART 2 PRODUCTS - NOT USED

#### PART 3 EXECUTION - NOT USED

#### SECTION 01 20 00 PRICE AND PAYMENT PROCEDURES

#### PART 1 GENERAL

#### **1.01 SECTION INCLUDES**

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Change procedures.
- D. Procedures for preparation and submittal of application for final payment.

# 1.02 SCHEDULE OF VALUES

- A. Form to be used: AIA G703 latest edition.
- B. Electronic media printout including equivalent information will be considered; submit sample to Contractor for approval.
- C. Forms filled out by hand will not be accepted.
- D. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.
- E. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification section. Identify site mobilization.
- F. Include in each line item, the amount of Allowances specified in this section. For unit cost Allowances, identify quantities taken from Contract Documents multiplied by the unit cost to achieve the total for the item.
- G. Revise schedule to list approved Change Orders, with each Application For Payment.

#### 1.03 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Form to be used: AIA G702 and G703 latest edition.
- C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- D. Forms filled out by hand will not be accepted.
- E. For each item, provide a column for listing each of the following:
  - 1. Item Number.
  - 2. Description of work.
  - 3. Scheduled Values.
  - 4. Previous Applications.
  - 5. Work in Place and Stored Materials under this Application.
  - 6. Authorized Change Orders.
  - 7. Total Completed and Stored to Date of Application.
  - 8. Percentage of Completion.
  - 9. Balance to Finish.
  - 10. Retainage.
- F. Execute certification by signature of authorized officer.
- G. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- H. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
- I. Submit one electronic and three hard-copies of each Application for Payment.
- J. Include the following with the application:
  - 1. Transmittal letter as specified for submittals in Section 01 30 00.

- 2. Construction progress schedule, revised and current as specified in Section 01 30 00.
- 3. Partial release of liens from major subcontractors and vendors.
- 4. Affidavits attesting to off-site stored products.
- K. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

#### **1.04 MODIFICATION PROCEDURES**

- A. Submit name of the individual authorized to receive change documents and who will be responsible for informing others in Contractor's employ or subcontractors of changes to Contract Documents.
- B. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.
- C. For other required changes, Architect will issue a document signed by instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
  - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
  - 2. Promptly execute the change.
- D. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 10 days.
- E. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions in accordance with Section 01 6000.
- F. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
  - 1. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect.
  - 2. For pre-determined unit prices and quantities, the amount will based on the fixed unit prices.
- G. Substantiation of Costs: Provide full information required for evaluation.
  - 1. On request, Provide following data:
    - a. Quantities of products, labor, and equipment.
    - b. Taxes, insurance, and bonds.
    - c. Overhead and profit.
    - d. Justification for any change in Contract Time.
    - e. Credit for deletions from Contract, similarly documented.
    - Support each claim for additional costs with additional information:
    - a. Origin and date of claim.
    - b. Dates and times work was performed, and by whom.
    - c. Time records and wage rates paid.
    - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
  - 3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- H. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- I. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the

2.

Contract Sum.

- J. Promptly revise progress schedules to reflect any change in Contract Time, revise subschedules to adjust times for other items of work affected by the change, and resubmit.
- K. Promptly enter changes in Project Record Documents.

# 1.05 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
  - 1. All closeout procedures specified in Section 01 70 00.

# PART 2 PRODUCTS - NOT USED

# PART 3 EXECUTION - NOT USED

#### SECTION 01 21 00 ALLOWANCES

#### PART 1 GENERAL

# **1.01 SECTION INCLUDES**

- A. Cash allowances.
- B. Payment and modification procedures relating to allowances.

# 1.02 CASH ALLOWANCES

- A. Costs Included in Cash Allowances: Cost of product to Contractor or subcontractor, less applicable trade discounts, less cost of delivery to site , less applicable taxes .
- B. Costs Not Included in Cash Allowances: Product delivery to site and handling at the site, including unloading, uncrating, and storage; protection of products from elements and from damage; and labor for installation and finishing.
- C. Architect Responsibilities:
  - 1. Consult with Contractor for consideration and selection of products, suppliers , and installers.
  - 2. Select products in consultation with Owner and transmit decision to Contractor.
  - 3. Prepare Change Order.
- D. Contractor Responsibilities:
  - 1. Assist in selection of products, suppliers , and installers.
  - 2. Obtain proposals from suppliers and installers and offer recommendations.
  - 3. On notification of which products have been selected, execute purchase agreement with designated supplier and installer.
  - 4. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.
  - 5. Promptly inspect products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.
- E. Differences in costs will be adjusted by Change Order.

#### 1.03 CONTINGENCY ALLOWANCE

A. Include in the Base Bid a stipulated sum/price of \$10,000 for Architect's Contingency. Contingency items shall be as determined and approved by the Architect and shall include all materials, labor, profit, and overhead associated with the approved contingency item.

#### 1.04 ALLOWANCES SCHEDULE

A. Section 08 71 00 - Door Hardware: Include in the base bid amount an allowance of \$800 per leaf per door for purchase, delivery, and installation of door hardware. An additional allowance of \$3,500 shall be included for the second-floor Star access door. The allowance shall apply to all new doors within the project scope inclusive of existing doors noted for reuse. Other exterior door protection-related items shall be included in the base bid and not considered part of the door allowance.

# PART 2 PRODUCTS - NOT USED

# PART 3 EXECUTION - NOT USED

#### SECTION 01 22 00 UNIT PRICES

#### PART 1 GENERAL

#### **1.01 SECTION INCLUDES**

- A. List of unit prices, for use in preparing Bids.
- B. Measurement and payment criteria applicable to Work performed under a unit price payment method.
- C. Defect assessment and non-payment for rejected work.

#### 1.02 COSTS INCLUDED

A. Unit Prices included on the Bid Form shall include full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

#### **1.03 UNIT QUANTITIES SPECIFIED**

A. Quantities indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements of actual Work will determine the payment amount.

#### 1.04 MEASUREMENT OF QUANTITIES

- A. Measurement methods delineated in the individual specification sections complement the criteria of this section. In the event of conflict, the requirements of the individual specification section govern.
- B. Testing agency will take all measurements and compute quantities accordingly.
- C. Assist by providing necessary equipment, workers, and survey personnel as required.
- D. Measurement Devices:
  - 1. Weigh Scales: Inspected, tested and certified by the applicable state Weights and Measures department within the past year.
  - 2. Platform Scales: Of sufficient size and capacity to accommodate the conveying vehicle.
  - 3. Metering Devices: Inspected, tested and certified by the applicable state department within the past year.
- E. Measurement by Weight: Concrete reinforcing steel, rolled or formed steel or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
- F. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness.
- G. Measurement by Area: Measured by square dimension using mean length and width or radius.
- H. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.
- I. Stipulated Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.
- J. Perform surveys required to determine quantities, including control surveys to establish measurement reference lines. Notify prior to starting work.
- K. Contractor's Engineer Responsibilities: Sign surveyor's field notes or keep duplicate field notes

#### 1.05 PAYMENT

- A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work that is incorporated in or made necessary by the Work and accepted by the , multiplied by the unit price.
- B. Payment will not be made for any of the following:
  - 1. Products wasted or disposed of in a manner that is not acceptable.
  - 2. Products determined as unacceptable before or after placement.
  - 3. Products not completely unloaded from the transporting vehicle.

- 4. Products placed beyond the lines and levels of the required Work.
- 5. Products remaining on hand after completion of the Work.
- 6. Loading, hauling, and disposing of rejected Products.

#### 1.06 DEFECT ASSESSMENT

- A. Replace Work, or portions of the Work, not complying with specified requirements.
- B. If, in the opinion of the Architect, it is not practical to remove and replace the Work, Architect will direct one of the following remedies:
  - 1. The defective Work may remain, but the unit price will be adjusted to a new unit price at the discretion of Architect, or:
  - 2. The defective Work will be partially repaired to the instructions of the Architect, and the unit price will be adjusted to a new unit price at the discretion of Architect.
- C. The individual specification sections may modify these options or may identify a specific formula or percentage price reduction.
- D. The authority of the Architect to assess the defect and identify payment adjustment is final.

#### 1.07 SCHEDULE OF UNIT PRICES

- A. Item: Unit Price No. 1 Data Outlet and Conduit.
  - 1. Description: Provide labor and materials cost for installation of data outlet and conduit to above ceiling as delineated in construction documents.
  - 2. Unit of Measurement: Per individual occurrence.
  - 3. Amount to be included in Base Bid: 5 units Data outlets as delineated in construction documents.
- B. Item: Unit Price No. 2 Duplex Receptacle and Circuit.
  - 1. Description: Provide labor and materials cost for installation of duplex receptacle and circuit as delineated in construction documents.
  - 2. Unit of Measurement: Per individual occurrence.
  - 3. Amount to be included in Base Bid: 5 Receptacles as delineated in construction documents.

### PART 2 PRODUCTS - NOT USED

#### PART 3 EXECUTION - NOT USED

#### SECTION 01 25 00 SUBSTITUTION PROCEDURES

#### PART 1 GENERAL

#### **1.01 SECTION INCLUDES**

A. Procedural requirements for proposed substitutions.

#### 1.02 DEFINITIONS

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
  - 1. Substitutions for Cause: Proposed due to changed Project circumstances beyond Contractor's control.
  - 2. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project.
    - a. Substitution requests offering advantages solely to the Contractor will not be considered.

#### PART 2 PRODUCTS - NOT USED

#### PART 3 EXECUTION

# 3.01 GENERAL REQUIREMENTS

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
  - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
  - 2. Agrees to provide the same warranty for the substitution as for the specified product.
  - 3. Agrees to provide same or equivalent maintenance service and source of replacement parts, as applicable.
  - 4. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
  - 5. Waives claims for additional costs or time extension that may subsequently become apparent.
  - 6. Agrees to reimburse Owner and for review or redesign services associated with reapproval by authorities.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
  - 1. Note explicitly any non-compliant characteristics.
- C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
  - 1. No specific form is required. Contractor's Substitution Request documentation must include the following:
    - a. Project Information:
      - 1) Official project name and number, and any additional required identifiers established in Contract Documents.
      - 2) Owner's, 's, and Contractor's names.
    - b. Substitution Request Information:
      - 1) Discrete and consecutive Substitution Request number, and descriptive subject/title.
      - 2) Indication of whether the substitution is for cause or convenience.
      - 3) Issue date.
      - 4) Reference to particular Contract Document(s) specification section number, title, and article/paragraph(s).
      - 5) Description of Substitution.
      - 6) Reason why the specified item cannot be provided.
      - 7) Differences between proposed substitution and specified item.

- 8) Description of how proposed substitution affects other parts of work.
- c. Attached Comparative Data: Provide point-by-point, side-by-side comparison addressing essential attributes specified, as appropriate and relevant for the item:
  - 1) Physical characteristics.
  - 2) In-service performance.
  - 3) Expected durability.
  - 4) Visual effect.
  - 5) Warranties.
  - 6) Include, as appropriate or requested, the following types of documentation:
    - (a) Product Data:
    - (b) Certificates, test, reports or similar qualification data.
    - (c) Drawings, when required to show impact on adjacent construction elements.
- d. Impact of Substitution:
  - 1) Savings to Owner for accepting substitution.
  - 2) Change to Contract Time due to accepting substitution.
- D. Limit each request to a single proposed substitution item.
  - 1. Submit an electronic document, combining the request form with supporting data into single document.

# 3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT

A. Architect will consider requests for substitutions only if submitted at least 10 days prior to the date for receipt of bids.

#### 3.03 RESOLUTION

- A. may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. will notify Contractor in writing of decision to accept or reject request.

# 3.04 ACCEPTANCE

A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

# 3.05 CLOSEOUT ACTIVITIES

A. See Section 01 78 00 - Closeout Submittals, for closeout submittals.

#### SECTION 01 30 00 ADMINISTRATIVE REQUIREMENTS

#### PART 1 GENERAL

#### **1.01 SECTION INCLUDES**

- A. Preconstruction meeting.
- B. Site mobilization meeting.
- C. Progress meetings.
- D. Construction progress schedule.
- E. Submittals for review, information, and project closeout.
- F. Number of copies of submittals.
- G. Requests for Interpretation (RFI) procedures.

#### 1.02 PROJECT COORDINATOR

- A. Project Coordinator: Construction Manager.
- B. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for site access, traffic, and parking facilities.
- C. During construction, coordinate use of site and facilities through the Project Coordinator.
- D. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- E. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities. Responsibility for providing temporary utilities and construction facilities is identified in Section 01 10 00 Summary.
- F. Coordinate field engineering and layout work under instructions of the Project Coordinator.
- G. Make the following types of submittals to through the Project Coordinator:
  - 1. Requests for Interpretation.
  - 2. Requests for substitution.
  - 3. Shop drawings, product data, and samples.
  - 4. Test and inspection reports.
  - 5. Design data.
  - 6. Manufacturer's instructions and field reports.
  - 7. Applications for payment and change order requests.
  - 8. Progress schedules.
  - 9. Coordination drawings.
  - 10. Correction Punch List and Final Correction Punch List for Substantial Completion.
  - 11. Closeout submittals.

#### PART 2 PRODUCTS - NOT USED

#### PART 3 EXECUTION

#### 3.01 PRECONSTRUCTION MEETING

- A. Architect will schedule a meeting after Notice of Award.
- B. Attendance Required:
  - 1. Owner.
  - 2. Architect.
  - 3. Contractor.
- C. Agenda:
  - 1. Execution of Owner-Contractor Agreement.
  - 2. Submission of executed bonds and insurance certificates.
  - 3. Distribution of Contract Documents.

Oakley Collier Architects, PA Architect's Project #20022

- 4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
- 5. Designation of personnel representing the parties to Contract, [\_\_\_\_]
- 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
- 7. Scheduling.
- D. Architect will record minutes and distribute copies within two days after meeting to participants, with one copy to participants, and those affected by decisions made.

#### 3.02 SITE MOBILIZATION MEETING

- A. Contractor will schedule a meeting at the Project site prior to Contractor occupancy.
- B. Project Coordinator will schedule meeting at the Project site prior to Contractor occupancy.
- C. Attendance Required:
  - 1. Contractor.
  - 2. Owner.
  - 3. Architect.
  - 4. Contractor's superintendent.
  - 5. Major subcontractors.
- D. Agenda:
  - 1. Use of premises by Owner and Contractor.
  - 2. Owner's requirements.
  - 3. Construction facilities and controls provided by Owner.
  - 4. Temporary utilities provided by Owner.
  - 5. Security and housekeeping procedures.
  - 6. Schedules.
  - 7. Application for payment procedures.
  - 8. Procedures for testing.
  - 9. Procedures for maintaining record documents.
  - 10. Requirements for start-up of equipment.
  - 11. Inspection and acceptance of equipment put into service during construction period.
- E. Contractor will record minutes and distribute copies within two days after meeting to participants, with one copy to participants, and those affected by decisions made.

#### 3.03 PROGRESS MEETINGS

- A. Contractor will schedule and administer meetings throughout progress of the Work at maximum monthly intervals.
- B. Project Coordinator will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Contractor will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- D. Attendance Required: Job superintendent, Owner, Architect, major Subcontractors and suppliers as appropriate to agenda topics for each meeting.

#### E. Agenda:

- 1. Review minutes of previous meetings.
- 2. Review of work progress.
- 3. Field observations, problems, and decisions.
- 4. Identification of problems that impede, or will impede, planned progress.
- 5. Review of submittals schedule and status of submittals.
- 6. Review of off-site fabrication and delivery schedules.
- 7. Maintenance of progress schedule.
- 8. Corrective measures to regain projected schedules.
- 9. Planned progress during succeeding work period.

- 10. Coordination of projected progress.
- 11. Maintenance of quality and work standards.
- 12. Effect of proposed changes on progress schedule and coordination.
- 13. Other business relating to work.
- F. Contractor will record minutes and distribute copies within two days after meeting to participants, with one copy to participants, and those affected by decisions made.

#### 3.04 CONSTRUCTION PROGRESS SCHEDULE - SEE SECTION 01 32 16

- A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of work, with a general outline for remainder of work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
  - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.

#### 3.05 REQUESTS FOR INTERPRETATION (RFI)

- A. Definition: A request seeking one of the following:
  - 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in the Contract Documents.
  - 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of the Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
  - 1. Prepare a separate RFI for each specific item.
    - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
    - b. Do not forward requests which solely require internal coordination between subcontractors.
  - 2. Combine RFI and its attachments into a single electronic file. PDF format is preferred.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
  - 1. Unacceptable Uses for RFIs: Do not use RFIs to request the following::
    - a. Approval of submittals (use procedures specified elsewhere in this section).
    - b. Approval of substitutions (see Section 01 60 00 Product Requirements)
    - c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
    - d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
  - 2. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.
  - 3. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, the Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.

- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
  - 1. Official Project name and number, and any additional required identifiers established in Contract Documents.
  - 2. Discrete and consecutive RFI number, and descriptive subject/title.
  - 3. Issue date, and requested reply date.
  - 4. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
  - 5. Annotations: Field dimensions and/or description of conditions which have engendered the request.
  - 6. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- G. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
  - 1. Indicate current status of every RFI. Update log promptly and on a regular basis.
  - 2. Note dates of when each request is made, and when a response is received.
  - 3. Highlight items requiring priority or expedited response.
  - 4. Highlight items for which a timely response has not been received to date.
- H. Review Time: will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
- I. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.

#### 3.06 SUBMITTAL SCHEDULE

- A. Submit to for review a schedule for submittals in tabular format.
  - 1. Submit at the same time as the preliminary schedulespecified in Section 01 32 16 Construction Progress Schedule.
  - 2. Format schedule to allow tracking of status of submittals throughout duration of construction.
  - 3. Arrange information to include scheduled date for initial submittal, specification number and title, submittal category (for review or for information), description of item of work covered, and role and name of subcontractor.
  - 4. Account for time required for preparation, review, manufacturing, fabrication and delivery when establishing submittal delivery and review deadline dates.
    - a. For assemblies, equipment, systems comprised of multiple components and/or requiring detailed coordination with other work, allow for additional time to make corrections or revisions to initial submittals, and time for their review.

# 3.07 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
  - Product data.
    Shop drawings.
  - Snop drawings.
    Samples for select
  - 3. Samples for selection.
  - 4. Samples for verification.

- B. Submit to for review for the limited purpose of checking for compliance with information given and the design concept expressed in the contract documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.

# 3.08 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
  - 1. Design data.
  - 2. Certificates.
  - 3. Test reports.
  - 4. Inspection reports.
  - 5. Manufacturer's instructions.
  - 6. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for . No action will be taken.

#### 3.09 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 78 00 Closeout Submittals:
  - 1. Project record documents.
  - 2. Operation and maintenance data.
  - 3. Warranties.
  - 4. Bonds.
  - 5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

#### 3.10 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by .
  - 1. After review, produce duplicates.
  - 2. Retained samples will not be returned to Contractor unless specifically so stated.

#### 3.11 SUBMITTAL PROCEDURES

- A. General Requirements:
  - 1. Use a separate transmittal for each item.
  - 2. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
  - 3. Transmit using approved form.
    - a. Use Contractor's form, subject to prior approval by .
  - 4. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
  - 5. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
  - 6. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
    - a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
  - 7. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
    - a. Send submittals in electronic format via email to .

- 8. Schedule submittals to expedite the Project, and coordinate submission of related items.
  - a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
  - b. For sequential reviews involving 's consultants, Owner, or another affected party, allow an additional 7 days.
- 9. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
- 10. Provide space for Contractor and review stamps.
- 11. When revised for resubmission, identify all changes made since previous submission.
- 12. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
- 13. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
- 14. Submittals not requested will not be recognized or processed.
- B. Transmit each submittal with approved form.

#### 3.12 SUBMITTAL REVIEW

- A. Submittals for Review: will review each submittal, and approve, or take other appropriate action.
- B. Submittals for Information: will acknowledge receipt and review. See below for actions to be taken.
- C. 's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
  - 1. Notations may be made directly on submitted items and/or listed on appended Submittal Review cover sheet.
- D. 's and consultants' actions on items submitted for review:
  - 1. Authorizing purchasing, fabrication, delivery, and installation:
    - a. "Approved", or language with same legal meaning.
    - b. "Approved as Noted, Resubmission not required", or language with same legal meaning.
      - 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
    - c. "Approved as Noted, Resubmit for Record", or language with same legal meaning.
  - 2. Not Authorizing fabrication, delivery, and installation:
- E. 's and consultants' actions on items submitted for information:
  - 1. Items for which no action was taken:
    - a. "Received" to notify the Contractor that the submittal has been received for record only.
  - 2. Items for which action was taken:
    - a. "Reviewed" no further action is required from Contractor.

#### SECTION 01 32 16 CONSTRUCTION PROGRESS SCHEDULE

#### PART 1 GENERAL

#### **1.01 SECTION INCLUDES**

- A. Preliminary schedule.
- B. Construction progress schedule, bar chart type.

#### 1.02 REFERENCE STANDARDS

- A. AGC (CPSM) Construction Planning and Scheduling Manual 2004.
- B. M-H (CPM) CPM in Construction Management Project Management with CPM 2015.

#### 1.03 SUBMITTALS

- A. Within 10 days after date of Agreement, submit preliminary schedule.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
  - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.
- F. Submit the number of opaque reproductions that Contractor requires, plus two copies that will be retained by Architect.
- G. Submit under transmittal letter form specified in Section 01 30 00 Administrative Requirements.

#### 1.04 SCHEDULE FORMAT

- A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
- B. Diagram Sheet Size: Maximum 22 x 17 inches (560 x 432 mm).
- C. Scale and Spacing: To allow for notations and revisions.

#### PART 2 PRODUCTS - NOT USED

#### PART 3 EXECUTION

#### 3.01 PRELIMINARY SCHEDULE

A. Prepare preliminary schedule in the form of a horizontal bar chart.

#### 3.02 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Identify work of separate stages and other logically grouped activities.
- D. Provide sub-schedules to define critical portions of the entire schedule.
- E. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- F. Provide separate schedule of submittal dates for shop drawings, product data, and samples, owner-furnished products, Products identified under Allowances, and dates reviewed submittals will be required from Architect. Indicate decision dates for selection of finishes.
- G. Indicate delivery dates for owner-furnished products and products identified under Allowances.
- H. Provide legend for symbols and abbreviations used.

#### 3.03 BAR CHARTS

- A. Include a separate bar for each major portion of Work or operation.
- B. Identify the first work day of each week.

#### 3.04 REVIEW AND EVALUATION OF SCHEDULE

- A. Participate in joint review and evaluation of schedule with at each submittal.
- B. Evaluate project status to determine work behind schedule and work ahead of schedule.
- C. After review, revise as necessary as result of review, and resubmit within 10 days.

#### 3.05 UPDATING SCHEDULE

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- C. Annotate diagrams to graphically depict current status of Work.
- D. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- E. Indicate changes required to maintain Date of Substantial Completion.
- F. Submit reports required to support recommended changes.

#### 3.06 DISTRIBUTION OF SCHEDULE

- A. Distribute copies of updated schedules to Contractor's project site file, to Subcontractors, suppliers, Architect, Contractor , and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

#### SECTION 01 33 00 SUBMITTAL PROCEDURES

#### PART 1 GENERAL

#### 1.01 RELATED DOCUMENTS

A. The Contract Documents, Drawings and individual Specification Sections, Contractor's Submission Schedule; apply to this Section.

#### 1.02 SUMMARY

A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

#### **1.03 DEFINITIONS**

- A. Action Submittals: Written and graphic information and physical samples that require the Design Professional'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 the Design Professional'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.
- C. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.
- D. Required Submittal List Utility application: Interacts with and to be used with the Owner's Contract Manager system. The Design Professional uses the utility to itemize the list of submission items needed to be submitted by the Contractor in order to insure the design intent will be satisfied and inclusive of all Project turnover documents and/or Contract Closeout Requirements.
- E. Contractor's Submission Schedule: The itemized list of project submission requirements printed as a report from Contract Manager. The Contractor enters the date each item needs to be submitted in order to meet the schedule.

#### **1.04 ACTION SUBMITTALS**

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by the construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or modifications to submittals noted by the Architect and additional time for handling and reviewing submittals required by those corrections.
- B. Format for Submittals: Submit required submittals in electronic (PDF) file format.

#### 1.05 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Design Professional's Digital Data Files: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by the Design Professional for the Contractor's use in preparing submittals.
- B. Coordination: Coordinate preparation and processing of submittals with the performance of the Work.
  - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  - 2. Commissioning Authority will review submittals applicable to systems being commissioned for compliance with commissioning needs, concurrent with the Design Professional review and approval.
  - 3. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
  - 4. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.

- 5. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
  - a. Submit Operation and Maintenance Manuals concurrent with action submittal.
  - b. The Owner or Design Professional 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 re-submittals, as follows. Time for review shall commence on the Design Professional'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 re-submittals.
  - 1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. The Design Professional will advise the 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. Re-submittal Review: Allow 15 days for review of each re-submittal.
  - 4. Sequential Review: Where sequential review of submittals by the Design Professional's consultants, the Owner, or other parties is indicated, allow 21 days for initial review of each submittal.
- D. Identification and Information: Place a permanent label or title block on each paper copy submittal item for identification.
  - 1. Indicate name of firm or entity that prepared each submittal on label or title block.
  - 2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by the Design Professional.
  - 3. Include the following information for processing and recording action taken:
    - a. Project name.
    - b. Date.
    - c. Name of Design Professional.
    - d. Name of Construction Manager (if applicable).
    - e. Name of Contractor.
    - f. Name of subcontractor.
    - g. Name of supplier.
    - h. Name of manufacturer.
    - i. Submittal number including revision identifier.
      - 1) Submittal number shall be the submittal item number and Submittal Package number designated in the Contractor's Submission Schedule.
    - j. Drawing number and detail references, as appropriate.
    - k. Location(s) where product is to be installed, as appropriate.
    - I. Other necessary identification.
- E. Identification and Information: Identify and incorporate information in each electronic submittal file as follows:
  - 1. Assemble complete submittal package into a single indexed file with links enabling navigation to each item.
  - 2. Name file with submittal number or other unique identifier, including revision identifier.
  - 3. Provide means for insertion to permanently record the Contractor's review and approval markings and action taken by the Design Professional.
  - 4. Include the following information on an inserted cover sheet:
    - a. Project name.
    - b. Date.
    - c. Name and address of Design Professional.
    - d. Name of Construction Manager (if applicable).
    - e. Name of Contractor.
    - f. Name of firm or entity that prepared submittal.
    - g. Name of subcontractor.

