

# West Virginia Community and Technical College System Pierpont Community & Technical College Clarksburg Campus Improvements Re-Bid RFB 26290

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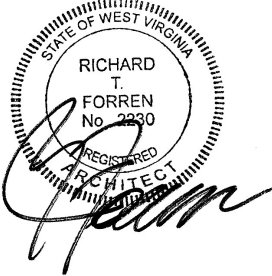
project address: 501 W. Main Street  
Clarksburg, WV 26301

## project manual



date of issue: 5/26/2026 Bid Documents

owner: West Virginia Community & Technical College System  
2001 Union Carbide Drive, Building 2000  
South Charleston, WV 25303



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## TABLE OF CONTENTS

Document	Description
<b>GENERAL</b>	
00010	Table of Contents
00030	Project Personnel & Emergency Notification
<b>BIDDING DOCUMENTS</b>	
00100	Invitation to Bid
00200	Depositories for Bidding Documents
A701-2018	Instructions to Bidders
State of WV	State of West Virginia Supplementary Instructions to Bidders for A701-2018
State of WV	Bid Bond (and Instructions)
00300	Form of Proposal
State of WV	Purchasing Affidavit
State of WV	Disclosure of Interested Parties to Contracts
WV-73	Drug Free Workplace Conformance Affidavit
WV-72	Certified Drug-Free Workplace Report Coversheet
WV-1	Vendor Registration and Disclosure Statement and Small, Women-, and Minority-Owned Business Certification Application
State of WV	Compliance with West Virginia Jobs Act – West Virginia Division of Labor Public Authority Jobs Act Flier Contractor Jobs Act Flier
<b>CONTRACT FORMS</b>	
State of WV	Labor and Material Payment Bond (and Instructions)
State of WV	Performance Bond (and Instructions)
State of WV	West Virginia Jobs Act Weekly Payroll Form
<p>(The following Contract Forms are not bound in the Project Manual but shall be used for this project. Contractor may obtain these forms by contacting AIA West Virginia at 304-344-9872.)</p>	
G701-2017	Change Order
G702-1992	Application and Certificate for Payment
G703-1992	Continuation Sheet
G704-2017	Certificate of Substantial Completion
G706-1994	Contractor's Affidavit of Payment of Debts and Claims
G706A-1994	Contractor's Affidavit of Release of Liens
G707-1994	Consent of Surety to Final Payment
G707A-1994	Consent of Surety to Reduction in or Partial Release of Retainage
G709-2008	Work Changes Proposal Request
G710-2017	Architect's Supplemental Instructions
G714-2017	Construction Change Directive
<b>CONDITIONS OF THE CONTRACT</b>	
A101-2017	Standard Form of Agreement Between Owner and Contractor
A101-Exhibit A	Insurance and Bonds
A201-2017	General Conditions of the Contract for Construction
State of WV	State of West Virginia Supplementary General Conditions
<b>DIVISION 1 – GENERAL REQUIREMENTS</b>	
011000	Summary
012100	Allowances
012300	Alternates

## **Pierpont CTC Clarksburg Campus Improvements**

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012500	Substitution Procedures
012600	Contract Modification Procedures
012900	Payment Procedures
013100	Project Management & Coordination
013200	Construction Progress Documentation
013233	Photographic Documentation
013300	Submittal Procedures
014000	Quality Requirements
014200	References
014339	Mockups
015000	Temporary Facilities & Controls
016000	Products Requirements
017300	Execution
017419	Construction Waste Management & Disposal
017700	Closeout Procedures
017823	Operation & Maintenance
017839	Project Record Documents
017900	Demonstration & Training

### **DIVISION 2 – EXISTING CONDITIONS**

024119	Selective Demolition-Civil
024119	Selective Demolition-Architectural

### **DIVISION 4 – MASONRY**

040110	Masonry Cleaning
040120.64	Brick Masonry Repointing

### **DIVISION 31 – EARTHWORK**

311000	Site Clearing
312319	Dewatering

### **DIVISION 32 – EXTERIOR IMPROVEMENTS**

329000	Site Restoration
329300	Plants & Planting
321216	Asphalt Paving
321313	Concrete Paving
321723	Pavement Markings
321726	Tactile Warning Surfacing
323113	Chain Link Fences and Gates
329113	Soil Preparation

### **DIVISION 33 – UTILITIES**

334200	Stormwater Conveyance
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END OF TABLE OF CONTENTS

**SECTION 00030 – PROJECT PERSONNEL & EMERGENCY NOTIFICATIONS**

***West Virginia Community & Technical College System***

OWNER: WV Council for Community & Technical College Education  
2001 Union Carbide Drive, Building 2000  
South Charleston, WV 25303  
Barrow Koslosky, Owner's Project Representative

CAMPUS:  
Pierpont Community and Technical College  
Caperton Center

ARCHITECT:  
Omni Associates-Architects, Inc.

CIVIL ENGINEER:  
Ascent Consulting & Engineering

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**EMERGENCY NOTIFICATIONS**

If an emergency occurs during a project, contact each of the following listed below simultaneously:

1. Architect – Richard Forren, Omni Associates – Architects, (304)367-1417
2. Owner – Barrow Koslosky, Owner's Project Representative (304)558-0281
3. Civil Engineer – Mike Nestor, Ascent Consulting & Engineering, (304) 677 - 8981

END OF SECTION 00030



**REQUEST FOR BIDS RFB 26290  
Pierpont CTC – Clarksburg Campus Improvements Re-Bid  
Caperton Center**

**SECTION 00100 – INVITATION TO BID**

The West Virginia Community and Technical College System invites proposals to provide all Work including, but not limited to, labor, material, equipment supplies and transportation for:

**REQUEST FOR BIDS RFB 26290**

Pierpont Community & Technical College  
Clarksburg Campus Improvements Re-Bid  
Caperton Center  
501 W. Main Street, Clarksburg, WV 26301

The Work of this Project is defined by the Contract Documents, and in general consists of the following: Deferred maintenance projects varying in type. Improving accessibility between the Vet Tech facility and Gaston Caperton Center, removal of the entry arch element on Gaston Caperton Center, improving site drainage, cleaning the building façade. This and further work is detailed in the Contract Documents.

Technical questions concerning the bidding documents shall be directed to Omni Associates-Architects, Inc., 207 Jefferson Street, Fairmont, WV 26554

Bids must be submitted in accordance with Bidding Documents issued by the Architect and on the Form of Proposal provided.

Bidding Documents will be available **Tuesday, May 26, 2026**, and can be obtained as described below:

Prime Contract Bidders only may contact Omni Associates-Architects, Inc., **Attn: Shelly Snider;** [smclaughlin@omniassociates.com](mailto:smclaughlin@omniassociates.com) and request information to access the firm's online ShareFile site for the **Pierpont Community & Technical Center, Caperton Center Re-Bid** project. Once access is gained, Bidders can download Bidding Documents in the form of PDF files at no charge. Requests for access to documents must be made by email, and those requests received through mail, telephone, fax transmission, or other online communications will not receive a response.

1. Hard Copies may be obtained from Charleston Blueprint (304-343-1063) by General Contractors, Subcontractors, material suppliers and dealers by paying the actual cost of printing, binding, and mailing; however, such cost is not refundable.

Bidding documents may be examined at Viewing Depositories listed in the Bidding Documents.

The Invitation to Bid, Addenda and other relevant information concerning RFB 26290 will be posted at the following URL. It is the Bidder's obligation to check this website for current information:  
<https://wvctcs.org/purchasing-and-finance>

A Pre-bid meeting is scheduled for:

Time: **1:00 p.m., Local Prevailing Time (LPT)**  
Date: **June 11, 2026**  
Place: **Pierpont Community & Technical College, Clarksburg Campus Improvement  
Caperton Center  
501 W. Main Street, Clarksburg, WV 26301**

Attendance is: **MANDATORY:** All Bidders **MUST** attend the pre-bid meeting to familiarize themselves with the Project location, site conditions and other relevant information. Should a Bidder fail to attend, the Bid will be disqualified. Subcontractors and material suppliers are encouraged to attend the pre-bid

**REQUEST FOR BIDS RFB 26290**  
**Pierpont CTC – Clarksburg Campus Improvements Re-Bid**  
**Caperton Center**

meeting.

The Bidder, if successful and awarded a contract, will receive a purchase order and notice to proceed from the Owner after all contract documents are properly completed, executed, and returned to the Owner within ten days following receipt of the Owner's written notice of intent to award a contract. All Work shall start from date of Notice to Proceed and shall be Substantially Complete not later than the number of consecutive calendar days identified in the Contract. Bidder also agrees to achieve Final Completion within 30 days thereafter.

The Owner will suffer financial loss if the Work is not Substantially Complete within the Contract Time. For each calendar day of delay in achieving Substantial Completion, the Contractor shall be liable for and shall pay the Owner, not as a penalty but as liquidated damages, in accordance with the following schedule:

For each calendar day the project is not Substantially Complete, damages to be assessed at Two Hundred Fifty Dollars (\$250.00) per day.

For each calendar day of delay in achieving Final Completion, the Contractor shall be liable for and shall pay half the amount of liquidated damages stated above, plus any additional fees of the Architect and the Architect's consultants that may accrue. Allowances may be made for delays due to shortages of materials and/or energy resources, subject to proof by documentation, and for delays due to strikes or other delays beyond the control of the Contractor. The Contractor in accordance with the Contract Documents must properly document all delays and any claim for extension of the Contract Time.

Submitting Bids: Sealed Bids will be received by the OWNER at the following location until **11:00 a.m.**, LPT, **June 24, 2026**, in accordance with the Instructions to Bidders, and Supplementary Instructions to Bidders:

Director of Facilities and Capital Project Management  
RFB 26290  
West Virginia Community and Technical College System  
2001 Union Carbide Drive, Building 2000  
South Charleston, WV 25303

Special Instructions for Delivering Bids:

1. Bids Delivered by UPS and Federal Express: The UPS and FedEx drivers will deliver bids to the mail room at the address above.
2. Hand Delivered Bids: Deliver bids to the following address: 1st Floor, WV Community and Technical College System, 2001 Union Carbide Drive, Building 2000, South Charleston, WV 25303.
3. Delivering Bids via U. S. Postal Service is not recommended. Bids may or may not arrive on time.

Late Bids and electronically transmitted bids will not be accepted. Owner reserves the right to accept or reject any/all Bids.

All applicable federal, state, and local laws, rules and regulations apply.

End Of Section

**SECTION 00200 – DEPOSITORIES FOR BIDDING DOCUMENTS**

***RFB 26242  
Pierpont Community and Technical College  
Clarksburg Campus Improvements  
Caperton Center***

Bidding Documents may be examined without charge at the following locations:

West Virginia Community and Technical College System  
2001 Union Carbide Drive, Building 2000  
South Charleston, WV 25303

***Omni Associates-Architects, Inc  
207 Jefferson Street  
Fairmont, WV 26554***

Contractors Association of West Virginia  
2114 Kanawha Boulevard, East  
Charleston, WV 25311

Ohio Valley Construction Employer's Council  
21 Armory Drive  
Wheeling, WV 26003

Construction Employers Association of North Central WV  
2794 White Hall Blvd.  
White Hall, WV 26554

Parkersburg-Marietta Contractor's Association  
4424 - B Emerson Avenue  
Parkersburg, WV 26104

Pennsylvania Builders Exchange  
1813 North Franklin Street  
Pittsburgh, PA 15233-2221

RCD Document Processing  
30 Technology Parkway South, Suite 500  
Norcross, GA 30092

Bid Clerk  
15101 S. Avers  
Midlothian, IL 60445

END OF SECTION 00200



# DRAFT AIA® Document A701™ - 2018

## Instructions to Bidders

for the following Project:

*(Name, location, and detailed description)*

« Pierpont Community & Technical College »  
« Clarksburg Campus Improvements »  
« Caperton Center »  
« 501 W. Main Street, Clarksburg, WV 26301 »

### THE OWNER:

*(Name, legal status, address, and other information)*

West Virginia Community and Technical College System  
2001 Union Carbide Drive, Building 2000 »  
South Charleston, WV 25303 »  
« »

### THE ARCHITECT:

*(Name, legal status, address, and other information)*

«Omni Associates-Architects, Inc. »« »  
«207 Jefferson Street »  
«Fairmont, WV 26554 »  
« »

### TABLE OF ARTICLES

- 1 DEFINITIONS
- 2 BIDDER'S REPRESENTATIONS
- 3 BIDDING DOCUMENTS
- 4 BIDDING PROCEDURES
- 5 CONSIDERATION OF BIDS
- 6 POST-BID INFORMATION
- 7 PERFORMANCE BOND AND PAYMENT BOND
- 8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

Certain Sections of AIA Document A107-2018 Instructions to Bidders have been modified by the West Community and Technical College System Supplementary Instructions to Bidders for AIA Document A701-2018 and follow this document in the Project Manual.

West Virginia Code §18B-5 and the Higher Education Purchasing Procedures Manual may also be applicable as they pertain to construction services.

**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.

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

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

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



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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.)*

«Refer to the Invitation to Bid and/or legal advertisement or instructions to 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.)*

«Bidders shall submit requests for clarification and interpretation to the Architect by email at the email address identified in the Invitation to Bid and/or during the Pre-Bid Meeting.»

§ 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.

§ 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.)*

«Addendum may be issued by email and/or the method employed to issue Bidding Documents. »

§ 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.)*

«Refer to §4.2 in the West Virginia Community and Technical College System Supplementary Instructions to Bidders to AIA Document A701-2018 for the bid security required to be provided with the Bid. This document follows A701-2018 Instructions to Bidders. »

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

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

**§ 4.2.4** The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until (a) the Contract has been executed and bonds, if required, have been furnished; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected. However, if no Contract has been awarded or a Bidder has not been notified of the acceptance of its Bid, a Bidder may, beginning «sixty (60) »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.)*

«An original Bid shall be submitted on paper using the Form of Proposal in the Bidding Documents.»

**§ 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.)*

«§4.4 In the West Virginia Community and Technical College System Supplementary Instructions to Bidders to AIA Document A701-2018. Please refer to this modification that governs modification or withdrawal of the Bid. Applicable provisions of West Virginia Code §18B-5 and the Higher Education Purchasing Procedures Manual may also apply.»

## **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.

## § 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™, 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.

Performance Bond and Labor and Material Payment Bond shall be written on the State of West Virginia Bond Forms in the Project Manual. These are the only Bond Forms acceptable.

§ 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:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor, unless otherwise stated below.  
*(Insert the complete AIA Document number, including year, and Document title.)*

« »

- .2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds, unless otherwise stated below.  
*(Insert the complete AIA Document number, including year, and Document title.)*

« »

- .3 AIA Document A201™–2017, General Conditions of the Contract for Construction, unless otherwise stated below.  
*(Insert the complete AIA Document number, including year, and Document title.)*

« »

- .4 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:  
*(Insert the date of the E203-2013.)*

«AIA Document E203 is not applicable in is not used for this project »

- .5 Drawings

Number	Title	Date
	See Schedule Drawings in the Project Manual	

**.6 Specifications**

Section	Title	Date	Pages
	See Table of Contents in the Project Manual		

**.7 Addenda:**

Number	Date	Pages
	Addenda issued by the Architect prior to the time and for receipt of Bids	

**.8 Other Exhibits:**

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

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

« »

The Sustainability Plan:

Title	Date	Pages

Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
	State of West Virginia Supplementary Conditions to AIA Document A201-2017 General Conditions to the Contract for Construction		

**.9 Other documents listed below:**

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

« »

## *West Virginia Community & Technical College System*

### **Supplementary Instructions to Bidders for AIA Document A701-2018**

The following supplements modify, change, delete from or add to Instructions to Bidders, AIA Document A701, 2018 Edition. Where any Article, Paragraph, Subparagraph, or Clause of Instructions to Bidders is modified or deleted by these Supplementary Instructions to Bidders, the unaltered portions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

#### **ARTICLE 3**

##### **BIDDING DOCUMENTS**

#### **§ 3.4 Addenda**

§ 3.4.4 Add the following sentence to § 3.4.4:

If the Bidder fails to acknowledge receipt of each Addendum the Bid may be rejected.

#### **ARTICLE 4**

##### **BIDDING PROCEDURES**

#### **§4.2 Bid Security**

§ 4.2.1 Add the following to § 4.2.1:

Each Bid shall be accompanied by a certified check payable to the Owner for five percent (5%) of the total Bid, or in lieu of a certified check, a Bid Bond may be provided on the State of West Virginia form included in the Project Manual for five percent (5%) of the total Bid. The attorney-in-fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of power of attorney.

§ 4.2.2 The following modification is made to § 4.2.2:

Delete the last sentence in its entirety.

#### **§ 4.3 Submission of Bids**

§ 4.3.1 Add the following to § 4.3.1:

Bids shall be submitted on paper using the Form of Proposal included in the Bidding Documents.

#### **§ 4.4 Modification or Withdrawal of Bid**

§ 4.4. The following modifications are made to § 4.4.3:

In the first sentence, substitute “Owner” for “Architect” and substitute “48 hours” for “two days.”

In the second sentence, add “and Owner” after Architect.

Add the following to § 4.4.3:

Once the Owner and Architect have examined the evidence provided by the Bidder and have determined to their reasonable satisfaction that a clerical error has been made in the Bid and that this error materially affects the Bidder’s ability to perform the Work pursuant to the Bidding and Contract Documents, the Bid Security provided with the Bid shall be returned to the Bidder.

§ 4.4 Add the following to § 4.4:

§ 4.4.4 Except as provided in § 4.4.3, Bids may not be modified or withdrawn for a period of sixty (60) days after receipt of Bids without forfeiture of Bid Security, not as a penalty but as liquidated damages.

#### **ARTICLE 6**

##### **POST-BID INFORMATION**

#### **§ 6.2 Owner’s Financial Capability**

§ 6.2 Delete § 6.2 in its entirety.

#### **ARTICLE 7**

##### **PERFORMANCE BOND AND PAYMENT BOND**

#### **§ 7.1 Bond Requirements**

§ 7.1.1 Add the following Clause to § 7.1.1:

§ 7.1.1.1 The successful Bidder shall furnish a Performance Bond and a Labor and Material Payment Bond for 100% of the contract sum and, if stipulated in the Bidding Documents, a two-year roofing Maintenance Bond for the full value of the roofing system.

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

§ 7.2.1 Delete § 7.2.1 in its entirety and substitute the following:

§ 7.2.1 The successful Bidder shall deliver the required bonds and all other Contract Documents, including

Certificates of Insurance, within fifteen (15) consecutive calendar days after receipt of the Owner's letter of intent to award a Contract. All Contract Documents must be properly executed. Should the successful Bidder fail or refuse to deliver the required bonds and all other Contract Documents, properly executed, within fifteen (15) consecutive calendar days after receipt of the Owner's notice of intent to award a Contract, the successful Bidder shall forfeit the security deposited with his Bid as liquidated damages, not as a penalty. Upon such event, the Owner may award the Contract to the next lowest responsible Bidder.

§ 7.2.2 Delete § 7.2.2 in its entirety and substitute the following:

§ 7.2.2 The bonds shall be written on the State of West Virginia bond forms bound in the Project Manual and according to the instructions provided with these forms.

**Add the following Article 9 to the Instructions to Bidders:**

## **ARTICLE 9** **OTHER CONDITIONS**

### **9.1 Wage Bond**

9.1.1 Pursuant to West Virginia Code §21-5-14, firms engaged in construction work in West Virginia less than five years preceding the date of the Bid shall furnish a bond on a form prescribed by the Commissioner of Labor, payable to the State of West Virginia, with the condition that the person, firm or corporation pay the wages and fringe benefits of his or her or its employees when due. Provided, that the amount of the bond shall not be decreased, except with the Commissioner's approval and determination that there are not outstanding claims against the bond: Provided, however, that if the employer, person, firm or corporation meets one of the following, then such employer, person, firm or corporation shall be exempt from the requirements of this subsection: (1) Has been in business in another state for at least five years; (2) Has at least \$100,000 in assets; or (3) Is a subsidiary of a parent company that has been in business for at least five years.

### **9.2 West Virginia Contractor's Licensing Act**

9.2.1 West Virginia Code §30-42 requires that all persons desiring to perform contractual work in West Virginia must be duly licensed. The West Virginia Contractor's Licensing Board is empowered to issue the contractor's license. Application for a contractor's

license may be made by contacting the West Virginia Contractor's Licensing Board.

9.2.2 West Virginia Code §30-42-12 requires Bidders to include the Bidder's contractor's license number on its Bid.

9.2.3 The successful Bidder shall furnish a copy of its contractor's license prior to issuance of a Purchase Order/Contract.

### **9.3 Vendor Registration**

9.3.1 The successful Bidder must be a registered vendor with the West Virginia Department of Administration, Purchasing Division, prior to issuance of a purchase order. If the Bidder is not a registered vendor, application should be made to the Purchasing Division. The Bidder should obtain a vendor number prior to the Bid Opening.

### **9.4 Purchasing (No-Debt) Affidavit**

9.4.1 ALL CONTRACTS: West Virginia Code §5A-3-10A states that no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than \$1,000 in the aggregate, or the debtor is in employer default.

9.4.2 CONSTRUCTION CONTRACTS: Under West Virginia Code §5-22-1(j), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, sale and use taxes, fire service fees, or other fines or fees.

9.4.3 The bidder (vendor) shall execute and submit with its bid, or as otherwise prescribed by West Virginia Code, the Purchasing Affidavit provided in the Bidding Documents.

### **9.5 Drug- Free Workplace Conformance Affidavit**

9.5.1 Pursuant to West Virginia Code §21-1D-5, any solicitation for a public improvement contract shall require each contractor that submits a bid for the work to submit an affidavit that the contractor has a written plan for a drug-free workplace policy prior to being awarded a contract. If the affidavit is not submitted with the bid submission, the public authority shall promptly request by telephone and electronic mail that the low bidder and

second low bidder provide the affidavit within one business day of the request. Failure to submit the affidavit within one business day of receiving the request shall result in disqualification of the bid. A public improvement contract may not be awarded to a contractor who does not have a written plan for a drug-free workplace policy and who has not submitted that plan to the appropriate contracting authority in timely fashion.

9.5.2 The contractor (bidder/vendor) shall execute and submit with its bid, or as otherwise prescribed by West Virginia Code, the Drug-Free Workplace Conformance Affidavit provided in the Bidding Documents.

### **9.6 Disclosure of interested Parties**

9.6.1 Pursuant to West Virginia Code §6D-1, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of \$1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

### **9.7 Notice to Proceed**

9.7.1 Any work performed, or any materials contracted for prior to receipt of the Owner's written Notice to Proceed and/or Purchase Order shall be at the Bidder's risk.

### **9.8 Contract Time**

9.8.1 The successful Bidder, as a condition of the Contract, agrees that all Work is to be Substantially Complete within the Contract Time stated in the Invitation to Bid and/or Bidding and Contract Documents.

9.8.2 The Owner will suffer financial loss if the Work is not Substantially Complete within the Contract Time. For each calendar day of delay in achieving Substantial Completion, the Contractor shall be liable for and shall pay the Owner the amount of liquidated damages stated in the Invitation to Bid and/or Bidding and Contract Documents, not as a penalty, but as liquidated damages. Allowances may be made for delays due to shortages of materials and/or energy resources, subject to proof by documentation, and for delays due to strikes or other delays beyond the control of the Contractor. All delays

and any claim for extension of the Contract Time must be properly documented in accordance with the Contract Documents by the Contractor.

END OF SUPPLEMENTARY INSTRUCTIONS TO BIDDERS



**BID BOND**

KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned, \_\_\_\_\_  
\_\_\_\_\_ of \_\_\_\_\_, \_\_\_\_\_, as Principal, and \_\_\_\_\_  
\_\_\_\_\_ of \_\_\_\_\_, \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_  
\_\_\_\_\_ with its principal office in the City of \_\_\_\_\_, as Surety, are held and firmly bound unto the State  
of West Virginia, as Obligee, in the penal sum of \_\_\_\_\_ (\$ \_\_\_\_\_) for the payment of which,  
well and truly to be made, we jointly and severally bind ourselves, our heirs, administrators, executors, successors and assigns.

The Condition of the above obligation is such that whereas the Principal has submitted to the Purchasing Section of the  
Department of Administration a certain bid or proposal, attached hereto and made a part hereof, to enter into a contract in writing for  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NOW THEREFORE,

- (a) If said bid shall be rejected, or
- (b) If said bid shall be accepted and the Principal shall enter into a contract in accordance with the bid or proposal  
attached hereto and shall furnish any other bonds and insurance required by the bid or proposal, and shall in all other respects perform  
the agreement created by the acceptance of said bid, then this obligation shall be null and void, otherwise this obligation shall remain in  
full force and effect. It is expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no  
event, exceed the penal amount of this obligation as herein stated.