- h. Name of supplier.
- i. Name of manufacturer.
- j. Number and title of appropriate Specification Section.
- k. Drawing number and detail references, as appropriate.
- I. Location(s) where product is to be installed, as appropriate.
- m. Related physical samples submitted directly.
- n. Other necessary identification.
- 5. Include the following information as keywords in the electronic file meta data:
  - a. Project name.
  - b. Number and title of appropriate Specification Section.
  - c. Manufacturer name.
  - d. Product name.
- F. Options: Identify options requiring selection by the Design Professional.
- G. Deviations: Identify deviations from the Contract Documents on submittals.
- H. Additional Copies: Unless the Design Professional observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
- I. Transmittal: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. The Design Professional will return submittals, without review, received from sources other than the Contractor.
  - 1. Transmittal Form: Use the Contractor's office form.
  - 2. Transmittal Form: Provide locations on form for the following information:
    - a. Project name.
    - b. Date.
    - c. Destination (To:).
    - d. Source (From:).
    - e. Names of subcontractor, manufacturer, and supplier.
    - f. Category and type of submittal.
    - g. Submittal purpose and description.
    - h. Specification Section number and title.
    - i. Indication of full or partial submittal.
    - j. Drawing number and detail references, as appropriate.
    - k. Transmittal numbered consecutively.
    - I. Submittal and transmittal distribution record.
    - m. Remarks.
    - n. Signature of transmitter.
  - 3. On an attached separate sheet, prepared on the Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by the Design Professional on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
- J. Re-submittals: Make re-submittals in same form and format.
  - 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 the Design Professional's action stamp.
- K. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, and installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- L. Use for Construction: Use only final submittals that are marked with approval notation from the Design Professional's action stamp.

# PART 2 PRODUCTS

#### 2.01 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
  - 1. Submit electronic submittals via email as electronic (PDF) files, to the Design Professional. The Owner may request paper copies of certain submittals for on-site coordination.
    - a. The Design Professional will return annotated file. Annotate and retain one copy of file as an electronic Project turnover document file.
    - b. The Commissioning Authority through the Design Professional will return annotated file.
    - c. PDF file shall be named as follows:
      - Section number, space, dash, space, Submittal number, space, Section name.
        (a) 00 00 00 001 Section Name.
        - (1) The submittal number is section specific.
  - 2. Operation and Maintenance Manual Submittals: Submit concurrent with the Action Submittal, as related in individual Specification Sections.
  - 3. Closeout Submittals: Comply with requirements specified in Section 01 78 00 Closeout Submittals.
  - 4. Permits, Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Permits, Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  - 1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
  - 2. Mark each copy of each submittal to show which products and options are applicable.
  - 3. Include the following information, as applicable:
    - a. Submittal Package number and Submittal Item number.
    - b. Manufacturer's catalog cuts.
    - c. Manufacturer's product specifications.
    - d. Standard color charts.
    - e. Statement of compliance with specified referenced standards.
    - f. Testing by recognized testing agency.
    - g. Application of testing agency labels and seals.
    - h. Notation of coordination requirements.
    - i. Availability and delivery time information.
  - 4. For equipment, include the following in addition to the above, as applicable:
    - a. Wiring diagrams showing 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 concurrent with Samples.
  - 6. Submit Product Data in electronic (PDF) file format.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
  - 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Submittal Package number and Submittal Item number.
    - b. Identification of products.

- c. Schedules.
- d. Compliance with specified standards.
- e. Notation of coordination requirements.
- f. Notation of dimensions established by field measurement.
- g. Relationship and attachment to adjoining construction clearly indicated.
- h. Seal and signature of professional engineer if specified.
- 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches.
- 3. Submit Shop Drawings in electronic (PDF) file format.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
  - 1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
  - Identification: Attach label on unexposed side of Samples that includes the following:
    a. Submittal Package number and Submittal Item number.
    - b. Generic description of Sample.
    - c. Product name and name of manufacturer.
    - d. Sample source.
    - e. Number and title of applicable Specification Section.
  - 3. 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 the Owner's property, are the property of the Contractor.
  - 4. 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: For turnover purpose, submit three full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. The Design Professional will return submittal with options selected.
  - 5. 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. The Design Professional will retain one Sample set; remainder will be returned. Mark up and retain one returned Sample set as a turnover 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.
- E. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:

- 1. Name, address, and telephone number of entity performing subcontract or supplying products.
- 2. Number and title of related Specification Section(s) covered by subcontract.
- 3. Drawing number and detail references, as appropriate, covered by subcontract.
- 4. Submit subcontract list in PDF electronic file, to the Owner.
- F. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- G. 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 American Welding Society (AWS) forms. Include names of firms and personnel certified.
- H. Installer Certificates: Upon the Owner's request, 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.
- I. Manufacturer Certificates: Upon the Owner's request, submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- J. 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.
- K. 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.
- L. Field Test Reports: Submit 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.

# **PART 3 EXECUTION**

#### 3.01 CONTRACTOR'S REVIEW

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

#### 3.02 DESIGN PROFESSIONAL'S ACTION

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

G. On projects that have commissioning, the Commissioning Authority will receive copies of the submittals through the Design Professional and will provide comments on the submittals via the Design Professional.

#### SECTION 01 40 00 QUALITY REQUIREMENTS

#### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Submittals.
- B. Control of installation.
- C. Tolerances.
- D. Defect Assessment.

#### 1.02 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
  - 1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
  - 2. Certificates may be recent or previous test results on material or product, but must be acceptable to .
- C. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

#### 1.03 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

#### PART 2 PRODUCTS - NOT USED

#### PART 3 EXECUTION

#### 3.01 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

- E. Have work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

#### 3.02 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

#### 3.03 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not complying with specified requirements.
- B. If, in the opinion of Architect, it is not practical to remove and replace the Work, Architect will direct an appropriate remedy or adjust payment.

#### SECTION 01 50 00 TEMPORARY FACILITIES AND CONTROLS

#### PART 1 GENERAL

#### **1.01 SECTION INCLUDES**

- A. Temporary telecommunications services.
- B. Temporary sanitary facilities.
- C. Temporary Controls: Barriers and enclosures.
- D. Security requirements.
- E. Vehicular access and parking.
- F. Waste removal facilities and services.

#### 1.02 TELECOMMUNICATIONS SERVICES

- A. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization.
- B. Telecommunications services shall include:
  - 1. Email: Account/address reserved for project use.
- C. Contractor will pay for own telecommunications services.
- D. WiFi Access: Provide WiFi for use by Architect and Engineer until time of Substantial Completion.

#### **1.03 TEMPORARY SANITARY FACILITIES**

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Use of existing facilities is permitted.
- C. Maintain daily in clean and sanitary condition.
- D. At end of construction, return facilities to same or better condition as originally found.

#### 1.04 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations.
- B. Provide protection for plants designated to remain. Replace damaged plants.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

#### **1.05 INTERIOR ENCLOSURES**

- A. Provide temporary partitions to separate work areas from -occupied areas, to prevent penetration of dust and moisture into -occupied areas, and to prevent damage to existing materials and equipment.
- B. Construction: Framing and gypsum board sheet materials with closed joints and sealed edges at intersections with existing surfaces:
- C. Paint surfaces exposed to view from Owner-occupied areas.

#### 1.06 SECURITY

A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

#### 1.07 VEHICULAR ACCESS AND PARKING

- A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
- B. Coordinate access and haul routes with governing authorities and Owner.
- C. Provide and maintain access to fire hydrants, free of obstructions.

# 1.08 WASTE REMOVAL

- A. See Section 01 74 19 Construction Waste Management and Disposal, for additional requirements.
- B. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- C. Provide containers with lids. Remove trash from site periodically.

# PART 2 PRODUCTS - NOT USED

# PART 3 EXECUTION - NOT USED
#### SECTION 01 51 00 TEMPORARY UTILITIES

#### PART 1 GENERAL

### **1.01 SECTION INCLUDES**

A. Temporary Utilities: Provision of electricity, lighting, heat, ventilation, and water.

### 1.02 TEMPORARY ELECTRICITY

- A. Cost: By Owner.
- B. Connect to Owner's existing power service.
  - 1. Exercise measures to conserve energy.
- C. Permanent convenience receptacles may be utilized during construction.

# **1.03 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES**

- A. Provide and maintainincandescent lighting for construction operations to achieve a minimum lighting level of 2 watt/sq ft (to achieve a minimum lighting level of 21 watt/sq m).
- B. Provide and maintain 0.25 watt/sq ft (2.7 watt/sq m) H.I.D. lighting to interior work areas after dark for security purposes.
- C. Maintain lighting and provide routine repairs.
- D. Permanent building lighting may be utilized during construction.

### **1.04 TEMPORARY HEATING**

- A. Cost of Energy: By Owner.
- B. Maintain minimum ambient temperature of 50 degrees F (10 degrees C) in areas where construction is in progress, unless indicated otherwise in specifications.
- C. Owner's existing heat plant may be used.
  - 1. Exercise measures to conserve energy.

#### 1.05 TEMPORARY COOLING

- A. Cost of Energy: By Owner.
- B. Maintain maximum ambient temperature of 80 degrees F (26 degrees C) in areas where construction is in progress, unless indicated otherwise in specifications.
- C. Owner's existing cooling plant may be used.
- D. Cost: By Contractor.
- E. Utilize appropriate ventilation equipment. Extend and supplement equipment with temporary fan units as required to maintain clean air for construction operations.

#### **1.06 TEMPORARY WATER SERVICE**

- A. Cost of Water Used: By Owner.
- B. Connect to existing water source.
  - 1. Exercise measures to conserve water.
- C. Extend branch piping with outlets located so water is available by hoses with threaded connections. Provide temporary pipe insulation to prevent freezing.

# PART 2 PRODUCTS - NOT USED

# PART 3 EXECUTION - NOT USED

### SECTION 01 60 00 PRODUCT REQUIREMENTS

### PART 1 GENERAL

### **1.01 SECTION INCLUDES**

- A. General product requirements.
- B. Re-use of existing products.
- C. Transportation, handling, storage and protection.
- D. Product option requirements.
- E. Substitution limitations.
- F. Procedures for Owner-supplied products.
- G. Maintenance materials, including extra materials, spare parts, tools, and software.

### 1.02 REFERENCE STANDARDS

A. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

### 1.03 SUBMITTALS

- A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
  - 1. Submit within 15 days after date of Notice to Proceed.
  - 2. For products specified only by reference standards, list applicable reference standards.
- B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- C. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- D. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
  - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

# PART 2 PRODUCTS

#### 2.01 EXISTING PRODUCTS

- A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by the Contract Documents.
- B. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner.
- C. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.
- D. Reused Products: Reused products include materials and equipment previously used in this or other construction, salvaged and refurbished as specified.

# 2.02 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.
- B. Use of products having any of the following characteristics is not permitted:
  - 1. Made using or containing CFC's or HCFC's.

# 2.03 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

### 2.04 MAINTENANCE MATERIALS

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- B. Deliver and place in location as directed; obtain receipt prior to final payment.

### PART 3 EXECUTION

### 3.01 SUBSTITUTION LIMITATIONS

A. See Section 01 25 00 - Substitution Procedures.

### 3.02 OWNER-SUPPLIED PRODUCTS

- A. Owner's Responsibilities:
  - 1. Arrange for and deliver Owner reviewed shop drawings, product data, and samples, to Contractor.
  - 2. Arrange and pay for product delivery to site.
  - 3. On delivery, inspect products jointly with Contractor.
  - 4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
  - 5. Arrange for manufacturers' warranties, inspections, and service.
- B. Contractor's Responsibilities:
  - 1. Review Owner reviewed shop drawings, product data, and samples.
  - 2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
  - 3. Handle, store, install and finish products.
  - 4. Repair or replace items damaged after receipt.

# 3.03 TRANSPORTATION AND HANDLING

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

# 3.04 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 01 74 19.
- B. Store and protect products in accordance with manufacturers' instructions.

- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Provide off-site storage and protection when site does not permit on-site storage or protection.
- G. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- H. Comply with manufacturer's warranty conditions, if any.
- I. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- J. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- K. Prevent contact with material that may cause corrosion, discoloration, or staining.
- L. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- M. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

### SECTION 01 70 00 EXECUTION AND CLOSEOUT REQUIREMENTS

### PART 1 GENERAL

# 1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Pre-installation meetings.
- C. Cutting and patching.
- D. Cleaning and protection.
- E. Starting of systems and equipment.
- F. Demonstration and instruction of Owner personnel.
- G. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.
- H. General requirements for maintenance service.

### 1.02 REFERENCE STANDARDS

A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations 2019.

#### 1.03 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Project Record Documents: Accurately record actual locations of capped and active utilities.

### 1.04 PROJECT CONDITIONS

- A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- B. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into adjacent areas.

### 1.05 COORDINATION

- A. See Section 01 10 00 for occupancy-related requirements.
- B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- C. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- E. Coordinate completion and clean-up of work of separate sections.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

# PART 2 PRODUCTS

#### 2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 60 00 Product Requirements.

# PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- B. Examine and verify specific conditions described in individual specification sections.
- C. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- D. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- E. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

### 3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

### 3.03 PREINSTALLATION MEETINGS

- A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect seven days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
  - 1. Review conditions of examination, preparation and installation procedures.
  - 2. Review coordination with related work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

# 3.04 GENERAL INSTALLATION REQUIREMENTS

- A. In addition to compliance with regulatory requirements, conduct construction operations in compliance with NFPA 241, including applicable recommendations in Appendix A.
- B. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- C. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- D. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- E. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- F. Make neat transitions between different surfaces, maintaining texture and appearance.

# 3.05 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation only.
  - 1. Verify that construction and utility arrangements are as indicated.
  - 2. Report discrepancies to before disturbing existing installation.
  - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.

- 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 50 00 in locations indicated on drawings.
- C. Remove existing work as indicated and as required to accomplish new work.
  - 1. Remove items indicated on drawings.
  - 2. Relocate items indicated on drawings.
  - 3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
  - 4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- D. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
  - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
  - 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
  - 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
    - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
    - b. See Section 01 10 00 for other limitations on outages and required notifications.
    - c. Provide temporary connections as required to maintain existing systems in service. Verify that abandoned services serve only abandoned facilities.
  - Verify that abandoned services serve only abandoned facilities.
     Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- E. Protect existing work to remain.
  - 1. Perform cutting to accomplish removals neatly and as specified for cutting new work.
  - 2. Repair adjacent construction and finishes damaged during removal work.
- F. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
  - 1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to .
  - 2. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
  - 3. Where a change of plane of 1/4 inch (6 mm) or more occurs in existing work, submit recommendation for providing a smooth transition for review and request instructions.
- G. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- H. Refinish existing surfaces as indicated:
  - 1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
  - 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- I. Clean existing systems and equipment.

- J. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- K. Do not begin new construction in alterations areas before demolition is complete.
- L. Comply with all other applicable requirements of this section.

# 3.06 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Alterations article above for additional requirements.
- C. Perform whatever cutting and patching is necessary to:
  - 1. Complete the work.
  - 2. Fit products together to integrate with other work.
  - 3. Provide openings for penetration of mechanical, electrical, and other services.
  - 4. Match work that has been cut to adjacent work.
  - 5. Repair areas adjacent to cuts to required condition.
  - 6. Repair new work damaged by subsequent work.
  - 7. Remove samples of installed work for testing when requested.
  - 8. Remove and replace defective and non-complying work.
- D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- E. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- G. Restore work with new products in accordance with requirements of Contract Documents.
- H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 84 00, to full thickness of the penetrated element.
- J. Patching:
  - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
  - 2. Match color, texture, and appearance.
  - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

# 3.07 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

# 3.08 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.

- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Prohibit traffic from landscaped areas.
- H. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

### 3.09 SYSTEM STARTUP

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Architect and owner seven days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.
- G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- H. Submit a written report that equipment or system has been properly installed and is functioning correctly.

# 3.10 DEMONSTRATION AND INSTRUCTION

A. See Section 01 79 00 - Demonstration and Training.

# 3.11 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

# 3.12 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Use cleaning materials that are nonhazardous.
- C. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- D. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- E. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- F. Replace filters of operating equipment.

# 3.13 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.1. Provide copies to Architect.
- B. Substantial Completion.
  - 1. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's

Notice of Substantial Completion.

- 2. Notify when work is considered ready for 's Substantial Completion inspection.
- 3. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for 's Substantial Completion inspection.
- 4. Submit necessary warranties, bonds, maintenance agreements, final certifications and similar documents as warranted by the project.
- 5. Obtain and submit releases enabling Owner use of the space; include necessary permits and similar releases.
- 6. Change construction cores to permanent cores and deliver keys to owner.
- 7. Complete start-up testing of systems, operating instructions for owner's assigned personnel.
- 8. Complete final cleaning and touch-up requirements.
- 9. Provide copy of contractor's completed punchlist.
- a. Contractor is responsible for completing his own punchlist prior to inspection.
- 10. Accompany Architect on preliminary final inspection to determine items to be listed for completion or correction in Contractor's Notice of Substantial Completion.
- 11. Architect will proceed with inspection or notify contractor of discrepancies.
  - a. Architect will suspend inspection in the event that the project is found not to be ready for inspection.
- 12. Architect will prepare Certificate of Substantial Completion following inspection and correction of any deficiencies.
- C. Final Inspection/Acceptance.
  - 1. Notify Architect when project is complete.
  - 2. Notify Architect that punch list items have been corrected and project is ready for a final formal inspection.
  - 3. Architect will certify in writing that all punch list items have been completed and schedule formal final inspection with the Owner.
  - 4. The Architect will furnish written notice of the final formal inspection not less than seven (7) days prior to the inspection.
  - 5. Architect will coordinate Final Formal inspection with all parties.
  - 6. Upon acceptance of project by the Owner the Architect will provide Certificate of Compliance.
- D. will occupy all of the building as specified in Section 01 10 00.
- E. Conduct Substantial Completion inspection and create Final Correction Punch List containing 's and Contractor's comprehensive list of items identified to be completed or corrected and submit to .
- F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.
- G. Notify when work is considered finally complete and ready for 's Substantial Completion final inspection.
- H. Complete items of work determined by listed in executed Certificate of Substantial Completion.

#### SECTION 01 74 19 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

#### PART 1 GENERAL

#### 1.01 WASTE MANAGEMENT REQUIREMENTS

- A. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- B. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- C. Contractor shall submit periodic Waste Disposal Reports; all landfill disposal, incineration, recycling, salvage, and reuse must be reported regardless of to whom the cost or savings accrues; use the same units of measure on all reports.
- D. Methods of trash/waste disposal that are not acceptable are:
  - 1. Burning on the project site.
  - 2. Burying on the project site.
  - 3. Dumping or burying on other property, public or private.
  - 4. Other illegal dumping or burying.
- E. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

#### **1.02 DEFINITIONS**

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.
- D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.
- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- G. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- H. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.

#### 1.03 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Waste Disposal Reports: Submit at specified intervals, with details of quantities of trash and waste, means of disposal or reuse, and costs; show both totals to date and since last report.
  - 1. Submit updated Report with each Application for Progress Payment; failure to submit Report will delay payment.
  - 2. Submit Report on a form acceptable to Owner.
  - 3. Landfill Disposal: Include the following information:
    - a. Identification of material.
    - b. Amount, in tons or cubic yards (cubic meters), of trash/waste material from the project disposed of in landfills.
    - c. State the identity of landfills, total amount of tipping fees paid to landfill, and total disposal cost.
    - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.

- 4. Recycled and Salvaged Materials: Include the following information for each:
  - a. Identification of material, including those retrieved by installer for use on other projects.
  - b. Amount, in tons or cubic yards (cubic meters), date removed from the project site, and receiving party.
  - c. Transportation cost, amount paid or received for the material, and the net total cost or savings of salvage or recycling each material.
  - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
  - e. Certification by receiving party that materials will not be disposed of in landfills or by incineration.
- 5. Other Disposal Methods: Include information similar to that described above, as appropriate to disposal method.

# PART 2 PRODUCTS - NOT USED

# PART 3 EXECUTION

### 3.01 WASTE MANAGEMENT PROCEDURES

- A. See Section 01 30 00 for additional requirements for project meetings, reports, submittal procedures, and project documentation.
- B. See Section 01 50 00 for additional requirements related to trash/waste collection and removal facilities and services.
- C. See Section 01 60 00 for waste prevention requirements related to delivery, storage, and handling.
- D. See Section 01 70 00 for trash/waste prevention procedures related to demolition, cutting and patching, installation, protection, and cleaning.

#### SECTION 01 78 00 CLOSEOUT SUBMITTALS

### PART 1 GENERAL

# **1.01 SECTION INCLUDES**

- A. Operation and Maintenance Data.
- B. Warranties and bonds.

### 1.02 SUBMITTALS

- A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
- B. Operation and Maintenance Data:
  - 1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. will review draft and return one copy with comments.
  - 2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
  - 3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with comments. Revise content of all document sets as required prior to final submission.
  - 4. Submit two sets of revised final documents in final form within 10 days after final inspection.
- C. Warranties and Bonds:
  - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
  - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
  - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

# PART 2 PRODUCTS - NOT USED

# PART 3 EXECUTION

# 3.01 OPERATION AND MAINTENANCE DATA

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

# 3.02 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

- A. For Each Product, Applied Material, and Finish:
  - 1. Product data, with catalog number, size, composition, and color and texture designations.
  - 2. Information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.

- D. Additional information as specified in individual product specification sections.
- E. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.
- F. Provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

### 3.03 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

- A. For Each Item of Equipment and Each System:
  - 1. Description of unit or system, and component parts.
  - 2. Identify function, normal operating characteristics, and limiting conditions.
  - 3. Include performance curves, with engineering data and tests.
  - 4. Complete nomenclature and model number of replaceable parts.
- B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.
- C. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
- D. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- E. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- F. Provide servicing and lubrication schedule, and list of lubricants required.
- G. Include manufacturer's printed operation and maintenance instructions.
- H. Include sequence of operation by controls manufacturer.
- I. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- J. Provide control diagrams by controls manufacturer as installed.
- K. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- L. Include test and balancing reports.
- M. Additional Requirements: As specified in individual product specification sections.

# 3.04 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

- A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.
- B. Where systems involve more than one specification section, provide separate tabbed divider for each system.
- C. Prepare instructions and data by personnel experienced in maintenance and operation of described products.
- D. Prepare data in the form of an instructional manual.
- E. Binders: Commercial quality, 8-1/2 by 11 inch (216 by 280 mm) three D side ring binders with durable plastic covers; 2 inch (50 mm) maximum ring size. When multiple binders are used, correlate data into related consistent groupings.
- F. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.

- G. Project Directory: Title and address of Project; names, addresses, and telephone numbers of , Consultants, Contractor and subcontractors, with names of responsible parties.
- H. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.
- I. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.
- J. Text: Manufacturer's printed data, or typewritten data on 24 pound paper.
- K. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- L. Arrange content by systems under section numbers and sequence of Table of Contents of this Project Manual.
- M. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, in three parts as follows:
  - 1. Part 1: Directory, listing names, addresses, and telephone numbers of , Contractor, Subcontractors, and major equipment suppliers.
  - 2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
    - a. Significant design criteria.
    - b. List of equipment.
    - c. Parts list for each component.
    - d. Operating instructions.
    - e. Maintenance instructions for equipment and systems.
    - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
  - 3. Part 3: Project documents and certificates, including the following:
    - a. Shop drawings and product data.
    - b. Air and water balance reports.
    - c. Certificates.
    - d. Photocopies of warranties and bonds.
- N. Table of Contents: Provide title of Project; names, addresses, and telephone numbers of , Consultants, and Contractor with name of responsible parties; schedule of products and systems, indexed to content of the volume.

#### 3.05 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.
- E. Manual: Bind in commercial quality 8-1/2 by 11 inch (216 by 279 mm) three D side ring binders with durable plastic covers.
- F. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.
- G. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which

specified, and the name of product or work item.

H. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

#### SECTION 01 79 00 DEMONSTRATION AND TRAINING

### PART 1 GENERAL

### 1.01 SUMMARY

- A. Demonstration of products and systems where indicated in specific specification sections.
- B. Training of Owner personnel in operation and maintenance is required for:
  - 1. Items specified in individual product Sections.
- C. Training of Owner personnel in care, cleaning, maintenance, and repair is required for:
  1. Finishes, including flooring, wall finishes, ceiling finishes.
  - Items specified in individual product Sections.

### 1.02 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Training Plan: Owner will designate personnel to be trained; tailor training to needs and skilllevel of attendees.
  - 1. Submit to Architect for transmittal to Owner.
  - 2. Submit not less than four weeks prior to start of training.
  - 3. Revise and resubmit until acceptable.
  - 4. Provide an overall schedule showing all training sessions.
  - 5. Include at least the following for each training session:
    - a. Identification, date, time, and duration.
    - b. Description of products and/or systems to be covered.
    - c. Name of firm and person conducting training; include qualifications.
    - d. Intended audience, such as job description.
    - e. Objectives of training and suggested methods of ensuring adequate training.
    - f. Methods to be used, such as classroom lecture, live demonstrations, hands-on, etc.
    - g. Media to be used, such a slides, hand-outs, etc.
    - h. Training equipment required, such as projector, projection screen, etc., to be provided by Contractor.
- C. Training Manuals: Provide training manual for each attendee; allow for minimum of two attendees per training session.
  - 1. Include applicable portion of O&M manuals.
  - 2. Include copies of all hand-outs, slides, overheads, video presentations, etc., that are not included in O&M manuals.
  - 3. Provide one extra copy of each training manual to be included with operation and maintenance data.
- D. Training Reports:
  - 1. Identification of each training session, date, time, and duration.
  - 2. Sign-in sheet showing names and job titles of attendees.
  - 3. List of attendee questions and written answers given, including copies of and references to supporting documentation required for clarification; include answers to questions that could not be answered in original training session.

### **1.03 QUALITY ASSURANCE**

- A. Instructor Qualifications: Familiar with design, operation, maintenance and troubleshooting of the relevant products and systems.
  - 1. Provide as instructors the most qualified trainer of those contractors and/or installers who actually supplied and installed the systems and equipment.
  - 2. Where a single person is not familiar with all aspects, provide specialists with necessary qualifications.

# PART 2 PRODUCTS - NOT USED

### PART 3 EXECUTION

### 3.01 DEMONSTRATION - GENERAL

- A. Demonstrations conducted during system start-up do not qualify as demonstrations for the purposes of this section, unless approved in advance by Owner.
- B. Demonstration may be combined with Owner personnel training if applicable.
- C. Non-Operating Products: Demonstrate cleaning, scheduled and preventive maintenance, and repair procedures.

1. Perform demonstrations not less than two weeks prior to Substantial Completion.

### 3.02 TRAINING - GENERAL

- A. Conduct training on-site unless otherwise indicated.
- B. Owner will provide classroom and seating at no cost to Contractor.
- C. Provide training in minimum two hour segments.
- D. Training schedule will be subject to availability of Owner's personnel to be trained; re-schedule training sessions as required by Owner; once schedule has been approved by Owner failure to conduct sessions according to schedule will be cause for Owner to charge Contractor for personnel "show-up" time.
- E. Be prepared to answer questions raised by training attendees; if unable to answer during training session, provide written response within three days.

#### SECTION 02 41 00 DEMOLITION

#### PART 1 GENERAL

### **1.01 SECTION INCLUDES**

A. Selective demolition of building elements for alteration purposes.

### 1.02 REFERENCE STANDARDS

- A. 29 CFR 1926 Safety and Health Regulations for Construction Current Edition.
- B. NFPA 241 Standard for Safeguarding Construction, Alteration, and Demolition Operations 2019.

### PART 2 PRODUCTS -- NOT USED

### PART 3 EXECUTION

### 3.01 SCOPE

- A. Selective demolition of elements as delineated in the plans.
- B. Remove other items indicated, for salvage and relocation.

### 3.02 DOCUMENTATION

- A. Prior to site mobilization the contractor shall document existing conditions including:
  - 1. Existing elements that are to remain.
  - 2. Existing elements that are being removed and salvaged to the owner.
  - 3. Existing elements that are being salvaged and reinstalled.
- B. Documentation shall consist primarily of photographs, augmented with written documentation where necessary, to convey an accurate depiction of existing conditions prior to start of work. Documented elements shall include to the extents possible the following:
  - 1. Existing plumbing, mechanical and electrical systems.
  - 2. Existing exterior building conditions.
  - 3. Existing interior building conditions.
- C. Elements that are uncovered during demolition shall be documented at that time. Existing conditions that may alter the contract shall be brought to the attention of the Architect for evaluation before continuing with demolition work.
- D. The contractor shall specifically document any elements described in this section that are damaged or non-functioning.

# 3.03 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with other requirements specified in Section 01 70 00.
- B. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
  - 1. Obtain required permits.
  - 2. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
  - 3. Conduct operations to minimize effects on and interference with adjacent occupants.
  - 4. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
- C. Do not begin removal until receipt of notification to proceed from Owner.
- D. Do not begin removal until built elements to be salvaged or relocated have been removed.
- E. If hazardous materials are discovered during removal operations, stop work and notify and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.

### 3.04 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
  - 1. Verify that construction and utility arrangements are as indicated.
  - 2. Report discrepancies to before disturbing existing installation.
  - 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Remove existing work as indicated and as required to accomplish new work.
  - 1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
  - 2. Remove items indicated on drawings.
- C. Protect existing work to remain.
  - 1. Perform cutting to accomplish removals neatly and as specified for cutting new work.
  - 2. Repair adjacent construction and finishes damaged during removal work.
  - 3. Patch as specified for patching new work.

### 3.05 DEBRIS AND WASTE REMOVAL

A. Remove from site all materials not to be reused on site; comply with requirements of Section 01 74 19 - Waste Management.

#### SECTION 06 10 00 ROUGH CARPENTRY

#### PART 1 GENERAL

### **1.01 SECTION INCLUDES**

- A. Preservative treated wood materials.
- B. Concealed wood blocking, nailers, and supports.
- C. Miscellaneous wood nailers, furring, and grounds.

### 1.02 REFERENCE STANDARDS

- A. ASTM A153/A153M Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware 2016a.
- B. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials 2021a.
- C. AWPA U1 Use Category System: User Specification for Treated Wood 2018.
- D. PS 20 American Softwood Lumber Standard 2020.
- E. SPIB (GR) Grading Rules 2014.

# 1.03 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide technical data on wood preservative materials and application instructions.
- C. Manufacturer's Certificate: Certify that wood products supplied for rough carpentry meet or exceed specified requirements.

### 1.04 DELIVERY, STORAGE, AND HANDLING

A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

### PART 2 PRODUCTS

# 2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
   1. Species: Southern Pine, unless otherwise indicated.
  - 2. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
  - 3. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
  - 4. Lumber of other species or grades is acceptable provided structural and appearance characteristics are equivalent to or better than products specified.

#### 2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Grading Agency: Southern Pine Inspection Bureau, Inc; SPIB (GR).
- B. Sizes: Nominal sizes as indicated on drawings, S4S.
- C. Moisture Content: S-dry or MC19.
- D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
  - 1. Lumber: S4S, No. 2 or Standard Grade.
  - 2. Boards: Standard or No. 3.

# 2.03 ACCESSORIES

A. Fasteners and Anchors:

Oakley Collier Architects, PA Architect's Project #20022 1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.

### 2.04 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
  - 1. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.
- B. Preservative Treatment:
  - 1. Preservative Pressure Treatment of Lumber Above Grade: AWPA U1, Use Category UC3B, Commodity Specification A using waterborne preservative.
    - a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
    - b. Treat lumber in contact with concrete.

#### PART 3 EXECUTION

#### 3.01 PREPARATION

A. Coordinate installation of rough carpentry members specified in other sections.

#### 3.02 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

#### 3.03 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In metal stud walls, provide continuous blocking around door and window openings for anchorage of frames, securely attached to stud framing.
- C. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.
- D. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.
- E. Specifically, provide blocking and framing for the proper installation of the following:
  - 1. Cabinets and shelf supports.
  - 2. Wall-mounted door stops.
- F. Provide wood ground along base of wall at floor, 1 1/2 inches tall by thickness of wallboard, continuous behind all rubber base.
  - 1. Finish face of ground shall be flush with finish face of wallboard.
  - 2. Set wallboard tight to top of ground.

#### 3.04 TOLERANCES

- A. Framing Members: 1/4 inch (6 mm) from true position, maximum.
- B. Variation from Plane (Other than Floors): 1/4 inch in 10 feet (2 mm/m) maximum, and 1/4 inch in 30 feet (7 mm in 10 m) maximum.

#### SECTION 06 20 00 FINISH CARPENTRY

### PART 1 GENERAL

# **1.01 SECTION INCLUDES**

- A. Finish carpentry items.
- B. Wood door frames.
- C. Wood casings and moldings.

# 1.02 REFERENCE STANDARDS

- A. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials 2021a.
- B. AWI/AWMAC/WI (AWS) Architectural Woodwork Standards, 2nd Edition 2014, with Errata (2016).

# **1.03 ADMINISTRATIVE REQUIREMENTS**

- A. Coordinate the work with plumbing rough-in, electrical rough-in, and installation of associated and adjacent components.
- B. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.

# 1.04 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements for submittal procedures.
- B. Product Data:
  - 1. Provide instructions for attachment hardware and finish hardware.
- C. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.

# PART 2 PRODUCTS

# 2.01 FINISH CARPENTRY ITEMS

- A. Surface Burning Characteristics: Provide materials having fire and smoke properties as required by applicable code.
- B. Interior Woodwork Items:
  - 1. Moldings, Bases, Casings, Miscellaneous Trim and items indicated on the plans.
  - 2. Profiles: Size and profiles to match existing
  - 3. Species: Match existing.
  - 4. Cut: Plain sawn.
  - 5. Finger Jointing: Not allowed.
  - 6. Finish: Painted as indicated on the plans.

# 2.02 FASTENINGS

A. Fasteners: Of size and type to suit application; countersunk finish in concealed locations and countersunk and filled finish in exposed locations.

# 2.03 ACCESSORIES

- A. Primer: Alkyd primer sealer.
- B. Wood Filler: Solvent base, tinted to match surface finish color.

# PART 3 EXECUTION

# 3.01 EXAMINATION

- A. Verify adequacy of backing and support framing.
- B. Verify mechanical, electrical, and building items affecting work of this section are placed and ready to receive this work.

# 3.02 PREPARATION FOR SITE FINISHING

A. Set exposed fasteners. Apply wood filler in exposed fastener indentations. Sand work smooth.

# SECTION 06 41 16 ARCHITECTURAL PLASTIC LAMINATE CASEWORK

### PART 1 GENERAL

# 1.01 SECTION INCLUDES

- A. Specially fabricated plastic laminate cabinet units.
- B. Countertops.
- C. Cabinet hardware.
- D. Preparation for installing utilities.

# 1.02 REFERENCE STANDARDS

- A. ANSI A135.4 American National Standard for Basic Hardboard; 2004.
- B. ANSI A208.1 American National Standard for Particleboard; 2009.
- C. ANSI A208.2 American National Standard for Medium Density Fiberboard for Interior Use; 2009.
- D. AWI/AWMAC (QSI) Architectural Woodwork Quality Standards Illustrated; Architectural Woodwork Institute and Architectural Woodwork Manufacturers Association of Canada; 2005, 8th Ed., Version 2.0.
- E. BHMA A156.9 American National Standard for Cabinet Hardware; Builders Hardware Manufacturers Association; 2010 (ANSI/BHMA A156.9).
- F. HPVA HP-1 American National Standard for Hardwood and Decorative Plywood; Hardwood Plywood & Veneer Association; 2009 (ANSI/HPVA HP-1).
- G. NEMA LD 3 High-Pressure Decorative Laminates; National Electrical Manufacturers Association; 2005.

# **1.03 ADMINISTRATIVE REQUIREMENTS**

# 1.04 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate materials, component profiles and elevations, assembly methods, joint details, fastening methods, accessory listings, hardware location and schedule of finishes.
- C. Product Data: Provide data for hardware accessories.
- D. Samples: Submit actual samples of architectural cabinet construction, minimum 12 inches (300 mm) square, illustrating proposed cabinet, countertop, and shelf unit substrate and finish.
- E. Samples: Submit actual sample items of proposed pulls, hinges, and locksets, demonstrating hardware design, quality, and finish.

# 1.05 QUALITY ASSURANCE

- A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.
- B. Perform work in accordance with AWI/AWMAC Architectural Woodwork Quality Standards Illustrated, Custom quality, unless other quality is indicated for specific items.
- C. Perform cabinet construction in accordance with AWI/AWMAC Architectural Woodwork Quality Standards Illustrated, Custom quality, unless other quality is indicated for specific items.
- D. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

# 1.06 DELIVERY, STORAGE, AND HANDLING

A. Protect units from moisture damage.

# 1.07 FIELD CONDITIONS

A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

# PART 2 PRODUCTS

# 2.01 MANUFACTURERS

A. Single Source Responsibility: Provide and install this work from single fabricator.

# 2.02 CABINETS

- A. Cabinets :
  - 1. Finish Exposed Exterior Surfaces: Decorative laminate.
  - 2. Finish Exposed Interior Surfaces: Decorative laminate.
  - 3. Finish Semi-Exposed Interior Surfaces: Thermoset Decorative Overlay.
  - 4. Finish Concealed Surfaces: Manufacturer's option.
  - 5. Door and Drawer Front Edge Profiles: Square edge with decorative laminate.
  - 6. Door and Drawer Front Retention Profiles: Fixed panel.
  - 7. Casework Construction Type: Type A Frameless.
  - 8. Grained Face Layout for Cabinet and Door Fronts: Flush panel.
    - a. Custom Grade: Doors, drawer fronts and false fronts wood grain to run and match vertically within each cabinet unit.
  - Adjustable Shelf Loading: 50 lbs. per sq. ft..
     a. Deflection: L/144.
  - 10. Cabinet Style: Flush overlay.
  - 11. Cabinet Doors and Drawer Fronts: Flush style.
  - 12. Drawer Side Construction: Manufacturer's option per AWI grade specified.
  - 13. Drawer Construction Technique: Manufacturer's option per AWI grade specified.
- B. Casework Dimensions: Standard dimensions as indicated in AWI/AWMAC Architectural Woodwork Quality Standards Illustrated unless noted otherwise on plans.

# 2.03 PANEL MATERIALS

- A. Particleboard: ANSI A208.1; medium density industrial type as specified in AWI/AWMAC Architectural Woodwork Quality Standards Illustrated, composed of wood chips bonded with interior grade adhesive under heat and pressure; sanded faces; thickness as indicated; use for components indicated on drawings.
- B. Medium Density Fiberboard (MDF): ANSI A208.2; type as specified in AWI/AWMAC Architectural Woodwork Quality Standards Illustrated; composed of wood fibers pressure bonded with moisture resistant adhesive to suit application; sanded faces; thickness as indicated.
  - 1. Use as backing for plastic laminate unless otherwise indicated.

# 2.04 LAMINATE MATERIALS

- A. Manufacturers:
  - 1. Formica Corporation: www.formica.com.
  - 2. Panolam Industries International, Inc\\Nevamar: www.nevamar.com.
  - 3. Wilsonart International, Inc: www.wilsonart.com.
  - 4. Substitutions: See Section 01 6000 Product Requirements.
- B. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications and as follows:
  - 1. Horizontal Surfaces: HGS, 0.048 inch (1.22 mm) nominal thickness, color as selected, finish as selected.
  - 2. Vertical Surfaces: VGS, 0.028 inch (0.71 mm) nominal thickness, color as selected, finish as selected.
  - 3. Cabinet Liner: CLS, 0.020 inch (0.51 mm) nominal thickness, color as selected, finish as selected.

# 2.05 COUNTERTOPS

A. Plastic Laminate Countertops: Medium density fiberboard substrate covered with HPDL, conventionally fabricated and self-edge banded.

# 2.06 ACCESSORIES

- A. Adhesive: Type recommended by fabricator to suit application.
- B. Fasteners: Size and type to suit application.
- C. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; galvanized or chrome-plated finish in concealed locations and stainless steel or chrome-plated finish in exposed locations.
- D. Concealed Joint Fasteners: Threaded steel.
- E. Grommets: Standard plastic grommets for cut-outs, in color to match adjacent surface.

# 2.07 HARDWARE

- A. Hardware: BHMA A156.9, types as indicated for quality grade specified.
- B. Adjustable Shelf Supports: Standard side-mounted system using multiple holes for pin supports and coordinated self rests, satin chrome finish, for nominal 1 inch (25 mm) spacing adjustments.
  - 1. Locations: Typical all shelf locations unless noted otherwise.
- C. Adjustable Locking Shelf Supports: Standard side-mounted system using multiple holes for pin supports and coordinated locking shelf rests, plastic, for nominal 1 inch (25 mm) spacing adjustments.
  - 1. Color: As selected by Architect from manufacturer's full range.
  - 2. Locations: Typical at all locations indicated.
- D. Drawer and Door Pulls: "U" shaped wire pull, aluminum with satin finish, 4 inch centers ("U" shaped wire pull, aluminum with satin finish, 100 mm centers).
- E. Catches: Magnetic.
- F. Drawer Slides:
  - 1. Type: Full extension ball bearing.
  - 2. Static Load Capacity: As indicated below.
    - a. Standard Drawer Pound Class: 100.
    - b. File Drawer Pound Class: 150.
  - 3. Mounting: Side mounted.
  - 4. Stops: Integral type.
  - 5. Features: Provide self closing/stay closed type.
  - 6. Products:
    - a. Accuride International, Inc: www.accuride.com.
    - b. Grass America Inc: www.grassusa.com.
    - c. Knape & Vogt Manufacturing Company: www.knapeandvogt.com.
    - d. Substitutions: See Section 01 6000 Product Requirements.
- G. Hinges: European style concealed self-closing type, steel with satin finish.
  - 1. Products:
    - a. Grass America Inc: www.grassusa.com.
    - b. Hardware Resources: www.hardwareresources.com.
    - c. Julius Blum, Inc: www.blum.com.
    - d. Substitutions: See Section 01 6000 Product Requirements.

# 2.08 FABRICATION

- A. Cabinet Style: Flush overlay.
- B. Cabinet Doors and Drawer Fronts: Flush style.
- C. Drawer Construction Technique: Any allowed by AWI grade specified .

- D. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.
- E. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.
- F. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.
- G. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises. Locate counter butt joints minimum 2 feet from sink cut-outs. (Locate counter butt joints minimum 600 mm from sink cut-outs.)
- H. Provide cutouts for plumbing fixtures, inserts, outlet boxes, and fixtures and fittings. Verify locations of cutouts from on-site dimensions. Seal cut edges.
- I. Shop prepare and identify components of assemblies for matching during site assembly.
- J. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

# PART 3 EXECUTION

# 3.01 EXAMINATION

- A. Verify adequacy of backing and support framing.
- B. Verify location and sizes of utility rough-in associated with work of this section.

### 3.02 INSTALLATION

- A. Use fixture attachments in concealed locations for wall mounted components.
- B. Use concealed joint fasteners to align and secure adjoining cabinet units and countertops.
- C. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch (1 mm). Do not use additional overlay trim for this purpose.
- D. Secure cabinets and counter bases to floor using appropriate angles and anchorages.
- E. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.
- F. Install work in accordance with Premium grade, Section 1700, QSI.

# 3.03 ADJUSTING

- A. Adjust installed work.
- B. Adjust moving or operating parts to function smoothly and correctly.

#### 3.04 CLEANING

A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

#### SECTION 07 92 00 JOINT SEALANTS

### PART 1 GENERAL

# 1.01 SECTION INCLUDES

- A. Nonsag gunnable joint sealants.
- B. Self-leveling pourable joint sealants.
- C. Joint backings and accessories.

### 1.02 REFERENCE STANDARDS

- A. ASTM C661 Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer 2015.
- B. ASTM C834 Standard Specification for Latex Sealants 2017.
- C. ASTM C920 Standard Specification for Elastomeric Joint Sealants 2018.
- D. ASTM C1193 Standard Guide for Use of Joint Sealants 2016.
- E. ASTM C1248 Standard Test Method for Staining of Porous Substrate by Joint Sealants 2018.
- F. ASTM C1330 Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants 2018.

### 1.03 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
  - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
  - 2. List of backing materials approved for use with the specific product.
  - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
  - 4. Substrates the product should not be used on.
  - 5. Substrates for which use of primer is required.
  - 6. Installation instructions, including precautions, limitations, and recommended backing materials and tools.
  - 7. Sample product warranty.
  - 8. Certification by manufacturer indicating that product complies with specification requirements.
- C. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.
- D. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
- E. Samples for Verification: Where custom sealant color is specified, obtain directions from and submit at least two physical samples for verification of color of each required sealant.

#### 1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- B. Installer Qualifications: Company specializing in performing the work of this section and with at least three years of documented experience.

### 1.05 WARRANTY

- A. See Section 01 78 00 Closeout Submittals, for additional warranty requirements.
- B. Correct defective work within a five year period after Date of Substantial Completion.

C. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

# PART 2 PRODUCTS

# 2.01 JOINT SEALANT APPLICATIONS

- A. Scope:
  - 1. Exterior Joints: Seal open joints, whether or not the joint is indicated on drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to, the following items.
    - a. Wall expansion and control joints.
    - b. Joints between door, window, and other frames and adjacent construction.
    - c. Joints between different exposed materials.
    - d. Openings below ledge angles in masonry.
    - e. Other joints indicated below.
  - 2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
    - a. Joints between door, window, and other frames and adjacent construction.
  - 3. Do not seal the following types of joints.
    - a. Intentional weepholes in masonry.
    - b. Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device.
    - c. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
    - d. Joints where installation of sealant is specified in another section.
    - e. Joints between suspended panel ceilings/grid and walls.
- B. Exterior Joints: Use non-sag non-staining silicone sealant, unless otherwise indicated.
- C. Interior Joints: Use non-sag polyurethane sealant, unless otherwise indicated.
   1. Wall and Ceiling Joints in Non-Wet Areas: Acrylic emulsion latex sealant.
- D. Interior Wet Areas: Bathrooms and restrooms; fixtures in wet areas include plumbing fixtures, countertops, cabinets, and other similar items.

#### 2.02 NONSAG JOINT SEALANTS

- 1. Hardness Range: 15 to 35, Shore A, when tested in accordance with ASTM C661.
- 2. Color: To be selected by from manufacturer's full range.
- B. Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
  - 1. Color: White.
  - 2. Hardness Range: 20 to 35, Shore A, when tested in accordance with ASTM C661.
  - 3. Color: To be selected by from manufacturer's full range.
- C. Non-Sag "Traffic-Grade" Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; explicitly approved by manufacturer for continuous water immersion and traffic without the necessity to recess sealant below traffic surface.
  - 1. Movement Capability: Plus and minus 25 percent, minimum.
  - 2. Hardness Range: 40 to 50, Shore A, when tested in accordance with ASTM C661.
  - 3. Color: To be selected by from manufacturer's full range.
  - 4. Color: To be selected by from manufacturer's full range.
  - 5. Grade: ASTM C834; Grade NF.

# 2.03 SELF-LEVELING SEALANTS

- A. Self-Leveling Polyurethane Sealant: ASTM C920, Grade P, Uses M and A; single or multicomponent; explicitly approved by manufacturer for traffic exposure; not expected to withstand continuous water immersion.
  - 1. Movement Capability: Plus and minus 25 percent, minimum.
  - 2. Color: Gray.

# 2.04 ACCESSORIES

- A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
  - 1. Type for Joints Not Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type O Open Cell Polyurethane.
- B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.
- C. Masking Tape: Self-adhesive, nonabsorbent, non-staining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.
- D. Joint Cleaner: Non-corrosive and non-staining type, type recommended by sealant manufacturer; compatible with joint forming materials.
- E. Primers: Type recommended by sealant manufacturer to suit application; non-staining.

# PART 3 EXECUTION

# 3.01 EXAMINATION

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.

### 3.02 PREPARATION

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

#### 3.03 INSTALLATION

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Install bond breaker backing tape where backer rod cannot be used.
- D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- E. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
- F. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

### SECTION 08 12 13 HOLLOW METAL FRAMES

### PART 2 PRODUCTS

### 1.01 PERFORMANCE REQUIREMENTS

- A. Door Frame Type: Provide hollow metal door frames with [\_\_\_\_\_].
  1. See drawings for locations of each type of frame.
- B. Steel Sheet: Comply with one or more of the following requirements; galvannealed steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
- C. Accessibility: Comply with ICC A117.1 and ADA Standards.
- D. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior frame that is also indicated as being sound-rated must comply with the requirements specified for exterior frames and for sound-rated frames; where two requirements conflict, comply with the most stringent.
- E. Hardware Preparations, Selections and Locations: Comply with BHMA A156.115, NAAMM HMMA 830, NAAMM HMMA 831 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

# 1.02 FINISHES

A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

### **1.03 ACCESSORIES**

A. Silencers: Resilient rubber, fitted into drilled hole; 3 on strike side of single door, 3 on center mullion of pairs, and 2 on head of pairs without center mullions.
#### SECTION 08 14 16 FLUSH WOOD DOORS

### PART 1 GENERAL

# 1.01 REFERENCE STANDARDS

- A. AWI/AWMAC/WI (AWS) Architectural Woodwork Standards, 2nd Edition 2014, with Errata (2016).
- B. AWMAC/WI (NAAWS) North American Architectural Woodwork Standards, U.S. Version 4.0 2021.
- C. WDMA I.S. 1A Interior Architectural Wood Flush Doors 2013.

### 1.02 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.
- C. Shop Drawings: Show doors and frames, elevations, sizes, types, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.
   1. Provide information as required by AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS).
- D. Samples: Submit two samples of door construction, 12 by 12 inch (300 by 300 mm) in size cut from top corner of door.
- E. Samples: Submit two samples of door veneer, 12 by 12 inch (300 by 300 mm) in size illustrating wood grain, stain color, and sheen.
- F. Manufacturer's Installation Instructions: Indicate special installation instructions.
- G. Warranty, executed in Owner's name.

#### 1.03 WARRANTY

- A. See Section 01 78 00 Closeout Submittals, for additional warranty requirements.
- B. Interior Doors: Provide manufacturer's warranty for the life of the installation.
- C. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

# PART 2 PRODUCTS

# 2.01 MANUFACTURERS

- A. Wood Veneer Faced Doors:
  - 1. Graham Wood Doors: www.grahamdoors.com.
  - 2. Eggers Industries: www.eggersindustries.com.
  - 3. Marshfield DoorSystems, Inc: www.marshfielddoors.com.
  - 4. VT Industries, Inc.: www.vtindustries.com.
  - 5. Chappell Door Company: www.chappelldoor.net.
  - 6. Substitutions: See Section 01 60 00 Product Requirements.

# 2.02 DOORS

- A. All Interior Doors: See drawings for locations and additional requirements.
  - 1. Quality Standard: Custom Grade, Heavy Duty performance, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
  - 2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.
- B. Interior Doors: 1-3/4 inches (44 mm) thick unless otherwise indicated; flush construction.
  - 1. Provide solid core doors at each location.
  - 2. Wood veneer facing with factory transparent finish.

# 2.03 DOOR AND PANEL CORES

A. Non-Rated Solid Core and 20 Minute Rated Doors: Type particleboard core (PC), plies and faces as indicated.

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# 2.04 DOOR FACINGS

- A. Veneer Facing for Transparent Finish: Species to match existing, veneer grade in accordance with quality standard indicated, plain sliced (flat cut), with book match between leaves of veneer, running match of spliced veneer leaves assembled on door or panel face.
  - 1. Vertical Edges: Same species as face veneer.

# 2.05 DOOR CONSTRUCTION

- A. Fabricate doors in accordance with door quality standard specified.
- B. Cores Constructed with stiles and rails:
  - 1. Provide solid blocks at lock edge and top of door for closer for hardware reinforcement.
  - 2. Provide solid blocking for other throughbolted hardware.
- C. Where supplementary protective edge trim is required, install trim after veneer facing has been applied full-width.
- D. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.
- E. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.
- F. Provide edge clearances in accordance with the quality standard specified.

# 2.06 FACTORY FINISHING - WOOD VENEER DOORS

- A. Finish work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 5 Finishing for grade specified and as follows:
  - 1. Transparent:
    - a. System 11, Polyurethane, Catalyzed.
    - b. Stain: Match existing
    - c. Sheen: Match existing .
- B. Factory finish doors in accordance with approved sample.
- C. Seal door top edge with color sealer to match door facing.

# PART 3 EXECUTION

# 3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

# 3.02 TOLERANCES

- A. Comply with specified quality standard for fit and clearance tolerances.
  - 1. No door shall be undercut more than 3/4 inch (19 mm).
  - 2. Undercut clearances:
    - a. From top of decorative floor covering: 1/2 inch (12.7 mm).
    - b. From top of non-combustible floor: 3/4 inch (19 mm) maximum.
    - c. From top of non-combustible sill or threshold: 3/8 inch (9.5 mm) maximum.
- B. Comply with specified quality standard for telegraphing, warp, and squareness.

# 3.03 ADJUSTING

- A. Adjust doors for smooth and balanced door movement.
- B. Adjust closers for full closure.

#### SECTION 08 71 00 DOOR HARDWARE

#### PART 1 GENERAL

### **1.01 SECTION INCLUDES**

A. Hardware for doors.

### 1.02 PRICE AND PAYMENT PROCEDURES

A. Allowances: See Section 01 21 00 - Allowances, for cash allowances affecting this section.

#### 1.03 REFERENCE STANDARDS

- A. ADA Standards Americans with Disabilities Act (ADA) Standards for Accessible Design 2010.
- B. BHMA A156.1 American National Standard for Butts and Hinges 2016.
- C. BHMA A156.4 American National Standard for Door Controls Closers 2013.
- D. BHMA A156.6 American National Standard for Architectural Door Trim 2015.
- E. BHMA A156.16 American National Standard for Auxiliary Hardware 2018.
- F. ICC A117.1 Accessible and Usable Buildings and Facilities 2017.
- G. NFPA 101 Life Safety Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

#### 1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the manufacture, fabrication, and installation of products that door hardware is installed on.
- B. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.
- C. Preinstallation Meeting: Convene a preinstallation meeting one week prior to commencing work of this section; attendance is required by affected installers and the following:
  - 1. Contractor
  - 2. Installer's Architectural Hardware Consultant (AHC).
  - 3. Hardware Installer.
  - 4. Owner's Security Consultant.
- D. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.
- E. Keying Requirements Meeting:
  - 1. Schedule meeting at project site prior to Contractor occupancy.
  - 2. Attendance Required:
    - a. Contractor.
    - b. Owner.
    - c. Architect
    - d. Installer's Architectural Hardware Consultant (AHC).
    - e. Hardware Installer.
    - f. Owner's Security Consultant.
  - 3. Agenda:
    - a. Establish keying requirements.
    - b. Verify locksets and locking hardware are functionally correct for project requirements.
    - c. Verify that keying and programming complies with project requirements.
    - d. Establish keying submittal schedule and update requirements.
  - 4. Incorporate "Keying Requirements Meeting" decisions into keying submittal upon review of door hardware keying system including, but not limited to, the following:
    - a. Access control requirements.
    - b. Key control system requirements.
    - c. Schematic diagram of preliminary key system.