The Surety, for the value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no  
way impaired or affected by any extension of the time within which the Obligee may accept such bid, and said Surety does hereby  
waive notice of any such extension.

WITNESS, the following signatures and seals of Principal and Surety, executed and sealed by a proper officer of Principal and  
Surety, or by Principal individually if Principal is an individual, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

Principal Seal

\_\_\_\_\_  
(Name of Principal)

By \_\_\_\_\_  
(Must be President, Vice President, or  
Duly Authorized Agent)

\_\_\_\_\_  
(Title)

Surety Seal

\_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_  
Attorney-in-Fact

**IMPORTANT – Surety executing bonds must be licensed in West Virginia to transact surety insurance, must affix its seal, and  
must attach a power of attorney with its seal affixed.**



BID BOND PREPARATION INSTRUCTIONS

AGENCY (A) \_\_\_\_\_
RFQ/RFP# (B) \_\_\_\_\_

- (A) WV State Agency (Stated on Page 1 "Spending Unit")
(B) Request for Quotation Number (upper right corner of page #1)
(C) Your Business Entity Name (or Individual Name if Sole Proprietor)
(D) City, Location of your Company
(E) State, Location of your Company
(F) Surety Corporate Name
(G) City, Location of Surety
(H) State, Location of Surety
(I) State of Surety Incorporation
(J) City of Surety's Principal Office
(K) Minimum amount of acceptable bid bond is 5% of total bid. You may state "5% of bid" or a specific amount on this line in words.
(L) Amount of bond in numbers
(M) Brief Description of scope of work
(N) Day of the month
(O) Month
(P) Year
(Q) Name of Business Entity (or Individual Name if Sole Proprietor)
(R) Seal of Principal
(S) Signature of President, Vice President, or Authorized Agent
(T) Title of Person Signing for Principal
(U) Seal of Surety
(V) Name of Surety
(W) Signature of Attorney in Fact of the Surety

Bid Bond
KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned,
(C) of (D), (E),
as Principal, and (F) of (G),
(H), a corporation organized and existing under the laws
of the State of (I) with its principal office in the City of
(J), as Surety, are held and firmly bound unto The State
of West Virginia, as Obligee, in the penal sum of (K)
(\$ (L)) for the payment of which, well and truly to be made,
we jointly and severally bind ourselves, our heirs, administrators, executors,
successors and assigns.

The Condition of the above obligation is such that whereas the Principal has submitted to the Purchasing Section of the Department of Administration a certain bid or proposal, attached hereto and made a part hereof to enter into a contract in writing for
(M)

NOW THEREFORE

(a) If said bid shall be rejected, or
(b) If said bid shall be accepted and the Principal shall enter into a contract in accordance with the bid or proposal attached hereto and shall furnish any other bonds and insurance required by the bid or proposal, and shall in all other respects perform the agreement created by the acceptance of said bid then this obligation shall be null and void, otherwise this obligation shall remain in full force and effect. It is expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated

The Surety for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of time within which the Obligee may accept such bid: and said Surety does hereby waive notice of any such extension.

NOTE 1: Dated Power of Attorney with Surety Seal must accompany this bid bond.

WITNESS, the following signatures and seals of Principal and Surety, executed and sealed by a proper officer of Principal and Surety, or by Principal individually if Principal is an individual, the (N) day of (O), 20 (P).

Principal Seal (R) (Q) (Name of Principal)
By (S) (Must be President, Vice President, or Duly Authorized Agent)
(T) Title
Surety Seal (U) (V) (Name of Surety)
(W) Attorney-in-Fact

IMPORTANT - Surety executing bonds must be licensed in West Virginia to transact surety insurance, must affix its seal, and must attach a power of attorney with its seal affixed.



**SECTION 00300 – FORM OF PROPOSAL**

BID TO THE OWNER: West Virginia Community and Technical College System  
2001 Union Carbide Drive, Building 2000  
South Charleston, WV 25303

PROJECT: RFB 26290  
**Pierpont Community and Technical College  
Clarksburg Campus Improvement  
Caperton Center**

Bidder's Name: \_\_\_\_\_

The undersigned, hereinafter called "Bidder," being familiar with and understanding the Bidding Documents, and also having examined the site and being familiar with all local conditions affecting the Project, hereby proposes to furnish all labor, material, equipment, supplies and transportation, and to perform all Work in accordance with the Bidding and Contract Documents within the time set forth below for the sum of:

**BASE BID: Removal of entry arch, new site and landscaping work at Caperton**

*Work does include demolition of wing wall at entry to Caperton Center, as well as Civil work relating to site accessibility, drainage, landscaping, and signage.*

*The Base Bid is the sum of Base Bid and Allowance #1. Amount to be shown in both words and numbers. In the event of a difference between the written amount and the number amount, the written amount shall prevail*

For the Sum of: (\$ \_\_\_\_\_)

\_\_\_\_\_  
\_\_\_\_\_

**ALLOWANCES:**

Refer to spec section, amounts are included in the base bid.

**ALLOWANCE No.1: Replace existing HVAC controls-provide a lump sum allowance of \$40,000.**

The Bidder, if successful and awarded a Contract, agrees that all Work is to be Substantially Complete within one hundred and eighty (180) consecutive calendar days following receipt of Owner's written Notice to Proceed and agrees to achieve Final Completion within 30 consecutive calendar days thereafter.

**ALTERNATES:**

The following Alternates may be added to the Base Proposal if selected by Owner. All work shown on drawings and/or specified is in Base Bid, except for such work specifically called to be an Alternate. Refer to Section 012300 - Alternates.

**Alternate No. 1: Work at Fairmont ATC campus**

Work includes re-sealing of concrete joints in sidewalks and building perimeter as described on sheet C-3.1. Work also includes stair and railing repair work as described on sheet C-3.2

ADD the Sum of: ..... (\$ \_\_\_\_\_)

\_\_\_\_\_  
\_\_\_\_\_

**Pierpont CTC Clarksburg Campus Improvements**

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**Alternate No. 2 – Clean Caperton Center façade**

Work includes general cleaning of all masonry façades on the Caperton Center (all façade zones), including removal of biological growth, efflorescence, and graffiti. Work also includes repointing of masonry and sealant joints where needed.

ADD the Sum of: ..... (\$ \_\_\_\_\_)

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**RESPECTFULLY SUBMITTED:**

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_  
*Signature in Ink*

NAME: \_\_\_\_\_ *Corporate Seal if Applicable*  
*Please Type or Print*

TITLE: \_\_\_\_\_

BIDDERS NAME: \_\_\_\_\_

BIDDERS ADDRESS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

TELEPHONE: \_\_\_\_\_

EMAIL: \_\_\_\_\_

CONTRACTOR'S LICENSE NO.: \_\_\_\_\_

**CONTRACTOR'S LICENSE**

West Virginia Code §30-42 requires that all persons desiring to perform contractual work in West Virginia must be duly licensed. The West Virginia Contractor Licensing Board is empowered to issue a contractor's license. Application for a contractor's license may be made by contacting the West Virginia Contractor Licensing Board, Building 3, Room 200, 1900 Kanawha Boulevard, East, Charleston, West Virginia 25305. Telephone: (304) 558-7890. West Virginia Code §30-42 requires any prospective Bidder to include the contractor's license number on or with its Bid. Successful Bidder will be required to furnish a copy of their contractor's license prior to issuance of a Purchase Order/Contract.

**AFFIDAVITS (on the following pages) – TO BE SUBMITTED WITH BID OR AS OTHERWISE  
PERSCRIBED BY LAW**

- PURCHASING AFFIDAVIT: West Virginia code §5A-3-10A states that no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than \$1,000 in the

aggregate. The Bidder (vendor) shall execute and submit with its bid, or as otherwise prescribed by West Virginia Code, the Purchasing Affidavit provided in the Bidding Documents.

- **DRUG-FREE WORKPLACE CONFORMANCE AFFIDAVIT:** West Virginia Code §21-1D-5 requires each contractor that submits a bid for the work to submit an affidavit that the contractor has a written plan for a drug-free workplace policy prior to being awarded a contract. The contractor (bidder/vendor) shall execute and submit with its bid, or as otherwise prescribed by West Virginia Code, the Drug-Free Workplace Conformance Affidavit provided in the Bidding Documents.

#### **CERTIFIED DRUG-FREE WORKPLACE REPORT**

In accordance with West Virginia Code §21-1D-7b, no less than once per year, or upon completion of the project, every contractor shall provide a certified report to the public authority which let the contract. That report must include each of the items identified in the Required Report Content section of the Certified Drug-Free Workplace Report Coversheet.

#### **DISCLOSURE OF INTERESTED PARTIES TO CONTRACTS**

Pursuant to West Virginia Code §6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of \$1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

The Disclosure Form is available at the following URL: <http://www.ethics.wv.gov/Pages/forms.aspx>

#### **VENDOR REGISTRATION AND DISCLOSURE STATEMENT**

The successful Bidder must be a registered vendor with the West Virginia Department of Administration, Purchasing Division, prior to receiving a contract/purchase order. Vendor registration information is available at the following URL: <http://www.state.wv.us/admin/purchase/vrc/wv1.pdf>

#### **LIQUIDATED DAMAGES**

The Owner will suffer financial loss if the Work is not Substantially Complete within the Contract Time following the date established for commencement of the Work in the notice to proceed and/or purchase order. As liquidated damages, and not as a penalty, the Contractor and the Contractor's surety shall be liable for and shall pay the Owner the sum of Two Hundred Fifty Dollars (\$250.00) per day until Substantial Completion is achieved.

Allowances may be made for delays due to shortages of materials and/or energy resources, subject to proof by documentation, and for delays due to strikes or other delays beyond the control of the Contractor. All delays and any claim for extension of Contract Time must be properly documented in accordance with the General Conditions of the Contract for Construction, AIA Document A201-2017, and the State of West Virginia Supplementary Conditions to AIA Document A201-2017.

#### **ADDENDA ACKNOWLEDGMENT**

The undersigned hereby acknowledges receipt of the following Addenda and has taken the information contained therein into full consideration in the formulation of this Bid.

Addenda      No. 1 \_\_\_\_\_

**Pierpont CTC Clarksburg Campus Improvements**

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No. 2 \_\_\_\_\_

No. 3 \_\_\_\_\_

No. 4 \_\_\_\_\_

Failure to acknowledge receipt of each Addendum may be cause for rejection of the Bid.

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_  
*Signature in Ink*

**LIST OF PROPOSED SUBCONTRACTORS  
(To Be Completed and Submitted with Bid)**

List as designated below the proposed subcontractor for each major branch of work for this bid. Also, provide the subcontractor's license number as required by the West Virginia Contractors Licensing Act. If the branch of work is to be completed solely by the Bidder/Contractor, so indicate. If the acceptance of an alternate bid changes a subcontractor, indicate by notation below. The Bidder/Contractor may be requested to change an unsatisfactory subcontractor. The Bidder/Contractor is responsible for selecting or changing subcontractors. The Owner and Architect/Engineer may indicate their concerns about any entity listed which they have reason to believe past experience indicates that poor performance may be expected. The Bidder/Contractor has full responsibility for satisfactory execution of all work in accordance with the Contract Documents. Any change of proposed subcontractors shall be at no additional cost to the Owner, as the Bidder/Contractor has full responsibility for execution of the work. Bidder/Contractor shall have up to two hours after the bid opening to make adjustments if necessary. Owner will suffer loss should Contractor change from those listed beyond the two-hour time stipulated. Please email adjustments/modifications to Chief Procurement Officer at [Barrow.Koslosky@wvhepc.edu](mailto:Barrow.Koslosky@wvhepc.edu)

<b>Branch of Work/Material Category</b>	<b>Subcontractor/Supplier</b>	<b>Contractor License No.</b>
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____

**END OF FORM OF PROPOSAL  
END OF SECTION 00300**

STATE OF WEST VIRGINIA  
Purchasing Division

# PURCHASING AFFIDAVIT

**CONSTRUCTION CONTRACTS:** Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

**ALL CONTRACTS:** Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**DEFINITIONS:**

**"Debt"** means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

**"Employer default"** means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

**"Related party"** means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code §61-5-3*) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_ Date: \_\_\_\_\_

State of \_\_\_\_\_

County of \_\_\_\_\_, to-wit:

Taken, subscribed, and sworn to before me this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

My Commission expires \_\_\_\_\_, 20\_\_\_\_.

**AFFIX SEAL HERE**

**NOTARY PUBLIC** \_\_\_\_\_



# West Virginia Ethics Commission



## Disclosure of Interested Parties to Contracts

Pursuant to *W. Va. Code* § 6D-1-2, a state agency may not allow a vendor to perform work on a contract, or a series of related contracts, that has/have an actual or estimated value of \$1 million or more until the business entity submits to the state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

For purposes of complying with these requirements, the following definitions apply:

*"Business entity"* means any entity recognized by law through which business is conducted, including a sole proprietorship, partnership or corporation, but does not include publicly traded companies listed on a national or international stock exchange.

*"Interested party"* or *"Interested parties"* means:

- (1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors;
- (2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract. (This subdivision does not apply to a publicly traded company); and
- (3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency. (This subdivision does not apply to persons or business entities performing legal services related to the negotiation or drafting of the applicable contract.)

*"State agency"* means a board, commission, office, department or other agency in the executive, judicial or legislative branch of state government, including publicly funded institutions of higher education: Provided, that for purposes of *W. Va. Code* § 6D-1-2, the West Virginia Investment Management Board shall not be deemed a state agency nor subject to the requirements of that provision.

The contracting business entity must complete this form and submit it to the state agency prior to beginning work under a contract and to complete another form within 30 days of contract completion or termination.

*This form was created by the State of West Virginia Ethics Commission, 210 Brooks Street, Suite 300, Charleston, WV 25301-1804. Telephone: (304)558-0664; fax: (304)558-2169; e-mail: [ethics@wv.gov](mailto:ethics@wv.gov); website: [www.ethics.wv.gov](http://www.ethics.wv.gov).*



West Virginia Ethics Commission  
**Disclosure of Interested Parties to Contracts**

(Required by *W. Va. Code* § 6D-1-2)

Name of Contracting Business Entity: \_\_\_\_\_ Address: \_\_\_\_\_

\_\_\_\_\_

Name of Authorized Agent: \_\_\_\_\_ Address: \_\_\_\_\_

Contract Number: \_\_\_\_\_ Contract Description: \_\_\_\_\_

Governmental agency awarding contract: \_\_\_\_\_

Check here if this is a Supplemental Disclosure

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below (*attach additional pages if necessary*):

**1. Subcontractors or other entities performing work or service under the Contract**

Check here if none, otherwise list entity/individual names below.

**2. Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)**

Check here if none, otherwise list entity/individual names below.

**3. Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)**

Check here if none, otherwise list entity/individual names below.

Signature: \_\_\_\_\_

Date Signed: \_\_\_\_\_

***Notary Verification***

State of \_\_\_\_\_, County of \_\_\_\_\_:

I, \_\_\_\_\_, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary Public's Signature

**To be completed by State Agency:**

Date Received by State Agency: \_\_\_\_\_

Date submitted to Ethics Commission: \_\_\_\_\_

Governmental agency submitting Disclosure: \_\_\_\_\_





**State of West Virginia  
DRUG FREE WORKPLACE CONFORMANCE AFFIDAVIT  
West Virginia Code §21-1D-5**

I, \_\_\_\_\_, after being first duly sworn, depose and state as follows:

1. I am an employee of \_\_\_\_\_; and,  
(Company Name)
2. I do hereby attest that \_\_\_\_\_  
(Company Name)

maintains a written plan for a drug-free workplace policy and that such plan and policy are in compliance with **West Virginia Code** §21-1D.

The above statements are sworn to under the penalty of perjury.

Printed Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Company Name: \_\_\_\_\_

Date: \_\_\_\_\_

STATE OF WEST VIRGINIA,

COUNTY OF \_\_\_\_\_, TO-WIT:

Taken, subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

By Commission expires \_\_\_\_\_

(Seal)

\_\_\_\_\_  
(Notary Public)

State of West Virginia  
Purchasing Division

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## CERTIFIED DRUG-FREE WORKPLACE REPORT COVERSHEET

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In accordance with **West Virginia Code** § 21-1D-7b, no less than once per year, or upon completion of the project, every contractor shall provide a certified report to the public authority which let the contract. That report must include each of the items identified below in the Required Report Content section.

**Instructions:** Vendor should complete this coversheet, attach it to the required report, and submit it to the appropriate location as follows: For contracts more than \$25,000, the report should be mailed to the West Virginia Purchasing Division at 2019 Washington Street East, Charleston, WV 25305. For contracts of \$25,000 or less, the vendor should mail the report to the public authority issuing the contract.

**Contract Identification:**

Contract Number: \_\_\_\_\_

Contract Purpose: \_\_\_\_\_

Agency Requesting Work: \_\_\_\_\_

**Required Report Content:** The attached report must include each of the items listed below. The vendor should check each box as an indication that the required information has been included in the attached report.

- Information indicating the education and training service to the requirements of **West Virginia Code** § 21-1D-5 was provided;
- Name of the laboratory certified by the United States Department of Health and Human Services or its successor that performs the drug tests;
- Average number of employees in connection with the construction on the public improvement;
- Drug test results for the following categories including the number of positive tests and the number of negative tests: (A) Pre-employment and new hires; (B) Reasonable suspicion; (C) Post-accident; and (D) Random.

**Vendor Contact Information:**

Vendor Name: \_\_\_\_\_

Vendor Telephone: \_\_\_\_\_

Vendor Address: \_\_\_\_\_

Vendor Fax: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Vendor E-Mail: \_\_\_\_\_

**STATE OF WEST VIRGINIA - PURCHASING DIVISION**

**VENDOR REGISTRATION AND DISCLOSURE STATEMENT  
AND SMALL, WOMEN-, AND MINORITY-OWNED BUSINESS  
CERTIFICATION APPLICATION**

---

Before a vendor is eligible to sell goods and/or services to the State of West Virginia, the **West Virginia Code** §5A-3-12 requires all vendors to have on file with the West Virginia Purchasing Division a completed Vendor Registration and Disclosure Statement. All vendors wishing to participate in the competitive bid process and receive purchase orders from the State of West Virginia exceeding \$5,000 in aggregate across all state agencies are required to complete the Vendor Registration and Disclosure Statement (WV-1 form) and pay a **\$125.00** annual fee. Payment of the annual fee includes email notifications on bid opportunities based on the commodities and services selected upon registering in the Vendor Self-Service (VSS) portal at **wvOASIS.gov**. Please complete this form in its **ENTIRETY** and return it with a check or money order made payable to the **STATE OF WEST VIRGINIA** in the amount of **\$125.00**. Incomplete forms may not be processed and may be returned to the vendor. Please send completed form and payment to:

**Purchasing Division - Vendor Registration  
2019 Washington Street East  
Charleston, WV 25305-0130**

Whenever a change occurs in the information submitted, such change shall be reported immediately in the same manner as required in the original disclosure statement (**West Virginia Code** §5A-3-12). Vendors doing business with the State of West Virginia are expected to abide by the **Vendor Code of Conduct** available online at **[www.state.wv.us/admin/purchase/vrc/vendorconduct.pdf](http://www.state.wv.us/admin/purchase/vrc/vendorconduct.pdf)**.

**Privacy Notice:** The Purchasing Division is required to collect certain information as stated in **West Virginia Code** §5A-3-12, other applicable sections of the **West Virginia Code**, the Vendor Registration and Disclosure Statement forms, and other documents to facilitate the state bidding and contract administration processes. This information is stored in a secure environment, but unless specifically protected under state law, any information provided may be inspected by or disclosed to the public.

Vendors are also required to be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or other state agencies or political subdivisions. Failure to do so may result in delay of or disqualification from a contract award pursuant to **West Virginia Code of State Rules** §148-1-6.1.7.

Should you need additional information relating to vendor registration, please visit **[www.state.wv.us/admin/purchase/VendorReg.html](http://www.state.wv.us/admin/purchase/VendorReg.html)**. Questions concerning this Vendor Registration and Disclosure Statement may be directed to the Purchasing Division at (304) 558-2311.



VENDOR REGISTRATION AND DISCLOSURE STATEMENT AND SMALL, WOMEN-, AND MINORITY-OWNED BUSINESS CERTIFICATION APPLICATION

**PLEASE TYPE OR CLEARLY PRINT ALL INFORMATION**  
*To Be Completed by the Vendor and Returned to the Purchasing Division*

---

**1. Legal Name of Company/Individual** \_\_\_\_\_

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

(Please provide a physical address, not a post office box.) \_\_\_\_\_

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

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

Telephone Number \_\_\_\_\_ Fax Number \_\_\_\_\_

Principle Contact Person \_\_\_\_\_ E-mail \_\_\_\_\_

Contact's Telephone Number \_\_\_\_\_ Contact's Fax Number \_\_\_\_\_

**DBA, if any** \_\_\_\_\_

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

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

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

Telephone Number \_\_\_\_\_ Fax Number \_\_\_\_\_

Principle Contact Person \_\_\_\_\_ E-mail \_\_\_\_\_

Contact's Telephone Number \_\_\_\_\_ Contact's Fax Number \_\_\_\_\_

---

**2. Vendor Tax Classification:**

- |  |  |
|--|--|
| <input type="checkbox"/> Individual      | <input type="checkbox"/> Government              |
| <input type="checkbox"/> Sole Proprietor | <input type="checkbox"/> Medical Corporation     |
| <input type="checkbox"/> Partnership     | <input type="checkbox"/> Attorney Corporation    |
| <input type="checkbox"/> Corporation     | <input type="checkbox"/> Non-Profit Organization |
| <input type="checkbox"/> Board Member    | <input type="checkbox"/> Payroll                 |
| <input type="checkbox"/> Trust           | <input type="checkbox"/> Employee                |
| <input type="checkbox"/> Estate          |  |

VENDOR REGISTRATION AND DISCLOSURE STATEMENT AND SMALL, WOMEN-, AND MINORITY-OWNED BUSINESS CERTIFICATION APPLICATION

**PLEASE TYPE OR CLEARLY PRINT ALL INFORMATION**  
*To Be Completed by the Vendor and Returned to the Purchasing Division*

**3. Taxpayer Identification Number (TIN):** If you have an Identification Number, enter it below. All partnerships, corporations, or companies with employees must have an EIN.

EIN

If you do not have a EIN, please enter Social Security number (SSN), Individual Taxpayer Identification Number (ITIN) or Adoptive Identification Number (ATIN) and check the correct below.

- (SSN , ITIN , ATIN )

**4. (A) Small, Women-Owned, Minority-Owned Businesses**

**West Virginia Code** §5A-3-59 establishes a procurement certification program in West Virginia for small, women-, and minority-owned businesses. Requirements related to the certification program are provided in the **West Virginia Code of State Rules** §148-2-1 et seq. Note that this certification provides nonresident vendors preference that is equivalent to competing resident (West Virginia) vendors that have applied for resident vendor preference, in accordance with **West Virginia Code** §5A-3-37. This certification may assist resident small, women-, and minority-owned businesses when soliciting business in other states. If you are renewing your two-year SWAM business certification status, please indicate the appropriate designation below.

**Certification of Status** (Check all those which apply)

- Minority-owned Business** [1] means a business concern that is at least fifty-one percent owned by one or more minority individuals or in the case of a corporation, partnership, or limited liability company or other entity, at least fifty-one percent of the equity ownership interest in the corporation, partnership, or limited liability company or other entity is owned by one or more minority individuals and both the management and daily business operations are controlled by one or more minority individuals.
- A “minority individual” means an individual who is a citizen of the United States or a noncitizen who is in full compliance with United States immigration law and who satisfies one or more of the following definitions:
    - **African American** means a person having origins in any of the original peoples of Africa and who is regarded as such by the community of which this person claims to be a part.
    - **Asian American** means a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent or the Pacific Islands, including, but not limited to, Japan, China, Vietnam, Samoa, Laos, Cambodia, Taiwan, Northern Mariana, the Philippines, a U.S. territory of the Pacific, India, Pakistan, Bangladesh, or Sri Lanka and who is regarded as such by the community of which this person claims to be a part.
    - **Hispanic American** means a person having origins in any of the Spanish-speaking peoples of Mexico, South or Central America, or the Caribbean Islands or other Spanish or Portuguese cultures and who is regarded as such by the community of which this person claims to be a part.
    - **Native American** means a person having origins in any of the original peoples of North America and who is regarded as such by the community of which this person claims to be a part or who is recognized by a tribal organization.