- 5. Record minutes and distribute copies within two days after meeting to participants, with two copies to , Owner, participants, and those affected by decisions made.
- 6. Deliver established keying requirements to manufacturers.

### 1.05 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project, and includes construction details, material descriptions, finishes, and dimensions and profiles of individual components.
- C. Shop Drawings Door Hardware Schedule: Submit detailed listing that includes each item of hardware to be installed on each door. Use door numbering scheme as included in Contract Documents.
  - 1. Prepared by or under supervision of Architectural Hardware Consultant (AHC).
  - 2. List groups and suffixes in proper sequence.
  - 3. Provide complete description for each door listed.
  - 4. Provide manufacturer's and product names, and catalog numbers; include functions, types, styles, sizes and finishes of each item.
  - 5. Include account of abbreviations and symbols used in schedule.
- D. Samples for Verification:
  - 1. Submit minimum size of 2 by 4 inch (51 by 102 mm) for sheet samples, and minimum length of 4 inch (102 mm) for other products.
  - 2. Submit one (1) sample of hinge, latchset, lockset, closer, and [\_\_\_\_] illustrating style, color, and finish.
  - 3. Return full-size samples to Contractor.
  - 4. Submit product description with samples.
- E. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- F. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
- G. Keying Schedule:
  - 1. Submit three (3) copies of Keying Schedule in compliance with requirements established during Keying Requirements Meeting unless otherwise indicated.
- H. Warranty: Submit manufacturer's warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

# 1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years of documented experience.
- B. Installer Qualifications: Company specializing in performing work of the type specified for commercial door hardware with at least three years of documented experience.

#### 1.07 DELIVERY, STORAGE, AND HANDLING

A. Package hardware items individually; label and identify each package with door opening code to match door hardware schedule.

# 1.08 WARRANTY

- A. See Section 01 78 00 Closeout Submittals, for additional warranty requirements.
- B. Warranty against defects in material and workmanship for period indicated, from Date of Substantial Completion.
  - 1. Closers: Ten years, minimum.
  - 2. Locksets and Cylinders: Five years, minimum.
  - 3. Other Hardware: Two years, minimum.

# PART 2 PRODUCTS

# 2.01 DESIGN AND PERFORMANCE CRITERIA

- A. Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent indicated.
- B. Provide individual items of single type, of same model, and by same manufacturer.
- C. Provide door hardware products that comply with the following requirements:
  - 1. Applicable provisions of federal, state, and local codes.
  - 2. Accessibility: ADA Standards and ICC A117.1.
  - 3. Applicable provisions of NFPA 101.
- D. Lock Function: Provide lock and latch function numbers and descriptions of manufacturer's series. Refer to Shop Drawing submittal of Door Hardware Schedule.
- E. Fasteners:
  - 1. Provide fasteners of proper type, size, quantity, and finish that comply with commercially recognized standards for proposed applications.
    - a. Aluminum fasteners are not permitted.
    - b. Provide phillips flat-head screws with heads finished to match door surface hardware unless otherwise indicated.
  - Provide machine screws for attachment to reinforced hollow metal and aluminum frames.
     a. Self-drilling (Tek) type screws are not permitted.
  - 3. Provide spacers or sex bolts with sleeves for through bolting of hollow metal doors and frames.

### 2.02 HINGES

- A. Hinges: Comply with BHMA A156.1, Grade 1.
  - 1. Provide hinges on every swinging door.
  - 2. Provide five-knuckle full mortise butt hinges unless otherwise indicated.
  - 3. Provide ball-bearing hinges at each door with closer.
  - 4. Provide following quantity of butt hinges for each door:
    - a. Doors From 60 inches (1.5 m) High up to 90 inches (2.3 m) High: Three hinges.
    - b. Doors 90 inches (2.3 m) High up to 120 inches (3 m) High: Four hinges.

#### 2.03 LOCK CYLINDERS

- A. Lock Cylinders: Provide key access on outside of each lock, unless otherwise indicated.
  - 1. Provide cylinders from same manufacturer as locking device.
  - 2. Provide cams and/or tailpieces as required for locking devices.

# 2.04 MORTISE LOCKS

- A. Manufacturers:
  - 1. Yale; an Assa Abloy Group company; 8800FL Series: www.assaabloydss.com.
  - 2. Best, dormakaba Group; 45H Series: www.bestaccess.com/#sle.
  - 3. Sargent Manufacturing Company; 8200 Series: www.sargentlock.com
  - 4. Substitutions: See Section 01 60 00 Product Requirements.

#### 2.05 DOOR PULLS AND PUSH PLATES

- A. Door Pulls and Push Plates: Comply with BHMA A156.6.
  - 1. Pull Type: Straight, unless otherwise indicated.
  - Push Plate Type: Flat, with square corners, unless otherwise indicated.
     a. Edges: Beveled, unless otherwise indicated.
  - 3. Material: Stainless steel, unless otherwise indicated.
  - 4. On solid doors, provide matching door pull and push plate on opposite faces.
  - 5. On glazed storefront doors, provide matching door pulls/push plates on both faces unless otherwise indicated.

# 2.06 CLOSERS

- A. Manufacturers; Surface Mounted:
  - 1. Corbin Russwin, Norton, Rixson, Sargent, or Yale; an Assa Abloy Group company; 7500: www.assaabloydss.com.
  - 2. Stanley, dormakaba Group; D-4550: www.stanleyhardwarefordoors.com/#sle.
  - 3. Yale; an Assa Abloy Group company; 4400 Series: www.assaabloydss.com.
  - 4. Substitutions: See Section 01 60 00 Product Requirements.
- B. Closers: Comply with BHMA A156.4, Grade 1.
  - 1. Type: Surface mounted to door.
  - 2. Provide door closer on each exterior door.
  - 3. Where an overlapping astragal is included on pairs of swinging doors, provide coordinator to ensure door leaves close in proper order.
  - 4. At corridor entry doors, mount closer on room side of door.
  - 5. At outswinging exterior doors, mount closer on interior side of door.

### 2.07 DOOR HOLDERS

- A. Door Holders: Comply with BHMA A156.16, Grade 1.
  - 1. Type: Lever, or kick down stop, with rubber bumper at bottom end.
  - 2. Material: Stainless steel.

### 2.08 FLOOR STOPS

- A. Floor Stops: Comply with BHMA A156.16, Grade 1 and Resilient Material Retention Test as described in this standard.
  - 1. Provide floor stops when wall surface is not available; be cautious not to create a tripping hazard.
  - 2. Type: Manual hold-open, with pencil floor stop.
  - 3. Material: Stainless steel housing with rubber insert.

# 2.09 WALL STOPS

- A. Wall Stops: Comply with BHMA A156.16, Grade 1 and Resilient Material Retention Test as described in this standard.
  - 1. Provide wall stops to prevent damage to wall surface upon opening door.
  - 2. Type: Bumper, concave, wall stop.
  - 3. Material: Stainless steel housing with rubber insert.

# 2.10 SILENCERS

- A. Silencers: Provide at equal locations on door frame to mute sound of door's impact upon closing.
  - 1. Single Door: Provide three on strike jamb of frame.
  - 2. Pair of Doors: Provide two on head of frame, one for each door at latch side.
  - 3. Material: Rubber, gray color.

#### 2.11 FINISHES

A. Finishes: Provide door hardware of same finish, unless otherwise indicated.1. To be selected by Architect

# PART 3 EXECUTION

# 3.01 EXAMINATION

A. Verify that doors and frames are ready to receive this work; labeled, fire-rated doors and frames are properly installed, and dimensions are as indicated on shop drawings.

### 3.02 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions and applicable codes.
- B. Use templates provided by hardware item manufacturer.

# 3.03 ADJUSTING

- A. Adjust work under provisions of Section 01 70 00 Execution and Closeout Requirements.
- B. Adjust hardware for smooth operation.

# 3.04 CLEANING

- A. Clean finished hardware in accordance with manufacturer's written instructions after final adjustments have been made.
- B. Clean adjacent surfaces soiled by hardware installation.

# 3.05 PROTECTION

- A. Protect finished Work under provisions of Section 01 70 00 Execution and Closeout Requirements.
- B. Do not permit adjacent work to damage hardware or finish.

#### SECTION 09 05 61 COMMON WORK RESULTS FOR FLOORING PREPARATION

#### PART 1 GENERAL

# **1.01 SECTION INCLUDES**

- A. This section applies to floors identified in contract documents that are receiving the following types of floor coverings:
  - 1. LVT flooring.
  - 2. Broadloom carpet.
- B. Removal of existing floor coverings.

### 1.02 REFERENCE STANDARDS

- A. ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring 2021.
- B. ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride 2016a.
- C. ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes 2019a.
- D. RFCI (RWP) Recommended Work Practices for Removal of Resilient Floor Coverings 2011.

### **1.03 ADMINISTRATIVE REQUIREMENTS**

A. Coordinate scheduling of cleaning and testing, so that preliminary cleaning has been completed for at least 24 hours prior to testing.

#### 1.04 SUBMITTALS

- A. Visual Observation Report: For existing floor coverings to be removed.
- B. Floor Covering and Adhesive Manufacturers' Product Literature: For each specific combination of substrate, floor covering, and adhesive to be used; showing:
  - 1. Moisture and alkalinity (pH) limits and test methods.
  - 2. Manufacturer's required bond/compatibility test procedure.
- C. Adhesive Bond and Compatibility Test Report.
- D. Copy of RFCI (RWP).

# 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, handle, and protect products in accordance with manufacturer's instructions and recommendations.
- B. Deliver materials in manufacturer's packaging; include installation instructions.
- C. Keep materials from freezing.

# PART 2 PRODUCTS

# PART 3 EXECUTION

# 3.01 REMOVAL OF EXISTING FLOOR COVERINGS

- A. Comply with local, State, and federal regulations and recommendations of RFCI Recommended Work Practices for Removal of Resilient Floor Coverings, as applicable to floor covering being removed.
- B. Dispose of removed materials in accordance with local, State, and federal regulations and as specified.

#### 3.02 PRELIMINARY CLEANING

- A. Clean floors of dust, solvents, paint, wax, oil, grease, asphalt, residual adhesive, adhesive removers, film-forming curing compounds, sealing compounds, alkaline salts, excessive laitance, mold, mildew, and other materials that might prevent adhesive bond.
- B. Do not use solvents or other chemicals for cleaning.

# 3.03 MOISTURE VAPOR EMISSION TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. Where this specification conflicts with the referenced test method, comply with the requirements of this section.
- C. Test in accordance with ASTM F1869 and as follows.
- D. Plastic sheet test and mat bond test may not be substituted for the specified ASTM test method, as those methods do not quantify the moisture content sufficiently.
- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if test values exceed 3 pounds per 1000 square feet (1.4 kg per 93 square meters) per 24 hours.
- F. Report: Report the information required by the test method.

# 3.04 INTERNAL RELATIVE HUMIDITY TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. Where this specification conflicts with the referenced test method, comply with the requirements of this section.
- C. Test in accordance with ASTM F2170 Procedure A and as follows.
- D. Testing with electrical impedance or resistance apparatus may not be substituted for the specified ASTM test method, as the values determined are not comparable to the ASTM test values and do not quantify the moisture content sufficiently.
- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if any test value exceeds 75 percent relative humidity.
- F. Report: Report the information required by the test method.

# 3.05 ALKALINITY TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. The following procedure is the equivalent of that described in ASTM F710, repeated here for the Contractor's convenience.
- C. Use a wide range alkalinity (pH) test paper, its associated chart, and distilled or deionized water.
- D. Place several drops of water on a clean surface of concrete, forming a puddle approximately 1 inch (25 mm) in diameter. Allow the puddle to set for approximately 60 seconds, then dip the alkalinity (pH) test paper into the water, remove it, and compare immediately to chart to determine alkalinity (pH) reading.
- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if alkalinity (pH) test value is over 10.

#### 3.06 PREPARATION

- A. See individual floor covering section(s) for additional requirements.
- B. Comply with recommendations of testing agency.
- C. Comply with requirements and recommendations of floor covering manufacturer.
- D. Fill and smooth surface cracks, grooves, depressions, control joints and other non-moving joints, and other irregularities with patching compound.
- E. Do not fill expansion joints, isolation joints, or other moving joints.

# 3.07 PROTECTION

A. Cover prepared floors with building paper or other durable covering.

#### SECTION 09 21 16 GYPSUM BOARD ASSEMBLIES

#### PART 1 GENERAL

### **1.01 SECTION INCLUDES**

- A. Performance criteria for gypsum board assemblies.
- B. Acoustic insulation.
- C. Gypsum wallboard.
- D. Joint treatment and accessories.

# 1.02 REFERENCE STANDARDS

- A. ASTM C475/C475M Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board 2017.
- B. ASTM C840 Standard Specification for Application and Finishing of Gypsum Board 2020.
- C. ASTM C954 Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness 2018.
- D. ASTM C1002 Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs 2020.
- E. ASTM C1396/C1396M Standard Specification for Gypsum Board 2017.
- F. ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber 2016.
- G. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials 2021a.
- H. ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements 2009 (Reapproved 2016).
- I. ASTM E413 Classification for Rating Sound Insulation 2016.
- J. GA-216 Application and Finishing of Gypsum Panel Products 2018.
- K. ICC (IBC) International Building Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- L. UL (FRD) Fire Resistance Directory Current Edition.

# 1.03 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate special details associated with acoustic seals.
- C. Product Data: Provide data on gypsum board, accessories, and joint finishing system.
- D. Product Data: Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.

#### 1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing gypsum board installation and finishing, with minimum three years of documented experience.
- B. Copies of Documents at Site: Maintain at the project site a copy of each referenced document that prescribes execution requirements.

# PART 2 PRODUCTS

#### 2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C840 and GA-216.
- B. Interior Partitions, Indicated as Acoustic: Provide completed assemblies with the following characteristics:

- 1. Acoustic Attenuation: STC as indicated calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.
- C. Fire Rated Assemblies: Provide completed assemblies complying with applicable code.
  - 1. Fire Rated Partitions: [\_\_\_\_\_].
  - 2. Head of Fire Rated Partitions: As indicated on plans.
  - 3. UL Assembly Numbers: Provide construction equivalent to that listed for the particular assembly in the current UL (FRD).

#### 2.02 BOARD MATERIALS

- A. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
  - 1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
  - 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
    - a. Mold-resistant board is required whenever board is being installed before the building is enclosed and conditioned.
    - b. Mold resistant board is required at all locations.
  - 3. At Assemblies Indicated with Fire-Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
    - a. Thickness: 5/8 inch (16 mm).
  - 4. Thickness non-rated assemblies:
    - a. Vertical Surfaces: 5/8 inch (16 mm).
    - b. Ceilings: 5/8 inch (16 mm).
  - 5. Mold Resistant Paper Faced Products:
    - a. American Gypsum Company; M-Bloc.
    - b. CertainTeed Corporation; M2Tech 1/2" Moisture & Mold Resistant Drywall.
    - c. National Gypsum Company; Gold Bond XP Gypsum Board.
    - d. Substitutions: See Section 01 60 00 Product Requirements.

#### 2.03 GYPSUM WALLBOARD ACCESSORIES

- A. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
- B. High Build Drywall Surfacer: Required for all existing walls that had VWC removed. Vinyl acrylic latex-based coating for spray application, designed to take the place of skim coating and separate paint primer in achieving Level 5 finish.
- C. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inch (0.84 mm) in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion resistant.

#### PART 3 EXECUTION

#### 3.01 EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

# 3.02 ACOUSTIC ACCESSORIES INSTALLATION

- A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- B. Acoustic Sealant: Install in accordance with manufacturer's instructions.
  - 1. Place two beads continuously on substrate before installation of perimeter framing (track) members.
  - 2. Place continuous bead at perimeter of each layer of gypsum board.
  - 3. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes.
    - a. Provide fire rated acoustical sealant in all rated walls in strict compliance with requirements of assembly listing.

# 3.03 BOARD INSTALLATION

- A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.
- B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
  - 1. Exception: Tapered edges to receive joint treatment at right angles to framing.
- C. Double-Layer Non-Rated: Use gypsum board for first layer, placed parallel to framing or furring members, with ends and edges occurring over firm bearing. Use glass mat faced gypsum board at exterior walls and at other locations as indicated. Place second layer perpendicular to framing or furring members. Offset joints of second layer from joints of first layer.
- D. Fire-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.

### 3.04 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints consistent with lines of building spaces and as directed.
   1. Not more than 30 feet (10 meters) apart on walls and ceilings over 50 feet (16 meters) long.
- B. Corner Beads: Install at external corners, using longest practical lengths.
- C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

### 3.05 JOINT TREATMENT

- A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
  - 1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
  - 2. Level 3: Walls to receive textured wall finish.
- B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
  - 1. Feather coats of joint compound so that camber is maximum 1/32 inch (0.8 mm).
- C. Fill and finish joints and corners of cementitious backing board as recommended by manufacturer.

#### 3.06 TOLERANCES

A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet (3 mm in 3 m) in any direction.

#### SECTION 09 51 00 ACOUSTICAL CEILINGS

### PART 1 GENERAL

# **1.01 SECTION INCLUDES**

A. Acoustical units.

# 1.02 REFERENCE STANDARDS

- A. ASTM C423 09a Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
- B. ASTM C635/C635M Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings 2017.
- C. ASTM C636/C636M Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels 2013.
- D. ASTM E1264 Standard Classification for Acoustical Ceiling Products 2019.
- E. ASTM E1414 / E1414M 11a Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum.

### **1.03 ADMINISTRATIVE REQUIREMENTS**

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Do not install acoustical units until after interior wet work is dry.

### 1.04 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate grid layout and related dimensioning and junctions with other ceiling finishes.
- C. Product Data: Provide data on suspension system components and acoustical units.
- D. Samples: Submit two full size samples illustrating material and finish of acoustical units.
- E. Samples: Submit two samples each, [\_\_\_] inches ([\_\_\_] mm) long, of suspension system main runner, cross runner, and perimeter molding.
- F. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  1. See Section 01 60 00 Product Requirements, for additional provisions.

# 1.05 QUALITY ASSURANCE

- A. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- B. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

#### **1.06 FIELD CONDITIONS**

A. Maintain uniform temperature of minimum 60 degrees F (16 degrees C), and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

#### **1.07 MAINTENANCE MATERIALS**

- A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials described below that match products installed. Packaged with protective covering for storage and identified with appropriate labels.
  - 1. Acoustical Ceiling Units: Furnish quantity of full-size units equal to five (5) percent of amount installed.

2. Exposed Suspension System Components: Furnish quantity of each exposed suspension component equal to two (2) percent of amount installed.

### PART 2 PRODUCTS

# 2.01 MANUFACTURERS

- A. Acoustic Tiles/Panels:
  - 1. Armstrong World Industries, Inc: www.armstrong.com/#sle.
  - 2. CertainTeed Corporation: www.certainteed.com/#sle.
  - 3. USG: www.usg.com/#sle.
  - 4. Substitutions: See Section 01 60 00 Product Requirements.
- B. Suspension Systems:
  - 1. Same as for acoustical units.
  - 2. Substitutions: See Section 01 60 00 Product Requirements.

### 2.02 ACOUSTICAL UNITS

- A. Acoustical Units General: ASTM E1264, Class A.
- B. Acoustical PanelsType ACT-1: Painted mineral fiber,{\rs\#1} Type III, with the following characteristics:
  - 1. Size: 24 by 24 inches (600 by 600 mm).
  - 2. Thickness: 5/8 inches (15 mm).
  - 3. Composition: Wet felted.
  - 4. Light Reflectance: 0.83 percent, determined in accordance with ASTM E1264.
  - 5. NRC Range: 0.55, determined as specified in ASTM C 423.
  - 6. Ceiling Attenuation Class (CAC): 33, determined as specified in ASTM E 1414.
  - 7. Edge: Tegular.
  - 8. Surface Color: White.
  - 9. Surface Pattern: Perforated, small holes.
  - 10. Suspension System: Exposed gridType [\_\_\_\_].
  - 11. Product: USG Radar 2120 or approved substitution.

#### 2.03 SUSPENSION SYSTEM(S)

- A. Metal Suspension Systems General: Complying with ASTM C635/C635M; die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required.
- B. Exposed Steel Suspension System: Formed steel, commercial quality cold rolled; intermediateduty.
  - 1. Profile: Tee; 15/16 inch (24 mm) wide face.
  - 2. Construction: Double web.
  - 3. Finish: White painted.

# 2.04 ACCESSORIES

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
- B. Perimeter Moldings: Same material and finish as grid.
  - 1. At Exposed Grid: Provide L-shaped molding for mounting at same elevation as face of grid.
- C. Touch-up Paint: Type and color to match acoustical and grid units.

# PART 3 EXECUTION

# 3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.

# 3.02 INSTALLATION - SUSPENSION SYSTEM

- A. Install suspension system in accordance with ASTM C636/C636M and manufacturer's instructions and as supplemented in this section.
- B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- C. Locate system on room axis according to reflected ceiling plan.
  - 1. Where no reflected ceiling plan is indicated; layout system to a balanced grid design with no edge units smaller than 4 inches (100 mm), unless directed otherwise by Architect.
- D. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.
- E. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- F. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- G. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- H. Support fixture loads using supplementary hangers located within 6 inches (150 mm) of each corner, or support components independently.
- I. Do not eccentrically load system or induce rotation of runners.
- J. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
  - 1. Use longest practical lengths.
  - 2. Miter corners.
- K. Form expansion joints as detailed. Form to accommodate plus or minus 1 inch (25 mm) movement. Maintain visual closure.

# 3.03 INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Lay directional patterned units with pattern parallel to longest room axis.
- D. Fit border trim neatly against abutting surfaces.
- E. Install units after above-ceiling work is complete.
- F. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- G. Cutting Acoustical Units:
  - 1. Cut to fit irregular grid and perimeter edge trim.
  - 2. Make field cut edges of same profile as factory edges.
  - 3. Double cut and field paint exposed reveal edges.
- H. Where round obstructions occur, provide preformed closures to match perimeter molding.

# 3.04 TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet (3 mm in 3 m).
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

#### SECTION 09 65 00 RESILIENT FLOORING

#### PART 1 GENERAL

# 1.01 SECTION INCLUDES

- A. Resilient base.
- B. Installation accessories.

### 1.02 REFERENCE STANDARDS

- A. ASTM F1861 Standard Specification for Resilient Wall Base 2021.
- B. ASTM F1913 Standard Specification for Vinyl Sheet Floor Covering Without Backing 2019.

### 1.03 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- C. Selection Samples: Submit manufacturer's complete set of color samples for Architect's initial selection.
- D. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

### 1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing specified flooring with minimum three years documented experience.

#### 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect materials from damage by storing per manufacturer's recommendations.
- B. Deliver materials in good condition to the jobsite in the manufacturer's original unopened containers that bear the name and brand of the manufacturer, project identification, and shipping and handling instructions.
- C. Store materials in a clean, dry, enclosed space off the ground, and protected from the weather and from extremes of heat and cold. Protect adhesives from freezing. Store flooring, adhesives and accessories in the spaces where they will be installed for at least 48 hours before beginning installation.

# **1.06 FIELD CONDITIONS**

- A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F (21 degrees C) to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F (13 degrees C).
- B. Maintain a minimum temperature in the spaces to receive the flooring and accessories of 65 degrees F (18 degrees C) and a maximum temperature of 100 degrees F (38 degrees C) for at least 48 hours before, during, and for not less than 48 hours after installation. Thereafter, maintain a minimum temperature of 55 degrees F (13 degrees C) in areas where work is completed. Protect all materials from the direct flow of heat from hot-air registers, radiators, or other heating fixtures and appliances.

#### 1.07 QUALITY ASSURANCE

- A. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installing work similar to that required for this project with minimum three years of documented experience.
- B. Single-Source Responsibility: Obtain types of flooring and accessories and adhesive from a single manufacturer.

# 1.08 WARRANTY

- A. Manufacturer's Materials Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.
  - 1. 1 year limited warranty commencing on Date of Final Acceptance.

# **1.09 MAINTENANCE MATERIALS**

- A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials described below that match products installed. Packaged with protective covering for storage and identified with appropriate labels.
  - Vinyl Composition Tile and Resilient Base: Furnish quantity of full-size units equal to five (5) percent for each type, composition, color, pattern, size and shape installed.

# PART 2 PRODUCTS

# 2.01 SHEET FLOORING

- A. Vinyl Sheet Flooring Type [\_\_\_\_]: Homogeneous without backing, with color and pattern throughout full thickness.
  - 1. Manufacturers:
    - a. Shannon Specialty Floors, Inc; TEKNOFLOR Medscapes HPD: www.shannonspecialtyfloors.com/#sle.
  - 2. Minimum Requirements: Comply with ASTM F1913.
  - 3. Thickness: 0.080 inch (2.0 mm) nominal.

# 2.02 RESILIENT BASE

- A. Resilient Base: ASTM F1861, Type TS rubber, vulcanized thermoset; top set Style B, Cove.
  - 1. Manufacturers:
    - a. Burke Flooring: www.burkeflooring.com/#sle.
      - 1) Product: Burke Resilient Rubber Wall Base Basis of Design or approved substitution.
    - b. Johnsonite, a Tarkett Company: www.johnsonite.com.
    - c. Roppe Corp: www.roppe.com.
    - d. Flexco: www.flexco.com.
    - e. Substitutions: See Section 01 60 00 Product Requirements.
  - 2. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
  - 3. Height: 4 inch (100 mm).
  - 4. Thickness: 0.125 inch (3.2 mm).
  - 5. Finish: Matte.
  - 6. Length: Roll.
  - 7. Color: To be selected by from manufacturer's full range.
  - 8. Accessories: Premolded external corners and internal corners.

# 2.03 ACCESSORIES

- A. Primers, Adhesives, and Seam Sealer: Waterproof; types recommended by flooring manufacturer.
- B. Filler for Coved Base: Plastic.

# PART 3 EXECUTION

# 3.01 EXAMINATION

- A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.

- C. Report conditions contrary to contract requirements that would prevent a proper installation. Do not proceed with the installation until unsatisfactory conditions have been corrected.
- D. Failure to call attention to defects or imperfections will be construed as acceptance and approval of the subfloor. Installation indicates acceptance of substrates with regard to conditions existing at the time of installation.

### 3.02 PREPARATION

- A. Prepare substrate as recommended by manufacturer.
- B. Remove ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with filler to achieve smooth, flat, hard surface.
- C. Clean substrate.

### 3.03 INSTALLATION - GENERAL

A. Install in strict accordance with manufacturer's instructions.

### 3.04 INSTALLATION - SHEET FLOORING

A. Lay flooring with joints and seams parallel to longer room dimensions, to produce minimum number of seams. Lay out seams to avoid widths less than 1/3 of roll width; match patterns at seams.

### 3.05 INSTALLATION - RESILIENT BASE

- A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches (45 mm) between joints.
- B. Resilient Base Miter internal corners. At external corners, 'V' cut back of base strip to 2/3 of its thickness and fold. At exposed ends, use manufacturer's premolded units.
- C. Install base on solid backing. Bond tightly to wall and floor surfaces.

### 3.06 CLEANING

- A. Remove excess adhesive from floor, base, and wall surfaces without damage.
- B. Clean in accordance with manufacturer's written instructions.