VENDOR REGISTRATION AND DISCLOSURE STATEMENT AND SMALL, WOMEN-, AND MINORITY-OWNED BUSINESS CERTIFICATION APPLICATION

**PLEASE TYPE OR CLEARLY PRINT ALL INFORMATION**  
*To Be Completed by the Vendor and Returned to the Purchasing Division*

- Small Business** [2] means a business, independently owned or operated by one or more persons who are citizens of the United States or noncitizens who are in full compliance with United States immigration law, which, together with affiliates, has two hundred fifty or fewer employees, or average annual gross receipts of \$10 million or less averaged over the previous three years.
- Women-owned Business** [3] means a business concern that is at least fifty-one percent owned by one or more women who are citizens of the United States or noncitizens who are in full compliance with United States immigration law, or in the case of a corporation, partnership or limited liability company or other entity, at least fifty-one percent of the equity ownership interest is owned by one or more women who are citizens of the United States or noncitizens who are in full compliance with United States immigration law, and both the management and daily business operations are controlled by one or more women who are citizens of the United States or noncitizens who are in full compliance with United States immigration law.

**(B) Other Federal Designations**

Additionally, by providing the following information, I represent that this enterprise is a small business as defined by the **Code of Federal Regulations**, Title 13, Part 121, as appended - which contains detailed industry definitions and related procedures - and/or the characteristics of the enterprise's control, operation and/or ownership are accurately reflected in the information provided. *Check all that apply.*

- Disabled Small Business Ownership [4]
- Veteran Small Business Ownership [5]

**5. Commodity Codes:** You may register for commodity codes for the products and services that you offer, which will provide you with bid opportunity alerts and notifications should you become a paid registered vendor. To perform this function, visit the Vendor Self-Service (VSS) Portal at **wvOASIS.gov**.

6. What is the latest Dun & Bradstreet number and rating on the vendor? \_\_\_\_\_

7. Is the vendor acting as an agent for some other individual, firm or corporation? If yes, attach statement of the principal authorizing such representation.  **No**  **Yes**

By signing below and submitting this form, the vendor certifies and acknowledges that: 1) it has obtained all licenses, certifications, and authorizations necessary to lawfully conduct business in the state of West Virginia; and 2) that the assertions made by completing this form and delivering it to the Purchasing Division are accurate and true in accordance with the applicable law and rules. As authorized agent of the vendor named herein, I do solemnly swear that the above information is true and complete, in accordance with **West Virginia Code** §5A-3-12(e).

In the event that the vendor is applying for certification as a small, women-, or minority-owned business, the vendor's signature below further certifies that: 1) the state in which the vendor has its headquarters or principal place of business does not deny a like certification to a West Virginia based small, women-owned, or minority-owned business; 2) the state in which the vendor has its headquarters or principal place of business does not provide a preference to small, women-owned, or minority-owned firms that is unavailable to West Virginia based businesses; and, 3) that it has read and understands this form, along with the law and rules governing certification as a small, women-owned, or minority-owned business.

\_\_\_\_\_  
*Authorized Agent of Vendor (Print Name)*

\_\_\_\_\_  
*Authorized Agent (Signature)*

\_\_\_\_\_  
*Title*

\_\_\_\_\_  
*Date*

<b>PURCHASING DIVISION USE ONLY</b>
Vendor ID: _____
Check No. : _____
Memo No. : _____
Date: _____
Entered by: _____

# WEST VIRGINIA DIVISION OF LABOR

1900 Kanawha Boulevard East  
State Capitol Complex – Building 3, Room 200 - Charleston, WV 25305  
Telephone: (304)558-7890      [labor.wv.gov](http://labor.wv.gov)      Fax: (304)558-3797



## West Virginia Jobs Act

### Public Authority's Responsibilities

Under the West Virginia Jobs Act, a public authority includes every state, county or municipal officer, board, commission or agency.

A public authority has specific responsibilities for complying with the Jobs Act when undertaking a construction project with a total cost of \$500,000.00 or more that is funded with public funds, excluding improvements funded in whole or in part by federal funds.

These responsibilities are to:

1. **Describe** the obligations of contractors and subcontractors to comply with the Jobs Act requirements in the construction contract.
2. **Notify** the Division of Labor as soon as possible of a construction project covered by the Jobs Act, including the project start date and the project location. This information can be sent by email to [\*\*JobsAct@wv.gov\*\*](mailto:JobsAct@wv.gov).
3. **Comply** with the reporting requirements of the Jobs Act, which means providing the Division of Labor with copies of any waiver certificates issued by WorkForce West Virginia, if any, and certified payroll documents on a **weekly** basis for all contractors and subcontractors.
4. **Review** certified payroll documents before submitting to the Division of Labor.
5. **File**, or require an employer to file, certified payroll or other comparable documents on a **weekly** basis that include at least: the name and address of the employer, identification of the payroll number and the work week ending date, the name of the project location, identification of the contract number, the names of employees, each employee's work classification or job title, **physical address of the primary residence for each employee, including the county** and the days worked.

Pursuant to §21-1-3 and §21-1C-5 an employer may be required to supplement this information upon request.

If you have additional questions, please contact the Division of Labor or send your inquiries to [\*\*JobsAct@wv.gov\*\*](mailto:JobsAct@wv.gov).



# WEST VIRGINIA DIVISION OF LABOR

1900 Kanawha Boulevard East  
State Capitol Complex - Building 3, Room 200 - Charleston, WV 25305  
Telephone: (304)558-7890      [labor.wv.gov](http://labor.wv.gov)      Fax: (304)558-3797



## West Virginia Jobs Act

### Contractor's and Subcontractor's Responsibilities

A contractor or subcontractor working on a public authority's construction project with a total cost of \$500,000.00 or more that is funded entirely with public funds, excluding improvements funded in whole or in part by federal funds, must comply with the following West Virginia Jobs Act requirements.

1. **Hire** at least 75% of employees from the local labor market, with two (2) employees permitted from outside the local labor market.
  - The local labor market includes every West Virginia county and any county outside of West Virginia if any portion of that county is within fifty (50) miles of the border of West Virginia.
  - An employee's **primary residence** must be located within the local labor market to comply with the Jobs Act requirements.
2. **Contact** the nearest WorkForce West Virginia office and complete a job order if you are unable to employ the minimum number of employees from the local labor market.
  - WorkForce will either refer qualified job applicants or issue a written waiver permitting the employer to fill any positions covered by the waiver from outside the local labor market.
3. **Complete and submit** certified payroll or other comparable documents on a **weekly** basis to the public authority and/or Division of Labor that include at least:

The name and address of the employer, identification of the payroll number and the work week ending date, the name of the project location, identification of the contract number, the names of employees, each employee's work classification or job title, **physical address of the primary residence for each employee, including the county** and the days worked.

Pursuant to §21-1-3 and §21-1C-5 you may be required to supplement this information upon request.

4. **Pay civil penalties** of between \$250 to \$500 per day for **each employee** needed to meet the 75% requirement.

If you have additional questions, please contact the Division of Labor or send your inquiries to **JobsAct@wv.gov**.



# LABOR AND MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

That \_\_\_\_\_  
(Contractor name, complete address including ZIP Code and legal title )

as Principal, hereinafter called Contractor, and \_\_\_\_\_  
(Surety name and complete address including ZIP Code)

\_\_\_\_\_ a corporation organized and existing under  
the laws of the State of \_\_\_\_\_, with its principal office in the City of \_\_\_\_\_

as Surety, hereinafter called Surety, are held firmly bound unto \_\_\_\_\_  
(Owner name, complete address including ZIP Code and legal title)

as Obligee, hereinafter called Owner, for the use and benefit of claimants as herein below defined in the amount of  
\_\_\_\_\_ Dollars ( \_\_\_\_\_ ),

for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally,  
firmly by these presents.

WHEREAS, Contractor has by written agreement dated \_\_\_\_\_  
\_\_\_\_\_ entered into a contract with Owner for

\_\_\_\_\_ in accordance with drawings and specifications prepared by \_\_\_\_\_

which contract is by reference made a part hereof, and is hereinafter referred to as the CONTRACT.  
NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Contractor shall, well and truly perform the contract, and shall pay off,  
satisfy and discharge all claims of subcontractors, labors, materialmen and all persons furnishing material or doing work pursuant to the  
CONTRACT and shall save Owner and its property harmless from any and all liability over and above the contract price thereof, between the Owner  
and the Contractor, for all of such labor and material, and shall fully pay off and discharge and secure the release of any and all mechanics liens  
which may be placed upon said property by any such subcontractor, laborer or materialmen, then this obligation shall be null and void. Otherwise, it  
shall remain in full force and effect.

Signed and sealed this \* \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_

Principal Corporate Seal

\_\_\_\_\_  
(Contractor Name) (Seal)

BY: \_\_\_\_\_ (Seal)  
(Must be President, Vice President, Owner, Partner, Manager, Member,  
or other duly Authorized Agent)

\_\_\_\_\_  
(Title)

Surety Corporate Seal

\_\_\_\_\_  
(Surety)

BY: \_\_\_\_\_ (Seal)

NOTE: Please attach Power of Attorney.

NOTE: Applicable sections of attached acknowledgments  
must be completed and returned as part of the bond.



# ACKNOWLEDGMENTS

## Acknowledgment by Principal if individual or Partnership

1. STATE OF \_\_\_\_\_
2. County of \_\_\_\_\_ to-wit: \_\_\_\_\_
3. I, \_\_\_\_\_, a Notary Public in and for the
4. county and state aforesaid, do hereby certify that \_\_\_\_\_  
whose name is signed to the foregoing writing, has this day acknowledged the same before me in my said county.
5. Given under my hand this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_
6. Notary Seal \_\_\_\_\_ 7: \_\_\_\_\_  
(Notary Public)
8. My commission expires on the \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

## Acknowledgment by Principal if Corporation

9. STATE OF \_\_\_\_\_
10. County of \_\_\_\_\_ to-wit: \_\_\_\_\_
11. I, \_\_\_\_\_, a Notary Public in and for the
12. county and state aforesaid, do hereby certify that \_\_\_\_\_
13. who as, \_\_\_\_\_ signed the foregoing writing for
14. \_\_\_\_\_ a corporation, has this day, in my said county, before me, acknowledged the said writing to be the act and deed of the said corporation.
15. Given under my hand this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_
16. Notary Seal \_\_\_\_\_ 17: \_\_\_\_\_  
(Notary Public)
18. My commission expires on the \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

## Acknowledgment by Surety

19. STATE OF \_\_\_\_\_
20. County of \_\_\_\_\_ to-wit: \_\_\_\_\_
21. I, \_\_\_\_\_, a Notary Public in and for the
22. county and state aforesaid, do hereby certify that \_\_\_\_\_
23. who as, \_\_\_\_\_ signed the foregoing writing for
24. \_\_\_\_\_ a corporation,  
has this day, in my said county, before me, acknowledged the said writing to be the act and deed of the said corporation.
25. Given under my hand this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_
26. Notary Seal \_\_\_\_\_ 27: \_\_\_\_\_  
(Notary Public)
28. My commission expires on the \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

## Sufficiency in Form and Manner of Execution Approved

This \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_.

By: \_\_\_\_\_  
(Deputy Attorney General)

Attorney General

## ACKNOWLEDGMENT PREPARATION INSTRUCTIONS

1. IF PRINCIPAL IS AN INDIVIDUAL OR PARTNERSHIP, HAVE NOTARY COMPLETE LINES (1) THROUGH (8).
2. IF PRINCIPAL IS A CORPORATION, HAVE NOTARY COMPLETE LINES (9) THROUGH (18).
3. SURETY MUST HAVE NOTARY COMPLETE LINES (19) THROUGH (28).
4. **Notaries must:**

---

### ACKNOWLEDGMENT BY PRINCIPAL, IF INDIVIDUAL OR PARTNERSHIP

---

1. Enter name of State.
2. Enter name of County.
3. Enter name of Notary Public witnessing transactions.
4. Enter name of principal covered by bond if individual or partnership. (Must be Owner or General Partner of Sole Proprietorship or Partnership)
5. Notary enters date bond was witnessed. Must be the same as or later than signature date.
6. Affix Notary Seal.
7. Notary affixes his/her signature.
8. Notary enters commission expiration date.

---

### ACKNOWLEDGMENT BY PRINCIPAL IF CORPORATION

---

9. Enter name of State.
10. Enter name of County.
11. Enter name of Notary Public witnessing transactions.
12. Enter name of Corporate Officer signing bond.
13. Enter Title of Corporate Officer signing bond. (Must be President or Vice President of Corporation; Manager or Managing Member of Limited Liability Company)
14. Enter name of Company or Corporation.
15. Notary enters date bond was witnessed. Must be the same as or later than signature date.
16. Affix notary Seal.
17. Notary affixes his/her signature.
18. Notary enters commission expiration date.

---

### ACKNOWLEDGMENT BY SURETY

---

19. Enter name of State.
20. Enter name of County.
21. Enter name of Notary Public witnessing transactions.
22. Enter name of person having power of attorney to bind Surety Company.
23. Enter Title of person binding Surety Company.
24. Enter name of Insurance Company (Surety).
25. Notary enters date bond was witnessed. Must be the same as or later than signature date.
26. Affix Notary Seal.
27. Notary affixes his/her signature.
28. Notary enters commission expiration date.

---

### POWER OF ATTORNEY INSTRUCTIONS

---

Power of attorney for surety must be attached showing that it was in full force and effect on signature date indicated on the face of the bond. A corporate seal must also be affixed to the Power of Attorney form.

- a. Name of attorney in fact must be listed.
- b. Power of Attorney may not exceed imposed limitations.
- c. Certificate date, the signature date of bond must be entered.
- d. Signature of authorizing official must be affixed. (Signature may be facsimile).
- e. **Seal must be affixed.**

# PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That \_\_\_\_\_  
(Contractor name, complete address including ZIP Code and legal title)

as Principal, hereinafter called Contractor, and \_\_\_\_\_  
(Surety name and complete address including ZIP Code)

\_\_\_\_\_ a corporation organized and existing under  
the laws of the State of \_\_\_\_\_, with its principal office in the City of \_\_\_\_\_

as Surety, hereinafter called Surety, are held firmly bound unto \_\_\_\_\_  
(Owner name, complete address including ZIP Code and legal title)

as Obligee, hereinafter called Owner, in the amount of \_\_\_\_\_

Dollars ( \_\_\_\_\_ ), for the payment whereof Contractor and Surety bind themselves, their heirs, executors,  
administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written agreement dated \_\_\_\_\_  
\_\_\_\_\_ entered into a contract with Owner for \_\_\_\_\_

in accordance with drawings and specifications prepared by \_\_\_\_\_

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

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Contractor shall, promptly and faithfully Perform and CONTRACT,  
then this obligation shall be null and void, otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the Owner.

Whenever Contractor shall be, and declared by Owner to be in default under the CONTRACT, the Owner having performed Owner's obligations  
thereunder, the Surety may promptly remedy the default, or shall promptly:

1. Complete the CONTRACT in accordance with its terms and conditions, and
2. Shall save the Owner harmless from any claims, judgments, or liens arising from the Surety's failure to either remedy the default or to  
complete the CONTRACT in accordance with its terms and conditions in a timely manner.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the successors of  
Owner.

Signed and sealed this \* \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

Principal Corporate Seal

\_\_\_\_\_  
(Contractor Name) (Seal)

BY: \_\_\_\_\_ (Seal)

(Must be President, Vice President, Owner, Partner, Manager, Member,  
or other duly Authorized Agent)

\_\_\_\_\_  
(Title)

Surety Corporate Seal

\_\_\_\_\_  
(Surety)

BY: \_\_\_\_\_ (Seal)

NOTE: Please attach Power of Attorney.

NOTE: Applicable sections of attached acknowledgments must be  
completed and returned as part of the bond.

APPROVED AG 07-15-2024



# ACKNOWLEDGMENTS

## Acknowledgment by Principal if individual or Partnership

1. STATE OF \_\_\_\_\_
2. County of \_\_\_\_\_ to-wit:
3. I, \_\_\_\_\_, a Notary Public in and for the
4. county and state aforesaid, do hereby certify that \_\_\_\_\_  
whose name is signed to the foregoing writing, has this day acknowledged the same before me in my said county.
5. Given under my hand this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_
6. Notary Seal
7. \_\_\_\_\_  
(Notary Public)
8. My commission expires on the \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

## Acknowledgment by Principal if Corporation

9. STATE OF \_\_\_\_\_
10. County of \_\_\_\_\_ to-wit:
11. I, \_\_\_\_\_, a Notary Public in and for the
12. county and state aforesaid, do hereby certify that \_\_\_\_\_
13. who as, \_\_\_\_\_ signed the foregoing writing for
14. \_\_\_\_\_ a corporation, has this day, in my said county, before me, acknowledged the said writing to be the act and deed of the said corporation.
15. Given under my hand this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_
16. Notary Seal
17. \_\_\_\_\_  
(Notary Public)
18. My commission expires on the \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

## Acknowledgment by Surety

19. STATE OF \_\_\_\_\_
20. County of \_\_\_\_\_ to-wit:
21. I, \_\_\_\_\_, a Notary Public in and for the
22. county and state aforesaid, do hereby certify that \_\_\_\_\_
23. who as, \_\_\_\_\_ signed the foregoing writing for
24. \_\_\_\_\_ a corporation,  
has this day, in my said county, before me, acknowledged the said writing to be the act and deed of the said corporation.
25. Given under my hand this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_
26. Notary Seal
27. \_\_\_\_\_  
(Notary Public)
28. My commission expires on the \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_

## Sufficiency in Form and Manner of Execution Approved

This \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_\_.

By: \_\_\_\_\_  
Attorney General  
(Deputy Attorney General)

# ACKNOWLEDGMENT PREPARATION INSTRUCTIONS

1. IF PRINCIPAL IS AN INDIVIDUAL OR PARTNERSHIP, HAVE NOTARY COMPLETE LINES (1) THROUGH (8).
2. IF PRINCIPAL IS A CORPORATION, HAVE NOTARY COMPLETE LINES (9) THROUGH (18).
3. SURETY MUST HAVE NOTARY COMPLETE LINES (19) THROUGH (28).
4. **Notaries must:**

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## ACKNOWLEDGMENT BY PRINCIPAL, IF INDIVIDUAL OR PARTNERSHIP

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1. Enter name of State.
2. Enter name of County.
3. Enter name of Notary Public witnessing transactions.
4. Enter name of principal covered by bond if individual or partnership. (Must be Owner or General Partner of Sole Proprietorship or Partnership)
5. Notary enters date bond was witnessed. Must be the same as or later than signature date.
6. Affix Notary Seal.
7. Notary affixes his/her signature.
8. Notary enters commission expiration date.

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## ACKNOWLEDGMENT BY PRINCIPAL IF CORPORATION

---

9. Enter name of State.
10. Enter name of County.
11. Enter name of Notary Public witnessing transactions.
12. Enter name of Corporate Officer signing bond.
13. Enter Title of Corporate Officer signing bond. (Must be President or Vice President of Corporation; Manager or Managing Member of Limited Liability Company)
14. Enter name of Company or Corporation.
15. Notary enters date bond was witnessed. Must be the same as or later than signature date.
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## ACKNOWLEDGMENT BY SURETY

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19. Enter name of State.
20. Enter name of County.
21. Enter name of Notary Public witnessing transactions.
22. Enter name of person having power of attorney to bind Surety Company.
23. Enter Title of person binding Surety Company.
24. Enter name of Insurance Company (Surety).
25. Notary enters date bond was witnessed. Must be the same as or later than signature date.
26. Affix Notary Seal.
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## POWER OF ATTORNEY INSTRUCTIONS

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Power of attorney for surety must be attached showing that it was in full force and effect on signature date indicated on the face of the bond. A corporate seal must also be affixed to the Power of Attorney form.

- a. Name of attorney in fact must be listed.
- b. Power of Attorney may not exceed imposed limitations.
- c. Certificate date, the signature date of bond must be entered.
- d. Signature of authorizing official must be affixed. (Signature may be facsimile).
- e. **Seal must be affixed.**





# DRAFT AIA® Document A101® - 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)

«West Virginia Community and Technical College System »« »  
«2001 Union Carbide Drive, Building 2000 »  
«South Charleston, WV 25303 »  
« »

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

« »« »  
« »  
« »  
« »

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

«Pierpont Community & Technical College  
Clarksburg Campus Improvements  
Caperton Center  
501 W. Main Street, Clarksburg, WV 26301 »

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

«Omni Associates Architects, Inc. »« »  
«207 Jefferson Street »  
«Fairmont, WV 26554 »  
« »

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.

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

The parties should complete A101®-2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201®-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.

**ELECTRONIC COPYING** of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

**TABLE OF ARTICLES**

- 1 THE CONTRACT DOCUMENTS**
- 2 THE WORK OF THIS CONTRACT**
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION**
- 4 CONTRACT SUM**
- 5 PAYMENTS**
- 6 DISPUTE RESOLUTION**
- 7 TERMINATION OR SUSPENSION**
- 8 MISCELLANEOUS PROVISIONS**
- 9 ENUMERATION OF CONTRACT DOCUMENTS**

**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.
  - [ « » ] A date set forth in a notice to proceed issued by the Owner.
  - [ « » ] 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.)*

[ « » ] 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:

Portion of Work	Substantial Completion Date

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

#### ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be « » (\$ « » ), subject to additions and deductions as provided in the Contract Documents.

#### § 4.2 Alternates

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

Item	Price

§ 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.)*

Item	Price	Conditions for Acceptance

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

Item	Price

#### § 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.)*

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

#### § 4.5 Liquidated damages, if any:

*(Insert terms and conditions for liquidated damages, if any.)*

« »

#### § 4.6 Other:

*(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)*

« »

## 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™–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:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .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:

- .1 The aggregate of any amounts previously paid by the Owner;
- .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.)*

« »

**§ 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

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

**§ 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.)*

<< >>

<< >>

<< >>  
<< >>

### § 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

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)*

<< >>  
<< >>  
<< >>  
<< >>  
<< >>  
<< >>

§ 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™-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™-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 a building information modeling exhibit, if completed, or as otherwise set forth below:  
*(If other than in accordance with a building information modeling exhibit, 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:

- .1 AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A101™-2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201™-2017, General Conditions of the Contract for Construction
- .4 Building information modeling exhibit, dated as indicated below:  
*(Insert the date of the building information modeling exhibit 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:

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

[ « » ] AIA Document E204™-2017, Sustainable Projects Exhibit, dated as indicated below:

(Insert the date of the E204-2017 incorporated into this Agreement.)

« »

[ « » ] The Sustainability Plan:

Title	Date	Pages

[ « » ] Supplementary and other Conditions 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™-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)

« »« »

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

\_\_\_\_\_  
**CONTRACTOR** (Signature)

« »« »

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

# DRAFT AIA® Document A101® - 2017

## Exhibit A

### Insurance and Bonds

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the « » day of « » in the year « »  
(In words, indicate day, month and year.)

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

« Pierpont Community & Technical College  
Clarksburg Campus Improvements  
Caperton Center  
501 W. Main Street, Clarksburg, WV 26301 »

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

«West Virginia Community and Technical College System »« »  
«2001 Union Carbide Drive, Building 2000  
South Charleston, WV 25303 »

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

« »« »  
« »

#### TABLE OF ARTICLES

- A.1 GENERAL
- A.2 OWNER'S INSURANCE
- A.3 CONTRACTOR'S INSURANCE AND BONDS
- A.4 SPECIAL TERMS AND CONDITIONS

#### ARTICLE A.1 GENERAL

The Owner and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A201™-2017, General Conditions of the Contract for Construction.

#### ARTICLE A.2 OWNER'S INSURANCE

##### § A.2.1 General

Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by Section A.2.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

**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.

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

This document is intended to be used in conjunction with AIA Document A201®-2017, General Conditions of the Contract for Construction. Article 11 of A201®-2017 contains additional insurance provisions.

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**§ A.2.2 Liability Insurance**

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

**§ A.2.3 Required Property Insurance**

**§ A.2.3.1** Unless this obligation is placed on the Contractor pursuant to Section A.3.3.2.1, the Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk “all-risks” completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner’s property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3.1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

**§ A.2.3.1.1 Causes of Loss.** The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub-limits, if any, are as follows:

*(Indicate below the cause of loss and any applicable sub-limit.)*

Causes of Loss	Sub-Limit

**§ A.2.3.1.2 Specific Required Coverages.** The insurance required by this Section A.2.3.1 shall provide coverage for loss or damage to falsework and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and reasonable compensation for the Architect’s and Contractor’s services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows:

*(Indicate below type of coverage and any applicable sub-limit for specific required coverages.)*

Coverage	Sub-Limit

**§ A.2.3.1.3** Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section A.2.3.1 or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.