#### SECTION 09 65 13 TRANSITIONS AND ADAPTORS

#### PART 1 GENERAL

# **1.01 SECTION INCLUDES**

A. Resilient Transitions and Adaptors.

# 1.02 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of product indicated.
- C. Samples for Verification: For each type of product indicated, in manufacturer's standard-size samples of each resilient product color, texture, and pattern required.
- D. Product Schedule: For resilient products. Use same designations indicated on Drawings.

# 1.03 DELIVERY, STORAGE, AND HANDLING

A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by the manufacturer, but not less than 55 deg F (13 deg C) or more than 85 deg F (29 deg C).

# **1.04 PROJECT CONDITIONS**

- A. Install resilient products after other finishing operations, including painting, have been completed.
- B. Maintain ambient temperatures within range recommended by the manufacturer, but not less than 65 deg F (18 deg C) or more than 85 deg F (29 deg C) in spaces to receive resilient products during the following time periods:
  - 1. 48 hours before installation.
  - 2. During installation.
  - 3. 48 hours after installation.
- C. Maintain the ambient relative humidity between 40% and 60% during installation.
- D. Until Substantial Completion, maintain ambient temperatures within range recommended by the manufacturer, but not less than 55 deg F (13 deg C) or more than 85 deg F (29 deg C).

# PART 2 PRODUCTS

# 2.01 MANUFACTURERS

- A. Johnsonite, Inc; Product: www.johnsonite.com.
- B. Burke Flooring: www.burkemercer.com.
- C. Roppe Corp: www.roppe.com.
- D. Substitutions: See Section 01 60 00 Product Requirements.

# 2.02 RESILIENT TRANSITIONS AND ADAPTORS

- A. ADAPTORS Resilient Adaptor with the following physical characteristics:
  - 1. Material: Homogeneous composition of polyvinyl chloride (PVC).
  - 2. Accessibility: Complies with A.D.A. Change of Level requirements and meets the requirements for slope to rise ratio for Ramps.
  - 3. Critical Radiant Flux: 0.45 watts/cm2 or greater, Class I per ASTM E 648.
  - 4. Abrasion Resistance: 0.22 mg/cycle per ASTM D 3389.
  - 5. Length per piece: 12 foot minimum.
  - 6. Profile:
    - a. 1-5/8" wide for 5/16" to 1/16" or 1/8" material.
      - 1) Product: CTA-D by Johnsonite or approved substitution.

# PART 3 EXECUTION

### 3.01 EXAMINATION

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

### 3.02 PREPARATION

- A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.
  - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
  - 2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
  - 3. Mechanically remove contamination on the substrate that may cause damage to the resilient flooring material. Permanent and non-permanent markers, pens, crayons, paint, etc., must not be used to write on the back of the flooring material or used to mark the substrate as they could bleed through and stain the flooring material.
  - 4. Prepare Substrates according to ASTM F 710 including the following:
    - a. Moisture Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
    - b. A pH test for alkalinity must be conducted. Results should range between 7 and 9. If the test results are not within the acceptable range of 7 to 9, the installation must not proceed until the problem has been corrected.
    - c. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer.
  - 5. Wood subfloors must have a minimum 19" (47 cm) of cross-ventilated space beneath the bottom of the joist.
    - a. The floor must be rigid, free of movement.
    - b. Single wood and tongue and groove subfloors should be covered with  $\frac{1}{4}$ " (6.4 mm) or  $\frac{1}{2}$ " (13 mm) APA approved underlayment plywood.
      - Use ¼" (6.4 mm) thick underlayment panels for boards with a face width of 3" (76 mm) or less.
      - 2) Use ½" (76 mm) thick underlayment panels for boards with a face width wider than 3" (76 mm).
    - c. Do not install over OSB (Oriented Strand Board), particle board, chipboard, lauan or composite type underlayments.
- B. Fill cracks, holes, depressions and irregularities in the substrate with good quality Portland cement based underlayment leveling and patching compound and remove bumps and ridges to produce a uniform and smooth substrate.
- C. Floor covering shall not be installed over expansion joints.
- D. Do not install resilient products until they are same temperature as the space where they are to be installed.
  - 1. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.
- E. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation.

# 3.03 RESILIENT ACCESSORY INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient accessories.
- B. Install with manufacturer adhesive specified for the site conditions and follow adhesive label for proper use.

# 3.04 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protection of resilient products.
- B. Perform the following operations immediately after completing resilient product installation:
  1. Remove adhesive and other blemishes from exposed surfaces.
  - 2. Sweep and vacuum surfaces thoroughly.
  - 3. Damp-mop surfaces to remove marks and soil.
- C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
  - 1. No traffic for 24 hours after installation.
  - 2. No heavy traffic, rolling loads, or furniture placement for 72 hours after installation.
- D. Cover resilient products until Substantial Completion.
- E. Wait 72 hours after installation before performing initial cleaning.
- F. A regular maintenance program must be started after the initial cleaning.

#### SECTION 09 68 13 TILE CARPETING

#### PART 1 GENERAL

#### **1.01 SECTION INCLUDES**

A. Carpet tile, fully adhered.

### 1.02 REFERENCE STANDARDS

- A. ASTM E648 Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source 2019a, with Editorial Revision (2020).
- B. CRI (GLP) Green Label Plus Testing Program Certified Products Current Edition.

#### 1.03 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.
- C. Samples: Submit two carpet tiles illustrating color and pattern design for each carpet color selected.
- D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- E. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.

#### 1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing specified carpet tile with minimum three years documented experience.
- B. Installer Qualifications: Company specializing in installing carpet tile with minimum three years documented experience and approved by carpet tile manufacturer.

#### 1.05 FIELD CONDITIONS

A. Store materials in area of installation for minimum period of 24 hours prior to installation.

#### **1.06 MAINTENANCE MATERIALS**

- A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials described below that match products installed. Packaged with protective covering for storage and identified with appropriate labels.
  - 1. Carpet Tile: Furnish quantity of full-size units equal to five (5) percent for each type, color, pattern and size installed.

### PART 2 PRODUCTS

#### 2.01 MANUFACTURERS

- A. Shaw Contract Group: www.shawcontractgroup.com.
- B. Mohawk Group: www.mohawkgroup.com.
- C. Interface, Inc: www.interfaceinc.com/#sle.
- D. Lees Carpets: www.leescarpets.com/#sle.
- E. J & J Industries, Inc.: www.jjinductries.com.
- F. Milliken & Company: www.milliken.com/#sle.
- G. Patcraft: www.patcraft.com.
- H. Substitutions: See Section 01 60 00 Product Requirements.

#### 2.02 MATERIALS

- A. Tile Carpeting: [\_\_\_\_], manufactured in one color dye lot.
  - 1. Product: Vast Tile manufactured by Shaw

- 2. Tile Size: 24" x 24" nominal.
- 3. Color: Selected by Architect.
- 4. Style: 5T009
- 5. Installation Method:Monolithic

### 2.03 ACCESSORIES

- A. Edge Strips: Rubber, color as selected.
- B. Carpet Tile Adhesive: Recommended by carpet tile manufacturer.

### PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Verify that sub-floor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet tile.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive carpet tile.
- C. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to sub-floor surfaces.
- D. Cementitious Sub-floor Surfaces: Verify that substrates are dry enough and ready for flooring installation by testing for moisture and pH.
  - 1. Obtain instructions if test results are not within limits recommended by flooring material manufacturer and adhesive materials manufacturer.
- E. Verify that required floor-mounted utilities are in correct location.

# 3.02 PREPARATION

- A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.
- B. Remove sub-floor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with sub-floor filler.
- C. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Prohibit traffic until filler is cured.
- D. Vacuum clean substrate.

### 3.03 INSTALLATION

- A. Starting installation constitutes acceptance of sub-floor conditions.
- B. Install carpet tile in accordance with manufacturer's instructions.
- C. Blend carpet from different cartons to ensure minimal variation in color match.
- D. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.
- E. Lay carpet tile in square pattern, with pile direction parallel to next unit, set parallel to building lines.
- F. Fully adhere carpet tile to substrate.
- G. Trim carpet tile neatly at walls and around interruptions.
- H. Complete installation of edge strips, concealing exposed edges.

# 3.04 CLEANING

- A. Remove excess adhesive without damage, from floor, base, and wall surfaces.
- B. Clean and vacuum carpet surfaces.

#### SECTION 09 81 00 ACOUSTIC INSULATION

### PART 1 GENERAL

# **1.01 SECTION INCLUDES**

A. Batt Acoustical Insulation.

### 1.02 REFERENCE STANDARDS

- A. ASTM C 423 Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
- B. ASTM C 553 Standard Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications.
- C. ASTM C 665 Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
- D. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials.
- E. ASTM E 119 Standard Test Methods for Fire Tests of Building Construction and Materials.
- F. ASTM E 136 Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 Degrees C.
- G. ASTM E 814 Standard Test Method for Fire Tests of Through-Penetration Fire Stops.
- H. National Fire Protection Association (NFPA) Life Safety Code.

### 1.03 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation methods.
- C. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

#### 1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer with a minimum of ten years of documented experience manufacturing products in this section shall provide all products listed.
- B. Installer Qualifications: Products listed in this section shall be installed by a single organization with at least five years of documented experience successfully installing insulation on projects of similar type and scope as specified in this section.

# 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
- B. Store materials in dry locations with adequate ventilation, free from water, and in such a manner to permit easy access for inspection and handling.
- C. Handle materials to avoid damage.
- D. Ensure that products of this section are supplied in time to prevent interruption of construction progress.

# 1.06 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

# PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. CertainTeed Corporation: www.certainteed.com.1. Basis of Design or approved substitution.
- B. Johns Manville: www.jm.com.
- C. Owens-Corning Fiberglass Corporation: www.owenscorning.com.
- D. Substitutions: See Section 01 60 00 Product Requirements.

### 2.02 APPLICATIONS

- A. Interior Partitions Indicated with STC Rating: Batt type.
- B. Above Interior Ceilings: Batt type.

### 2.03 MATERIALS

- A. Acoustical/Thermal Insulation: Certainteed Sound Attenuation NoiseReducer Batts preformed glass fiber batt insulation (Basis of Design or approved substitution).
  - 1. Location: Between studs friction fit.
  - 2. Facing: ASTM C 665, Type 1, Unfaced.
    - a. Fire Hazard Classification ASTM E84.
    - b. Maximum Flame Spread Index of 25.
    - c. Maximum Smoke Developed Index of 50.
    - d. Noncombustible ASTM E 136, passes.
  - 3. Thermal Resistance: R of 11 (RSI 1.9).
  - 4. Thickness: 3 1/2 inches (89 mm).
  - 5. Width: As required by project conditions.

### PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify that all interior walls, partitions, and ceiling assembly construction has been completed to the point where the insulation may correctly be installed.
- C. Verify that mechanical and electrical services in ceilings, walls and floors have been installed and tested and, if appropriate, verify that adjacent materials are dry and ready to receive insulation.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

#### 3.02 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

#### 3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install in spaces without gaps or voids. Do not compress insulation.
- C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
- D. Fit insulation tight in spaces and tight to exterior side of mechanical and electrical services within plane of insulation.

#### 3.04 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

#### SECTION 09 91 23 INTERIOR PAINTING

#### PART 1 GENERAL

### **1.01 SECTION INCLUDES**

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
  - 1. Prime surfaces to receive wall coverings.
  - 2. Mechanical and Electrical:
    - a. In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.
    - b. In finished areas, paint shop-primed items.
    - c. Paint interior surfaces of air ducts that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.
    - d. Paint dampers exposed behind louvers, grilles, to match face panels.
- D. Do Not Paint or Finish the Following Items:
  - 1. Items factory-finished unless otherwise indicated; materials and products having factoryapplied primers are not considered factory finished.
  - 2. Items indicated to receive other finishes.
  - 3. Items indicated to remain unfinished.
  - 4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
  - 5. Floors, unless specifically indicated.
  - 6. Glass.
  - 7. Concealed pipes, ducts, and conduits.

#### 1.02 REFERENCE STANDARDS

- A. 40 CFR 59, Subpart D National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency current edition.
- B. MPI (APSM) Master Painters Institute Architectural Painting Specification Manual Current Edition.
- C. SSPC-SP 1 Solvent Cleaning 2015, with Editorial Revision (2016).
- D. SSPC-SP 2 Hand Tool Cleaning 2018.
- E. SSPC-SP 6 Commercial Blast Cleaning 2007.

# 1.03 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:
  - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
  - 2. MPI product number (e.g. MPI #47).
  - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
  - 4. Manufacturer's installation instructions.
  - 5. If proposal of substitutions is allowed under submittal procedures, explanation of substitutions proposed.
- C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches (216 by 279 mm) in size, illustrating range of colors available for each finishing product specified.

- 1. Where sheen is specified, submit samples in only that sheen.
- 2. Where sheen is not specified, submit each color in each sheen available.
- 3. Allow 30 days for approval process, after receipt of complete samples by .
- 4. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as wood cabinets and wood doors, have been approved.
- D. Samples: Submit two paper chip samples, 2 by 2 inch (50 by 50 mm) in size illustrating range of colors available for each surface finishing product scheduled.
- E. Samples: Submit two painted samples, illustrating selected colors for each color and system selected with specified coats cascaded. Submit on tempered hardboard, 8 1/2 by 11 inch (216 by 279 mm) in size.
- F. Manufacturer's Instructions: Indicate special surface preparation procedures.
- G. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.
- H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 01 60 00 Product Requirements, for additional provisions.
  - 2. Extra Paint and Finish Materials: 1 gallon (4 L) of each color; from the same product run, store where directed.
  - 3. Label each container with color in addition to the manufacturer's label.

### 1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum [\_\_\_\_\_] years experience and approved by manufacturer.

# 1.05 MOCK-UP

- A. See Section 01 40 00 Quality Requirements, for general requirements for mock-up.
- B. Locate where directed by Architect.
- C. Mock-up may remain as part of the work.

# 1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

#### 1.07 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply materials when relative humidity exceeds 85 percent; at temperatures less than 5 degrees F (3 degrees C) above the dew point; or to damp or wet surfaces.
- D. Minimum Application Temperatures for Paints: 50 degrees F (10 degrees C) for interiors unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.
## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
  - 1. PPG Paints: www.ppgpaints.com/#sle.
  - 2. Sherwin-Williams Company: www.sherwin-williams.com/#sle.
  - 3. Benjamin Moore Co: www.benjaminmoore.com.
- C. Primer Sealers: Same manufacturer as top coats.
- D. Substitutions: See Section 01 60 00 Product Requirements.

### 2.02 PAINTS AND FINISHES - GENERAL

- A. Paints and Finishes: Ready mixed, unless intended to be a field-catalyzed paint.
  - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
  - 2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
  - 3. Supply each paint material in quantity required to complete entire project's work from a single production run.
  - 4. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Volatile Organic Compound (VOC) Content:
  - 1. Provide paints and finishes that comply with the most stringent requirements specified in the following:
    - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
  - 2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- C. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by from the manufacturer's full line.
- D. Colors: To be selected from manufacturer's full range of available colors.
  - 1. Selection to be made by after award of contract.
  - 2. Allow for minimum of three colors for each system, unless otherwise indicated, without additional cost to Owner.
  - 3. Extend colors to surface edges; colors may change at any edge as directed by .
  - 4. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under.

## 2.03 PAINT SYSTEMS - INTERIOR

- A. Paint I-OP Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board, wood, uncoated steel, shop primed steel, and galvanized steel.
  - 1. Two top coats and one coat primer.
  - 2. Primer: As recommended by top coat manufacturer for specific substrate.
- B. Paint I-OP-MD-DT Medium Duty Door/Trim: For surfaces subject to frequent contact by occupants, including metals and wood:
  - 1. Medium duty applications include doors and door frames.
  - 2. Two top coats and one coat primer.
  - 3. Top Coat(s): High Performance Architectural Interior Latex; MPI #139, 140, or 141.
  - 4. Top Coat Sheen:
    - a. Eggshell: MPI gloss level 3; use this sheen at all locations.

- b. Satin: MPI gloss level 4; use this sheen at all locations.
- 5. Primer: As recommended by top coat manufacturer for specific substrate.
- C. Paint I-OP-MD-WC Medium Duty Vertical and Overhead: Including uncoated steel, shop primed steel, and galvanized steel.
  - 1. Two top coats and one coat primer.
  - 2. Top Coat(s): High Performance Architectural Interior Latex.
  - 3. Top Coat Sheen:
    - a. Flat: MPI gloss level 1; use this sheen for ceilings and other overhead surfaces.
  - 4. Primer: As recommended by top coat manufacturer for specific substrate.
- D. Paint MI-OP-3L Ferrous Metals, Unprimed, Latex, 3 Coat:
  - 1. One coat of latex primer.
  - 2. Semi-gloss: Two coats of latex enamel.
- E. Paint GI-OP-3A Gypsum Board/Plaster, Alkyd, 3 Coat:
  - 1. One coat of alkyd primer sealer.
  - 2. Semi-gloss: Two coats; Industrial alkyd urethane.
  - 3. Locations: All toilet, janitor, break, processing and interview rooms gypsum board walls.
- F. Paint GI-OP-3L Gypsum Board/Plaster, Latex, 3 Coat:
  - 1. One coat of alkyd primer sealer.
  - 2. Eggshell: Two coats of latex enamel.
  - 3. Flat: Two coats of latex enamel.

### 2.04 ACCESSORY MATERIALS

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

## PART 3 EXECUTION

## 3.01 EXAMINATION

- A. Do not begin application of paints and finishes until substrates have been properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.
- D. If substrate preparation is the responsibility of another installer, notify of unsatisfactory preparation before proceeding.
- E. Test shop-applied primer for compatibility with subsequent cover materials.
- F. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
  - 1. Gypsum Wallboard: 12 percent.
  - 2. Plaster and Stucco: 12 percent.

### 3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or repair existing paints or finishes that exhibit surface defects.
- D. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- E. Seal surfaces that might cause bleed through or staining of topcoat.

- F. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- G. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.
- H. Plaster: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.
- I. Galvanized Surfaces:
  - 1. Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
  - 2. Prepare surface according to SSPC-SP 2.
- J. Ferrous Metal:
  - 1. Solvent clean according to SSPC-SP 1.
  - 2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
  - 3. Remove rust, loose mill scale, and other foreign substances using using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 "Commercial Blast Cleaning". Protect from corrosion until coated.

### 3.03 APPLICATION

- A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- D. Apply each coat to uniform appearance in thicknesses specified by manufacturer.
- E. Regardless of number of coats specified, apply as many coats as necessary for complete hide.
- F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- G. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

### 3.04 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

## 3.05 PROTECTION

A. Protect finishes until completion of project.

# END OF SECTION

### SECTION 12 21 13 HORIZONTAL LOUVER WOOD BLINDS

### PART 1 GENERAL

## 1.01 SECTION INCLUDES

A. Horizontal Non FR Wood Blinds (Premium Quality).

### 1.02 REFERENCE STANDARDS

- A. Flame-resistant headrail and components contained within shall pass or exceed the following test:
  - 1. National Fire Protection Association (NFPA) 701 (small scale for horizontal applications).

### 1.03 SUBMITTALS

- A. See Section 01 30 00 Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate opening sizes, tolerances required, method of attachment, clearances, and operation.
- C. Samples: Submit two samples, 6 inch long illustrating slat materials and finish, color, cord type and color.
- D. Product Data: Provide manufacturer's descriptive literature indicating materials, finishes, construction and installation instructions, recommendations for maintenance and cleaning, and verifying that product meets requirements specified in this section.
- E. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

### 1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- B. Installer Qualifications: Company specializing in installation of the Products specified in this section with minimum three years documented experience.
- C. Single source responsibility: Provide all components of the window blind system manufactured by the same company.

## 1.05 DELIVERY, STORAGE AND HANDLING

- A. Product shall be delivered to site in manufacturer's original packaging.
- B. Product shall be handled and stored to prevent damage to materials, finishes and operating mechanisms.

### 1.06 PROJECT CONDITIONS

- A. Prior to shade installation, building shall be enclosed.
- B. Interior temperature shall be maintained between 60° F. and 90° F. during and after installation; relative humidity shall not exceed 80%. Wet work shall be complete and dry.

### 1.07 WARRANTY

A. Lifetime Limited Warranty. Specific product warranties available from manufacturer or its authorized agent.

## PART 2 PRODUCTS

## 2.01 MANUFACTURERS

- A. Hunter Douglas Contract: www.hunterdouglascontract.com.1. Basis of Design or approved substitution.
- B. Levolor Contract: www.levolorcontract.com.
- C. Graber, division of Springs Window Fashions: www.graberblinds.com.
- D. SWF Contract: www.swfcontract.com.

E. Substitutions: See Section 01 6000 - Product Requirements.

### 2.02 MATERIALS

- A. Product: Hunter Douglas "Chalet 2" Horizontal Wood Blind".1. Basis of Design or approved substitution.
- B. Slats: 2" wide by 1/8" thick cut from quality selected hardwood with slat ends finished to match slats. Furnish not less than nominal 7.2 slats per foot to ensure tight closure and light control.
  1. Finish: As selected by Architect from manufacturer's full range.
- C. Slat Support: Braided ladders of 100% polyester yarn color compatible with slats and spacing of ladder no more than 44mm.
- D. Headrail: U-shaped profile with rolled edges, measuring 1 1/2" x 2 1/4" x .024" constructed of corrosion resistant steel and providing a sleek low profile design. Internally fit with components required for specified performance and designed for smooth, quiet, trouble-free operation. Headrail finish to be standard baked-on polyester and to coordinate with slats. Ends fitted with zinc-coated steel end lock with adjustable tab for centering blinds.
- E. Bottom Rail: 2" wide by 5/8" thick quality selected hardwood with ends finished to match slats. Provide color-coordinated engineered polymer tape buttons to secure ladder and cord.
- F. Lifting mechanism: Engineering polymer and galvanized steel housing cordlocks with polymer roller bearing and steel locking dogs, two-ply polyester cord filler in braided polyester jacket lift cords meet or exceed commercial specification 1029.86, and cord stop / tassel. Located on either side of individual blind unit per Architect.
- G. Tilting mechanism: Wand tilt of worm and gear construction with slip clutch incorporated into tilter mechanism.
- H. Tilt Control Wand: Rounded 3/8" diameter constructed of quality selected hardwood finished to match slats and detachable without tools. Located on either side of individual blind unit per Architect.
- I. Mounting Hardware: Manufacturer's standard .030" steel box brackets with baked-on polyester finish to match headrail with additional support brackets for blinds over 48" wide.
- J. Valance: Manufacturer's standard valance of select hardwoods, finished to match slats.
- K. Optional Parts:
  - 1. Hold Down Brackets and accessories.

### 2.03 FABRICATION

- A. Blind measurements shall be accurate to within + 1/8".
- B. Determine sizes by field measurement.
- C. Fabricate blinds to fit within openings with uniform edge clearance of 1/4 inch (6mm).
- D. Fabricate blinds to cover window frames completely.
- E. At openings requiring multiple blind units, provide separate blind assemblies with space of 1/4 inch (6mm) between blinds, located at window mullion centers.

## **PART 3 EXECUTION**

## 3.01 INSPECTION

A. Subcontractor shall be responsible for inspection on site, approval of mounting surfaces, installation conditions and field measurement for this work.

## 3.02 INSTALLATION

- A. Installation shall comply with manufacturer's specifications, standards and procedures as detailed on contract drawings.
- B. Adequate clearance shall be provided to permit unencumbered operation of shade and hardware.
  - 1. Maximum Variation of Gap at Window Opening Perimeter: 1/4 inch (6 mm).

- 2. Maximum Offset From Level: 1/8 inch (3 mm).
- C. Clean finish installation of dirt and finger marks. Leave work area clean and free of debris.

## 3.03 DEMONSTRATION

A. Demonstrate operation method and instruct owner's personnel in the proper operation and maintenance of the blinds.

# 3.04 SCHEDULE

- A. Locate at all exterior windows.
- B. Locate at interior windows as noted on window schedule.

## END OF SECTION

### SECTION 12 36 61 QUARTZ SURFACING COUNTERTOPS

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

- A. "Quartz Surfacing" for:
  - 1. Countertops.

### 1.02 REFERENCE STANDARDS

- A. ASTM International:
  - 1. ASTM C97 Absorption and Bulk Specific Gravity of Dimension Stone.
  - 2. ASTM C99 Modulus of Rupture of Dimension Stone.
  - 3. ASTM C170 Compressive Strength of Dimension Stone.
  - 4. ASTM C217 Weather Resistance of Slate.
  - 5. ASTM C482 Bond Strength of Ceramic Tile to Portland Cement.
  - 6. ASTM C484 Thermal Shock Resistance of Glazed Ceramic Tile.
  - 7. ASTM C501 Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abraser.
  - 8. ASTM C531 Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing, and Polymer Concretes.
  - 9. ASTM C880 Flexural Strength of Dimension Stone.
  - 10. ASTM C1026 Resistance of Ceramic Tile to Freeze-Thaw Cycling.
  - 11. ASTM C1028 Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method.
  - 12. ASTM C1243 Relative Resistance to Deep Abrasive Wear of Unglazed Ceramic Tile by Rotating Disc.
  - 13. ASTM D256 Izod Pendulum Impact Resistance of Plastics.
  - 14. ASTM D2047 Static Coefficient of Friction of Polish-Coated Floor Surfaces by the James Machine.
  - 15. ASTM E84 Surface Burning Characteristics of Building Materials.
- B. American National Standards Institute (ANSI):
  - 1. ANSI Z124.6 Stain Resistance.
  - 2. ANSI/N 42.14 Radiation.
- C. National Electrical Manufacturers Association (NEMA):
  - 1. NEMA LD3-3.5 Boiling Water Resistance.
  - 2. NEMA LD 3-3.6 High Temperature Resistance.
- D. European Standards (EN):
  - 1. EN 14617-1 Determination of Apparent Density and Water Absorption.
  - 2. EN 14617-4 Determination of Abrasion Resistance.
  - 3. EN 14617-5 Determination of Freeze/Thaw Resistance.
  - 4. EN 14617-9 Determination of Impact Resistance.
  - 5. EN 14617-12 Determination of Dimensional Stability.
  - 6. EN 14617-13 Determination of Electrical Resistivity.
  - 7. EN 14617-15 Determination of Compressive Strength.
- E. ISO (International Organization for Standardization):
  - 1. ISO 9002 Model for Quality Assurance in Production.
  - 2. ISO 14001 Environmental Management Systems.
- F. Others:
  - 1. NSF ANSI/NSF Standard 51.

## 1.03 SUBMITTALS

A. Product Data.

- 1. Quartz Surfacing: Submit manufacturer's product data, sample warranty form, and Fabrication and Installation Instructions.
- B. Accessories: Submit manufacturer's product data and installation instructions.
- C. Shop Drawings: Identify colors and finishes, and show the following:
  - 1. Field-verified dimensions.
  - 2. Quartz surfacing dimensions.
  - 3. Locations and dimensions of cutouts.
  - 4. Required locations of support and blocking members.
  - 5. Edge profiles.
  - 6. Installation details and methods.
- D. Samples:
  - 1. Cut sample and seam together for representation of seaming techniques.
  - 2. Indicate full range of color and pattern variation.
  - 3. Samples for Color Selection: Submit two sets of manufacturer's standard colors and finishes.
  - 4. Samples for Color Approval: Submit two samples, 10 x 10 inches, (250 x 250 mm) of each color and finish selected.
  - 5. Stone Adhesive: Submit two samples of an adhesive joint for each color quartz surfacing selected. Show color match of adhesive.
- E. Fabricator Qualifications: Submit evidence of fabricator's qualifications.
- F. Closeout Submittals: Submit completed warranty form.
- G. LEED Submittals: Provide LEED submittals as required.
- H. Product Certificates: For each type of product, provide product certificates signed by product manufacturer.
- I. Maintenance Data:
  - 1. Submit manufacturer's care and maintenance data.
  - 2. Include in project closeout documents.

# 1.04 QUALITY ASSURANCE

- A. Applicable Standards.
  - 1. Standards of the following, as referenced herein:
    - a. American National Standards Institute (ANSI).
    - b. American Society for Testing and Materials (ASTM).
    - c. National Electrical Manufacturers Association (NEMA).
    - d. NSF International.
    - e. International Organization for Standardization (ISO).
  - 2. Fire Test response characteristics.
    - a. Provide with the following Class A (Class 1) surface burning characteristics as evidenced by testing identical products against ASTM E84 (UL 723) or another testing and inspecting agency acceptable to authorities having jurisdiction.
    - b. Flame Spread Index: 25 or less.
    - c. Smoke Developed Index: 450 or less.
- B. Allowable Tolerances:
  - 1. Variation in component size  $\pm 1/8$ " (3mm) over a ten (10) foot length.
  - 2. Location of openings: ± 1/8" (3mm) from indicated location.
  - 3. Maximum 1/8" (3mm) clearance between quartz surfaces and each wall.

# 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Packaging, Shipping, Handling, and Unloading.
  - 1. Observe manufacturer's recommendations and handle accordingly in order to prevent breakage or damage.
  - 2. Brace parts if necessary.

- 3. Transport in the near-vertical position with finished face turned toward finished face.
- 4. Do not allow finished surfaces to rub during shipping or handling.
- B. Storage and Protection.
  - 1. Store in racks in near-vertical position.
  - 2. Prevent warpage and breakage.
  - 3. Store inside away from direct exposure to sun.
  - 4. Store between 25°F and 130°F (-4 °C and 54°C).
  - 5. Store with finished face turned toward finished face.

## 1.06 WARRANTY

A. Provide manufacturer's Limited Commercial 10-Year Warranty against product defects when fabricated and installed by a CaesarStone certified fabricator.

## PART 2 PRODUCT

## 2.01 MANUFACTURERS

- A. Qualifications: Manufacturer shall be ISO 9002 and ISO 14001 certified.
- B. Acceptable Manufacturer: Provide CaesarStone Quartz Surfacing distributed by U.S.Quartz Products Inc. (CaesarStone U.S.A., Inc.); Van Nuys, CA; phone 877-9-QUARTZ(978.2789); www.caesarstoneus.com.
- C. Substitutions: Not Allowed.

## 2.02 QUARTZ SURFACING

- A. Composition: 93 percent crushed quartz aggregate combined with resins and pigments and fabricated into slabs using a vacuum vibro-compaction process.
- B. Dimensions
  - 1. Thickness: Nominal 3/4 inch (20 mm).
  - 2. Size: Slabs shall be not less than 56.5 x 120 inches (1.44 x 3.05 m) to minimize the number of joints used in installation.
- C. Identification: Material shall be labeled with a batch number and imprinted with a manufacturer's identifying mark on the back.
- D. Color and Finish
  - 1. Provide colors and finishes as indicated on drawings.
  - 2. Finish
    - a. Polished surface shall have gloss greater than or equal to 35% at 50°.
    - b. Honed surface shall have a matte finish.
- E. Exposed Edges and Corners.
  - 1. Countertops
    - a. Edges: Square profile, double layer thick.
    - b. Outside Corners: Square 3/4 inch (20 mm).
  - 2. Backsplash.
    - a. Edges: Square.
    - b. Outside Corners: Square butt joints.

## 2.03 ACCESSORIES

- A. Mounting Adhesives
  - 1. Provide structural-grade silicone or epoxy adhesives as recommended by manufacturer for application and per conditions of use.
- B. Acceptable Silicone Manufacturers
  - 1. Dow Corning.
  - 2. GE Sealants and Adhesives.
- C. Acceptable Epoxy Manufacturers
  - 1. Akemi North America
  - 2. Bonstone Materials Corporation

Division 12

- 3. Tenax U.S.A.
- D. Provide spacers, if required, of type recommended by adhesive manufacturer.
- E. Stone Adhesive
  - 1. Provide epoxy or polyester adhesive of type recommend by manufacturer for application and conditions of use.
  - 2. Acceptable Manufacturers
    - a. Akemi North America
      - b. Bonstone Materials Corporation
      - c. Tenax U.S.A.
  - 3. Color: Adhesive that will be visible in finished work should be tinted to match quartz surfacing.
- F. Joint Sealants
  - 1. Clear silicone sealant as recommended by manufacturer for application and per conditions of use.
  - 2. Provide anti-bacterial type.
  - 3. Acceptable Manufacturers:
    - a. Dow Corning.
    - b. GE Sealants and Adhesives
- G. Solvent: Product recommended by adhesive manufacturer to clean surface of quartz surfacing to assure adhesion of adhesives and sealants.
- H. Cleaning Agents: Non-abrasive, low pH cleansers.

# 2.04 FABRICATION

- A. Fabricator: Firm shall have five years' experience fabricating architectural stone and shall have water-cooled cutting tools. [Firm shall be authorized in writing by manufacturer.]
- B. Shop Assembly: Observe proper safety procedures and comply with manufacturer's instructions.
- C. Layout: Layout joints to minimize joints and to avoid L-shaped pieces of quartz surfacing.
- D. Inspect Material
  - 1. Inspect material for defects prior to fabrication.
  - 2. Color Match
    - a. Materials used throughout the project shall be from the same batch and bear labels with the same batch numbers.
    - b. Visually inspect materials to be used for adjacent pieces to ensure acceptable color match.
    - c. Inspect in lighting conditions similar to those existing at the jobsite.
  - 3. Variation in distribution of aggregates in quartz surfacing that is within manufacturer's tolerances is not a defect.
- E. Tools: Cut and polish with water-cooled power tools.
- F. Cutouts
  - 1. Cutouts shall have 3/8 inches (10 mm) minimum inside corner radius. Inside corners shall be reinforced in an acceptable manner to prevent cracking.
  - 2. Polish edges where they will be exposed in finished work.
  - 3. If the remaining material outside a cutout is less than three inches (76 mm) wide, reinforce area by laminating it with a strip of quartz surfacing.
- G. Laminations: Laminate layers of quartz surfacing as required to create built-up edges, trim, and other areas requiring additional thickness.

# PART 3 EXECUTION

# 3.01 ACCEPTABLE INSTALLER

A. Installer: Firm shall have five years experience installing architectural stone.

## 3.02 EXAMINATION

- A. Site Verification
  - 1. Verify dimensions by field measurements prior to fabrication.
  - 2. Verify that substrates supporting quartz surfaces are plumb, level, and flat to within 1/16 inch in ten feet (1.6 mm in 3000 mm), and that necessary supports and blocking are in place.
  - 3. Base Cabinets: Cabinet units shall be securely fixed to adjoining units and back wall.
- B. Materials Review
  - 1. Inspect finished surfaces for damage.
  - 2. Do not install until damaged materials have been repaired or replaced in an acceptable manner.

## 3.03 PREPARATION

- A. General
  - 1. Protect finished surfaces against scratches.
  - 2. Apply masking where necessary.
  - 3. Guard against grit, dust, and other potentially abrasive dirt or residue.

## 3.04 INSTALLATION

- A. General
  - 1. Install materials in accordance to manufacturer's recommendations.
  - 2. 2. Lift and place carefully to avoid breakage.
- B. Preliminary Installation and Adjustment
  - 1. Position materials to verify correct sizing and preparation.
  - 2. Make necessary adjustments.
  - 3. If cutting, grinding, or polishing is required at the jobsite, use water-cooled tools.
  - 4. Protect jobsite and surfaces against dust and water.
  - 5. Perform work away from installation site, if possible.
  - 6. Gypsum drywall back walls which are not fire or acoustically rated may be routed up to half the thickness of the drywall to allow the countertop to fit.
  - 7. Allow gaps for expansion of not less than 1/16 inch (1.5 mm) per five feet when installed between walls or other fixed conditions.
  - 8. Drainage: Where drainage is required, shim countertops slightly to ensure positive drainage.
- C. Permanent Installation
  - 1. After verifying fit:
    - a. Remove quartz surfacing from position.
    - b. Clean substrates of dust and contamination.
    - c. Clean quartz surfacing back side and joints with solvent.
  - 2. Apply sufficient quantity of mounting adhesive in accordance with adhesive manufacturer's recommendations to provide permanent, secure installation.
  - 3. Install surfacing plumb, level, and square and flat to within 1/16 inch in ten feet (1.6mm in 3000 mm).
- D. Joints
  - 1. Joints between adjacent pieces of quartz surfacing
    - a. Joints shall be flush, tight fitting, level, and neat.
    - b. Securely join with stone adhesive.
    - c. Fill joints level with quartz surfacing.
    - d. Clamp or brace quartz surfacing in position until adhesive sets.
  - 2. Joints between backsplashes and countertops: Seal joints with silicone sealant.

# 3.05 REPAIR

A. Repair or replace damaged materials in a satisfactory manner.

# 3.06 CLEANING

A. Remove masking and excess adhesives and sealants. Clean exposed surfaces.

# 3.07 PROTECTION

A. Protect surfacing from damage by other Sections.

# END OF SECTION

# SECTION 22 00 00 PLUMBING REQUIREMENTS

# 1.0 <u>GENERAL</u>

# 1.01 General Conditions:

- A. Drawings, all Contract Documents, and Division-1 Specifications sections, apply to work of this Section.
- B. Where the term "Contractor" is used it shall mean the Plumbing Contractor.
- C. Contractors bidding on this section are notified that they shall hold a license for Plumbing as issued by the North Carolina State Board of Examiners of Plumbing and Heating Contractors.
- D. Reference shall be made to the Architectural, Structural, Heating and Airconditioning, and Electrical drawings and specifications for details of building construction and for coordination with other parts of construction.
- E. Contractor shall visit the job site before the submission of a bid and familiarize himself with existing conditions. Submission of a bid will be considered as evidence that the Contractor has visited the site and is familiar with existing conditions.
- 1.02 <u>Bidding:</u>

See General conditions.

# 1.03 Scope of the Work:

- A. The work to be done under this contract consists of furnishing all labor, materials, equipment, devices, appliances, tools, transportation, and services as required, and in performing all functions to completion and leave ready for operation the installation of the plumbing work in strict accordance with these specifications and applicable drawings and subject to the terms and conditions of the contract.
- B. Obtain all permits and make all test.

# 1.04 Intent:

- A. It is the intention of the specifications and drawings to call for finished work, tested, and ready for operation. Work shall be installed in accordance with the drawings and specifications using skilled workmen.
- B. It shall be the responsibility of this Contractor upon discovering any discrepancies in the drawings or specifications or points of conflict therein, to immediately notify the Owner who will clarify such discrepancies or conflicts in writing before the work progresses beyond said point. No extras will be allowed because of failure to properly notify the Owner.

# 1.05 Codes, Permits and Inspections:

- A. All work under this specification shall comply with all local and state codes, laws, ordinances and regulations. Wherever the drawings and specifications are in excess of such laws, ordinances and regulations, the drawings and specifications shall hold.
- B. Contractor shall obtain permits and arrange all inspections necessary for the installation of this work, paying all fees in connection therewith, and furnishing the Owner with certificates of inspection from all authorities having jurisdiction.
- C. No piping or other construction shall be covered up or concealed until it has been inspected, tested and approved. The Contractor shall furnish all labor, materials, water, fuel, equipment, and apparatus and bear all expenses of such tests as are hereinafter specified for the work under this section of the specifications.

# 1.06 Drawings and Specifications:

- A. The plumbing drawings show the general arrangement of all piping, equipment and appurtenances and shall be followed as closely as actual building construction will permit.
- B. Plumbing work shall conform to the requirements shown on all the drawings. Architectural and Structural drawings shall take precedence over Plumbing drawings. Because of the small scale of the drawings, it is not possible to indicate all offsets, fittings and accessories which may be required. The Contractor shall investigate the structural and finish conditions affecting the work and shall arrange his work accordingly, providing such fittings, valves and accessories as may be required to meet such conditions.
- C. The drawings and specifications are complementary each to the other and what is called for by one shall be as binding as if called for by both.
- D. Omission of particular reference to any item necessary for a complete installation and proper operation thereof, shall not relieve the Contractor of the responsibility of furnishing same.

# 1.07 Coordination of Work:

- A. The Contractor shall coordinate the work with other contractors on the project. All work shall be so arranged that there will be no delay in the proper installation and completion of any part or parts of all piping systems and equipment. Work shall be installed in proper sequence with other trades, and without unnecessary delays.
- B. The layout shown shall be followed as closely as circumstances will permit but the Contractor must lay out his work so as not to conflict with other trades and to avoid any unnecessary cutting of or damage to walls, floors or other parts of his equipment.

- C. Whenever interferences might occur, before installing any of the work in question, the Contractor shall consult with other contractors and shall come to an agreement with them as to the exact location and level of his piping and other parts of his equipment.
- D. Locations of pipes, equipment, and appurtenances shall be adjusted to accommodate the work to interferences anticipated and encountered. The Contractor shall determine the exact route and location of each pipe prior to fabrication. Lines, which pitch, shall have right of way over those which do not pitch. Lines whose elevations cannot be changed shall have right of way over lines whose elevations can be changed.
- E. Offsets and changes in direction in pipes shall be made as required to maintain proper head room and pitch of sloping lines whether or not indicated on the drawings. The Contractor shall furnish and install all accessories as required to effect these offsets and changes in direction.

# 1.08 Equipment and Materials:

- A. Catalog numbers and trade names in these specifications and noted on the drawings are intended to describe the material, devices or apparatus wanted. Similar materials, devices or apparatus of other manufacturers, if of equal quality, capacity and character, may be substituted on the written approval of the Owner. If the Contractor fails to comply with the provisions of this paragraph, he shall be required to furnish all materials and equipment as specified.
- B. All materials shall be new and bear the manufacturer's name, trade name and the UL Label in every case where a standard has been established for the particular material. The equipment to be furnished shall be essentially the standard product of a manufacturer regularly engaged in the production of the required type of equipment, and shall be the manufacturer's latest approved design.
- C. Equipment and materials shall be delivered to the site and stored in original containers, suitably sheltered from the elements, but readily accessible for inspection until installed.
- D. Equipment and materials of the same general type shall be of the same make throughout the work to provide uniform appearance, operation and maintenance.
- E. Equipment shall be tightly covered and protected against dirt, water and chemical or mechanical injury and theft. Damage or defects developing before acceptance of the work shall be made good at the Contractor's expense.
- F. Dimensions: It shall be the responsibility of the Contractor to insure that items to be furnished fit the space available. He shall make necessary field measurements to ascertain space requirements, including those for connections, and shall furnish and install such sizes and shapes of equipment that the final installation shall suit the true intent and meaning of the drawings and specifications.

# 1.09 Equipment Accessories:

- A. The Contractor shall furnish and install all equipment, accessories, connections and incidental items necessary to fully complete the work, ready for use, occupancy and operation by the Owner.
- B. Supports: The Contractor shall support plumb, rigid and true to line all work and equipment furnished under this section. The Contractor shall study thoroughly all general, structural, mechanical and electrical drawings, shop drawings, and catalog data to determine how equipment, fixtures, piping, etc., are to be supported, mounted or suspended and shall provide extra steel bolts, inserts, pipe stands, brackets and accessories for proper support whether or not shown on the drawings.

# 1.10 Cutting, Patching and Repairing:

- A. In new construction, the General Contractor will provide all openings in wall, floor, and roof construction required by the Plumbing Contractor for installation of his work, provided complete information is furnished to the General Contractor at the time required. Failure to provide necessary information will necessitate provisions of additional required openings, chases, recesses, etc., by Plumbing Contractor at his own expense, and he shall be fully responsible for the proper cutting and patching of such construction as approved and directed by the Owner.
- B. Where pipes or conduit pass through walls, floors, or roofs, sleeves shall be furnished by this Contractor and installed, except as noted otherwise, by the trade furnishing and installing the material in which they are located. Location of sleeves, inserts, and supports shall be as directed by this Contractor who will also insure that they are properly installed. Sleeves shall be neatly sawed, sheared, or cut with wheeled cutters. No flame cutting will be permitted.
- C. Each trade shall bear the expense of all cutting, patching, repairing or replacing of the work of other trades required because of his fault, error or tardiness or because of any damage done by him.
- D. Under no circumstances shall the Contractor cut any structural beam or support without prior approval and instructions from the Owner.
- E. If Plumbing Contractor installs Plumbing work through exposed finish walls, ceiling or floor after they are in place, the Plumbing Contractor shall close excess openings around his work to match finish surface.

# 1.11 Shop Drawings and Submittal Data:

A. The Contractor shall submit to the Owner after the award of the contract, a folder containing catalog cuts and descriptions giving name of manufacturer, trade name, type, catalog number and location in work, of all equipment which he proposes to use in the execution of the contract.

- B. Approval is solely for the purpose of determining suitability and will in no way absolve the Contractor of his responsibility for the correctness of measurements, quantities, or performance. Approval of shop drawings shall not constitute a change in the contract requirements.
- C. Shop drawings must comply with the requirements of all regulatory bodies having jurisdiction.
- D. Contractor shall furnish at least five (5) copies of submittal data. Three (3) copies will be returned to the Contractor. If the Contractor desires the return of more than three (3) copies, additional copies shall be furnished at the time of original submission.

# 1.12 Workmanship:

The work throughout shall be executed in the best and most thorough manner, under the periodic observation of and to the satisfaction of the Owner and Engineer who will jointly interpret the meaning of the drawings and specification, and shall have the power to reject any work or materials which, in their judgment, are not in full accordance therewith.

1.13 <u>Singular:</u>

In all cases where a device or piece of equipment is referred to herein or on the drawings in the singular number, it is intended that such reference shall apply to as many such devices as are required to complete the installation.

## 1.14 Use of the Word "Provide":

Herein, where the word "Provide" is written in these specifications, provide shall be understood to mean provide complete in place, that is, "Furnish and Install".

## 1.15 <u>Supervision and Superintendence:</u>

The Contractor shall, during the progress of the work, maintain a competent superintendent, who shall not be change d except if he proves unsatisfactory to the Contractor or the Owner. Efficient supervision shall be given to all work under this contract.

# 2.0 PRODUCTS

# 2.01 Excavation, Trenching, and Backfill:

- A. Unless noted otherwise on the drawings, the Plumbing Contractor shall do all excavation and backfill required for his work. Unless otherwise shown, provide separate trenches for each sanitary sewer, storm sewer, and water line. Lay all pipe in open trenches except when the Owner gives written permission for tunneling.
- B. Sheeting, Bracing, and Water Removal: Sheet and brace trenches, and remove water as necessary to fully protect workmen and adjacent structures and permit proper installation of the work. Comply with all local regulations

or, in the absence thereof, with the provisions of the "Manual of Accident Prevention in Construction" of the Associated General Contractors of America, Inc. Under no circumstances lay pipe or install appurtenances in water. The trench shall be kept free from water until pipe joint material has hardened. The presence of ground water in the soil or the necessity of sheeting or bracing trenches shall not constitute a condition for which any increase may be made in the contract price. Sheeting shall not be removed until the trench is substantially backfilled.

- C. Rock Excavation: The material to be excavated is assumed to be earth and debris encountered in the project area. If rock should be encountered, an agreed extra compensation will be allowed. Earth shall include all material that can be removed by a 3/4-yard power shovel. Rock is defined as rock, stone, hard shale in original ledge, boulders, masonry and rock fragments over nine (9) cubic feet in volume, and cannot be removed by power shovel or without the use of explosives or drills.
- D. Blasting: The written consent and approval of method from the Owner must be obtained before explosives are used, and if used, all local regulations, laws, and ordinances shall be observed. Cover blasts with heavy timbers or mats and set off no blast within twenty-five (25) feet of pipe already laid in the trench. Protect pipe already laid with earth backfill.

Grading Trench Bottoms: Grade the bottom of trenches evenly to insure uniform bearing for the full length of all pipes. Cut holes as necessary for joints and joint making. Excavate all rock, cemented gravel, or other hard materials to at least four (4) inches below the pipe at all points. Refill to grade with sand or fine gravel firmly compacted.

Backfill trenches only after piping has been inspected, tested and locations of pipe and appurtenances have been recorded. Backfill by hand around pipe and for a depth of one (1) foot above the pipe using earth without rock fragments or large stones, and tamp firmly in layers not exceeding six (6) inches in thickness, taking care not to disturb the pipe or injure the pipe coating. Compact the remainder of the backfill thoroughly with a rammer of suitable weight or with an approved mechanical tamper, in layers not exceeding six (6) inches in thickness. All cinders and rubbish shall be prohibited from all trenches.

All fill within the building shall be compacted to 95 per cent of the maximum standard Proctor density.

# 2.02 Sanitary, Waste, and Vent Lines:

A. The following lines and fittings shall be Schedule 40 PVC – NO FOAM CORE:

Underground waste and storm lines

B. The following lines and fittings shall be Service Weight Cast Iron

Underfloor sanitary waste lines Above floor sanitary waste and storm lines Above floor vent lines

C. Installation:

Piping of sizes shown shall be run as indicated on the drawings. All extensions above the roof shall be made according to code and as detailed on the drawings. Soil waste and vent stacks shall be run in partitions and suspended above ceilings where indicated. Vertical vent pipes shall be connected together into one main vent stack or riser above the fixtures and vented as indicated on riser diagrams. Vents and branch vent lines shall be free from drops or sags and be graded and connected so as to drip back into the soil or waste pipe by gravity. Where vent pipes connect to the horizontal soil or waste pipe, the vent branch shall be taken off above the center line of the pipe and the vent pipe extended vertically or at an angle of forty-five (45) degrees to the vertical before off-setting or connecting to branch, main waste or soil vent.

Vents from any fixture or line of fixtures, when connected to a vent line serving other fixtures, shall be extended at least six (6) inches above the flood level rim of the highest of such fixtures to prevent use of the vent line as a waste. Extensions of vent pipes through a roof shall be terminated not less than twelve (12) inches above the roof.

Horizontal drainage piping shall be installed in practical alignment at the grade shown on the drawings, but in no case less than a uniform grade of 1/8 inch per foot for sizes 3" and larger. For sizes 2" and smaller grade shall be not less than 1/4 inch per foot.

Changes in direction in drainage piping shall be made by the appropriate use of forty-five (45) degrees wyes, half-wyes, or long sweep quarter, sixth, eighth, or sixteenth bends. Sanitary tees or short quarter bends may be used when two (2) fixtures are installed back to back and have a common drain. Straight tees, elbows, and crosses may be used on vent lines. No change in direction of flow greater than ninety (90) degrees shall be made. Where different sizes of drainage pipes or pipes and fittings are to be connected, standard increasers and reducers of proper size shall be used. Reduction of the size of drainage piping in the direction of flow is prohibited.

Drilling and tapping of house drains, soil, waste or vent pipes, and the use of saddle hubs and bands are prohibited.

Cross-connections or any fixtures, devices, or construction which will permit backflow connections between a water distribution system and any part of the drainage system shall not be installed.

All piping shall be made permanently gas and water tight. Any fitting or connection which has an enlargement, chamber, or recess with a ledge or shoulder or reduction of the pipe area that offers an obstruction to flow through the pipe shall not be installed. Threaded joints shall be made with a

lubricant on the male thread only. All burrs or cutting shall be removed and pipe shall be reamed or filed out to not less than the original diameter.

Floor connections for water closets and other fixtures shall be made by means of an approved brass, or iron flange, caulked, into the drainage pipe. The connection shall be bolted, with an approved gasket or approved setting compound between the fixture base and the connections.

## 2.03 <u>Water Piping, Cold and Hot:</u>

- A. Copper tubing, water, ASTM Specification B-88-55, Type K and Type L.
- B. Soldered joint fittings, wrought type, American Standard Specification B-16 22-1951. Fittings to be of same manufacturer as copper tubing.
- C. Silver Solder: 15% silver, 80% copper, 5% phosphorous conforming to ASTM B 260-52T.
- D. 95/5 Solder: 95% tin, 5% antimony.
- E. Above-ground Piping: Seamless, type L, hard drawn copper with wrought copper fittings.
- F. Underground Piping: Piping shall be seamless, type K, soft copper with wrought copper fittings.
- G. Valves: Valves shall have the name and trademark of the manufacturer and the guaranteed working pressure cast on the body of the valve. All valves shall be of one manufacturer and identified by manufacturer's catalog number stamped on a metal disk located under the valve handle nut. Valves shall be bronze NIBCO S-111 or approved equal.
- H. Installation:

All piping shall be provided with identification in accordance with ANDI A13.1-1981 standards. Markers shall be located at each wall, floor, and ceiling penetration, and at every 20ft. Markers shall be fully legible from floor level showing medium contained in pipe, and direction of flow.

Contractor shall provide hot and cold water mains with branches and risers complete from point indicated on plans running to all fixtures and other outlets indicated. Mains and branches shall be run generally as shown on the drawings. Contractor shall provide all interior water piping, branches, and risers as shown on the drawing and shall make connections to all plumbing fixtures, hose bibbs, wall hydrants, and other points requiring water under this and other divisions of the specifications. All water mains and branches shall be pitched at least one (1) inch in twenty-five (25) feet toward fixtures. The piping installation shall be arranged so that the entire system can be drained through fixture supply connections. Unions shall be installed at the connections to each piece of equipment to allow removal of equipment without dismantling connecting piping. Size of all water piping shall be as shown on the drawings. Sizes for connections to fixtures and equipment shall be not less than shown in the schedules on the drawings.

Plumbing Contractor shall be held responsible for any damage to any work installed by others caused by leaks or improper installation of the piping system. The Contractor shall coordinate his work with that of the Heating Contractor and where interference occurs, shall procure approval from the Owner before installation of the work.

Provide eighteen (18) inch high air chambers at fixtures with flush valves. At other fixtures air chambers shall be eighteen (18) inches high. Pipe size for air chambers shall be same as supply to fixture.

Soldered or Bronzed Joints: Joints 1-1/4 inches and larger shall be made with silver solder. For joints less than 1-1/4 inches and all valves (regardless of size) use 95/5 solder. Also use a non-corrosive paste flux in accordance with manufacturer's instructions. All joints shall be thoroughly cleaned with emory cloth and reamed cut before assembly. Acid core solder will not be permitted.

Pipe penetrations through floor slabs and fire rated walls shall be restored to the slab or fire rated wall's original rating and shall be sealed with impervious non-combustible materials sufficiently tight to prevent transfer of smoke or combustion gases from one side of the wall or slab to the other in accordance with UL methods.

As appropriate to the penetration size and location, provide firestopping using one of the following:

High-temperature non-shrink grout shall be installed in accordance with recommendations of ACI, CSI and the manufacturer's specifications.