**§ A.2.3.1.4 Deductibles and Self-Insured Retentions.** If the insurance required by this Section A.2.3 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

**§ A.2.3.2 Occupancy or Use Prior to Substantial Completion.** The Owner’s occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

**§ A.2.3.3 Insurance for Existing Structures**

If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, “all-risks” property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

### § A.2.4 Optional Extended Property Insurance.

The Owner shall purchase and maintain the insurance selected and described below.

*(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)*

- [  ] **§ A.2.4.1 Loss of Use, Business Interruption, and Delay in Completion Insurance**, to reimburse the Owner for loss of use of the Owner's property, or the inability to conduct normal operations due to a covered cause of loss.
- 
- [  ] **§ A.2.4.2 Ordinance or Law Insurance**, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.
- 
- [  ] **§ A.2.4.3 Expediting Cost Insurance**, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.
- 
- [  ] **§ A.2.4.4 Extra Expense Insurance**, to provide reimbursement of the reasonable and necessary excess costs incurred during the period of restoration or repair of the damaged property that are over and above the total costs that would normally have been incurred during the same period of time had no loss or damage occurred.
- 
- [  ] **§ A.2.4.5 Civil Authority Insurance**, for losses or costs arising from an order of a civil authority prohibiting access to the Project, provided such order is the direct result of physical damage covered under the required property insurance.
- 
- [  ] **§ A.2.4.6 Ingress/Egress Insurance**, for loss due to the necessary interruption of the insured's business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.
- 
- [  ] **§ A.2.4.7 Soft Costs Insurance**, to reimburse the Owner for costs due to the delay of completion of the Work, arising out of physical loss or damage covered by the required property insurance: including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, building permits, additional interest on loans, realty taxes, and insurance premiums over and above normal expenses.
- 

### § A.2.5 Other Optional Insurance.

The Owner shall purchase and maintain the insurance selected below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance.)

[  ] **§ A.2.5.1 Cyber Security Insurance** for loss to the Owner due to data security and privacy breach, including costs of investigating a potential or actual breach of confidential or private information. (Indicate applicable limits of coverage or other conditions in the fill point below.)

[  ] **§ A.2.5.2 Other Insurance**  
(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage	Limits
----------	--------

### ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

#### § A.3.1 General

**§ A.3.1.1 Certificates of Insurance.** The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies.

**§ A.3.1.2 Deductibles and Self-Insured Retentions.** The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

The Contractor is solely responsible for losses within the deductible or self-insured retention contained within its program of insurance.

**§ A.3.1.3 Additional Insured Obligations.** To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, CG 20 32 07 04.

#### § A.3.2 Contractor's Required Insurance Coverage

**§ A.3.2.1** The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.)

#### § A.3.2.2 Commercial General Liability

**§ A.3.2.2.1** Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than  ( \$  ) each occurrence,  ( \$  ) general aggregate, and  ( \$  ) aggregate for products-completed operations hazard, providing coverage for claims including

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal injury and advertising injury;
- .3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

**§ A.3.2.2** The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

- .1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
- .2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
- .3 Claims for bodily injury other than to employees of the insured.
- .4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured.
- .5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
- .6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
- .7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
- .8 Claims related to roofing, if the Work involves roofing.
- .9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
- .10 Claims related to earth subsidence or movement, where the Work involves such hazards.
- .11 Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

**§ A.3.2.3** Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than «One Million Dollars» (\$ «\$1,000,000.00 ») per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

**§ A.3.2.4** The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

**§ A.3.2.5** Workers' Compensation at statutory limits.

**§ A.3.2.6** Employers' Liability with policy limits not less than «One Million Dollars» (\$ «\$1,000,000.00 ») each accident, «One Million Dollars» (\$ «\$1,000,000.00 ») each employee, and «One Million Dollars» (\$ «\$1,000,000.00 ») policy limit.

Employers' Liability shall include coverage for W. Va. Code §23-4-2 (Mandolidis).

**§ A.3.2.7** Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks

**§ A.3.2.8** If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate.

§ A.3.2.9 If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate.

§ A.3.2.10 Coverage under Sections A.3.2.8 and A.3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate.

§ A.3.2.11 Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate.

§ A.3.2.12 Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate.

### § A.3.3 Contractor's Other Insurance Coverage

§ A.3.3.1 Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

*(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)*

« »

§ A.3.3.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1.

*(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)*

- [  ] § A.3.3.2.1 Property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible.. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below:

*(Where the Contractor's obligation to provide property insurance differs from the Owner's obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)*

« Property insurance shall be written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis.

Deductibles: The Contractor is solely responsible for losses within the deductible or self-insured retention contained within its program of insurance. »

- [  ] § A.3.3.2.2 Railroad Protective Liability Insurance, with policy limits of not less than « » (\$ « ») per claim and « » (\$ « ») in the aggregate, for Work within fifty (50) feet of railroad property.

- [  ] § A.3.3.2.3 Asbestos Abatement Liability Insurance, with policy limits of not less than « » (\$ « ») per

claim and « » (\$ « » ) in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.

[  ] § A.3.3.2.4 Insurance for physical damage to property while it is in storage and in transit to the construction site on an “all-risks” completed value form.

[  ] § A.3.3.2.5 Property insurance on an “all-risks” completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.

[  ] § A.3.3.2.6 Other Insurance

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

**Coverage**

Excess/Umbrella Liability – Occurrence

**Limits**

Each Occurrence: \$5,000,000.00

Aggregate: \$5,000,000.00

**§ A.3.4 Performance Bond and Payment Bond**

The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows:

*(Specify type and penal sum of bonds.)*

Type

Payment Bond

Performance Bond

Penal Sum (\$0.00)

One Hundred Percent (100%) of the Contract Sum

One Hundred Percent (100%) of the Contract Sum

Payment and Performance Bonds shall be AIA Document A312™, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312™, current as of the date of this Agreement.

**ARTICLE A.4 SPECIAL TERMS AND CONDITIONS**

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:

«Deductibles: The Contractor is solely responsible for losses within the deductible or self-insured retention contained within its program of insurance.

The Performance and Payment Bonds required by §A.3.4 shall be issued on the State of West Virginia bond forms, not AIA Document A312. Copies of the State of West Virginia bond forms are provided in the Project Manual »



# DRAFT AIA® Document A201® - 2017

## General Conditions of the Contract for Construction

### for the following PROJECT:

(Name and location or address)

« Pierpont Community & Technical College »  
« Clarksburg Campus Improvements »  
« Caperton Center »  
« 501 W. Main Street, Clarksburg, WV 26301 »

### THE OWNER:

(Name, legal status and address)

« West Virginia Community and Technical College System » « »  
« 2001 Union Carbide Drive, Building 2000  
South Charleston, WV 25303 »

### THE ARCHITECT:

(Name, legal status and address)

« Omni Associates Architects, Inc. » « »  
« 207 Jefferson Street  
Fairmont, WV 26554 »

### TABLE OF ARTICLES

- 1 GENERAL PROVISIONS
- 2 OWNER
- 3 CONTRACTOR
- 4 ARCHITECT
- 5 SUBCONTRACTORS
- 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
- 7 CHANGES IN THE WORK
- 8 TIME
- 9 PAYMENTS AND COMPLETION
- 10 PROTECTION OF PERSONS AND PROPERTY
- 11 INSURANCE AND BONDS
- 12 UNCOVERING AND CORRECTION OF WORK
- 13 MISCELLANEOUS PROVISIONS

**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.

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14 TERMINATION OR SUSPENSION OF THE CONTRACT

15 CLAIMS AND DISPUTES



## INDEX

(Topics and numbers in bold are Section headings.)

### Acceptance of Nonconforming Work

9.6.6, 9.9.3, **12.3**

Acceptance of Work

9.6.6, 9.8.2, 9.9.3, 9.10.1, 9.10.3, 12.3

### Access to Work

**3.16**, 6.2.1, 12.1

Accident Prevention

10

Acts and Omissions

3.2, 3.3.2, 3.12.8, 3.18, 4.2.3, 8.3.1, 9.5.1, 10.2.5,  
10.2.8, 13.3.2, 14.1, 15.1.2, 15.2

Addenda

1.1.1

Additional Costs, Claims for

3.7.4, 3.7.5, 10.3.2, 15.1.5

### Additional Inspections and Testing

9.4.2, 9.8.3, 12.2.1, **13.4**

### Additional Time, Claims for

3.2.4, 3.7.4, 3.7.5, 3.10.2, 8.3.2, **15.1.6**

### Administration of the Contract

3.1.3, **4.2**, 9.4, 9.5

Advertisement or Invitation to Bid

1.1.1

Aesthetic Effect

4.2.13

### Allowances

**3.8**

### Applications for Payment

4.2.5, 7.3.9, 9.2, **9.3**, 9.4, 9.5.1, 9.5.4, 9.6.3, 9.7, 9.10

Approvals

2.1.1, 2.3.1, 2.5, 3.1.3, 3.10.2, 3.12.8, 3.12.9,  
3.12.10.1, 4.2.7, 9.3.2, 13.4.1

### Arbitration

8.3.1, 15.3.2, **15.4**

## ARCHITECT

**4**

Architect, Definition of

**4.1.1**

Architect, Extent of Authority

2.5, 3.12.7, 4.1.2, 4.2, 5.2, 6.3, 7.1.2, 7.3.4, 7.4, 9.2,  
9.3.1, 9.4, 9.5, 9.6.3, 9.8, 9.10.1, 9.10.3, 12.1, 12.2.1,  
13.4.1, 13.4.2, 14.2.2, 14.2.4, 15.1.4, 15.2.1

Architect, Limitations of Authority and  
Responsibility

2.1.1, 3.12.4, 3.12.8, 3.12.10, 4.1.2, 4.2.1, 4.2.2,  
4.2.3, 4.2.6, 4.2.7, 4.2.10, 4.2.12, 4.2.13, 5.2.1, 7.4,  
9.4.2, 9.5.4, 9.6.4, 15.1.4, 15.2

Architect's Additional Services and Expenses

2.5, 12.2.1, 13.4.2, 13.4.3, 14.2.4

Architect's Administration of the Contract

3.1.3, 3.7.4, 15.2, 9.4.1, 9.5

Architect's Approvals

2.5, 3.1.3, 3.5, 3.10.2, 4.2.7

Architect's Authority to Reject Work

3.5, 4.2.6, 12.1.2, 12.2.1

Architect's Copyright

1.1.7, 1.5

Architect's Decisions

3.7.4, 4.2.6, 4.2.7, 4.2.11, 4.2.12, 4.2.13, 4.2.14, 6.3,  
7.3.4, 7.3.9, 8.1.3, 8.3.1, 9.2, 9.4.1, 9.5, 9.8.4, 9.9.1,  
13.4.2, 15.2

Architect's Inspections

3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.8.3, **9.9.2**, **9.10.1**, 13.4

Architect's Instructions

3.2.4, 3.3.1, 4.2.6, 4.2.7, 13.4.2

Architect's Interpretations

4.2.11, 4.2.12

Architect's Project Representative

4.2.10

Architect's Relationship with Contractor

1.1.2, 1.5, 2.3.3, 3.1.3, 3.2.2, 3.2.3, 3.2.4, 3.3.1, 3.4.2,  
3.5, 3.7.4, 3.7.5, 3.9.2, 3.9.3, 3.10, 3.11, 3.12, 3.16,  
3.18, 4.1.2, 4.2, 5.2, 6.2.2, 7, 8.3.1, 9.2, 9.3, 9.4, 9.5,  
9.7, 9.8, 9.9, 10.2.6, 10.3, 11.3, **12**, **13.3.2**, 13.4, 15.2

Architect's Relationship with Subcontractors

1.1.2, 4.2.3, 4.2.4, 4.2.6, 9.6.3, 9.6.4, 11.3

Architect's Representations

9.4.2, 9.5.1, 9.10.1

Architect's Site Visits

3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.5.1, **9.9.2**, **9.10.1**, 13.4

Asbestos

10.3.1

Attorneys' Fees

3.18.1, 9.6.8, 9.10.2, 10.3.3

Award of Separate Contracts

6.1.1, 6.1.2

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

**5.2**

### Basic Definitions

**1.1**

Bidding Requirements

1.1.1

Binding Dispute Resolution

8.3.1, 9.7, 11.5, 13.1, 15.1.2, 15.1.3, 15.2.1, 15.2.5,  
15.2.6.1, 15.3.1, 15.3.2, 15.3.3, 15.4.1

Bonds, Lien

7.3.4.4, 9.6.8, 9.10.2, 9.10.3

### Bonds, Performance, and Payment

7.3.4.4, 9.6.7, 9.10.3, **11.1.2**, 11.1.3, **11.5**

### Building Information Models Use and Reliance

**1.8**

Building Permit

3.7.1

### Capitalization

**1.3**

Certificate of Substantial Completion

9.8.3, 9.8.4, 9.8.5

## **Certificates for Payment**

4.2.1, 4.2.5, 4.2.9, 9.3.3, **9.4**, 9.5, 9.6.1, 9.6.6, 9.7, 9.10.1, 9.10.3, 14.1.1.3, 14.2.4, 15.1.4

Certificates of Inspection, Testing or Approval  
13.4.4

Certificates of Insurance  
9.10.2

## **Change Orders**

1.1.1, 3.4.2, 3.7.4, 3.8.2.3, 3.11, 3.12.8, 4.2.8, 5.2.3, 7.1.2, 7.1.3, **7.2**, 7.3.2, 7.3.7, 7.3.9, 7.3.10, 8.3.1, 9.3.1.1, 9.10.3, 10.3.2, 11.2, 11.5, 12.1.2

**Change Orders**, Definition of

### **7.2.1**

## **CHANGES IN THE WORK**

2.2.2, 3.11, 4.2.8, **7**, 7.2.1, 7.3.1, 7.4, 8.3.1, 9.3.1.1, 11.5

**Claims**, Definition of

### **15.1.1**

Claims, Notice of  
1.6.2, 15.1.3

## **CLAIMS AND DISPUTES**

3.2.4, 6.1.1, 6.3, 7.3.9, 9.3.3, 9.10.4, 10.3.3, **15**, 15.4  
Claims and Timely Assertion of Claims  
15.4.1

## **Claims for Additional Cost**

3.2.4, 3.3.1, 3.7.4, 7.3.9, 9.5.2, 10.2.5, 10.3.2, **15.1.5**

## **Claims for Additional Time**

3.2.4, 3.3.1, 3.7.4, 6.1.1, 8.3.2, 9.5.2, 10.3.2, **15.1.6**

## **Concealed or Unknown Conditions, Claims for 3.7.4**

Claims for Damages  
3.2.4, 3.18, 8.3.3, 9.5.1, 9.6.7, 10.2.5, 10.3.3, 11.3, 11.3.2, 14.2.4, 15.1.7

Claims Subject to Arbitration  
15.4.1

## **Cleaning Up**

### **3.15**, 6.3

Commencement of the Work, Conditions Relating to  
2.2.1, 3.2.2, 3.4.1, 3.7.1, 3.10.1, 3.12.6, 5.2.1, 5.2.3, 6.2.2, 8.1.2, 8.2.2, 8.3.1, 11.1, 11.2, **15.1.5**

## **Commencement of the Work**, Definition of **8.1.2**

## **Communications**

### 3.9.1, **4.2.4**

Completion, Conditions Relating to  
3.4.1, 3.11, 3.15, 4.2.2, 4.2.9, 8.2, 9.4.2, 9.8, 9.9.1, 9.10, 12.2, 14.1.2, 15.1.2

## **COMPLETION, PAYMENTS AND 9**

Completion, Substantial  
3.10.1, 4.2.9, 8.1.1, 8.1.3, 8.2.3, 9.4.2, 9.8, 9.9.1, 9.10.3, 12.2, 15.1.2

Compliance with Laws

2.3.2, 3.2.3, 3.6, 3.7, 3.12.10, 3.13, 9.6.4, 10.2.2, 13.1, 13.3, 13.4.1, 13.4.2, 13.5, 14.1.1, 14.2.1.3, 15.2.8, 15.4.2, 15.4.3

Concealed or Unknown Conditions

3.7.4, 4.2.8, 8.3.1, 10.3

Conditions of the Contract

1.1.1, 6.1.1, 6.1.4

Consent, Written

3.4.2, 3.14.2, 4.1.2, 9.8.5, 9.9.1, 9.10.2, 9.10.3, 13.2, 15.4.4.2

## **Consolidation or Joinder**

### **15.4.4**

## **CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**

1.1.4, **6**

**Construction Change Directive**, Definition of  
**7.3.1**

## **Construction Change Directives**

1.1.1, 3.4.2, 3.11, 3.12.8, 4.2.8, 7.1.1, 7.1.2, 7.1.3, **7.3**, 9.3.1.1

Construction Schedules, Contractor's

3.10, 3.11, 3.12.1, 3.12.2, 6.1.3, 15.1.6.2

## **Contingent Assignment of Subcontracts**

**5.4**, 14.2.2.2

## **Continuing Contract Performance**

### **15.1.4**

**Contract**, Definition of

### **1.1.2**

## **CONTRACT, TERMINATION OR SUSPENSION OF THE**

5.4.1.1, 5.4.2, 11.5, **14**

Contract Administration

3.1.3, 4, 9.4, 9.5

Contract Award and Execution, Conditions Relating to

3.7.1, 3.10, 5.2, 6.1

Contract Documents, Copies Furnished and Use of  
1.5.2, 2.3.6, 5.3

**Contract Documents**, Definition of

### **1.1.1**

## **Contract Sum**

2.2.2, 2.2.4, 3.7.4, 3.7.5, 3.8, 3.10.2, 5.2.3, 7.3, 7.4, **9.1**, 9.2, 9.4.2, 9.5.1.4, 9.6.7, 9.7, 10.3.2, 11.5, 12.1.2, 12.3, 14.2.4, 14.3.2, 15.1.4.2, **15.1.5**, **15.2.5**

**Contract Sum**, Definition of

### **9.1**

Contract Time

1.1.4, 2.2.1, 2.2.2, 3.7.4, 3.7.5, 3.10.2, 5.2.3, 6.1.5, 7.2.1.3, 7.3.1, 7.3.5, 7.3.6, 7, 7, 7.3.10, 7.4, 8.1.1, 8.2.1, 8.2.3, 8.3.1, 9.5.1, 9.7, 10.3.2, 12.1.1, 12.1.2, 14.3.2, 15.1.4.2, 15.1.6.1, 15.2.5

**Contract Time**, Definition of

### 8.1.1

## **CONTRACTOR**

### **3**

Contractor, Definition of

### **3.1**, **6.1.2**

## **Contractor's Construction and Submittal Schedules**

**3.10**, 3.12.1, 3.12.2, 4.2.3, 6.1.3, 15.1.6.2

Contractor's Employees  
2.2.4, 3.3.2, 3.4.3, 3.8.1, 3.9, 3.18.2, 4.2.3, 4.2.6,  
10.2, 10.3, 11.3, 14.1, 14.2.1.1

**Contractor's Liability Insurance**  
**11.1**  
Contractor's Relationship with Separate Contractors  
and Owner's Forces  
3.12.5, 3.14.2, 4.2.4, 6, 11.3, 12.2.4

Contractor's Relationship with Subcontractors  
1.2.2, 2.2.4, 3.3.2, 3.18.1, 3.18.2, 4.2.4, 5, 9.6.2,  
9.6.7, 9.10.2, 11.2, 11.3, 11.4

Contractor's Relationship with the Architect  
1.1.2, 1.5, 2.3.3, 3.1.3, 3.2.2, 3.2.3, 3.2.4, 3.3.1, 3.4.2,  
3.5.1, 3.7.4, 3.10, 3.11, 3.12, 3.16, 3.18, 4.2, 5.2,  
6.2.2, 7, 8.3.1, 9.2, 9.3, 9.4, 9.5, 9.7, 9.8, 9.9, 10.2.6,  
10.3, 11.3, 12, 13.4, 15.1.3, 15.2.1

Contractor's Representations  
3.2.1, 3.2.2, 3.5, 3.12.6, 6.2.2, 8.2.1, 9.3.3, 9.8.2

Contractor's Responsibility for Those Performing the  
Work  
3.3.2, 3.18, 5.3, 6.1.3, 6.2, 9.5.1, 10.2.8

Contractor's Review of Contract Documents  
3.2

Contractor's Right to Stop the Work  
2.2.2, 9.7

Contractor's Right to Terminate the Contract  
14.1

Contractor's Submittals  
3.10, 3.11, 3.12, 4.2.7, 5.2.1, 5.2.3, 9.2, 9.3, 9.8.2,  
9.8.3, 9.9.1, 9.10.2, 9.10.3

Contractor's Superintendent  
3.9, 10.2.6

Contractor's Supervision and Construction  
Procedures  
1.2.2, 3.3, 3.4, 3.12.10, 4.2.2, 4.2.7, 6.1.3, 6.2.4,  
7.1.3, 7.3.4, 7.3.6, 8.2, 10, 12, 14, 15.1.4

Coordination and Correlation  
1.2, 3.2.1, 3.3.1, 3.10, 3.12.6, 6.1.3, 6.2.1

Copies Furnished of Drawings and Specifications  
1.5, 2.3.6, 3.11

Copyrights  
1.5, **3.17**

Correction of Work  
2.5, 3.7.3, 9.4.2, 9.8.2, 9.8.3, 9.9.1, 12.1.2, **12.2**, 12.3,  
15.1.3.1, 15.1.3.2, 15.2.1

**Correlation and Intent of the Contract Documents**  
**1.2**

**Cost**, Definition of  
**7.3.4**

Costs  
2.5, 3.2.4, 3.7.3, 3.8.2, 3.15.2, 5.4.2, 6.1.1, 6.2.3,  
7.3.3.3, 7.3.4, 7.3.8, 7.3.9, 9.10.2, 10.3.2, 10.3.6,  
11.2, 12.1.2, 12.2.1, 12.2.4, 13.4, 14

**Cutting and Patching**  
**3.14**, 6.2.5

Damage to Construction of Owner or Separate  
Contractors  
3.14.2, 6.2.4, 10.2.1.2, 10.2.5, 10.4, 12.2.4

Damage to the Work  
3.14.2, 9.9.1, 10.2.1.2, 10.2.5, 10.4, 12.2.4

Damages, Claims for  
3.2.4, 3.18, 6.1.1, 8.3.3, 9.5.1, 9.6.7, 10.3.3, 11.3.2,  
11.3, 14.2.4, 15.1.7

Damages for Delay  
6.2.3, 8.3.3, 9.5.1.6, 9.7, 10.3.2, 14.3.2

**Date of Commencement of the Work**, Definition of  
**8.1.2**

**Date of Substantial Completion**, Definition of  
**8.1.3**

**Day**, Definition of  
**8.1.4**

Decisions of the Architect  
3.7.4, 4.2.6, 4.2.7, 4.2.11, 4.2.12, 4.2.13, 6.3, 7.3.4,  
7.3.9, 8.1.3, 8.3.1, 9.2, 9.4, 9.5.1, 9.8.4, 9.9.1, 13.4.2,  
14.2.2, 14.2.4, 15.1, 15.2

**Decisions to Withhold Certification**  
9.4.1, **9.5**, 9.7, 14.1.1.3

Defective or Nonconforming Work, Acceptance,  
Rejection and Correction of  
2.5, 3.5, 4.2.6, 6.2.3, 9.5.1, 9.5.3, 9.6.6, 9.8.2, 9.9.3,  
9.10.4, 12.2.1

Definitions  
1.1, 2.1.1, 3.1.1, 3.5, 3.12.1, 3.12.2, 3.12.3, 4.1.1, 5.1,  
6.1.2, 7.2.1, 7.3.1, 8.1, 9.1, 9.8.1, 15.1.1

**Delays and Extensions of Time**  
**3.2**, **3.7.4**, 5.2.3, 7.2.1, 7.3.1, **7.4**, **8.3**, 9.5.1, **9.7**,  
10.3.2, **10.4**, 14.3.2, **15.1.6**, 15.2.5

**Digital Data Use and Transmission**  
**1.7**

Disputes  
6.3, 7.3.9, 15.1, 15.2

**Documents and Samples at the Site**  
**3.11**

**Drawings**, Definition of  
**1.1.5**

Drawings and Specifications, Use and Ownership of  
3.11

Effective Date of Insurance  
8.2.2

**Emergencies**  
**10.4**, 14.1.1.2, **15.1.5**

Employees, Contractor's  
3.3.2, 3.4.3, 3.8.1, 3.9, 3.18.2, 4.2.3, 4.2.6, 10.2,  
10.3.3, 11.3, 14.1, 14.2.1.1

Equipment, Labor, or Materials  
1.1.3, 1.1.6, 3.4, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1,  
4.2.6, 4.2.7, 5.2.1, 6.2.1, 7.3.4, 9.3.2, 9.3.3, 9.5.1.3,  
9.10.2, 10.2.1, 10.2.4, 14.2.1.1, 14.2.1.2

Execution and Progress of the Work  
1.1.3, 1.2.1, 1.2.2, 2.3.4, 2.3.6, 3.1, 3.3.1, 3.4.1, 3.7.1,  
3.10.1, 3.12, 3.14, 4.2, 6.2.2, 7.1.3, 7.3.6, 8.2, 9.5.1,  
9.9.1, 10.2, 10.3, 12.1, 12.2, 14.2, 14.3.1, 15.1.4

Extensions of Time  
3.2.4, 3.7.4, 5.2.3, 7.2.1, 7.3, 7.4, 9.5.1, 9.7, 10.3.2,  
10.4, 14.3, 15.1.6, **15.2.5**

#### **Failure of Payment**

9.5.1.3, **9.7**, 9.10.2, 13.5, 14.1.1.3, 14.2.1.2

Faulty Work

(See Defective or Nonconforming Work)

#### **Final Completion and Final Payment**

4.2.1, 4.2.9, 9.8.2, **9.10**, 12.3, 14.2.4, 14.4.3

Financial Arrangements, Owner's

2.2.1, 13.2.2, 14.1.1.4

### **GENERAL PROVISIONS**

#### **1**

##### **Governing Law**

###### **13.1**

Guarantees (See Warranty)

##### **Hazardous Materials and Substances**

10.2.4, **10.3**

Identification of Subcontractors and Suppliers

5.2.1

##### **Indemnification**

3.17, **3.18**, 9.6.8, 9.10.2, 10.3.3, 11.3

##### **Information and Services Required of the Owner**

2.1.2, **2.2**, 2.3, 3.2.2, 3.12.10.1, 6.1.3, 6.1.4, 6.2.5,

9.6.1, 9.9.2, 9.10.3, 10.3.3, 11.2, 13.4.1, 13.4.2,

14.1.1.4, 14.1.4, 15.1.4

##### **Initial Decision**

###### **15.2**

##### **Initial Decision Maker, Definition of**

1.1.8

Initial Decision Maker, Decisions

14.2.4, 15.1.4.2, 15.2.1, 15.2.2, 15.2.3, 15.2.4, 15.2.5

Initial Decision Maker, Extent of Authority

14.2.4, 15.1.4.2, 15.2.1, 15.2.2, 15.2.3, 15.2.4, 15.2.5

##### **Injury or Damage to Person or Property**

**10.2.8**, 10.4

Inspections

3.1.3, 3.3.3, 3.7.1, 4.2.2, 4.2.6, 4.2.9, 9.4.2, 9.8.3,

9.9.2, 9.10.1, 12.2.1, 13.4

Instructions to Bidders

1.1.1

Instructions to the Contractor

3.2.4, 3.3.1, 3.8.1, 5.2.1, 7, 8.2.2, 12, 13.4.2

##### **Instruments of Service, Definition of**

###### **1.1.7**

Insurance

6.1.1, 7.3.4, 8.2.2, 9.3.2, 9.8.4, 9.9.1, 9.10.2, 10.2.5,

#### **11**

Insurance, Notice of Cancellation or Expiration

11.1.4, 11.2.3

##### **Insurance, Contractor's Liability**

###### **11.1**

Insurance, Effective Date of

8.2.2, 14.4.2

##### **Insurance, Owner's Liability**

###### **11.2**

##### **Insurance, Property**

**10.2.5**, 11.2, 11.4, 11.5

Insurance, Stored Materials

9.3.2

### **INSURANCE AND BONDS**

#### **11**

Insurance Companies, Consent to Partial Occupancy

9.9.1

Insured loss, Adjustment and Settlement of

11.5

Intent of the Contract Documents

1.2.1, 4.2.7, 4.2.12, 4.2.13

##### **Interest**

###### **13.5**

##### **Interpretation**

1.1.8, 1.2.3, **1.4**, 4.1.1, 5.1, 6.1.2, 15.1.1

Interpretations, Written

4.2.11, 4.2.12

Judgment on Final Award

15.4.2

##### **Labor and Materials, Equipment**

1.1.3, 1.1.6, **3.4**, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1,

5.2.1, 6.2.1, 7.3.4, 9.3.2, 9.3.3, 9.5.1.3, 9.10.2, 10.2.1,

10.2.4, 14.2.1.1, 14.2.1.2

Labor Disputes

8.3.1

Laws and Regulations

1.5, 2.3.2, 3.2.3, 3.2.4, 3.6, 3.7, 3.12.10, 3.13, 9.6.4,

9.9.1, 10.2.2, 13.1, 13.3.1, 13.4.2, 13.5, 14, 15.2.8,

15.4

Liens

2.1.2, 9.3.1, 9.3.3, 9.6.8, 9.10.2, 9.10.4, 15.2.8

Limitations, Statutes of

12.2.5, 15.1.2, 15.4.1.1

Limitations of Liability

3.2.2, 3.5, 3.12.10, 3.12.10.1, 3.17, 3.18.1, 4.2.6,

4.2.7, 6.2.2, 9.4.2, 9.6.4, 9.6.7, 9.6.8, 10.2.5, 10.3.3,

11.3, 12.2.5, 13.3.1

Limitations of Time

2.1.2, 2.2, 2.5, 3.2.2, 3.10, 3.11, 3.12.5, 3.15.1, 4.2.7,

5.2, 5.3, 5.4.1, 6.2.4, 7.3, 7.4, 8.2, 9.2, 9.3.1, 9.3.3,

9.4.1, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 12.2, 13.4, 14, 15,

15.1.2, 15.1.3, 15.1.5

##### **Materials, Hazardous**

10.2.4, **10.3**

Materials, Labor, Equipment and

1.1.3, 1.1.6, 3.4.1, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1,

5.2.1, 6.2.1, 7.3.4, 9.3.2, 9.3.3, 9.5.1.3, 9.10.2,

10.2.1.2, 10.2.4, 14.2.1.1, 14.2.1.2

Means, Methods, Techniques, Sequences and

Procedures of Construction

3.3.1, 3.12.10, 4.2.2, 4.2.7, 9.4.2

Mechanic's Lien

2.1.2, 9.3.1, 9.3.3, 9.6.8, 9.10.2, 9.10.4, 15.2.8

##### **Mediation**

8.3.1, 15.1.3.2, 15.2.1, 15.2.5, 15.2.6, **15.3**, 15.4.1,

15.4.1.1

## Minor Changes in the Work

1.1.1, 3.4.2, 3.12.8, 4.2.8, 7.1, 7.4

## MISCELLANEOUS PROVISIONS

### 13

#### Modifications, Definition of

##### 1.1.1

Modifications to the Contract

1.1.1, 1.1.2, 2.5, 3.11, 4.1.2, 4.2.1, 5.2.3, 7, 8.3.1, 9.7, 10.3.2

#### Mutual Responsibility

##### 6.2

#### Nonconforming Work, Acceptance of

9.6.6, 9.9.3, 12.3

Nonconforming Work, Rejection and Correction of  
2.4, 2.5, 3.5, 4.2.6, 6.2.4, 9.5.1, 9.8.2, 9.9.3, 9.10.4, 12.2

#### Notice

1.6, 1.6.1, 1.6.2, 2.1.2, 2.2.2, 2.2.3, 2.2.4, 2.5, 3.2.4, 3.3.1, 3.7.4, 3.7.5, 3.9.2, 3.12.9, 3.12.10, 5.2.1, 7.4, 8.2.2, 9.6.8, 9.7, 9.10.1, 10.2.8, 10.3.2, 11.5, 12.2.2.1, 13.4.1, 13.4.2, 14.1, 14.2.2, 14.4.2, 15.1.3, 15.1.5, 15.1.6, 15.4.1

Notice of Cancellation or Expiration of Insurance

11.1.4, 11.2.3

#### Notice of Claims

1.6.2, 2.1.2, 3.7.4, 9.6.8, 10.2.8, 15.1.3, 15.1.5, 15.1.6, 15.2.8, 15.3.2, 15.4.1

Notice of Testing and Inspections

13.4.1, 13.4.2

Observations, Contractor's

3.2, 3.7.4

Occupancy

2.3.1, 9.6.6, 9.8

Orders, Written

1.1.1, 2.4, 3.9.2, 7, 8.2.2, 11.5, 12.1, 12.2.2.1, 13.4.2, 14.3.1

## OWNER

### 2

Owner, Definition of

##### 2.1.1

#### Owner, Evidence of Financial Arrangements

2.2, 13.2.2, 14.1.1.4

#### Owner, Evidence of Financial Arrangements

2.1.2, 2.2, 2.3, 3.2.2, 3.12.10, 6.1.3, 6.1.4, 6.2.5, 9.3.2, 9.6.1, 9.6.4, 9.9.2, 9.10.3, 10.3.3, 11.2, 13.4.1, 13.4.2, 14.1.1.4, 14.1.4, 15.1.4

Owner's Authority

1.5, 2.1.1, 2.3.3.2.4, 2.5, 3.4.2, 3.8.1, 3.12.10, 3.14.2, 4.1.2, 4.2.4, 4.2.9, 5.2.1, 5.2.4, 5.4.1, 6.1, 6.3, 7.2.1, 7.3.1, 8.2.2, 8.3.1, 9.3.2, 9.5.1, 9.6.4, 9.9.1, 9.10.2, 10.3.2, 11.4, 11.5, 12.2.2, 12.3, 13.2.2, 14.3, 14.4, 15.2.7

#### Owner's Insurance

##### 11.2

Owner's Relationship with Subcontractors

1.1.2, 5.2, 5.3, 5.4, 9.6.4, 9.10.2, 14.2.2

## Owner's Right to Carry Out the Work

2.5, 14.2.2

## Owner's Right to Clean Up

### 6.3

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

### 6.1

## Owner's Right to Stop the Work

### 2.4

Owner's Right to Suspend the Work

14.3

Owner's Right to Terminate the Contract

14.2, 14.4

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

1.1.1, 1.1.6, 1.1.7, 1.5, 2.3.6, 3.2.2, 3.11, 3.17, 4.2.12, 5.3

## Partial Occupancy or Use

9.6.6, 9.9

## Patching, Cutting and

3.14, 6.2.5

Patents

3.17

## Payment, Applications for

4.2.5, 7.3.9, 9.2, 9.3, 9.4, 9.5, 9.6.3, 9.7, 9.8.5, 9.10.1, 14.2.3, 14.2.4, 14.4.3

## Payment, Certificates for

4.2.5, 4.2.9, 9.3.3, 9.4, 9.5, 9.6.1, 9.6.6, 9.7, 9.10.1, 9.10.3, 14.1.1.3, 14.2.4

## Payment, Failure of

9.5.1.3, 9.7, 9.10.2, 13.5, 14.1.1.3, 14.2.1.2

Payment, Final

4.2.1, 4.2.9, 9.10, 12.3, 14.2.4, 14.4.3

## Payment Bond, Performance Bond and

7.3.4.4, 9.6.7, 9.10.3, 11.1.2

## Payments, Progress

9.3, 9.6, 9.8.5, 9.10.3, 14.2.3, 15.1.4

## PAYMENTS AND COMPLETION

### 9

Payments to Subcontractors

5.4.2, 9.5.1.3, 9.6.2, 9.6.3, 9.6.4, 9.6.7, 14.2.1.2

PCB

10.3.1

## Performance Bond and Payment Bond

7.3.4.4, 9.6.7, 9.10.3, 11.1.2

## Permits, Fees, Notices and Compliance with Laws

2.3.1, 3.7, 3.13, 7.3.4.4, 10.2.2

## PERSONS AND PROPERTY, PROTECTION OF

### 10

Polychlorinated Biphenyl

10.3.1

Product Data, Definition of

##### 3.12.2

## Product Data and Samples, Shop Drawings

3.11, 3.12, 4.2.7

## **Progress and Completion**

4.2.2, **8.2**, 9.8, 9.9.1, 14.1.4, 15.1.4

## **Progress Payments**

9.3, **9.6**, 9.8.5, 9.10.3, 14.2.3, 15.1.4

## **Project, Definition of**

### **1.1.4**

Project Representatives

4.2.10

## **Property Insurance**

10.2.5, **11.2**

## **Proposal Requirements**

1.1.1

## **PROTECTION OF PERSONS AND PROPERTY**

### **10**

#### **Regulations and Laws**

1.5, 2.3.2, 3.2.3, 3.6, 3.7, 3.12.10, 3.13, 9.6.4, 9.9.1, 10.2.2, 13.1, 13.3, 13.4.1, 13.4.2, 13.5, 14, 15.2.8, 15.4

#### **Rejection of Work**

4.2.6, 12.2.1

#### **Releases and Waivers of Liens**

9.3.1, 9.10.2

#### **Representations**

3.2.1, 3.5, 3.12.6, 8.2.1, 9.3.3, 9.4.2, 9.5.1, 9.10.1

#### **Representatives**

2.1.1, 3.1.1, 3.9, 4.1.1, 4.2.10, 13.2.1

#### **Responsibility for Those Performing the Work**

3.3.2, 3.18, 4.2.2, 4.2.3, 5.3, 6.1.3, 6.2, 6.3, 9.5.1, 10

#### **Retainage**

9.3.1, 9.6.2, 9.8.5, 9.9.1, 9.10.2, 9.10.3

#### **Review of Contract Documents and Field**

##### **Conditions by Contractor**

**3.2**, 3.12.7, 6.1.3

##### **Review of Contractor's Submittals by Owner and Architect**

3.10.1, 3.10.2, 3.11, 3.12, 4.2, 5.2, 6.1.3, 9.2, 9.8.2

##### **Review of Shop Drawings, Product Data and**

##### **Samples by Contractor**

3.12

#### **Rights and Remedies**

1.1.2, 2.4, 2.5, 3.5, 3.7.4, 3.15.2, 4.2.6, 5.3, 5.4, 6.1, 6.3, 7.3.1, 8.3, 9.5.1, 9.7, 10.2.5, 10.3, 12.2.1, 12.2.2, 12.2.4, **13.3**, 14, 15.4

#### **Royalties, Patents and Copyrights**

**3.17**

#### **Rules and Notices for Arbitration**

15.4.1

#### **Safety of Persons and Property**

**10.2**, 10.4

#### **Safety Precautions and Programs**

3.3.1, 4.2.2, 4.2.7, 5.3, **10.1**, 10.2, 10.4

#### **Samples, Definition of**

**3.12.3**

#### **Samples, Shop Drawings, Product Data and**

3.11, **3.12**, 4.2.7

#### **Samples at the Site, Documents and**

**3.11**

## **Schedule of Values**

**9.2**, 9.3.1

#### **Schedules, Construction**

3.10, 3.12.1, 3.12.2, 6.1.3, 15.1.6.2

#### **Separate Contracts and Contractors**

1.1.4, 3.12.5, 3.14.2, 4.2.4, 4.2.7, 6, 8.3.1, 12.1.2

#### **Separate Contractors, Definition of**

**6.1.1**

#### **Shop Drawings, Definition of**

**3.12.1**

#### **Shop Drawings, Product Data and Samples**

3.11, **3.12**, 4.2.7

#### **Site, Use of**

**3.13**, 6.1.1, 6.2.1

#### **Site Inspections**

3.2.2, 3.3.3, 3.7.1, 3.7.4, 4.2, 9.9.2, 9.4.2, 9.10.1, 13.4

#### **Site Visits, Architect's**

3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.5.1, 9.9.2, 9.10.1, 13.4

#### **Special Inspections and Testing**

4.2.6, 12.2.1, 13.4

#### **Specifications, Definition of**

**1.1.6**

#### **Specifications**

1.1.1, **1.1.6**, 1.2.2, 1.5, 3.12.10, 3.17, 4.2.14

#### **Statute of Limitations**

15.1.2, 15.4.1.1

#### **Stopping the Work**

2.2.2, 2.4, 9.7, 10.3, 14.1

#### **Stored Materials**

6.2.1, 9.3.2, 10.2.1.2, 10.2.4

#### **Subcontractor, Definition of**

**5.1.1**

## **SUBCONTRACTORS**

### **5**

#### **Subcontractors, Work by**

1.2.2, 3.3.2, 3.12.1, 3.18, 4.2.3, 5.2.3, 5.3, 5.4, 9.3.1.2, 9.6.7

#### **Subcontractual Relations**

**5.3**, 5.4, 9.3.1.2, 9.6, 9.10, 10.2.1, 14.1, 14.2.1

#### **Submittals**

3.10, 3.11, 3.12, 4.2.7, 5.2.1, 5.2.3, 7.3.4, 9.2, 9.3, 9.8, 9.9.1, 9.10.2, 9.10.3

#### **Submittal Schedule**

3.10.2, 3.12.5, 4.2.7

#### **Subrogation, Waivers of**

6.1.1, **11.3**

#### **Substances, Hazardous**

**10.3**

#### **Substantial Completion**

4.2.9, 8.1.1, 8.1.3, 8.2.3, 9.4.2, **9.8**, 9.9.1, 9.10.3, 12.2, 15.1.2

#### **Substantial Completion, Definition of**

**9.8.1**

#### **Substitution of Subcontractors**

5.2.3, 5.2.4

#### **Substitution of Architect**

2.3.3

Substitutions of Materials  
3.4.2, 3.5, 7.3.8  
**Sub-subcontractor**, Definition of  
**5.1.2**  
Subsurface Conditions  
3.7.4  
**Successors and Assigns**  
**13.2**  
**Superintendent**  
**3.9**, 10.2.6  
**Supervision and Construction Procedures**  
1.2.2, **3.3**, 3.4, 3.12.10, 4.2.2, 4.2.7, 6.1.3, 6.2.4,  
7.1.3, 7.3.4, 8.2, 8.3.1, 9.4.2, 10, 12, 14, 15.1.4  
Suppliers  
1.5, 3.12.1, 4.2.4, 4.2.6, 5.2.1, 9.3, 9.4.2, 9.5.4, 9.6,  
9.10.5, 14.2.1  
Surety  
5.4.1.2, 9.6.8, 9.8.5, 9.10.2, 9.10.3, 11.1.2, 14.2.2,  
15.2.7  
Surety, Consent of  
9.8.5, 9.10.2, 9.10.3  
Surveys  
1.1.7, 2.3.4  
**Suspension by the Owner for Convenience**  
**14.3**  
Suspension of the Work  
3.7.5, 5.4.2, 14.3  
Suspension or Termination of the Contract  
5.4.1.1, 14  
**Taxes**  
3.6, 3.8.2.1, 7.3.4.4  
**Termination by the Contractor**  
**14.1**, 15.1.7  
**Termination by the Owner for Cause**  
5.4.1.1, **14.2**, 15.1.7  
**Termination by the Owner for Convenience**  
**14.4**  
Termination of the Architect  
2.3.3  
Termination of the Contractor Employment  
14.2.2  
  
**TERMINATION OR SUSPENSION OF THE CONTRACT**  
**14**  
**Tests and Inspections**  
3.1.3, 3.3.3, 3.7.1, 4.2.2, 4.2.6, 4.2.9, 9.4.2, 9.8.3,  
9.9.2, 9.10.1, 10.3.2, 12.2.1, **13.4**  
**TIME**  
**8**  
**Time, Delays and Extensions of**  
3.2.4, 3.7.4, 5.2.3, 7.2.1, 7.3.1, 7.4, **8.3**, 9.5.1, 9.7,  
10.3.2, 10.4, 14.3.2, 15.1.6, 15.2.5

Time Limits  
2.1.2, 2.2, 2.5, 3.2.2, 3.10, 3.11, 3.12.5, 3.15.1, 4.2,  
5.2, 5.3, 5.4, 6.2.4, 7.3, 7.4, 8.2, 9.2, 9.3.1, 9.3.3,  
9.4.1, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 12.2, 13.4, 14,  
15.1.2, 15.1.3, 15.4  
**Time Limits on Claims**  
3.7.4, 10.2.8, 15.1.2, 15.1.3  
Title to Work  
9.3.2, 9.3.3  
**UNCOVERING AND CORRECTION OF WORK**  
**12**  
**Uncovering of Work**  
**12.1**  
Unforeseen Conditions, Concealed or Unknown  
3.7.4, 8.3.1, 10.3  
Unit Prices  
7.3.3.2, 9.1.2  
Use of Documents  
1.1.1, 1.5, 2.3.6, 3.12.6, 5.3  
**Use of Site**  
**3.13**, 6.1.1, 6.2.1  
**Values, Schedule of**  
**9.2**, 9.3.1  
Waiver of Claims by the Architect  
13.3.2  
Waiver of Claims by the Contractor  
9.10.5, 13.3.2, **15.1.7**  
Waiver of Claims by the Owner  
9.9.3, 9.10.3, 9.10.4, 12.2.2.1, 13.3.2, 14.2.4, **15.1.7**  
Waiver of Consequential Damages  
14.2.4, 15.1.7  
Waiver of Liens  
9.3, 9.10.2, 9.10.4  
**Waivers of Subrogation**  
6.1.1, **11.3**  
**Warranty**  
**3.5**, 4.2.9, 9.3.3, 9.8.4, 9.9.1, 9.10.2, 9.10.4, 12.2.2,  
15.1.2  
Weather Delays  
8.3, 15.1.6.2  
**Work, Definition of**  
**1.1.3**  
Written Consent  
1.5.2, 3.4.2, 3.7.4, 3.12.8, 3.14.2, 4.1.2, 9.3.2, 9.10.3,  
13.2, 13.3.2, 15.4.4.2  
Written Interpretations  
4.2.11, 4.2.12  
Written Orders  
1.1.1, 2.4, 3.9, 7, 8.2.2, 12.1, 12.2, 13.4.2, 14.3.1

## **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.

**§ 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**

**§ 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™-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™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–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**

**§ 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.

**§ 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**

**§ 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.

### **§ 3.8 Allowances**

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

**§ 3.8.2** Unless otherwise provided in the Contract Documents,

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

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

### **§ 3.9 Superintendent**

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

**§ 3.9.2** The Contractor, as soon as practicable after award of the Contract, shall 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 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 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.

### **§ 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.

**§ 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.

## 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**

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

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

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

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

**§ 5.4.3** Upon 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.

**§ 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**

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

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

### **§ 7.3 Construction Change Directives**

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

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

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

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;

- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

**§ 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**

**§ 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.

**§ 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**

**§ 9.5.1** The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot

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

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

**§ 9.5.2** When 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**

**§ 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.

### **§ 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.

**§ 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

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

**§ 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

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

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

**§ 10.2.3** The Contractor shall 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 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 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.

### **§ 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 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.

**§ 12.2.2.3** 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.

## § 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 Subcontractor, 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.

**§ 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:

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

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

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

the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

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

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

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

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

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

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

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

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

**§ 14.4.3** In case of such termination for the Owner's convenience, the 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**

**§ 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.

**§ 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**

**§ 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**

**§ 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.

State of West Virginia

Supplementary Conditions to AIA Document A201-2017  
General Conditions of the Contract for Construction

The following Supplementary Conditions modify the General Conditions of the Contract for Construction, AIA Document A201, 2017 Edition. Where a portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

Order of Precedence: The documents contained in the contract to which this document has been attached shall be interpreted in the following order of precedence:

First Priority – Documents developed by the State or agency and utilized to provide public notice of the solicitation, along with other general terms and conditions shall be first in priority.

Second Priority – This document "Supplementary Conditions to the AIA Document A201-2017 General Conditions of the Contract for Construction" shall be second in priority.

Third Priority – all other AIA documents including, but not limited to, the AIA Document A201-2017 General Conditions of the Contract for Construction and the A101-2017 Standard Form of Agreement Between Owner and Contractor (when utilized) shall be third or lower in priority.

**ARTICLE 1  
GENERAL PROVISIONS**

Add the following Section to Article 1:

**§1.05 PARTY RELATIONS**

§1.05 The Owner and their consultants, the Architect and their Consultants, and the Contractor and their Subcontractors agree to proceed with the Work on the basis of mutual trust, good faith and fair dealing.