Fill openings with Thermafiber Safing insulation.

Caulk full depth of wall or floor with 3M fire barrier; material - No. 25 caulk or 303 putty.

Penetrations through existing construction shall be neatly drilled or cut, and the opening completely filled around the penetrating pipe with the approved firestopping material. Solid masonry and concrete walls as well as concrete slabs shall be core drilled. Diameter of core drilled holes shall be from 3/4 inch to 1-1/2 inch bigger than the outside diameter of pipe. Pipe shall be secured within 18 inches of the penetration, both sides, from other than the fire wall or slab itself.

# 2.04 Open Ends:

This Contractor shall keep all ends of piping including those extending above the roof, drains, and fixture branches closed with caps or plugs so as to prevent dirt from building materials from getting into pipes and traps during construction.

# 2.05 Hangers, Anchors, and Guides:

- A. All piping in building shall be rigidly supported from the building structure by means of approved hangers and supports. Piping shall be supported to maintain required grading and pitching of lines, to prevent vibration, and to secure piping in place and shall be so arranged as to provide for expansion and contraction.
- B. Generally, pipe hangers shall be attached to 1-1/2" x 1- 1/2" x 1/4" angles supported between joists or supported from clamps attached to bar joists. Use trapeze hangers, 1-1/2" x 1-1/2" x 1/4" angles, where possible and lines can be grouped. Trapeze hanger to be supported from joists by beam clamps.
- C. Spacing of hangers shall not be greater than the following:

Horizontal soil pipe, 5'-0" on centers. Copper tubing, 2" size, 10'-0" on centers, 1-1/2" and smaller 6'-0" on centers.

In addition, provide two (2) hangers at each turn in horizontal line approximately two (2) feet from fitting.

- D. Hangers shall be adjustable steel clevis, MSS Type 1. Select size of hangers to exactly fit pipe size for bare piping and to exactly fit around piping insulation with saddle of shield for insulated piping. Provide copper plated hangers and supports for copper piping that do not receive insulation.
- E. Hanger rods shall not be less than the following sizes and machine threads:

2" and smaller	3/8" diameter
2-1/2" and 3"	1/2" diameter
3-1/2", 4" and 5"	5/8" diameter

- F. Provide fastening devices, turnbuckles or other leveling devices, locknuts, rods and inserts as required to properly support the piping systems.
- 2.06 Pipe Insulation:
  - A. All above ground storm, hot and cold water piping in building shall be insulated.
  - B. Piping shall be insulated with premoulded glass fiber. Jacket shall be factory applied white kraft bonded to aluminum foil, reinforced with fiberglass yarn. Insulation shall be Johns-Manville Flame-Safe with VB jacket or equal by Owens Corning or Certainteed 1" thick for all piping and all pipe sizes.
  - C. Provide 4" sealing strips of jacket for butt joints. Securely fasten jacket at longitudinal laps and sealing strips with adhesive and flare-door type staples 3 to 4 inches on centers. Each staple shall be sealed after installation with

adhesive. Adhesive shall be Foster Spark-FAS 85-20. Apply according to manufacturer's recommendations.

- D. At hanger locations, the Contractor shall furnish and install insulation protection saddle between insulation and hanger. Insulation shall pass through hanger unbroken.
- E. All fittings, valve bodies, etc., to be insulated with machined fiberglass fitting covers and PVC ZIP jackets as manufactured by Speed Line Manufacturing Company. Install according to manufacturer's recommendations.
- F. Insulation shall pass through all sleeves and walls unbroken.
- G. All insulation material shall have 25/50 smoke and flame rating.
- 2.07 <u>Plumbing Fixtures:</u>
  - A. The best quality of plumbing fixtures and trimmings shall be provided, fabricated by a manufacturer of established reputation, and all plumbing fixtures shall be of same manufacturer through entire job.
  - B. All fixtures shall have the manufacturer's guarantee label or trademark indicating first quality. All enameled ware shall bear the manufacturer's symbol signifying acid resisting enamel.
  - C. Quantities: The Contractor is referred to the Architectural and Plumbing drawings for the quantities of fixtures to be furnished under this division of the specifications which shall be deemed to include all plumbing fixtures shown of the type described hereinafter, complete with all necessary trimmings.
  - D. All supply fittings to lavatories, urinals, and water closets through wall to valve and to fixture shall be chrome plated brass, complete with chrome plated escutcheon.
  - E. The fixtures herein, specifying catalog numbers, show the type and quality of plumbing fixture desired in each instance. Owner approved equal fixtures of the following manufacturers will be acceptable.

Fixtures	American-Standard, Kohler, Eljer, Elkay, Just
Trim	As for fixtures plus Chicago Faucet, Sloan, Delta, Symmons, McGuire
Seats	Church, Beneke, Olsonite
Carriers	Josam, Wade, Zurn
Floor Drains	Josam, Wade, Zurn
Cleanouts	As for floor drains

Water Cooler Halsey Taylor, Elkay, Sunroc

Water Heater Rudd, State, A.O. Smith

- F. All fixtures shall be white.
- G. Refer to drawings for fixture schedule.

# 3.0 EXECUTION

# 3.01 <u>Electrical Connections of Equipment:</u>

- A. Wiring from disconnect switches, junction boxes, panel board circuit breakers, etc. up to mechanical equipment shall be by the electrical contractor. Final electrical connections to plumbing equipment shall be by this contractor.
- B. Control wiring and control connections for plumbing systems is by this Contractor.

# 3.02 Protection During Construction:

- A. Plumbing fixtures and trim shall be protected against damage or injury due to building materials, acid, tools, equipment, or any causes incidental to construction.
- B. The finished surface of each fixture shall be covered with building paper or similar protection. All fixtures damaged by any cause, and any trim with marred or scratched finish shall be replaced at nocost to the Owner. The fixture and fixture trim protection shall be removed at the completion of construction.
- 3.03 <u>Tests:</u>
  - A. Concealed work shall remain uncovered until required tests have been completed, but if necessary, tests on portions of the work may be made and those portions of the work may be concealed after being proved satisfactory. Repairs of defects that are discovered as a result of inspections or tests shall be made with new materials. Caulking of screwed joints, cracks, or holes will not be accepted. Test shall be repeated after defects have been eliminated.
  - B. Drainage System Tests:

A water test shall be applied to all parts of the drainage systems before the pipes are concealed or fixtures set in place. The test may be applied in sections. All openings of each system to be tested shall be tightly closed except the highest opening above roof, and the entire system shall be filled with water up to the overflow point of this highest opening.

All parts of the system shall be subject to not less than ten (10) feet of hydrostatic head except the uppermost ten (10) feet of the piping directly

below the opening. The water shall remain in the system for not less than fifteen (15) minutes after which time no leaks at any joint or lowering of the water level at the overflow shall be visible.

C. Water Supply System:

A water pressure test shall be applied to all parts of the water supply system before the piping is concealed or before the fixtures are connected. A hydrostatic pressure of not less than one hundred twenty-five (125) pounds per square inch shall be applied to the system, and there shall be no leaks at any point in the system at this pressure. An air or gas test is not acceptable.

# 3.04 <u>Sterilization:</u>

- A. All the new water piping and affected existing water piping, including all valves, fixtures, fittings, and other devices connected hereto, shall be sterilized with a solution containing not less than fifty (50) parts per million of available chlorine. The chlorinating material shall be liquid chlorine gas-water mixture, calcium hypochlorite, sodium hypochlorite, or chlorinated lime and water mixture conforming to the standards of the American Water Works Association and shall be introduced into the system in an approved manner.
- B. The sterilization solution shall be allowed to remain in the system for a minimum period of twenty-four (24) hours, but until pronounced safe and fit for human consumption by the Owner based on samples drawn from the system and tested. During the sterilizing period all valves and outlets shall be opened and closed several times. After sterilization, the solution shall be flushed from the system with clean water until residual chlorine content is not greater than 0.2 parts per million unless otherwise directed. After the system has been flushed, additional samples will be taken and tests made; if the water is found unsafe for human consumption, the sterilization procedure specified herein before shall be repeated.

# 3.05 Cleaning and Adjusting:

- A. Upon completion of work, all surplus material and rubbish shall be removed from premises. Fixtures shall be cleaned; all valves adjusted; all escutcheons and plates installed; all floor drains cleaned, and all mortar and foreign matter removed from all exposed plumbing work.
- B. Any stoppage or discoloration or other damage to parts of the building, its finish, or furnishing, due to the Contractor's failure to properly clean the piping system shall be repaired by the Contractor without cost to the Owner.
- 3.06 Emergency Repairs:

The Owner reserves the right to make, or have made, repairs to the plumbing system within the guarantee period as required to keep the equipment in operation when the Plumbing Contractor is not available to make the necessary

repairs. These necessary repairs shall in no way void the Contractor's guarantee bond nor relieve the Contractor of his responsibilities during the bonding period.

## 3.07 Painting:

- A. All factory finished metal surfaces of plumbing equipment installed that are damaged during construction shall be restored to the original condition.
- B. Contractor shall paint all iron and steel, including pipe hangers, that do not have a factory finish or galvanized finish used for support of equipment. Prime with one coat of oil base primer followed by one coat of oil base finish coat.

## 3.08 Maintenance and Operating Manuals:

At the completion of this project the contractor shall furnish the Owner three (3) operating and maintenance manual s containing a brief description of each system and its various components. Instructions must give full details of the operation of all equipment installed, and shall include manufacturer's printed operating and maintenance instructions, detailed data and bulletins covering all material furnished under the contract giving all necessary illustrations and diagrams and a composite schedule of periodic servicing and lubrication requirements and replacement parts.

## 3.09 As Built Drawings:

- A. Contractor shall keep and maintain in good order a record of any waste, vent, or water piping that deviates from drawings for any reason. This record shall be made available to the Owner on the date of substantial completion and shall be legible and accurate so as to be directly transferable to an as-built reproducible drawing.
- B. Contractor shall provide to the Owner actual dimensions of all waste and water lines installed on exterior of building, giving dimensions to new and/or existing buildings.

## 3.10 Guarantee:

The Contractor shall deliver the system to the Owner complete in first-class operating condition in every respect and shall guarantee the material and workmanship for a period of one (1) year from the date of acceptance. If, during that time, any defect should show up due to defective material, negligence, or want of proper care on the part of the Contractor, he shall furnish such new materials as are necessary to repair such defects and place same in working order at his own expense on receipt of notice of such from the Owner or Owners.

# END OF SECTION 22 00 00

## SECTION 23 00 00 MECHANICAL REQUIREMENTS

# 1.0 <u>GENERAL</u>

# 1.01 General Conditions:

- A. Drawings, all Contract Documents, and Division-1 Specifications sections, apply to work of this section.
- B. Where the term "Contractor" is used, it shall mean the HVAC Contractor.
- C. Contractors bidding on this section are notified that they shall hold licenses for Heating H-2 and H-3 as issued by the State Board of Examiners of Plumbing and Heating Contractors.
- D. Reference shall be made to the Architectural, Structural, Plumbing and Electrical drawings and specifications for details of building construction and for coordination with other parts of construction.
- E. Contractor shall visit the job site before the submission of a bid and familiarize himself with existing conditions. Submission of a bid will be considered as evidence that the Contractor has visited the site and is familiar with existing conditions.
- 1.02 Bidding:

The HVAC work shall be included under the General Contract.

- 1.03 Scope of the Work:
  - A. The work to be done under this contract consists of furnishing all labor, materials, equipment, devices, appliances, tools, transportation, and services as required, and in performing all functions to complete and leave ready for operation the installation of the HVAC system in strict accordance with these specifications and applicable drawings; and subject to the forms and conditions of the contract.
  - B. The work shall include the following items but is not intended to cover every item in detail. The list is not necessarily a complete list:

Pipe Penetrations Sheet Metal Work Grilles Insulation VAV Terminals

# 1.04 Intent:

- A. It is the intention of the specifications and drawings to call for finished work, tested, and ready for operation. Work shall be installed in accordance with the plans and specifications using skilled workmen.
- B. It shall be the responsibility of this Contract or upon discovering any discrepancies in the drawings or specifications or points of conflict therein to immediately notify the Owner who will clarify such discrepancies or conflicts in writing before the work progresses beyond said point. No extras will be allowed because of failure to properly notify the Owner.

## 1.05 Codes, Permits and Inspections:

- A. All work under this specification shall comply with all local and state codes, laws, ordinances and regulations particularly Volume III of the North Carolina State Building Code. Wherever the drawings and specifications are in excess of such laws, ordinances and regulations, the drawings and specifications shall hold.
- B. Contractor shall obtain permits and arrange all inspections necessary for the installation of this work, paying all fees in connection there with, and furnishing the Owner with certificates of inspection from all authorities having jurisdiction.
- C. No piping or other construction shall be covered up or concealed until it has been inspected, tested and approved. The Contractor shall furnish all labor, materials, fuel, equipment, and apparatus and bear all expenses of such tests as are hereinafter specified for the work under this section of the specifications.

## 1.06 Drawings and Specifications:

- A. The HVAC drawings show the general arrangement of all piping, ductwork, equipment, and appurtenances and shall be followed as closely as actual building construction will permit.
- B. HVAC work shall conform to the requirements shown on all the drawings. Because of the small scale of the drawings, it is not possible to indicate all offsets, fittings and accessories, which may be required. The Contractor shall investigate the structural and finish conditions affecting the work and shall arrange his work accordingly, providing such fittings; valves and accessories as may be required to meet such conditions.
- C. The drawings and specifications are complimentary each to the other and what is called for by one shall be as binding as if called for by both.
- D. Omission of particular reference to any item necessary for a complete installation and proper operation thereof, shall not relieve the Contractor of the responsibility of furnishing same.

# 1.07 Coordination of Work:

- A. The Contractor shall coordinate the work with other contractors on the project. All work shall be so arranged that there will be no delay in the proper installation and completion of any part or parts of all piping system sand equipment. Work shall be installed in proper sequence with other trades, and without necessary delays.
- B. The layout shown shall be followed as closely as circumstances will permit but the Contractor must lay out his work so as not to conflict with other trades and to avoid any unnecessary cutting of or damage to walls, floors or other supporting structural members.
- C. Whenever interferences might occur before installing any of the work in question, the Contractor shall consult with other contractors and shall come to an agreement with them as to the exact location and level of his piping and other parts of his equipment, subject to final approval of the Owner.
- D. Locations of pipes, equipment, and appurtenances shall be adjusted to accommodate the work to interferences anticipated and encountered. The Contractor shall determine the exact route and location of each duct prior to fabrication. Pipe lines which pitch shall have right of way over ductwork.
- E. Offsets and changes in direction in ducts shall be made as required to maintain proper headroom and to avoid sloping pipelines whether or not indicated on the drawings. The Contractor shall furnish and install all accessories as required to effect these offsets and changes in direction.

# 1.08 Equipment and Materials:

- A. Catalog numbers and trade names in these specifications and noted on the drawings are intended to describe the material, devices or apparatus wanted. Similar materials, devices or apparatus of other manufacturers, if of equal quality, capacity and character, may be substituted on the written approval of the Owner. Proposed substitutions with descriptive data shall be submitted to the Owner at least ten days before the Bid date. If the Contractor fails to comply with the provisions of this paragraph, he shall be required to furnish all materials and equipment as specified.
- B. All materials shall be new and bear the manufacturer's name, trade name and the UL label in every case where a standard has been established for the particular material. The equipment to be furnished shall be essentially the standard product of a manufacturer regularly engaged in the production of the required type of equipment and shall be the manufacturer's latest approve design.
- C. Equipment and materials shall be delivered to the site and stored in original containers suitably sheltered from the elements but readily accessible for inspection until installed.
- D. Equipment and materials of the same general type shall be of the same make throughout the work to provide uniform appearance, operation and maintenance.

- E. Equipment shall be tightly covered and protected against dirt, water and chemical or mechanical injury and theft. Damage or defects developing before acceptance of the work shall be made good at the Contractor's expense.
- F. Dimensions: It shall be the responsibility of the Contractor to insure that items to be furnished fit the space available. He shall make necessary field measurements to ascertain space requirements, including those for connections, and shall furnish and install such sizes and shapes of equipment that the final installation shall suit the true intent and meaning of the drawings and specifications.
- G. Manufacturer's directions shall be followed completely in the delivery, storage, protection and installation of all equipment and materials. The Contractor shall promptly notify the Owner in writing of any conflict between any requirement of the contract documents and the manufacturer's directions and shall obtain the Owner's written instruction before proceeding with the work. Should the Contractor perform any work that does not comply with the manufacturer's directions or such written instruction from the Owner, he shall bear all costs arising in correcting the deficiencies.

# 1.09 Equipment Accessories:

- A. The Contractor shall furnish and install all equipment, accessories, connections and incidental items necessary to fully complete the work, ready for use, occupancy and operation by the Owner.
- B. Supports: The Contractor shall support plumb, rigid and true to line all work and equipment furnished under this section. The Contractor shall study thoroughly all general, structural, mechanical and electrical drawings, shop drawings, and catalog data to determine how equipment, fixtures, piping, etc. are to be supported, mounted or suspended and shall provide extra steel bolts, inserts, pipe stands, brackets and accessories for proper support whether or not shown on the drawings.

# 1.10 <u>Cutting, Patching and Repairing:</u>

- A. In new construction the General Contractor will provide all openings in wall, floor, and roof construction required by HVAC Contractor for installation of his work provided complete information is furnished to the General Contractor at the time required. Failure to provide necessary information will necessitate provisions of additional required openings, chases, recesses, etc., by HVAC Contractor at his own expense, and he shall be fully responsible for the proper cutting and patching of such construction as approved and directed by the Owner.
  - B. Each trade shall bear the expense of all cutting, patching, repairing or replacing of the work of other trades required because of his fault, error tardiness or because of any damage done by him.
- C. Under no circumstances shall the Contractor cut any structural beam or support without prior approval and instructions from the Owner.

D. If HVAC Contractor installs HVAC work through exposed finish walls, ceiling or floor after they are in place, the HVAC Contractor shall close excess openings around his work to match finish surface.

## 1.11 Shop Drawings and Submittal Data:

- A. The Contractor shall submit to the Owner after award of the contract, a folder containing catalog cuts and descriptions giving the name of the manufacturer, trade name, type, catalog number and location in work of all equipment which he proposes to use in the execution of the contract.
  - B. After receiving the approval of the Owner, it shall be the responsibility of the Contractor to verify all dimensions and arrangements of equipment or apparatus with job conditions to insure correct application and installation.
  - C. Contractor shall then prepare, or cause to be prepared, shop drawings showing in detail (a) the equipment he has been authorized to install, and (b) the methods by which the installation of his work is to be made. Shop drawings shall show make, model number, capacity, dimensions, construction, and all pertinent data regarding the equipment to be furnished. Shop drawings shall bear Contractor's stamp certifying that he has checked each item of equipment for size, location, capacities and performance that each item meets all conditions indicated on drawings and specified.
- D. The manufacturer's standard drawings will be accepted for manufacturer's standard production items if certified for installation at the location noted. Shop drawings shall be made for all items of equipment, specially fabricated for this contract.
- E. Shop drawings shall be submitted as soon after award of the contract as possible, allowing ample time for checking and processing and the Contractor shall assume responsibility for delays incurred due to rejected items. Failure to submit suitable drawings will not be considered sufficient cause for extension of time.
- F. Approval is solely for the purpose of determining suitability and will in no way absolve the Contractor of his responsibility for the correctness of measurements, quantities, or performance. Approval of shop drawings shall not constitute a change in the contract requirement.
- G. Shop drawings must comply with the requirements of all regulatory bodies having jurisdiction.
- H. Contractor shall furnish at least five (5) copies of submittal data. Three (3) copies will be returned to the Contractor.

## 1.12 Workmanship:

The work throughout shall be executed in the best and most thorough manner, under the periodic observation of and to the satisfaction of the Owner and the Engineer who will jointly interpret the meaning of the drawings and specifications and shall have the power to reject any work or materials which, in their judgment, are not in full accordance therewith.

1.13 <u>Singular:</u>

In all cases where a device or piece of equipment is referred to herein or on the plans in the singular number, it is intended that such reference shall apply to as many such devices as are required to complete the installation.

## 1.14 Use of the Word "Provide":

Herein, where the word "provide" is written in these specifications, "provide" shall be understood to mean provide complete in place, that is, "furnish and install".

1.15 <u>Supervision and Superintendence:</u>

The Contractor shall, during the progress of the work, maintain a competent superintendent who shall not be changed except if he proves unsatisfactory to the Contractor or the Owner. Efficient supervision shall be given to all work under this contract.

# 2.0 PRODUCTS

## 2.01 <u>Pipe Penetrations:</u>

- A. Pipe penetrations through floor slabs and fire rated walls shall be restored to the slab or fire rated wall's original rating and shall be sealed with impervious noncombustible materials sufficiently tight to prevent transfer of smoke or combustion gases from one side of the wall or slab to the other in accordance with UL methods.
- B. As appropriate to the penetration size and location, provide fire stopping using one of the following:

High-temperature non-shrink grout shall be installed in accordance with recommendations of ACI, CSI and the manufacturer's specifications.

Fill openings with Thermofiber Safing insulation.

Caulk full depth of wall or floor with 3M-fire barrier material - No. 25 caulk or 303 putty.

- C. Penetrations through construction shall be neatly drilled or cut, and the opening completely filled around the penetrating pipe with the approved fire stopping material. Solid masonry and concrete walls as well as concrete slabs shall be core drilled. Diameter of core drilled holes shall be f rom3/4inch to 1-1/2 inch bigger than the outside diameter of pipe. Pipe shall be secured within 18 inches of the penetration, both sides, from other than the firewall or slab itself.
- 2.02 Sheet Metal Work:

- A. Provide all ducts, dampers and accessories as indicated on the drawings and specified herein.
- B. Duct sizes shown on drawings are actual sheet metal size s. Plans are generally diagrammatic and Contractor shall make take offs as required to install ducts in spaces provided, however, the Contractor shall secure the Owner's approval before re-routing or changing duct sizes.
- C. Sheet metal work shall be constructed in accordance to S MACNA, Inc. Low Velocity Duct Construction Standards.
- D. Dampers, volume (Manual). Provide the manually operated volume control dampers necessary for the proper balancing of the air handling system. They shall have an indicating device with lock to hold the damper in position for proper setting. Wye branch connections to have splitter dampers. All branch ducts to registers shall have a damper.
- E. Ductwork: All low velocity ductwork shall be constructed of galvanized steel in accordance with Table 1 and Plates 5 through 15 of the low velocity duct standard. Galvanized steel shall be of lock forming quality and shall have a galvanized coating of 1 1/4 ounces total for both sides of one (1) square foot of a sheet.
- F. Flexible ductwork: All flexible ductwork with in the building envelope shall have a minimum R-value of 6.2. All flexible ductwork outside of the building envelope shall have a minimum R-value of 8.0.
- G. Elbows, Radius: Shall be constructed in accordance with Plate 21, Figure B of the low velocity duct standard.
- 2.03 <u>Grilles:</u>
  - A. The diffuser, grilles, and registers shall be of type and size shown in the equipment schedule. A white finish shall be provide, unless noted otherwise. Provide with volume control dampers, square-to-round transitions, etc.
  - B. Use Price, Kruger, Carnes, Metal-Aire, or approved equivalent.

# 2.04 Insulation:

- A. Duct
  - Unless otherwise noted in the drawings all rectangular and round air conditioning supply, return, exhaust, and outside air duct shall be externally insulated with 3" thick, 3/4 lb. density foil scrim Kraft jacketed insulation. Joints shall be wrapped with a minimum of 3" wide FSK band of insulation to prevent any possible leakage and condensation. Ducts with widths over 30" shall be further secured on the underside with mechanical fasteners on 18" maximum centers.
  - 2) In addition to the duct wrap specified in B1.a of this specification, all low pressure rectangular supply and return ductwork shall be lined for

15 feet downstream from air handling unit (or up to and including the first 90 degree elbow). Duct liner shall be 1" thick, 2lb. dense, Shuller Permorate Linacoustic HP, or approved equivalent. Coat all exposed leading edges and transverse joints with a fire retardant adhesive.

- 3) Duct sizes shown are actual duct dimension. Where ductwork is lined, as noted above, the duct insulation thickness shall be added to the listed ductwork dimensions for final duct size.
- Duct routed outside the building shall be insulated with minimum R-8 fiberglass. All joints shall be sealed with mastic prior to insulating. Apply final skin of sheet metal and seal weather tight.
- 5) Duct board shall be 2" thickness rigid Fiberglas Owens/Corning or equal, ASTM C 612, 3 pounds per cubic foot density, with Foil reinforced jacket. The board shall be attached with field applied perforated base pins or weld pins applied on 12" centers. Finish shall be 8oz canvas jacket, totally sized with Foster 81-42W or equal lagging adhesive. Corner board shall be used on all edges.
- B. Piping
  - All condensate drain piping, all refrigerant suction piping, and all refrigerant piping exposed on the exterior of the building shall be insulated with 1.5" wall tubular closed cell elastomeric insulation with all joints butted and cemented tight. Insulation shall be Rubatex R-180-FS or equal with aluminum jacket exterior protective coating on all insulation exposed on exterior.
- 2.05 VAV Terminal Unit:
  - A. VAV Damper
    - The unit casing shall be of 24-gauge zinc coated steel, acoustically lined with <sup>3</sup>/<sub>4</sub>" thick,1-1/2 pound density fiberglass and shall comply with UL 181 and NFPA 90A.
    - 2) The reversible actuator shall be shaft mounted without linkage and shall be an integral part of the electronic controller.
    - 3) Units shall have pressure independent electronic control and shall be reset for air flow between zero and the maximum cataloged cfm.
    - 4) The damper shall be double thickness of 24-gauge steel, with shaft rotating in self-lubricating bearing.
    - Dampers shall be designed such as to prevent air leakage in excess of 1% of the rated quantity at rated inlet static pressure.
  - B. Fan Terminal Unit
    - 1) The unit casing shall be of 20-gauge zinc coated steel, acoustically lined with 1" thick, 1 ½ pound density fiberglass and shall comply with UL 181 and NFPA 90A.
    - 2) Unit fans shall be forward curve centrifugal type with direct drive, three speed, permanently lubricated split capacitor type motors.
- 3) Unit shall have factory-installed volume control dampers. Dampers shall be designed such as to prevent air leakage in excess of 1% of the rated air quantity at rated inlet static pressure.
- 4) Terminal unit fan shall be controlled by means of an electronic speed controller with voltage limiting circuit and shall turn on whenever heating is required even though primary air system is turned off.
- 5) Provide with 1" filter rack on the fan air inlet.