**§1.1 BASIC DEFINITIONS**

**§1.1.1 THE CONTRACT DOCUMENTS**

§1.1.1 Delete the last sentence of this Section and substitute the following:

The Contract Documents also include the Bidding Documents (Advertisement or Invitation to Bid, Request for Quotations/Bids, Instructions to Bidders, Form of Proposal, Bid Bond and Sample Forms), Performance Bond, Payment Bond, Maintenance Bond (if applicable), Certificates of Insurance, Special Provisions For Disadvantaged and Women Business Enterprise Utilization (if bound herein).

**§1.1.2 THE CONTRACT**

§1.1.2 Make the following changes to Section 1.1.2:

In the last sentence, insert "and the Contractor" after "The Architect" and delete "the Architect's" and insert "their respective".

**§1.2 Correlation and intent of Contract Documents**

§1.2.1.1 In the second sentence, remove "any law" and insert "West Virginia law or any applicable federal law". In the last sentence, remove "by law" and insert "West Virginia law or any applicable federal law".

**§1.7 Digital Data Use and Transmission**

§1.7 Delete the last sentence of this section in its entirety.

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

§ 1.8 Remove this section in its entirety and replace it with the following:

"Any use of, or reliance on, all or a portion of a building information model must be approved in advance by Owner and will only be permitted if the Parties have agreed upon and executed written documents to memorialize protocols governing the use of, and reliance on, the information contained in the model."

**ARTICLE 2**  
**OWNER**

**§2.1 GENERAL**

§ 2.1.1 Add the following after the last sentence:

Notwithstanding the foregoing, the parties understand that since Owner is a government entity, change orders will often require approval by entities in addition to owner. When owner is a state agency, those entities may include, but are not limited to, the West Virginia Attorney General's Office and the West Virginia Purchasing Division. Additionally, approval may be required by agencies providing project funding, including but not limited to, West Virginia School Building Authority and agencies of the United States federal government.

§2.1.2 Delete Section 2.1.2 in its entirety.

§2.1 Add the following Section to 2.1:

§2.1.3 The Owner and the agency funding the project reserve the right to maintain a full time or part time project representative (sometimes referred to as the "Clerk of the Works") at the project site who shall keep the Owner informed of the progress and quality of the Work and responsibilities. The Contractor shall cooperate and assist the Clerk of the Works in the performance of his/her duties. The Clerk of the Works will not interfere with or be responsible for the Contractor's supervision and direction of the Work, and the Contractor's means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work. The Clerk of the Works may facilitate communications between the Owner, Architect, and Contractor but has no authority to make decisions for the Owner, approve modifications to the Contract Documents, the Contract Time, or Contract Sum. Additionally, Contractor is not permitted to rely on or consider decisions made by the Clerk of the Works on behalf of Owner

**§2.2 Evidence of the Owner's Financial Arrangements:** Delete § 2.2 and all of its subsections in its entirety.

**§2.3 Information and Services Required of Owner**

§2.3.2 Make the following changes to Section 2.3.2:

In first sentence, delete the period and add ", when required pursuant to West Virginia Code §30-12-1 et seq." Add the following sentence at the end of Section 2.3.2: "If the Owner does not retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located, the Owner will appoint an individual to assume the role and obligations of the Architect pursuant to this Agreement."

§2.3.3 Delete this section in its entirety.

§2.3.4 Delete the last sentence of Section 2.3.4 and substitute the following:

The Contractor shall confirm the locations of each utility. If the Owner has provided geotechnical and other tests to determine subsurface conditions, the Owner will provide such documents to the Contractor; the Contractor acknowledges that it will make no claims for any subsurface or any other conditions revealed by these tests.

**ARTICLE 3**  
**CONTRACTOR**

**§3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR**

§3.2.2 Add the following sentence to the end of Section 3.2.2:

Claims by Contractor resulting from its failure to familiarize itself with the site shall be deemed waived. Additionally, by submitting a bid or otherwise entering into this contract, Contractor acknowledges that it has reviewed and understands the contract documents and the work required by those documents. Any claims arising from Contractor's failure to review and understand the contract documents shall be deemed waived.

§3.2.3 Delete Section 3.2.3 in its entirety and substitute the following:

§3.2.3 The Contractor acknowledges its continuing duty to review and evaluate the Construction Documents during performance of its services and shall immediately notify the Owner and the Architect about any problems, conflicts, defects, deficiencies, inconsistencies or omissions it discovers in or between the Construction Documents; and variances it discovers between the Construction Documents and applicable laws, statutes, building codes, rules and regulations.

§ 3.2.4 Add the following clauses to Section 3.2.4:

§3.2.4.1 If the Contractor performs any Work which it knows or should have known involves a recognized problem, conflict, defect, deficiency, inconsistency or omission in the Construction Documents; or a variance between the Construction Documents and requirements of applicable laws, statutes, building codes, rules and regulations, without notifying the Owner and the Architect prior to receiving written authorization from the Architect to proceed, the Contractor shall be responsible for the consequences of such performance.

§3.2.4.2 Before ordering any materials or doing any Work, the Contractor and Subcontractors shall verify all measurements at the site and shall be responsible for the correctness of same. Discrepancies shall be reported in writing to the Architect prior to proceeding with the Work. No extra charge or compensation will be

entertained due to differences between actual measurements and dimensions indicated on the drawings, if such differences do not result in a change in the scope of Work or if the Architect failed to receive written notice before the Work was performed.

### §3.4 LABOR AND MATERIALS

§3.4.1 Vendor must review and comply with the following statutory requirements affecting public construction projects, as well as any other applicable laws that are not referenced herein:

- W. Va. Code § 5-19-1 *et seq.*, relating to domestic steel preference.
- W. Va. Code § 5A-3-56 relating to domestic steel preference, provided that the Owner is a state agency subject to Chapter 5A, Article 3 of the W. Va. Code.
- W. Va. Code § §21-1C-1 *et seq.*, relating to local hiring preference
- W. Va. Code §21-1D-1 *et seq.*, relating to drug free workplace requirements.

§3.4 Add the following Sections to 3.4:

§3.4.4 Where materials and equipment are to be provided by the Owner under the Contract Documents, the Contractor shall notify the Owner in writing as to when materials and equipment are required on the project site in sufficient time to avoid delay in the Work.

§3.4.5 The Contractor shall employ labor on the Project or in connection with the Work, capable of working harmoniously with all trade crafts and any other individuals associated with the Project. The Contractor shall also use its best efforts and implement policies and practices to minimize the likelihood of any strike, work stoppage or other labor disturbance. Except as specifically provided in this Agreement, Contractor shall not be entitled to any adjustment in the Contract sum or Contract time and shall be liable to the Owner for all damages suffered by the Owner occurring as a result of work stoppages, slowdowns, disputes, or strikes by the work force of or provided by Contractor or its Subcontractors.

### §3.5 WARRANTY

§3.5 Add the following sentence at the end of Section 3.5:

The Contractor agrees to assign to the Owner at time of Final Completion of the Work, any and all manufacturer's warranties relating to materials and labor used in the Work and further agrees to perform the Work in such a manner so as to preserve any and all such warranties.

### §3.8 ALLOWANCES

§3.8.3 Make the following change to Section 3.8.3:

§3.8.3 Delete "with reasonable promptness" and insert "in sufficient time to avoid delay in the Work."

Add the following Section to 3.8:

§3.8.4 The Contractor shall promptly submit to the Owner an itemized account of any expenditure by the Contractor of the Contract allowance in sufficient detail to allow the Owner to properly account for such expenditure.

### §3.9 SUPERINTENDENT/PROJECT MANAGER

§3.9.1 Add the following sentence to the end of Section 3.9.1:

The Contractor may also employ a competent project manager.

§3.9.2 Make the following changes to Section 3.9.2:

In the first sentence, add "and project manager, if applicable" after "superintendent." In the second sentence, add "or project manager, if applicable," after "superintendent."

§3.9.3 Make the following changes to Section 3.9.3:

In the first sentence, add "or project manager, if applicable," after "superintendent." In the second sentence, add "or project manager, if applicable," after "superintendent."

§3.9 Add the following Section to 3.9:

§3.9.4 The Owner shall have the right, at any time, to direct a change in the Contractor's representatives if their performance is deemed unsatisfactory.

### §3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§3.10.1 Make the following changes to Section 3.10.1:

In the first sentence, delete the word "promptly" and substitute "by the earliest reasonable date".

Add the following sentence to the end of Section 3.10.1: "The Contractor shall submit an updated construction schedule with each payment application, unless waived by the Owner."

Add the following Sections to 3.10:

§3.10.4 At any time after the first thirty (30) days of the Contract Time, if it is found that the project is two (2) weeks or more behind schedule, beyond approved time extensions, or if at any time during

the last thirty (30) days of the scheduled Contract Time the Contractor is one (1) week or more behind schedule, the Contractor shall immediately submit a plan to the Owner describing how the Work will be placed back on schedule within the remaining Contract Time.

§3.10.5 If the Owner and the Architect determine that the performance of the Work during any stage of the construction schedule last approved by the Owner has not progressed or reached the level of completion required by the Contract Documents, the Owner will have the right to order the Contractor to take corrective measures (hereinafter referred to collectively as Extraordinary Measures) necessary to expedite the progress of the Work, including, without limitation: (1) working additional shifts or overtime; (2) supplying additional manpower, equipment and facilities; and (3) other similar measures. Such Extraordinary Measures shall continue until the progress of the Work complies with the last approved construction schedule. The Owner's right to require Extraordinary Measures is solely for the purpose of ensuring the Contractor's compliance with the construction schedule after allowing for approved extensions of Contract Time as provided elsewhere in this Agreement. The Contractor is not entitled to an adjustment in the Contract Sum in connection with any Extraordinary Measures required by the Owner. The Owner may exercise its rights under this Section as frequently as the Owner deems necessary to ensure that the Contractor's performance of the Work will comply with the construction schedule.

### §3.11 DOCUMENTS AND SAMPLES AT THE SITE

§3.11 Insert the following sentence at the end of Section 3.11:

The Contractor's compliance with this Section 3.11 shall be a condition precedent to any obligation of the Owner to make Final Payment pursuant to this Agreement.

### §3.15 CLEANING UP

§3.15.2 Delete Section 3.15.2 in its entirety and substitute the following:

§3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and may withhold such reasonable costs as necessary for the fulfillment of the Contractor's obligation under this Section 3.15. If the reasonable costs of such cleaning exceed the Contract Sum then due the Contractor, the Contractor shall reimburse the Owner the difference within thirty (30) consecutive calendar days of the Owner's written request.

Any materials, tools, supplies, or other personal property left by the Contractor shall be deemed abandoned property and the Owner shall have no obligation to hold or store the property on behalf of Contractor and may dispose of the abandoned property as if it were property of the State of West Virginia. Provided however, that prior to treating property as abandoned and disposing of it, Owner must

first provide Contractor with 10 days notice of its intent to do so. If any materials, tools, supplies or other personal property belong to a subcontractor, then Contractor is obligated to communicate this notice to its subcontractor immediately.

§3.15 Add the following Section to 3.15:

§3.15.3 In order to achieve Substantial Completion, as defined by Section 9.8, for any portion of the Work, the Contractor must have the area where the Work is located fully cleaned and all materials and/or debris removed from site. The Certificate of Substantial Completion will not be issued until the Contractor has met this obligation.

## ARTICLE 4 ARCHITECT

### §4.1 GENERAL

### §4.2 ADMINISTRATION OF THE CONTRACT

§4.2 Make the following changes to Section 4.2:

§4.2.1 In the first sentence of Section 4.2.1 after the word Architect add ", unless otherwise indicated by the Owner,".

§4.2.2 In the first sentence of Section 4.2.2 strike the word "generally."

§4.2.3 In the first sentence of Section 4.2.3 strike the word "reasonably."

§4.2.5 Add the following sentence at the end of Section 4.2.5:

The Architect upon receipt of an Application for Payment from the Contractor shall either review and certify such amounts due for payment or return such Application for Payment to the Contractor for correction(s) within five (5) consecutive business days of receipt.

§4.2.7 Delete the first sentence of Section 4.2.7 and substitute the following:

The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples for the purpose of checking for conformance with the Contract Documents.

Modify the second to last sentence by removing it in its entirety and replacing it with the following: The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures, unless the Architect has established the required construction means, methods, techniques, sequences, or procedures, or the Contract Documents require such approval.

§4.2.8 Make the following change to Section 4.2.8:

In the first sentence, after the word Architect add ", in consultation with the Owner,".

ARTICLE 5  
SUBCONTRACTORS

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

§5.2.1 Add the following sentence to Section 5.2.1.

This provision in no way limits the Contractor's legal obligations to report subcontractors and labor/material suppliers under W. Va. Code § 5-22-1(f) and obtain approval under W. Va. Code § 5-22-1(g) prior to any subcontractor substitution.

§5.4 Contingent Assignment of Subcontracts: This section is removed in its entirety and replaced with the following:

§5.4 Emergency Contracts with Subcontractors:

In the event that the general contractor fails to fulfill its contractual obligations and the performance bond has failed to provide an adequate remedy, Owner has the right to execute emergency contracts with subcontractors to ensure continuation of the work, provided that doing so is in compliance with the laws, rules, and procedures governing emergency contracting authority for Owner, and the emergency contract terms comply with all other applicable laws, rules, and procedures.

ARTICLE 7  
CHANGES IN THE WORK

§7.1 General

§7.1.2. In Section 7.1.2. remove the word "alone" and insert "with approval by the Owner."

§7.2 CHANGE ORDERS

§7.2 Add the following Section to 7.2:

§7.2.2 A written Change Order as defined under 7.2.1 above constitutes a final settlement of all matters relating to the change in the Work which is the subject of the Change Order, including, but not limited to general conditions, all direct or indirect costs associated with such change and any and all adjustment to the Contract Sum and Contract Time. The parties also understand and agree that if Owner is a state agency, change orders may require approval by entities in addition to Owner. Those entities may include, but are not limited to, the West Virginia Purchasing Division, and the West Virginia Attorney General's Office. Owner

and Contractor must discuss the change order approval requirements prior to executing this agreement.

Add the following section to § 7.2

§7.2.3. Allowance for Overhead and Profit: Contractor's overhead and profit for a change order issued under this Article included in the total cost to the Owner shall not exceed based on the following schedule:

.1 For the Contractor, for any Work performed by the Contractor's own forces, fifteen percent (15%) of the cost.

.2 For the Contractor, for Work performed by the Contractor's Subcontractor, ten percent (10%) of the amount due the Subcontractor.

.3 For each Subcontractor or Sub-Subcontractor involved, for any Work performed by that Subcontractor's own forces, fifteen percent (15%) of the cost.

.4. For each Subcontractor, for Work performed by the Subcontractor's Sub-subcontractors, ten percent (10%) of the amount due the Sub-subcontractor.

.5 Cost to which overhead and profit is to be applied shall be determined in accordance with Section 7.3.7. Estimated labor hours shall include hours only for those workmen and working foremen directly involved in performing the Change Order work. Supervision above the level of working foremen (such as general foremen, superintendent, project manager, etc.) is considered to be included in the allowance for Overhead and Profit. Hand tools are defined as equipment with a value of \$1,000 or less. For Contractor owned equipment, the "bare" equipment rental rates allowed to be used for pricing Change Order proposals shall be not more than the monthly rate listed in the most current publication of The AED Green Book divided by 176 to arrive at a maximum hourly rate to be applied to the hours the equipment is used performing the Change Order work.

.6 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, material, equipment and Subcontractors. Details to be submitted will include detailed line item estimates showing detailed materials quantity take-offs, material prices by item and related labor hour pricing information and extensions (by line item or by drawing as applicable.) Where major cost items are Subcontracts, they shall also be itemized as prescribed above. In no case will a change involving over \$10,000 be approved without such an itemization.

.7 Local Business and Occupation Taxes, if applicable, shall be calculated on the cost of the Work, overhead and profit.

.8 Overhead and profit shall not be calculated on changes in the Work involving unit prices. Unit prices are to have overhead and profit included in the price quoted.

.9 Under no circumstances is Contractor permitted to charge for the passage of time (often referred to as general conditions or winter conditions) without an identified, itemized, and concretely provable cost borne by Contractor. Contractor has a duty to mitigate costs during a delay period to the fullest extent possible and Contractor will not be paid for costs that could have been mitigated. Calculating a daily delay rate without properly identifying, itemizing, and proving actual, unmitigateable costs, is prohibited. Contractor understands and accepts that it has the responsibility to prove that costs could not be mitigated prior to submitting a request for payment.

### §7.3 CONSTRUCTION CHANGE DIRECTIVES

#### §7.3.4 Make the following change in Section 7.3.4:

In the fourth line of the first sentence, delete the words "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" and substitute "an allowance for overhead and profit in accordance with clauses 7.3.11.1 through 7.3.11.9 below."

#### §7.3.7 Delete the word "recorded" and replace it with "processed".

#### §7.3.9 Delete Section 7.3.9 in its entirety and substitute the following:

§7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, amounts not in dispute for such changes in the Work shall be included in Applications for Payment provided these amounts have been added to the Contract by Change Order and a purchase order has been issued for the Change Order.

#### §7.3.10 Add the following sentence to the end of Section 7.3.10:

The Parties will utilize their best efforts to issue a change order within 60 days of agreement being reached, but failure to do so will not give rise to grounds for contract cancellation, penalties, or any other cause of action.

#### Add the following Section to 7.3:

§7.3.11 In Section 7.3.7, the allowance for overhead and profit for a change directive issued under this Article included in the total cost to the Owner shall not exceed the following schedule:

.1 For the Contractor, for any Work performed by the Contractor's own forces, fifteen percent (15%) of the cost.

.2 For the Contractor, for Work performed by the Contractor's Subcontractor, ten percent (10%) of the amount due the Subcontractor.

.3 For each Subcontractor or Sub-Subcontractor involved, for any Work performed by that Subcontractor's own forces, fifteen percent (15%) of the cost.

.4. For each Subcontractor, for Work performed by the Subcontractor's Sub-subcontractors, ten percent (10%) of the amount due the Sub-subcontractor.

.5 Cost to which overhead and profit is to be applied shall be determined in accordance with Section 7.3.7. Estimated labor hours shall include hours only for those workmen and working foremen directly involved in performing the Change Order work. Supervision above the level of working foremen (such as general foremen, superintendent, project manager, etc.) is considered to be included in the allowance for Overhead and Profit. Hand tools are defined as equipment with a value of \$1,000 or less. For Contractor owned equipment, the "bare" equipment rental rates allowed to be used for pricing Change Order proposals shall be not more than the monthly rate listed in the most current publication of The AED Green Book divided by 176 to arrive at a maximum hourly rate to be applied to the hours the equipment is used performing the Change Order work.

.6 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, material, equipment and Subcontractors. Details to be submitted will include detailed line item estimates showing detailed materials quantity take-offs, material prices by item and related labor hour pricing information and extensions (by line item or by drawing as applicable.) Where major cost items are Subcontracts, they shall also be itemized as prescribed above. In no case will a change involving over \$10,000 be approved without such an itemization.

.7 Local Business and Occupation Taxes, if applicable, shall be calculated on the cost of the Work, overhead and profit.

.8 Overhead and profit shall not be calculated on changes in the Work involving unit prices. Unit prices are to have overhead and profit included in the price quoted.

.9 Under no circumstances is Contractor permitted to charge for the passage of time (often referred to as general conditions or winter conditions) without an identified, itemized, and concretely provable cost borne by Contractor. Contractor has a duty to mitigate costs during a delay period to the fullest extent possible and Contractor will not be paid for costs that could have been mitigated. Calculating a daily delay rate

without properly identifying, itemizing, and proving actual, unmitigateable costs, is prohibited. Contractor understands and accepts that it has the responsibility to prove that costs could not be mitigated prior to submitting a request for payment.

**§7.4 Minor Changes in Work.** Insert the following sentence at the end of section 7.4:

"Contractor may request that Architect provide written confirmation that Owner has agreed to the minor change, and if requested, Architect will provide it."

**ARTICLE 8  
TIME**

**§8.3 DELAYS AND EXTENSIONS OF TIME**

§8.3.1 In the first sentence, delete "unusual delay in deliveries," and add "unmitigatable costs attributable to" before the words "adverse weather conditions."

**ARTICLE 9  
PAYMENTS AND COMPLETION**

**§9.1 Contract Sum**

§9.1.2 Add the following sentence to the end of section 9.1.2:

"Any equitable adjustment of unit prices must be processed as a change order to the contract"

**§9.2 SCHEDULE OF VALUES**

§9.2 Make the following changes to Section 9.2:

In the first sentence add "and the Owner" after the first reference to the Architect. In the second sentence add "or the Owner" after Architect. Remove the last sentence in its entirety and replace it with the following:

"Any changes to the schedule of values shall be submitted to the Architect and the Owner and supported by such data to substantiate its accuracy as the Architect or owner may require. This schedule, unless objected to by the Architect or the Owner, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment."

**§9.3 APPLICATIONS FOR PAYMENT**

§9.3 Make the following changes to Section 9.3:

§9.3.1 In the first sentence add "and the Owner" after the first reference to the Architect and add "and other required documents" after the words "schedule of values."

§9.3.1.1 Delete clause 9.3.1.1 in its entirety and substitute the following:

§9.3.1.1 Such applications may include requests for payment on account of changes in the Work authorized by Construction Change Directives and Change Orders only after a purchase order has been issued for the Work affected.

§9.3.1 Add the following clauses to Section 9.3.1:

§9.3.1.3 Until the Work is fifty percent (50%) complete, the Owner will withhold as retainage 10% of the amount due the Contractor on account of progress payments. At the time the Work is fifty percent (50%) complete and thereafter, if the manner of completion of the Work and its progress are and remain satisfactory to the Owner and Architect, and in the absence of other good and sufficient reasons, the Architect will, on presentation by the Contractor of Consent of Surety, authorize any remaining partial payments to be paid in full.

§9.3.1.4 The full Contract retainage may be reinstated if the manner of completion of the Work and its progress do not remain satisfactory to the Owner and Architect, if the Surety withholds its consent, or for other good and sufficient reasons.

**§9.4 CERTIFICATES FOR PAYMENT**

§9.4.1 After the phrase "in the full amount of the Application for Payment," insert the phrase "less any retainage withheld pursuant to section 9.3.1.3,".

**§9.6 PROGRESS PAYMENTS**

§9.6.7 Delete Section 9.6.7 in its entirety.

§9.6.8 Delete Section 9.6.8 in its entirety.

**§9.7 FAILURE OF PAYMENT**

§9.7 Make the following changes in Section 9.7:

In line two, change "seven days" to "sixty days." In line four, delete "binding dispute resolution" and substitute "the West Virginia Claims Commission"

**§9.8 SUBSTANTIAL COMPLETION**

§9.8.3 Add the following clause to Section 9.8.3:

If Architect is required to perform more than one inspection under this subsection, Contractor shall be responsible for paying the Owner for the cost of the additional inspection, which will be paid by Owner to Architect, at the hourly rate established in the contract between Owner and Architect.

§9.8.5 Add the following clause to Section 9.8.5:

§9.8.5.1 The payment of retainage shall be sufficient to increase the total payments to ninety-five percent (95%) for the Work or designated portion thereof being accepted as Substantially Complete, less any amounts as the Architect shall determine for any Work that is not complete, not in accordance with the Contract Documents, or for unsettled claims.

§9.10 FINAL COMPLETION AND FINAL PAYMENT

§9.10.1 Add the following to the end of Section 9.10.1:

If Architect is required to perform more than one inspection under this subsection, Contractor shall be responsible for paying the Owner for the cost of the additional inspection, which will be paid by Owner to Architect, at the hourly rate established in the contract between Owner and Architect.

§9.10.2 Make the following changes in Section 9.10.2:

In the first sentence, delete "for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner)."

Add the following clause to Section 9.10.2:

§9.10.2.1 Before final payment is due the Contractor, all applicable State and local taxes must be paid. If requested by the Owner, the Contractor shall present evidence that payment or satisfaction of all such tax obligations has been made.

§9.10.3 Add the following clause to Section 9.10.3:

9.10.3.1 Unless and to the extent final completion is delayed through no fault of the Contractor as provided in Section 9.10.3, the Owner shall be under no obligation to increase payments above ninety-five percent (95%) until final completion of the Work is Certified by the Architect.

§9.10.4 Make the following changes in Section 9.10.4:

In the first sentence, delete the word "the" and replace it with "Unless and until the Contractor makes a subsequent Claim against the Owner, the".

Add the following as the last sentence. "Neither the Owner's offer of a final payment nor its acceptance by the Contractor shall legally prevent or limit the Owner's right to assert any and all counterclaims in litigation filed by the Contractor as allowed in section 15.1.8."

Add the following Sections to Article 9:

§9.11 LIQUIDATED DAMAGES

§9.11.1 The Owner will suffer financial loss if the Work is not Substantially Complete within the Contract Time as defined in Article 8, and if final completion is not achieved within the specified time frame following Substantial Completion. As liquidated damages, and not as a penalty, the Contractor and the Contractor's surety shall be liable for and shall pay the Owner the sum(s) stated in this Agreement and/or purchase order.

§9.11.2 Allowances may be made for delays due to shortages of materials and/or energy resources, subject to proof by documentation, and also for delays due to strikes or other delays beyond the control of the Contractor. All delays and any claim for extension of Contract Time must be properly documented in accordance with Section 15.1.5 by the Contractor and must be made within the time limits stated in Section 15.1.2.

**ARTICLE 10**

**PROTECTION OF PERSONS AND PROPERTY**

§10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

§10.2.8 Make the following changes to Section 10.2.8:

In the first sentence, delete "within a reasonable time not exceeding 21 days" and substitute "immediately".

§10.3 HAZARDOUS MATERIALS

§10.3.3 Delete Section 10.3.3 in its entirety.

**ARTICLE 11**

**INSURANCE AND BONDS**

§11.1 CONTRACTOR'S LIABILITY INSURANCE

§11.1.2 Add the following to the end of §11.1.2.

At a minimum the Contract shall provide, at the Contractor's Expense:

§11.1.2.1. a Performance Bond and a Labor and Material Payment Bond for 100% of the Contract Sum and, if applicable, a two-year roofing Maintenance Bond for the full value of the roofing system.

§11.1.2.2 An attorney-in-fact who executes the bonds on behalf of the surety shall affix thereto a certified and current copy of power of attorney.

§11.1.2.3 The bonds shall be issued on State of West Virginia forms. The Contractor shall deliver the required bonds and all other contract documents to the Owner not later than 15 days following receipt of the Owner's notice of intent to award a Contract.

§11.2 Owner's Insurance Delete section 11.2 in its entirety.

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

§11.4 Section 11.4 is deleted in its entirety.

§11.5.1 Make the following changes in Section 11.5.1:

In the first sentence, substitute "Contractor" for "Owner" each time the latter word appears.

§11.5.2 Delete Section 11.5.2 in its entirety and substitute the following:

§11.5.2 Prior to settlement of insured loss, the Contractor shall notify the parties of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The parties shall have 14 days from the receipt of notice to object. If no objection is made, the Contractor shall proceed as proposed and allocate the settlement accordingly. If such objection is made, the dispute shall be resolved as provided in Section 15.4. The Contractor, in that case, shall make settlement with insurers in accordance with directions of the Court. If distribution of the insurance proceeds as directed by the Court is required, the Court will direct such distribution. Any work to repair the damage will be incorporated into the contract as a change order.

### **ARTICLE 13** **MISCELLANEOUS PROVISIONS**

#### **§13.4 TESTS AND INSPECTIONS**

§13.4.1 Remove the phrase "so require" and insert in its place "prohibit delegation of the test to Contractor"

#### **§13.6 INTEREST**

§13.6 Delete Section 13.5 in its entirety and substitute the following:

Notwithstanding any other provision in the Contract Documents, West Virginia Code does not authorize the payment of interest on late payments. Accordingly, interest charges for late payment are prohibited.

Add the following Sections to Article 13:

#### **§13.6 WORKERS COMPENSATION**

The Contractor shall provide proof of compliance with West Virginia Worker's Compensation laws and regulations.

#### **§13.7 CONTRACTOR'S LICENSE**

§13.7.1 West Virginia Code §21-11-2 requires that all persons desiring to perform contractual work in West Virginia shall be duly licensed. The West Virginia Contractor's Licensing Board is empowered to issue a contractor's license.

§13.7.2 West Virginia Code §21-11-11 requires any prospective Bidder to include the Bidder's contractor's license number on its Bid. The successful Bidder will be required to furnish a copy of its contractor's license in a classification appropriate to the Work prior to issuance of a purchase order/contract.

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

#### **§14.1 TERMINATION BY THE CONTRACTOR**

§14.1.1 Make the following changes in Section 14.1.1:

At the end of clause 14.1.1.3 delete "; or" and insert a period.

Delete clause 14.1.1.4 in its entirety.

§14.1.3 Delete Section 14.1.3 in its entirety and substitute the following:

§14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exist, the Contractor may, upon seven days written notice to the Owner and Architect, terminate the Contract. In such event, the Contractor shall be paid for all Work performed in accordance with the Contract Documents, for reasonable and proven termination expenses and a reasonable allowance for overhead and profit. However, such payment, exclusive of termination expenses, shall not exceed the Contract Sum as reduced by other payments made to the Contractor and further reduced by the value of Work as yet not completed. The Contractor shall be entitled to reasonable overhead, but not profit, on Work not performed.

#### **§14.2 TERMINATION BY THE OWNER FOR CAUSE**

§14.2.4 Delete Section 14.2.4 in its entirety and substitute the following:

§14.2.4 If the unpaid balance of the Contract Sum exceeds the cost 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 not 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 Owner shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

#### §14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§14.4.1 Delete Section 14.4.1 in its entirety and substitute the following:

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

§14.4.3 Delete Section 14.4.3 in its entirety and substitute the following:

§14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment from the Owner on the same basis provided in Section 14.1.3 above.

Add the following Section to Article 14:

#### §14.5 FISCAL YEAR FUNDING

§14.5 Work performed under this Contract is to continue in the succeeding fiscal year contingent upon funds being appropriated by the Legislature for this Work. In the event funds are not appropriated for this Work, this Contract becomes of no effect and is null and void after June 30.

### **ARTICLE 15 CLAIMS AND DISPUTES**

#### §15.1 Claims

##### §15.1.2 TIME LIMITS ON CLAIMS

§15.1.2 Delete Section 15.1.2 in its entirety and substitute the following:

Any applicable statute of limitations shall be in accordance with West Virginia Code.

§15.1.3 NOTICE OF CLAIMS Add the following to § 15.1.3:

§15.1.3.3 All claims, and notice of claims that require an increase in contract time, contract scope, or contract sum must be made in writing.

§ 15.1.8 is added to the Contract as follows:

§ 15.1.8 Counterclaims – In the event that Contractor makes a claim, Owner reserves the right to make a counterclaim and will not be barred from doing so even if final payment has been made.

#### §15.2 INITIAL DECISION

§15.2.1 In the third sentence of Section 15.2.1, insert "or litigation" following the word "mediation" and remove the phrase "binding dispute resolution" and replace it with "or litigation".

§15.2.5 Delete the last sentence in Section 15.2.5 and substitute the following:

Approval or rejection of a claim by the Initial Decision Maker shall be final and binding on the parties unless it is pursued further by either party in accordance with Section 15.2.6.

§15.2.6 Make the following change to clause 15.2.6.1:

In the last sentence, delete "or pursue binding dispute resolution proceedings."

§15.2.8 Delete Section 15.2.8 in its entirety.

#### §15.3 MEDIATION

§15.3.1 Delete "binding dispute resolution" and substitute "litigation in a court of competent jurisdiction."

§15.3.2 Delete Section 15.3.2 in its entirety and substitute the following:

§15.3.2 The parties shall endeavor to resolve their Claims by non-binding 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.

§ 15.3.3 Remove section 15.3.3 in its entirety

#### §15.4 ARBITRATION

§15.4 Delete Section 15.4 in its entirety and substitute the following:

#### §15.4 SETTLEMENT OF CLAIMS

§15.4.1 The Constitution of West Virginia grants the State sovereign immunity from any and all Claims against the public treasury. This immunity applies and is extended to all agencies of the State, including the Owner. It shall be in full force and effect as it relates to this Contract. The West Virginia Legislature, recognizing that certain Claims against the State may constitute a moral obligation of the State and should be heard, has established the West Virginia Claims Commission for this purpose. The Parties understand that this sovereign immunity and the Constitution of the

State of West Virginia prohibit the State and Owner, from entering into binding arbitration. Notwithstanding any provision to the contrary in the Contract Documents, all references to arbitration, regardless of whether they are included in the AIA Document A201-2017 or another related document are hereby deleted and all Claims of the Contractor for monetary relief, and only of the Contractor, arising out of or related to this Contract shall be decided by the West Virginia Claims Commission. The following Sections have been rewritten to bring them into conformance with the foregoing.

§15.4.2 Claims by the Owner may be brought against the Contractor in the Circuit Court of Kanawha County, West Virginia, or in any other court that has jurisdiction, as the Owner may elect.

§15.4.3 Any Claim arising out of or related to the Contract, except Claims relating to aesthetic effect and except those waived as provided for in Sections 15.1.6, 9.10.4 and 9.10.5, shall, within 30 days after submission of the decision by the Initial Decision Maker, be settled for the Contractor by the West Virginia Claims Commission or, for the Owner, by the Circuit Court of Kanawha County or any other court of jurisdiction as the Owner may elect.

§15.4.4 Notice of such action shall be filed in writing with the other party to the Contract, and a copy of such notice shall be filed with the Initial Decision Maker and the Architect, if applicable.

§15.4.5 During court proceedings, the Owner and the Contractor shall comply with Section 15.1.3.

§15.4.6 Claims shall be made within the time limits specified in Section 15.2.6.1.

§15.4.7 The party filing a Claim must assert in the demand all Claims then known to that party on which action is permitted.

Add the following Article:

**ARTICLE 16**  
**EQUAL OPPORTUNITY**

**§16.1 COMPLIANCE WITH REGULATIONS UNDER TITLE VI OF THE FEDERAL CIVIL RIGHTS ACT OF 1964 AND EXECUTIVE ORDER 65-2 BY THE GOVERNOR OF WEST VIRGINIA DATED DECEMBER 15, 1965**

§16.1.1 The Contractor agrees that it will comply with Title VI of the Federal Civil Rights Act of 1964 (P.L. 88352) and the regulations of the State of West Virginia, to the end that no person in the State, or in the United States, shall on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or otherwise subjected to discrimination under any program or activity for which the Contractor receives any recompense or other consideration of value, either directly or indirectly from the State; and HEREBY GIVES ASSURANCE THAT it will immediately take any measures necessary to effectuate this Agreement.

§16.1.2 If any real property or structure thereon is provided or improved, this assurance shall obligate the Contractor, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which any State payment is extended or for another purpose involving the provision of similar services or benefits. If any other goods or services are so provided, this assurance shall obligate the Contractor for the period during which it supplies such goods or services.

§16.1.3 The Contractor recognizes and agrees that such right to provide property, goods or services to the State will be extended in reliance on the representations and agreements made in assurance, and that the State shall have the right to seek judicial enforcement of this assurance. This is binding on the Contractor, its successors, transferee, and assignee, or any authorized person on behalf of the Contractor.

END OF SUPPLEMENTARY CONDITIONS TO AIA DOCUMENT A201-2017

Any provisions of the Contract Documents that conflict with these Supplementary Conditions shall be null and void unless they have been approved in writing by the applicable State purchasing officer and the Attorney General, and are clearly identified as such in the bid documents.

The Owner and Contractor hereby agree to the full performance of the covenants contained herein.

IN WITNESS WHEREOF, the Owner and Contractor have entered into this Agreement as of the effective date as stated in the A101-2017 (when utilized) or other Contract Documents.

Owner:

Contractor:

By:

By:

Title:

Title:

Date:

Date:

This Supplementary Conditions to AIA Document A201-2017, General Conditions of the Contract for Construction, has been approved as to form on this 20th day of February, 2019, by the West Virginia Attorney General's office as indicated in the signature line below. Any modification of this document is void unless expressly approved in writing by the West Virginia Attorney General's Office.

PATRICK MORRISEY, ATTORNEY GENERAL

BY:

  
DEPUTY ATTORNEY GENERAL

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

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

B. Related Requirements:

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

1.3 DEFINITIONS

- A. Work Package: A group of specifications, drawings, and schedules prepared by the design team to describe a portion of the Project Work for pricing, permitting, and construction.

1.4 PROJECT INFORMATION

A. Project Identification:

1. Project Location: Pierpont Community & Technical College, Caperton Center, 501 W. Main Street, Clarksburg, WV 26301

A. Owner:

1. Owner's Representative: Barrow Koslosky

B. Architect: The Omni Associates – Architects, 207 Jefferson Street, Fairmont, WV 26554

1. Architect's Representative: Richard Forren, 207 Jefferson Street, Fairmont, WV 26554

C. Architect's Consultants: Architect has retained the following design professionals, who have prepared designated portions of the Contract Documents:

1. Structural Engineer: Allegheny Design Services

D. Other Owner Consultants: Owner has retained the following design professionals who have prepared designated portions of the Contract Documents:

#### 1.5 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of this Project is defined by the Contract Documents, and in general consists of the following:

Deferred maintenance projects varying in type. Improving accessibility between the Vet Tech facility and Gaston Caperton Center, removal of the entry arch element on Gaston Caperton Center, improving site drainage, cleaning the building façade. This and further work is detailed in the Contract Documents.

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

#### 1.6 WORK PERFORMED BY OWNER

A. Cooperate fully with Owner, so work may be carried out smoothly, without interfering with or delaying Work under this Contract or work by Owner. Coordinate the Work of this Contract with work performed by Owner.

B. Concurrent Work: Owner will perform the following construction operations at Project site. Those operations will be conducted simultaneously with Work under this Contract.

1. Furnishings

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

A. Unrestricted Use of Site: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.

B. Limits on Use of Site: Limit use of Project site to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

C. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.8 WORK RESTRICTIONS

- A. Comply with restrictions on construction operations.
  - 1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work to between 7:00 a.m. to 6:00 p.m., Monday through Friday, unless otherwise indicated. Work hours may be modified to meet Project requirements if approved by Owner and authorities having jurisdiction.
  - 1. Weekend Hours: Coordinate with the Bob Runion, Assistant Airport Manager
  - 2. Early Morning Hours: Coordinate with the Bob Runion, Assistant Airport Manager
  - 3. Hours for Utility Shutdowns: Coordinate with the Bob Runion, Assistant Airport Manager and utility company
- C. Smoking and Controlled Substance Restrictions: Use of tobacco products, alcoholic beverages, and other controlled substances on Project site is not permitted.
- D. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.
  - 1. Maintain list of approved screened personnel with Owner's representative.

1.9 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
  - 2. Text Color: Text used in the Specifications, including units of measure, manufacturer and product names, and other text may appear in multiple colors or underlined as part of a hyperlink; no emphasis is implied by text with these characteristics.
  - 3. Hypertext: Text used in the Specifications may contain hyperlinks. Hyperlinks may allow for access to linked information that is not residing in the Specifications. Unless otherwise indicated, linked information is not part of the Contract Documents.
  - 4. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 00 Contracting Requirements: General provisions of the Contract, including General and Supplementary Conditions, apply to all Sections of the Specifications.
- C. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

- D. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
  2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings and published as part of the U.S. National CAD Standard.
  3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012100 - ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
  - 1. Lump-sum allowances.
  - 2. Contingency allowances.
- C. Related Requirements:
  - 1. Section 012600 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

1.3 DEFINITIONS

- A. Allowance: A quantity of work or dollar amount included in the Contract, established in lieu of additional requirements, used to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

1.4 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection, or purchase and delivery, of each product or system described by an allowance must be completed by the Owner to avoid delaying the Work.
- B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Architect from the designated supplier.

1.5 ACTION SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.

1.6 INFORMATIONAL SUBMITTALS

- A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.7 LUMP-SUM ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.
- B. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner or selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.
- C. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
  - 1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

1.8 ADJUSTMENT OF ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, required maintenance materials, and similar margins.
  - 1. Include installation costs in purchase amount only where indicated as part of the allowance.
  - 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other markups.
- B. Submit claims for increased costs due to a change in the scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
  - 1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of Work

has changed from what could have been foreseen from information in the Contract Documents.

2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

**A. HVAC Controllers Allowance No.1**

1. Provide a Lump Sum Allowance of **\$40,000** to engage Wind Water Controls to replace the existing Carrier controllers with Johnson Controls F4 series controllers. (Contact: Blazer at 301-616-4949) This work includes new programming and graphics in Tridium for the following equipment:
  - a. CHWS
  - b. - HWS
  - c. - AHU1
  - d. - AHU2
  - e. - AHU3
  - f. - AHU4
  - g. - AHU5
  - h. - AHU6
  - i. - AHU7
  - j. - FCU101A (Existing points not discoverable)
  - k. - FCU101B (Existing points not discoverable)
  - l. - VAV10 (Currently no active control program)
  - m. - VAV19 (Currently no active control program)

Additional work includes:

1. Installation of monitored temperature sensors on the CHW piping outside. These points will feature software alarms that activate if the measured

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternates into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include, as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation, whether or not indicated as part of alternate.

B. Execute accepted alternates under the same conditions as other Work of the Contract.

C. Schedule: A Part 3 "Schedule of Alternates" Article is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

**Alternate No. 1: Work at Fairmont ATC campus**

Work includes re-sealing of concrete joints in sidewalks and building perimeter as described on sheet C-3.1. Work also includes stair and railing repair work as described on sheet C-3.2

**Alternate No. 2: Clean Caperton Center façade**

Work includes general cleaning of all masonry façades on the Caperton Center (all façade zones), including removal of biological growth, efflorescence, and graffiti. Work also includes repointing of masonry and sealant joints where needed.

END OF SECTION 012300

**Pierpont CTC Clarksburg Campus Improvements**

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temperature falls below a specified threshold, indicating a freeze warning and potential issues with the heat trace operation.

2. Interlocking the boiler intake damper directly to the controls, ensuring it is tied in with Boiler Enable.

END OF SECTION 012100

## **SECTION 012500 – SUBSTITUTION PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
  - 1. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

#### **1.3 DEFINITIONS**

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

#### **1.4 ACTION SUBMITTALS**

- A. Substitution Requests: Submit documentation identifying product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Substitution Request Form: Use form acceptable to Architect.
  - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
    - b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.

- c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
  - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
  - e. Samples, where applicable or requested.
  - f. Certificates and qualification data, where applicable or requested.
  - g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
  - h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
  - i. Research reports evidencing compliance with building code in effect for Project.
  - j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
  - k. Cost information, including a proposal of change, if any, in the Contract Sum.
  - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
  - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 14 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
  - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

## 1.5 QUALITY ASSURANCE

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

1.6 PROCEDURES

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

1.7 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 14 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

- a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- b. Substitution request is fully documented and properly submitted.
- c. Requested substitution will not adversely affect Contractor's construction schedule.
- d. Requested substitution has received necessary approvals of authorities having jurisdiction.
- e. Requested substitution is compatible with other portions of the Work.
- f. Requested substitution has been coordinated with other portions of the Work.
- g. Requested substitution provides specified warranty.
- h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- i. Requested substitution is approved by the Owner.

- B. Substitutions for Convenience: Architect will consider requests for substitution if received within 60 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:

- a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
- b. Requested substitution does not require extensive revisions to the Contract Documents.

- c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- d. Substitution request is fully documented and properly submitted.
- e. Requested substitution will not adversely affect Contractor's construction schedule.
- f. Requested substitution has received necessary approvals of authorities having jurisdiction.
- g. Requested substitution is compatible with other portions of the Work.
- h. Requested substitution has been coordinated with other portions of the Work.
- i. Requested substitution provides specified warranty.
- j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- k. Requested substitution is approved by the Owner.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

## **SECTION 012600 - CONTRACT MODIFICATION PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

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

#### **1.3 MINOR CHANGES IN THE WORK**

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

#### **1.4 PROPOSAL REQUESTS**

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

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

#### 1.5 ADMINISTRATIVE CHANGE ORDERS

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

#### 1.6 CHANGE ORDER PROCEDURES

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

#### 1.7 CONSTRUCTION CHANGE DIRECTIVE

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

## Pierpont CTC Clarksburg Campus Improvements

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1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

### 1.8 WORK CHANGE DIRECTIVE

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

1. Work Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Work Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600



**SECTION 012900 - PAYMENT PROCEDURES**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
  - 1. Document 004373 "Proposed Schedule of Values Form" for requirements for furnishing proposed schedule of values with bid.
  - 2. Section 012100 "Allowances" for procedural requirements governing the handling and processing of allowances.
  - 3. Section 012200 "Unit Prices" for administrative requirements governing the use of unit prices.
  - 4. Section 012600 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
  - 5. Section 013200 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

1.3 DEFINITIONS

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
  - 1. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule.
  - 2. Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
  - 3. Subschedules for Phased Work: Where the Work is separated into phases requiring separately phased payments, provide subschedules showing values coordinated with each phase of payment.

4. Subschedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide subschedules showing values coordinated with each element.
- B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
1. Identification: Include the following Project identification on the schedule of values:
    - a. Project name and location.
    - b. Owner's name.
    - c. Owner's Project number.
    - d. Name of Architect.
    - e. Architect's Project number.
    - f. Contractor's name and address.
    - g. Date of submittal.
  2. Arrange schedule of values consistent with format of AIA Document G703.
  3. Arrange the schedule of values in tabular form, with separate columns to indicate the following for each item listed:
    - a. Related Specification Section or division.
    - b. Description of the Work.
    - c. Name of subcontractor.
    - d. Name of manufacturer or fabricator.
    - e. Name of supplier.
    - f. Change Orders (numbers) that affect value.
    - g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent. Round dollar amounts to whole dollars, with total equal to Contract Sum.
      - 1) Labor.
      - 2) Materials.
      - 3) Equipment.
  4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
  5. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
    - a. Differentiate between items stored on-site and items stored off-site.
  6. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.

7. Purchase Contracts: Provide a separate line item in the schedule of values for each Purchase contract. Show line-item value of Purchase contract. Indicate Owner payments or deposits, if any, and balance to be paid by Contractor.
8. Overhead Costs, Separate Line Items: Show cost of temporary facilities and other major cost items that are not direct cost of actual work-in-place as separate line items.
9. Temporary Facilities: Show cost of temporary facilities and other major cost items that are not direct cost of actual work-in-place as separate line items.
10. Closeout Costs. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.
11. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum. Include at least one separate line item for each Change Order and Construction Change Directive.

**1.5 APPLICATIONS FOR PAYMENT**

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments, as certified by Architect and paid for by Owner.
- B. Payment Application Times: Submit Application for Payment to Architect by a date agreed upon by all parties. The period covered by each Application for Payment is one month.
  1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect.
- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
  1. Other Application for Payment forms proposed by the Contractor may be acceptable to Architect and Owner. Submit forms for approval with initial submittal of schedule of values.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
  1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
  2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
  3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
  4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.

- E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment for stored materials.
  2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
  3. Provide summary documentation for stored materials indicating the following:
    - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
- F. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
  2. Schedule of values.
  3. Contractor's construction schedule (preliminary if not final).
  4. Combined Contractor's construction schedule (preliminary if not final) incorporating Work of multiple contracts, with indication of acceptance of schedule by each Contractor.
  5. Products list (preliminary if not final).
  6. Sustainable design action plans, including preliminary project materials cost data.
  7. Schedule of unit prices.
  8. Submittal schedule (preliminary if not final).
  9. List of Contractor's staff assignments.
  10. List of Contractor's principal consultants.
  11. Copies of building permits.
  12. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  13. Initial progress report.
  14. Report of preconstruction conference.
- H. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

## **Pierpont CTC Clarksburg Campus Improvements**

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1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
    - a. Complete administrative actions, submittals, and Work preceding this application, as described in Section 017700 "Closeout Procedures."
  2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- I. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited to, the following:
1. Evidence of completion of Project closeout requirements.
  2. Certification of completion of final punch list items.
  3. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
  4. Updated final statement, accounting for final changes to the Contract Sum.
  5. AIA Document G706.
  6. AIA Document G706A.
  7. AIA Document G707.
  8. Evidence that claims have been settled.
  9. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
  10. Final liquidated damages settlement statement.
  11. Proof that taxes, fees, and similar obligations are paid.
  12. Waivers and releases.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900



**SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative provisions for coordinating construction operations on Project, including, but not limited to, the following:
  - 1. General coordination procedures.
  - 2. Coordination drawings.
  - 3. RFIs.
  - 4. Digital project management procedures.
  - 5. Web-based Project management software package.
  - 6. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.
- C. Related Requirements:
  - 1. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
  - 2. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
  - 3. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.
  - 4. Section 019113 "General Commissioning Requirements" for coordinating the Work with Owner's Commissioning Authority.

**1.3 DEFINITIONS**

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

**1.4 INFORMATIONAL SUBMITTALS**

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:

1. Name, address, telephone number, and email address of entity performing subcontract or supplying products.
2. Number and title of related Specification Section(s) covered by subcontract.
3. Drawing number and detail references, as appropriate, covered by subcontract.