# 3.0 EXECUTION

- 3.01 <u>Electrical Connection of Equipment:</u>
  - A. Wiring from disconnect switches, junction boxes, panel board circuit breakers, etc. up to mechanical equipment shall be by the electrical contractor. Final electrical connections to mechanical equipment shall be by this contractor.
  - B. Control wiring and control connections control for heating and air conditioning systems is by this Contractor.
- 3.02 Test and Balance:
  - A. Tests shall be made on all equipment and apparatus furnished under this contract for verification of performance of equipment and systems.
  - B. The Contractor shall indicate to the Engineer, at least five days prior to the scheduled time, when he will be prepared for a complete system checkout.
  - C. Operating conditions of all controls and major components shall be verified in the presence of the Engineer and the Owner's representative.
  - D. Heating and air conditioning system shall be balanced, adjusted and placed into service by personnel skilled as a result of training and experience in working with air distribution systems.
  - E. A certified independent test and balance contractor shall perform testing and balancing. The test and balance contractor shall be certified by National Environment Balancing Bureau (NEBB) or Associated Air Balance Council (AABC).
  - F. All necessary equipment, forms, reports, etc. required to perform the system testing and balancing shall be as recommended in the above named procedures.
  - G. The Contractor shall submit to the Engineer a letter stating the procedures, instruments, forms, etc. to be used for testing and balancing heating and air conditioning systems.
  - H. Final balancing data shall be submitted to the Engineer prior to final acceptance. After completion of the work, the Contractor shall state in a letter to the Engineer that the work conforms to plans and specifications. This Letter of Compliance is to be issued prior to final inspection and acceptance by the Owner.

- I. A copy of the approved final balancing data should be included in the Maintenance and Operations Manuals.
- J. After testing, all adjustable pitch motor pulleys shall be replaced with fixed pitch pulleys.

# 3.03 Painting:

- A. Contractor shall paint all iron and steel not having a factory finish or galvanized finish used for support and hanging equipment throughout building. One coat of primer shall be used followed by one coat of oil base paint with colors selected by the Owner.
- B. All painted equipment with damaged areas be painted to match original finish.

### 3.04 <u>Clean-Up:</u>

At the completion of all work, this Contractor shall be responsible for cleaning up all rubbish, leaving the system in perfect operating condition. He shall further clean up rubbish daily in such a manner that the job shall present a neat appearance. Work shall be accomplished to the satisfaction of the Owner.

### 3.05 Maintenance and Operating Manuals:

At the completion of this project the Contractor shall furnish the Owner three (3) operating and maintenance manuals containing a brief description of each system and its various components. Instructions must give full details of the operation of all equipment installed, and shall include manufacturer's printed operating and maintenance instructions, detailed data and bulletins covering all material furnished under the contract giving all necessary illustrations and diagrams and a composite schedule of periodic servicing and lubrication requirements and replacement parts.

## 3.06 As Built Drawings:

Contractor shall keep and maintain in good order a record of any deviations from drawings for any reason. This record shall be made available to the Owner on the date of substantial completion and shall be legible and accurate so as to be transferable to as-built reproducible drawing.

### 3.07 Guarantee:

The Contractor shall deliver the system to the Owner complete in first-class operating condition in every respect and shall guarantee the material and workmanship for a period of one year from the date of acceptance. If during that time any defect should show up due to defective material, negligence, or want of proper care on the part of the Contractor, he shall furnish such new materials as are necessary to repair such defects and place same in working order at his own expense on receipt of notice of such from the Owner.

# END OF SECTION 23 00 00

# SECTION 26 00 00

# ELECTRICAL REQUIREMENTS

# 1.0 <u>GENERAL</u>

### 1.01 General Notes:

- A. Drawings, all Contract Documents, and Division-1 Specifications sections, apply to work of this section.
- B. Where the term "Contractor" is used, it shall mean the Electrical Contractor.
- C. Contractors bidding on this section must possess a State of North Carolina Electrical Contractor's License. Each bidder shall show his license proposal.
- D. Reference shall be made to the Architectural, Structural, Plumbing and HVAC drawings and specifications for details of building construction and for coordination with other parts of construction.
- E. Contractor shall visit the job site before the submission of a bid and familiarize himself with existing conditions. Submission of a bid will be considered as evidence that the Contractor has visited the site and is familiar with existing conditions.

### 1.02 <u>Bidding:</u>

The Electrical work shall be included under the General Contract.

- 1.03 <u>Scope:</u>
  - A. The work under this section of the specifications consists of providing all labor, equipment, supplies, and materials, and performing all operations, including trenching, backfilling, compaction, cutting, channeling and chasing necessary for the installation of a complete wiring system in strict accordance with this section of the specifications and the applicable drawings and subject to the terms and conditions of the contract.
  - B. The following gives a brief outline of the Electrical work which is further described in the body of the specifications and indicated on the accompanying drawings:

Electrical panels and disconnect switches.

Feeder conduits, conductors, and fittings as shown and specified.

Lighting fixtures.

Communication outlets and associated wiring.

All power and lighting branch conduit, conductors, outlets, boxes, receptacles, switches and circuit breakers as shown and specified.

Electrical power connections complete to all equipment requiring electrical connections.

Grounding

C. Certified manufacturer's drawings and shop drawings shall be submitted for all equipment except the following for which lists of manufacturers and catalog numbers shall be submitted. Submit five (5) sets.

Conduit

Conduit fitting

Wiring devices

Wire

Boxes

1.04 <u>Applicable Specifications and Standards:</u> The following standards shall be considered as minimum requirements for this project:

The National Electrical Code.

The National Electrical Safety Code.

The North Carolina State Building Code.

The Underwriter's Laboratories, Inc.

The National Electrical Manufacturers association.

The Insulated Power Cable Engineers Association.

ANSI/TIA/EIA-568B.1, B.2, and B.3 Commercial Building Telecommunications Cabling Standard

- 1.05 Drawings and Specifications:
  - A. The drawings accompanying these specifications and subsequent drawings, or detail will form a part of the contract for this work.
  - B. The drawings are diagrammatic and indicate the extent and general arrangement of the outlets and equipment. These drawings shall be followed as closely as possible, but all measurements shall be verified at the job site. Do not scale drawings for location dimensions. Consult the architectural, structural, mechanical, plumbing and equipment drawings and details for this project for exact location of equipment and before starting the work.
  - C. The drawings and specifications are supplementary, one to the other, and material and workmanship indicated, called for or implied by the one and not be the other shall be supplied and installed as if specifically called for by both.
  - D. Omission of reference to any item necessary for a complete installation and proper operation thereof, shall not relieve the Contractor of the responsibility of furnishing same.
  - E. Discrepancies shown on different drawings, between drawings and specifications or between plans and field conditions shall be promptly brought to the attention of the Engineer for a decision.
- 1.06 <u>Codes, Permits and Inspections:</u>
  - A. The entire installation shall comply with:

All laws and ordinances applying to electrical installations.

The requirements of the National Electrical Code (latest edition with applicable revisions) where such requirements do not conflict with the laws in effect.

The regulations of the power company furnishing the electrical service.

In the event of conflict between these codes, requirements, etc., the most stringent shall apply.

- B. The Contractor shall give all required notices, obtain necessary permits, and pay all required fees.
- C. After completion of the work, the Contractor shall furnish to the Owner a certificate of final inspection and approval from the electrical inspection department having jurisdiction.
- 1.07 Singular:

In all cases where a device or piece of equipment is referred to herein or on the drawings in the singular number, it is intended that such reference shall apply to as many such devices as are required to complete the installation.

1.08 Use of the Word "Provide":

Herein, where the work "Provide" is written in these specifications, provide shall be understood to mean provide complete in place, that is, "Furnish and Install".

- 1.09 <u>Electric Service:</u>
  - A. Voltage: Refer to electrical plans.
- 1.10 Equipment and Materials:
  - A. Catalog numbers and trade names in these specifications and noted on the drawings are intended to describe the material, devices or apparatus wanted. Similar materials, devices or apparatus of other manufacturers, if of equivalent quality, capacity and character, may be substituted on the written approval of the engineer. Proposed substitutions with descriptive data shall be submitted to the engineer at least ten days before the Bid Date. The submissions, if approved by the engineer, will be issued in an addendum before the Bid Opening. If the Contractor fails to comply with the provisions of this paragraph, he shall be required to furnish all materials and equipment as specified.
  - B. All materials shall be new and shall bear the manufacturer's name, trade name and the UL label in every case where a standard has been established for the material. The equipment to be furnished shall be essentially the standard product of a manufacturer regularly engaged in the production of the required type of equipment and shall be the manufacturer's latest approved design.
  - C. Equipment and materials shall be delivered to the site and stored in original containers, suitably sheltered from the elements but readily accessible for inspection until installed.
  - D. Equipment and materials of the same general type shall be of the same make throughout the work to provide uniform appearance, operation and maintenance.
  - E. Equipment shall be tightly covered and protected against dirt, water and chemical or mechanical injury and theft. Damage or defects developing before acceptance of the work shall be made good at the Contractor's expense.
  - F. Dimensions: It shall be the responsibility of the Contractor to ensure that items to be furnished fit the space available. He shall make necessary field measurements to ascertain space requirements, including those for connections, and shall furnish and install such sizes and shapes of equipment that the final installation shall suit the true intent and meaning of the drawings and specifications.

### 1.11 Workmanship:

- A. All work specified herein shall be executed in the best and most workmanlike manner by skilled mechanics. This Contractor shall cover and protect all work and materials throughout the course of the work. He shall be responsible for all damage done to, or caused by, this work until the building is completed and accepted by the Owner, and at completion shall leave the work clean.
- B. This Contractor shall cooperate with all other contractors on the project and shall prosecute the work as fast as the progress of other work will allow. He shall consult with the other

trades and be responsible for the proper placing and fitting of this work in advance of, or in connection with other work.

#### 1.12 <u>Modifications:</u>

- A. Instructions that will modify the work will be ordered by the engineer in writing either before or after the signing of the contract. Only such instructions shall be accepted by this Contractor.
- B. Slight relocations of outlets, devices and equipment shall be made by this Contractor as required, at no additional cost to the Owner, for proper coordination of all trades.

#### 1.13 Locations and Measurements:

- A. Outlets, devices, fixtures and appliances have been located and shown as accurately as possible on the drawings. The Contractor shall take necessary measurements in the field for exact locations and match his work to the building construction. The outlets for special appliances must be installed so they will be in the proper location when the appliances are installed. Necessary information for the proper installation of these special outlets shall be obtained from the Owner by a request in writing.
- B. This Contractor shall furnish and place all metal sleeves necessary for electrical work at the time of or prior to building of the walls or pouring of slabs. He shall be responsible for the locations and sizes of these sleeves. The Contractor shall furnish and install all inserts and hangers required to support conduits, cables, pull boxes, etc. If the sleeves, hangers, inserts, etc. are improperly installed, this Contractor shall do all necessary cutting and patching at his own expense to rectify the errors.

#### 1.14 Excavation and Backfill:

This Contractor shall do all excavation necessary for the installation of this work and shall backfill such excavation promptly. Backfill shall be thoroughly tamped with mechanical tamper in layers not exceeding six (6) inches. Rocks and rubbish are prohibited from trenches.

#### 1.15 Cutting, Patching and Repairing:

- A. In new construction, the General Contractor will provide all openings in wall, floor and roof construction required by Electrical Contractor for installation of his work, provided complete information is furnished to the General Contractor at the time required. Failure to provide necessary information will necessitate provisions of additional required openings, chases, recesses, etc., by this Contractor at his own expense, and he shall be fully responsible for the proper cutting and patching of such construction as approved and directed by the engineer.
- B. Where pipes or conduit pass through walls, floors, or roofs, sleeves shall be furnished by this Contractor and installed, except as noted otherwise, by the trade furnishing and installing the material in which they are located. Location of sleeves, inserts, and supports shall be as directed by this Contractor who will also ensure that they are properly installed. Sleeves shall be neatly sawed, sheared, or cut with wheeled cutters. No flame cutting will be permitted.
- C. Each trade shall bear the expense of all cutting, patching, repairing or replacing of the work of other trades required because of his fault, error or tardiness or because of any damage done by him.

- D. Under no circumstances shall the Contractor cut any structural beam or support without prior approval and instructions from the Owner.
- E. If Electrical Contractor installs electrical work through exposed finish walls, ceiling or floor after they are in place, the Electrical Contractor shall close excess openings around his work to match finish surfaces.

# 2.0 <u>PRODUCTS</u>

2.01 <u>Wiring Methods:</u> Wiring methods shall be:

Rigid Schedule 40 PVC for underground secondary service.

Electrical metallic tubing or for all homeruns and exposed conditions systems run above floor.

MC Cable concealed in walls or above a ceiling subject to restrictions of the NEC.

Liquid-tight flexible conduit for short equipment connections and connections to motors or motor equipment.

Rigid PVC conduit for all systems run under floor or underground.

#### 2.02 Installation Methods:

- A. The installation shall comply with the latest issue of all national, state and local rules and ordinances. The requirements of the latest issue of the National Electrical Code shall be considered a minimum. The state and/or local requirements or the plans and/or specifications shall govern when they exceed the requirements of the National Electrical Code.
- B. All work shall be concealed in walls, partitions, ceilings, and floors unless specifically indicated as being exposed. All conduits run overhead shall be run tight to bottom of joists.
- C. In places where walls are masonry, conduits and boxes shall be installed in the walls as they are erected. Boxes shall be of such depth that conduit entrances may be made without excessive cutting of the masonry. Box openings shall be cut neatly to fit the outline of the boxes and the finish plates shall cover the entire cut opening.
- D. Exposed conduit shall be installed with runs parallel or perpendicular to walls and ceilings with right angle turns utilizing outlet boxes or symmetrical bends.
- E. Conduit installed underground shall have a minimum cover of two (2) feet. Joints in conduit installed underground or under floor shall be made watertight. Conduit under concrete floor slab shall be installed on top of subgrade before stone fill is placed.
- F. Exposed conduits shall be securely fastened in place no more than six (6) feet centers for up through one (1) inch and eight (8) feet for all sizes larger than one (1) inch and hangers, supports or fastenings shall be provided at each elbow and at the end of each straight run terminating at a box or cabinet. Horizontal and vertical conduit runs may be supported by one-hole malleable straps, clamp backs, or other approved device with suitable bolts, expansion shields where needed or beam clamps for mounting to building structure or special brackets. Adjustable hangers may be used to suspend conduits when separately located. Hangers shall be made of durable materials suitable for the application involved.
- G. Conduit ends shall be cut square, threaded and reamed to remove burrs and sharp edges. Field threads shall be of same type and have same effective length as factory cut threads. Conduit joints shall be made with approved couplings. Bends and offsets shall be avoided where possible, but where necessary factory elbows shall be used for one (1) inch and larger. Other offsets and bends shall be made with an approved hickey or conduit bending machine. Conduit deformed or crushed in any way shall not be installed and bends with a radius of less than 3-1/2 inches will not be permitted.
- H. Conduit shall be securely fastened to all sheet metal outlet, junction, cabinets and pull boxes with double galvanized locknuts and insulated bushings, care being observed to see that the full number of threads project through to permit the bushing to be drawn tight against the end of conduit, after the locknuts shall have been made up sufficiently tight to

draw them into firm electrical contact with the box. Insulated bushings of fiber or plastic shall be used on one (1) inch conduit and larger.

- I. During installation, conduit ends shall be capped or plugged to prevent the entrance of foreign matter. The Contractor shall exercise necessary precautions to prevent accumulation of water, dirt or concrete in the conduits during execution of the work. Conduits in which water or other foreign materials have been permitted to accumulate shall be cleaned thoroughly or the conduit run replaced where such accumulation cannot be removed by methods approved by the engineer.
- J. No wires shall be installed until work which might cause damage to the wires or conduits has been completed. Conductors terminating at wired outlets shall extend at least eight (8) inches beyond the outlet to facilitate installation of wiring devices or fixtures.
- K. All taps, splices, and joints in conductors' size number eight (8) and larger shall be made by mechanical means. Connectors used shall have Underwriter's Laboratories approval for use at six hundred (600) volts. All conductors size number ten (10) and smaller shall be jointed by non-corrosive flux solder connections using the hot dip method except that ideal "wirenuts" or approved equal, as for example, 3M pre-insulated (plastic covered) "Scotchlox", shall be used to connect fixture lead wires to their designated branch circuit in junction boxes. These splices shall be electrically and mechanically secure and installed equal to or exceeding the conductor capacity in each instance. All joints, splices, and taps and other sections or wiring requiring taping shall be taped with at least two (2) layers of approved gum rubber tape which shall be laid on with half lap followed by at least one (1) layer of friction of or plastic tape laid on with half lap. The intent of this specification is that the taping shall be neatly done and form a permanently secured insulation equal to that of the wire.
- L. Minimum wire size for all branch circuits shall be No. 12 AWG.
- M. Minimum size for conduit shall be 1/2 inch.
- N. No wiring will be installed in the telephone conduit. Provide pull wires in each conduit.
- O. Where more than one (1) device is installed at the same location and mounting height, a gang plate shall be used.
- P. Junction and/or pull boxes shall be furnished and installed where necessary to avoid excessive runs or too many bends between outlets.
- Q. Powdered soapstone or approved lubricants shall be used to facilitate pulling conductors into conduit.
- R. The following color code shall be used for all conductors in feeder and branch circuits.

	277/480 3 phase	120/208, 3 phase
Phase A	Brown	Black
Phase B	Orange	Red
Phase C	Yellow	Blue
Neutral	Gray	White
Ground	Green	Green

Branch circuit conductors shall be factory color coded. Scotch tape of the proper color may be used to identify conductors No. 4 and larger. All feeders, sub-feeders to panels, motor starters and motors shall be completely phased out as to sequences left to right when facing equipment.

- S. Conductors shall be stranded except that sizes No. 10 and smaller may be solid.
- T. All motors with conduit connections shall be connected to conduit system with short length (not more than twenty-four (24) inches of flexible liquid-tight conduit.)
- U. Circuits are shown schematically. Installation shall be as shown on drawings except by written permission of the engineer.
- V. Conductors shall be continuous from outlet to outlet, and no splices shall be made except within outlet or junction boxes.
- W. Conductors for branch circuits whose length from panel to center of load exceeds fifty feet shall be No. 10 AWG unless a larger size is shown on drawings.
- X. All receptacles to be grounded to the raceway system with a No.12 green TW jumper connected to the bonding screw. Steel City Style G, grounding clips may be used on stamped steel boxes. Bonding jumper shall be installed as the device box is installed.
- Y. A code gauge, green grounding conductor, (considered a non-current-carrying conductor), shall be pulled through the entire raceway system.
- Z. PVC conduit shall be UL labeled, shall be rated for 90 degrees C. wiring, and shall be assembled with solvent weld fittings. Bends shall be accomplished with equipment specifically intended for the purpose, and flame-type heating devices shall not be used. Any portion of the conduit, which has been scorched or deformed because of excessive heat, shall be rejected. PVC conduits shall not be run exposed in any locations.

#### 2.03 <u>Materials and Equipment:</u>

- A. All materials used in this work shall be new and listed by the Underwriter's Laboratories, Inc. in every case where a standard has been established for the material to be installed. Materials and equipment furnished under this specification shall be the standard products of manufacturers regularly engaged in the manufacture of such equipment and shall be identical.
- B. Electrical Metallic Tubing/Rigid steel conduit: General Electric Electro Galvanized Zinc-Coating.
- C. EMT/Rigid Fittings: Thomas & Betts compression type.
- D. Flexible Conduit: Liquid-tight flexible conduit shall be "Sealtight" type UA as manufactured by American Brass.
- E. PVC Conduit: Type 40, heavy wall rigid.
- F. Insulated Bushings: Rigid conduit 0-Z Type "A". EMT Thomas & Betts "Blue Throat" plastic insulated series.
- G. Insulated Grounding Bushing: 0-Z Type "B".
- H. Pull and Junction Boxes: Pull boxes shall be fabricated from galvanized sheet steel, not less than 16 gauge thick, with covers held in place by corrosion-resistant machine screws. Boxes shall be furnished and installed where indicated on the plans or where necessary to facilitate cable pulling and splicing. Box size shall be as required by N.E.C. for the number of conduits and conductors entering and leaving it. Where feeder splices are to be made, box shall be large enough to provide ample workspace. Exposed boxes shall not have extra knockouts.
- I. Outlet Boxes: All outlet boxes shall be galvanized steel, at least 2-1/8" deep and of sufficient size to accommodate devices noted. Boxes for fixtures shall have fixture studs in the center. If flexible connections are to be made, use "Greenfield" with appropriate fittings

for ground continuity. Outlet boxes, for wiring devices in finished walls, shall be one-piece, standard, gang-type, of a size to accommodate number of devices noted. Boxes shall have tile rings to bring box openings flush with finished wall or not more than 1/16" back of same. Sheet steel boxes shall be as manufactured by Steel City, Raco, Appleton, Kilark, or approved equal. Exposed boxes shall not have extra knockouts.

J. Wiring devices shall be as follows:

Unit	Catalog No.	Capacity
One pole switch	See plans	20A 120/277V
Three-way switch	See plans	20A 120/277V
Four-way switch	See plans	20A 120/277V
Duplex receptacle	See plans	20A 125V
Ground fault rec.	See plans	20A 125V

Equivalent wiring devices shall be as manufactured by P&S, Leviton or Eagle.

Wiring device trim plates shall be as noted on the plans.

K. Wire and Cable: All wiring shall be of copper. Provide the AWG size shown on the drawings with insulation indicated below. Conductors shall conform to latest NEC requirements and meet ASTM specifications. Conductors shall be stranded except that sizes No. 10 and smaller may be solid. Wire size, voltage rating, insulation type and manufacturer shall be clearly marked on the conductor jacket at regular intervals. Conductors with the following types of insulation shall be installed in locations indicated and/or shown on drawings. Conductors and cables shall be as manufactured by Senator Wire and Cable Co., Southwire Company, or the Okonite Co.

Type THHN, or THWN or THWN-2 for No. 10 and smaller branch circuits. (Circuits of 600 volts or less.)

Type THHN or THWN or THWN-2 for No. 8 and larger. (Circuits of 600 volts or less.)

- L. Wire Connectors: Pressure connectors as manufactured by "O-Z" or Thomas and Betts for feeders; and wire nuts by Ideal Industries or "Scotch Lox" by Minnesota-Mining for branch circuits.
- M. Panelboards:

All breakers shall be bolt-on type. Breakers shall be thermal magnetic tripped and shall have interrupting capacities required on the drawings. Panelboard shall have asymmetrical fault current rating equal to or greater than panels specified on drawings.

Panelboards shall be provided with size and number of breakers as indicated on plans. Main breakers, where required, shall be top or bottom mounted. Side mounted main breakers or those occupying space which will limit panelboard construction to less than 42 branch circuit poles are precluded.

Single pole breakers for lighting circuit, only, may be quick lag type, equipped with one operating handle, molded in one common case. External connections with internal trip devices for ganging quick lag breakers will not be permitted. All breakers to be thermal magnetic, temperature compensated type and shall be quick-make, quick-break type for manual and automatic operation. When panels are used for switching, breakers shall be specifically approved by Under-writers' Laboratory for such operation.

Conductors in panelboards shall be grouped together and laced with plastic ties in a neat, substantial and approved manner.

A neatly typed directory, properly identifying each circuit, shall be installed in each panelboard. A temporary running directory shall be maintained during construction.

Branch circuits shall be connected in each panel board as indicated on drawings.

All panels shall be marked with its designation and voltage by installing engraved plastic plates with pop rivets. Pressure sensitive plastic tape will not be permitted. Submit sample for approval.

New panels shall be GE series A to match existing. Refer to panel diagrams for required features.

N. Disconnects:

Disconnects shall be furnished and installed at locations shown on plans. Refer to schedule on drawings for additional requirements. Disconnects shall be equipped with fusible poles, as indicated, with quick-break operating mechanism. All disconnects shall be equipped with full-cover interlock.

All disconnects shall be provided with provisions for locking of handle in either "on" or "off" position by installation of pad lock as required. All disconnects shall be equipped with positive pressure fuse clips and shall have visible disconnecting blade switches. Disconnects to be furnished with factory-finished paint with appropriate knockouts for conduit connections.

All disconnects shall be Square D, or equivalent by General Electric, ITE, or Westinghouse.

Fusetron, or equal, dual-element fuses shall be used for protection of motor driven equipment.

# 3.0 EXECUTION

- 3.01 <u>Electrical Connection of Equipment:</u>
  - A. Electrical Contractor shall make power connections to all owner supplied equipment. Refer to detail on plans for connections to mechanical and plumbing equipment.
  - B. Control wiring for Heating and Air Conditioning Systems is by Heating and Air Conditioning Contractor.
- 3.02 Lighting Fixtures:
  - A. Catalog number and names of manufacturers are used to convey the types, performance and quality of fixtures to be supplied. Fixtures of other manufacturers may be acceptable provided they offer equal or superior performance and quality and are approved as substitutions. Approval of substitutions 10 days prior to Bid date required.
  - B. Catalog numbers given are not necessarily the total fixture specifications. The general description, type and number of lamps, pertinent details as to the quality and functional operation of the fixture as well as the catalog numbers are to be considered in determining the appearance, performance and quality intended. Any major discrepancies in any fixture specification should be reported to the engineer prior to submitting a proposal.
  - C. It is intended that a lighting fixture be provided for every lighting outlet shown. Any omission is in error and shall be brought to the attention of the engineer prior to submitting a proposal; otherwise the fixture of intent selected by the engineer shall be furnished and installed at no additional cost to the contract.

D. LED Luminaries:

LED driver manufacturers should have a minimum of five years of experience with the manufacture of LED drivers. All drivers shall have a minimum warranty of five years.

Fixtures shall be dimmable down to 10% with standard 120-volt, electronic, low voltage dimmers.

Minimum color rendering index (CRI) shall be 80. Color temperature and performance shall conform to the parameters established by ENERGY STAR SSL standards (refer to ANSI-C78.377-2008).

Optical design shall be low glare, 50% cut-off.

Rated for 50,000 hours at 70% lumen maintenance.

LED driver shall be high efficiency with a minimum power factor of .90

5-year, 100% warranty coverage for the driver, LED module, housing and trim. For the 1st year this shall be a complete parts and labor warranty. The 4th and 5th years shall cover parts only.

- E. Refer to drawings for fixture schedule.
- 3.03 Painting:
  - A. Contractor shall paint all iron and steel not having a factory finish or galvanized finish used for support and hanging equipment throughout building. One coat of primer shall be used followed by one coat of oil base paint with colors selected by the Owner.
  - B. All painted equipment with damaged areas shall be painted to match original finish.
- 3.04 Clean-Up:

At the completion of all work, this Contractor shall be responsible for cleaning up all rubbish, leaving the system in perfect operating condition. He shall further clean up rubbish daily in such a manner that the job shall present a neat appearance. Work shall be accomplished to the satisfaction of the engineer.

#### 3.05 <u>Maintenance and Operating Manuals:</u>

At the completion of this project the Contractor shall furnish the Owner three (3) operating and maintenance manuals containing a brief description of each system and its various components. Instructions must give full details of the operation of all equipment installed, and shall include manufacturer's printed operating and maintenance instructions, detailed data and bulletins covering all material furnished under the contract giving all necessary illustrations and diagrams and a composite schedule of periodic servicing and lubrication requirements and replacement parts.

3.06 As Built Drawings:

Contractor shall keep and maintain in good order a record of any deviations from drawings for any reason. This record shall be made available to the Owner on the date of substantial completion and shall be legible and accurate to be transferable to as-built reproducible drawing.

3.07 <u>Guarantee:</u>

The Contractor shall deliver the system to the Owner complete in first-class operating condition in every respect and shall guarantee the material and workmanship for a period of one year from the date of acceptance. If during that time any defect should show up due to defective material, negligence, or want of proper care on the part of the Contractor, he shall furnish such new materials as are necessary to repair such defects and place same in working order at his own expense on receipt of notice of such from the Owner.

End