B. Key Personnel Names: Within 7 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses, cellular telephone numbers, and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of list in Project meeting room, in temporary field office, in web-based Project software directory, and in prominent location in each built facility. Keep list current at all times.

## 1.5 GENERAL COORDINATION PROCEDURES

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results, where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and scheduled activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's construction schedule.
2. Preparation of the schedule of values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.

1.6 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely indicated on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
    - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
    - b. Coordinate the addition of trade-specific information to coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
    - c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
    - d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
    - e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
    - f. Indicate required installation sequences.
    - g. Indicate dimensions shown on Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternative sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
- B. Coordination Drawing Organization: Organize coordination drawings as follows:
1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
  2. Plenum Space: Indicate subframing for support of ceiling, raised access floor, and wall systems, mechanical and electrical equipment, and related Work. Locate components within plenums to accommodate layout of light fixtures and other components indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
  3. Mechanical Rooms: Provide coordination drawings for mechanical rooms, showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
  4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
  5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing

- plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
6. Mechanical and Plumbing Work: Show the following:
    - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
    - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
    - c. Fire-rated enclosures around ductwork.
  7. Electrical Work: Show the following:
    - a. Runs of vertical and horizontal conduit 1-1/4 inches (32 mm) in diameter and larger.
    - b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
    - c. Panel board, switchboard, switchgear, transformer, busway, generator, and motor-control center locations.
    - d. Location of pull boxes and junction boxes, dimensioned from column center lines.
  8. Fire-Protection System: Show the following:
    - a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
  9. Review: Architect will review coordination drawings to confirm that, in general, the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make suitable modifications and resubmit.
  10. Coordination Drawing Prints: Prepare coordination drawing prints according to requirements in Section 013300 "Submittal Procedures."
- C. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:
1. File Preparation Format:
    - a. Same digital data software program, version, and operating system as original Drawings.
  2. File Submittal Format: Submit or post coordination drawing files using PDF format.
  3. BIM File Incorporation: Develop and incorporate coordination drawing files into BIM established for Project.
    - a. Perform three-dimensional component conflict analysis as part of preparation of coordination drawings. Resolve component conflicts prior to submittal. Indicate where conflict resolution requires modification of design requirements by Architect.

4. Architect will furnish Contractor one set of digital data files of Drawings for use in preparing coordination digital data files.
  - a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
  - b. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Owner and Architect.

**1.7 REQUEST FOR INFORMATION (RFI)**

- A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
  1. Architect will return without response those RFIs submitted to Architect by other entities controlled by Contractor.
  2. Coordinate and submit RFIs in a prompt manner to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
  1. Project name.
  2. Owner name.
  3. Owner's Project number.
  4. Name of Architect.
  5. Architect's Project number.
  6. Date.
  7. Name of Contractor.
  8. RFI number, numbered sequentially.
  9. RFI subject.
  10. Specification Section number and title and related paragraphs, as appropriate.
  11. Drawing number and detail references, as appropriate.
  12. Field dimensions and conditions, as appropriate.
  13. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
  14. Contractor's signature.
  15. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
    - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- C. RFI Forms: Form bound in Project Manual.
  1. Attachments shall be electronic files in PDF format.

- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
1. The following Contractor-generated RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.
    - c. Requests for approval of Contractor's means and methods.
    - d. Requests for coordination information already indicated in the Contract Documents.
    - e. Requests for adjustments in the Contract Time or the Contract Sum.
    - f. Requests for interpretation of Architect's actions on submittals.
    - g. Incomplete RFIs or inaccurately prepared RFIs.
  2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt by Architect of additional information.
  3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 012600 "Contract Modification Procedures."
    - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within three days of receipt of the RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Use software log that is part of web-based Project management software.
1. Project name.
  2. Name and address of Contractor.
  3. Name and address of Architect.
  4. RFI number, including RFIs that were returned without action or withdrawn.
  5. RFI description.
  6. Date the RFI was submitted.
  7. Date Architect's response was received.
  8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
  9. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within three days if Contractor disagrees with response.

## 1.8 DIGITAL PROJECT MANAGEMENT PROCEDURES

- A. Use of Architect's Digital Data Files: Digital data files of Architect's CAD drawings will be provided by Architect for Contractor's use during construction.

1. Digital data files may be used by Contractor in preparing coordination drawings, Shop Drawings, and Project Record Drawings.
  2. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Contract Drawings.
  3. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Owner and Architect.
- B. Web-Based Project Management Software Package: Provide, administer, and use web-based Project management software package for purposes of hosting and managing Project communication and documentation until Final Completion.
1. Web-based Project management software includes, at a minimum, the following features:
    - a. Compilation of Project data, including Contractor, subcontractors, Architect, Architect's consultants, Owner, and other entities involved in Project. Include names of individuals and contact information.
    - b. Access control for each entity for each workflow process, to determine entity's digital rights to create, modify, view, and print documents.
    - c. Document workflow planning, allowing customization of workflow between project entities.
    - d. Creation, logging, tracking, and notification for Project communications required in other Specification Sections, including, but not limited to, RFIs, submittals, Minor Changes in the Work, Construction Change Directives, and Change Orders.
    - e. Track status of each Project communication in real time, and log time and date when responses are provided.
    - f. Procedures for handling PDFs or similar file formats, allowing markups by each entity. Provide security features to lock markups against changes once submitted.
    - g. Processing and tracking of payment applications.
    - h. Processing and tracking of contract modifications.
    - i. Creating and distributing meeting minutes.
    - j. Document management for Drawings, Specifications, and coordination drawings, including revision control.
    - k. Management of construction progress photographs.
    - l. Mobile device compatibility, including smartphones and tablets.
  2. At completion of Project, provide digital archive in format that is readable by common desktop software applications in format acceptable to Architect. Provide data in locked format to prevent further changes.
- C. PDF Document Preparation: Where PDFs are required to be submitted to Architect, prepare as follows:
1. Assemble complete submittal package into a single indexed file, incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
  2. Name file with submittal number or other unique identifier, including revision identifier.
  3. Certifications: Where digitally submitted certificates and certifications are required, provide a digital signature with digital certificate on where indicated.

1.9 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.
  - 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times a minimum of seven days prior to meeting.
  - 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
  - 3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
  
- B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 14 days after execution of the Agreement.
  - 1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  - 2. Agenda: Discuss items of significance that could affect progress, including the following:
    - a. Responsibilities and personnel assignments.
    - b. Tentative construction schedule.
    - c. Phasing.
    - d. Critical work sequencing and long lead items.
    - e. Designation of key personnel and their duties.
    - f. Lines of communications.
    - g. Use of web-based Project software.
    - h. Procedures for processing field decisions and Change Orders.
    - i. Procedures for RFIs.
    - j. Procedures for testing and inspecting.
    - k. Procedures for processing Applications for Payment.
    - l. Distribution of the Contract Documents.
    - m. Submittal procedures.
    - n. Preparation of Record Documents.
    - o. Use of the premises.
    - p. Work restrictions.
    - q. Working hours.
    - r. Owner's occupancy requirements.
    - s. Responsibility for temporary facilities and controls.
    - t. Procedures for moisture and mold control.
    - u. Procedures for disruptions and shutdowns.
    - v. Construction waste management and recycling.
    - w. Parking availability.
    - x. Office, work, and storage areas.
    - y. Equipment deliveries and priorities.
    - z. First aid.

- aa. Security.
    - bb. Progress cleaning.
  - 3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity when required by other Sections and when required for coordination with other construction.
- 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
  - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
    - a. Contract Documents.
    - b. Options.
    - c. Related RFIs.
    - d. Related Change Orders.
    - e. Purchases.
    - f. Deliveries.
    - g. Submittals.
    - h. Review of mockups.
    - i. Possible conflicts.
    - j. Compatibility requirements.
    - k. Time schedules.
    - l. Weather limitations.
    - m. Manufacturer's written instructions.
    - n. Warranty requirements.
    - o. Compatibility of materials.
    - p. Acceptability of substrates.
    - q. Temporary facilities and controls.
    - r. Space and access limitations.
    - s. Regulations of authorities having jurisdiction.
    - t. Testing and inspecting requirements.
    - u. Installation procedures.
    - v. Coordination with other work.
    - w. Required performance results.
    - x. Protection of adjacent work.
    - y. Protection of construction and personnel.
  - 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
  - 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
  - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

- D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.
1. Conduct the conference to review requirements and responsibilities related to Project closeout.
  2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
  3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
    - a. Preparation of Record Documents.
    - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
    - c. Procedures for completing and archiving web-based Project software site data files.
    - d. Submittal of written warranties.
    - e. Owner's partial occupancy requirements.
    - f. Installation of Owner's furniture, fixtures, and equipment.
    - g. Responsibility for removing temporary facilities and controls.
  4. Minutes: Entity conducting meeting will record and distribute meeting minutes.
- E. Progress Meetings: Conduct progress meetings at biweekly intervals.
1. Coordinate dates of meetings with preparation of payment requests.
  2. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
  3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
    - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
      - 1) Review schedule for next period.
    - b. Review present and future needs of each entity present, including the following:
      - 1) Interface requirements.

- 2) Sequence of operations.
  - 3) Status of submittals.
  - 4) Deliveries.
  - 5) Off-site fabrication.
  - 6) Access.
  - 7) Site use.
  - 8) Temporary facilities and controls.
  - 9) Progress cleaning.
  - 10) Quality and work standards.
  - 11) Status of correction of deficient items.
  - 12) Field observations.
  - 13) Status of RFIs.
  - 14) Status of Proposal Requests.
  - 15) Pending changes.
  - 16) Status of Change Orders.
  - 17) Pending claims and disputes.
  - 18) Documentation of information for payment requests.
4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
    - a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting, where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.
  5. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
    - a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to combined Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
    - b. Schedule Updating: Revise combined Contractor's construction schedule after each coordination meeting, where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
  6. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

## **SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
  - 1. Startup construction schedule.
  - 2. Contractor's Construction Schedule.
  - 3. Construction schedule updating reports.
  - 4. Daily construction reports.
  - 5. Material location reports.
  - 6. Site condition reports.
  - 7. Unusual event reports.
- B. Related Requirements:
  - 1. Section 014000 "Quality Requirements" for schedule of tests and inspections.
  - 2. Section 012900 "Payment Procedures" for schedule of values and requirements for use of cost-loaded schedule for Applications for Payment.

#### **1.3 DEFINITIONS**

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

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

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
  - 1. Working electronic copy of schedule file.
  - 2. PDF file.
  - 3. Two paper copies, of sufficient size to display entire period or schedule, as required.
- B. Startup construction schedule.
- C. Startup Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.
- D. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
- E. CPM Reports: Concurrent with CPM schedule, submit each of the following reports. Format for each activity in reports shall contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
  - 1. Activity Report: List of activities sorted by activity number and then early start date, or actual start date if known.
  - 2. Logic Report: List of preceding and succeeding activities for each activity, sorted in ascending order by activity number and then by early start date, or actual start date if known.
  - 3. Total Float Report: List of activities sorted in ascending order of total float.
- F. Construction Schedule Updating Reports: Submit with Applications for Payment.
- G. Daily Construction Reports: Submit at monthly intervals.
- H. Material Location Reports: Submit at monthly intervals.
- I. Site Condition Reports: Submit at time of discovery of differing conditions.
- J. Unusual Event Reports: Submit at time of unusual event.

- K. Qualification Data: For scheduling consultant.

#### 1.5 QUALITY ASSURANCE

- A. Prescheduling Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination." Review methods and procedures related to the preliminary construction schedule and Contractor's Construction Schedule, including, but not limited to, the following:
  - 1. Review software limitations and content and format for reports.
  - 2. Verify availability of qualified personnel needed to develop and update schedule.
  - 3. Discuss constraints, including phasing, work stages, area separations, interim milestones and partial Owner occupancy.
  - 4. Review delivery dates for Owner-furnished products.
  - 5. Review schedule for work of Owner's separate contracts.
  - 6. Review submittal requirements and procedures.
  - 7. Review time required for review of submittals and resubmittals.
  - 8. Review requirements for tests and inspections by independent testing and inspecting agencies.
  - 9. Review time required for Project closeout and Owner startup procedures, including commissioning activities.
  - 10. Review and finalize list of construction activities to be included in schedule.
  - 11. Review procedures for updating schedule.

#### 1.6 COORDINATION

- A. Coordinate Contractor's Construction Schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.
  - 1. Secure time commitments for performing critical elements of the Work from entities involved.
  - 2. Coordinate each construction activity in the network with other activities, and schedule them in proper sequence.

#### 1.7 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.
  - 1. In-House Option: Owner may waive requirement to retain a consultant if Contractor employs skilled personnel with experience in CPM scheduling and reporting techniques. Submit qualifications.
- B. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Final Completion.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Activities: Treat each floor or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
  2. Temporary Facilities: Indicate start and completion dates for the following as applicable:
    - a. Securing of approvals and permits required for performance of the Work.
    - b. Temporary facilities.
    - c. Construction of mock-ups, prototypes and samples.
    - d. Owner interfaces and furnishing of items.
    - e. Interfaces with Separate Contracts.
    - f. Regulatory agency approvals.
    - g. Punch list.
  3. Procurement Activities: Include procurement process activities for long lead-time items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
  4. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with submittal schedule.
  5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
  6. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and Final Completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. Phasing: Arrange list of activities on schedule by phase.
  2. Work under More Than One Contract: Include a separate activity for each contract.
  3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
  4. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
  5. Work Restrictions: Show the effect of the following items on the schedule:
  6. Unresolved issues.
  7. Unanswered Requests for Information.
  8. Rejected or unreturned submittals.
  9. Notations on returned submittals.
  10. Pending modifications affecting the Work and the Contract Time.

- E. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
  - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
  - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
  - 3. As the Work progresses, indicate Final Completion percentage for each activity.
- F. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, equipment required to achieve compliance, and date by which recovery will be accomplished.
- G. Distribution: Distribute copies of approved schedule to Architect Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
  - 1. Post copies in Project meeting rooms and temporary field offices.
  - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

## 1.8 CPM SCHEDULE REQUIREMENTS

- A. Prepare network diagrams using AON (activity-on-node) format.
- B. Startup Network Diagram: Submit diagram within 14 days of date established for the Notice to Proceed. Outline significant construction activities for the first 90 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.
- C. CPM Schedule: Prepare Contractor's Construction Schedule using a time-scaled CPM network analysis diagram for the Work.
  - 1. Develop network diagram in sufficient time to submit CPM schedule, so it can be accepted for use no later than 60 days after date established for the Notice to Proceed.
    - a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates.

2. Conduct educational workshops to train and inform key Project personnel, including subcontractors' personnel, in proper methods of providing data and using CPM schedule information.
  3. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
  4. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule to coordinate with the Contract Time.
- D. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the startup network diagram, prepare a skeleton network to identify probable critical paths.
1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
    - a. Preparation and processing of submittals.
    - b. Mobilization and demobilization.
    - c. Purchase of materials.
    - d. Delivery.
    - e. Fabrication.
    - f. Utility interruptions.
    - g. Installation.
    - h. Work by Owner that may affect or be affected by Contractor's activities.
    - i. Testing and inspection.
    - j. Commissioning.
    - k. Punch list and Final Completion.
    - l. Activities occurring following Final Completion.
  2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
  3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
  4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
    - a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.
  5. Cost- and Resource-Loading of CPM Schedule: Assign cost to construction activities on the CPM schedule. Do not assign costs to submittal activities. Obtain Architect's approval prior to assigning costs to fabrication and delivery activities. Assign costs under main subcontracts for testing and commissioning activities, operation and maintenance manuals, punch list activities, Project record documents, and demonstration and training (if applicable), in the amount of 5 percent of the Contract Sum.

- a. Each activity cost shall reflect an appropriate value subject to approval by Architect.
  - b. Total cost assigned to activities shall equal the total Contract Sum.
- E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall Project schedule.
- F. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-total float." Identify critical activities. Prepare tabulated reports showing the following:
  1. Contractor or subcontractor and the Work or activity.
  2. Description of activity.
  3. Main events of activity.
  4. Immediate preceding and succeeding activities.
  5. Early and late start dates.
  6. Early and late finish dates.
  7. Activity duration in workdays.
  8. Total float or slack time.
  9. Average size of workforce.
  10. Dollar value of activity (coordinated with the schedule of values).
- G. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
  1. Identification of activities that have changed.
  2. Changes in early and late start dates.
  3. Changes in early and late finish dates.
  4. Changes in activity durations in workdays.
  5. Changes in the critical path.
  6. Changes in total float or slack time.
  7. Changes in the Contract Time.
- H. Value Summaries: Prepare two cumulative value lists, sorted by finish dates.
  1. In first list, tabulate activity number, early finish date, dollar value, and cumulative dollar value.
  2. In second list, tabulate activity number, late finish date, dollar value, and cumulative dollar value.
  3. In subsequent issues of both lists, substitute actual finish dates for activities completed as of list date.
  4. Prepare list for ease of comparison with payment requests; coordinate timing with progress meetings.
    - a. In both value summary lists, tabulate "actual percent complete" and "cumulative value completed" with total at bottom.

1.9 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
1. List of subcontractors at Project site.
  2. List of separate contractors at Project site.
  3. Approximate count of personnel at Project site.
  4. Equipment at Project site.
  5. Material deliveries.
  6. High and low temperatures and general weather conditions, including presence of rain or snow.
  7. Testing and inspection.
  8. Accidents.
  9. Meetings and significant decisions.
  10. Unusual events.
  11. Stoppages, delays, shortages, and losses.
  12. Meter readings and similar recordings.
  13. Emergency procedures.
  14. Orders and requests of authorities having jurisdiction.
  15. Change Orders received and implemented.
  16. Construction Change Directives received and implemented.
  17. Services connected and disconnected.
  18. Equipment or system tests and startups.
  19. Partial completions and occupancies.
  20. Substantial Completions authorized.
- B. Material Location Reports: At monthly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site. Indicate the following categories for stored materials:
1. Material stored prior to previous report and remaining in storage.
  2. Material stored prior to previous report and since removed from storage and installed.
  3. Material stored following previous report and remaining in storage.
- C. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013200

**SECTION 013233 - PHOTOGRAPHIC DOCUMENTATION**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

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

**1.3 INFORMATIONAL SUBMITTALS**

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

- f. Description of location, vantage point, and direction.
  - g. Unique sequential identifier keyed to accompanying key plan.
- C. Video Recordings: Submit video recordings within seven days of recording.
  - 1. Submit video recordings thumb drive. Include copy of key plan indicating each video's location and direction.
  - 2. Identification: With each submittal, provide the following information in file metadata tag:
    - a. Name of Project.
    - b. Name and address of photographer.
    - c. Name of Architect.
    - d. Name of Contractor.
    - e. Date video recording was recorded.
    - f. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.

#### 1.4 QUALITY ASSURANCE

- A. Photographer Qualifications: An individual who has been regularly engaged as a professional photographer of construction projects for not less than three years.
- B. Construction Webcam Service Provider: A firm specializing in providing photographic equipment, web-based software, and related services for construction projects, with a record of providing satisfactory services similar to those required for Project.

#### 1.5 FORMATS AND MEDIA

- A. Digital Photographs: Provide color images in JPG format, produced by a digital camera with minimum sensor size of 12 megapixels, and at an image resolution of not less than 3200 by 2400 pixels, and with vibration-reduction technology. Use flash in low light levels or backlit conditions.
- B. Digital Video Recordings: Provide high-resolution, digital video in MPEG format, produced by a digital camera with minimum sensor resolution of 12 megapixels and capable of recording in full high-definition mode with vibration-reduction technology. Provide supplemental lighting in low light levels or backlit conditions.
- C. Digital Images: Submit digital media as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.

#### 1.6 CONSTRUCTION PHOTOGRAPHS

- A. General: Take photographs with maximum depth of field and in focus.
  - 1. Maintain key plan with each set of construction photographs that identifies each photographic location.

- B. Preconstruction Photographs: Before commencement of the Work, take photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by Architect.
  - 1. Flag construction limits before taking construction photographs.
  - 2. Take 20 photographs to show existing conditions adjacent to property before starting the Work.
  - 3. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.
  
- C. Concealed Work Photographs: Before proceeding with installing work that will conceal other work, take photographs sufficient in number, with annotated descriptions, to record nature and location of concealed Work, including, but not limited to, the following:
  - 1. Underground utilities.
  - 2. Underslab services.
  - 3. Piping.
  - 4. Electrical conduit.
  - 5. Waterproofing and weather-resistant barriers.
  
- D. Periodic Construction Photographs: Take 20 photographs weekly coinciding with the cutoff date associated with each Application for Payment. Select vantage points to show status of construction and progress since last photographs were taken.
  
- E. Time-Lapse Sequence Construction Photographs: Take 20 photographs as indicated, to show status of construction and progress since last photographs were taken.
  - 1. Frequency: Take photographs monthly, on the same date each month.
  - 2. Vantage Points: Following suggestions by Architect and Contractor, photographer shall select vantage points. During each of the following construction phases, take not less than two of the required shots from same vantage point each time, to create a time-lapse sequence as follows:
    - a. Commencement of the Work, through completion of subgrade construction.
    - b. Above-grade structural framing.
    - c. Exterior building enclosure.
    - d. Interior Work, through date of Substantial Completion.
  
- F. Final Completion Construction Photographs: Take 50 photographs after date of Substantial Completion for submission as Project Record Documents.
  
- G. Additional Photographs: Architect may request photographs in addition to periodic photographs specified.
  - 1. Three days' notice will be given, where feasible.
  - 2. In emergency situations, take additional photographs within 24 hours of request.
  - 3. Circumstances that could require additional photographs include, but are not limited to, the following:
    - a. Special events planned at Project site.

**Pierpont CTC Clarksburg Campus Improvements**

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- b. Immediate follow-up when on-site events result in construction damage or losses.
- c. Photographs shall be taken at fabrication locations away from Project site. These photographs are not subject to unit prices or unit-cost allowances.
- d. Substantial Completion of a major phase or component of the Work.
- e. Extra record photographs at time of final acceptance.
- f. Owner's request for special publicity photographs.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013233

## **SECTION 013300 - SUBMITTAL PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

**A. Section Includes:**

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

**B. Related Requirements:**

1. Section 012900 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
2. Section 013100 "Project Management and Coordination" for submitting coordination drawings and subcontract list and for requirements for web-based Project software.
3. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
4. Section 013233 "Photographic Documentation" for submitting preconstruction photographs, periodic construction photographs, and Final Completion construction photographs.
5. Section 014000 "Quality Requirements" for submitting test and inspection reports, and schedule of tests and inspections.
6. Section 017700 "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.
7. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
8. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
9. Section 017900 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.

#### **1.2 DEFINITIONS**

- A. Action Submittals:** Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals:** Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. File Transfer Protocol (FTP):** Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard

Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.

- D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

### 1.3 SUBMITTAL SCHEDULE

- A. Submittal Schedule: Submit, as an action submittal, a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
2. Final Submittal Schedule: Submit concurrently with the first complete submittal of Contractor's construction schedule.
  - a. Submit revised submittal schedule as required to reflect changes in current status and timing for submittals.
3. Format: Arrange the following information in a tabular format:
  - a. Scheduled date for first submittal.
  - b. Specification Section number and title.
  - c. Submittal Category: Action; informational.
  - d. Name of subcontractor.
  - e. Description of the Work covered.
  - f. Scheduled date for Architect's final release or approval.

### 1.4 SUBMITTAL FORMATS

- A. Submittal Information: Include the following information in each submittal:
  1. Project name.
  2. Date.
  3. Name of Architect.
  4. Name of Contractor.
  5. Name of firm or entity that prepared submittal.
  6. Names of subcontractor, manufacturer, and supplier.
  7. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier and alphanumeric suffix for resubmittals.
  8. Category and type of submittal.
  9. Submittal purpose and description.

10. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
11. Drawing number and detail references, as appropriate.
12. Indication of full or partial submittal.
13. Location(s) where product is to be installed, as appropriate.
14. Other necessary identification.
15. Remarks.
16. Signature of transmitter.

B. Options: Identify options requiring selection by Architect.

C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.

D. Electronic Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number.

E. Submittals Utilizing Web-Based Project Software: Prepare submittals as PDF files or other format indicated by Project management software.

#### 1.5 SUBMITTAL PROCEDURES

A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Email: Prepare submittals as PDF package and transmit to Architect by sending via email. Include PDF transmittal form. Include information in email subject line as requested by Architect.
  - a. Post electronic submittals as PDF electronic files directly to Architect's FTP site if over 20 megabytes in size.
  - b. Architect will return annotated file. Annotate and retain one copy of file as a digital Project Record Document file.
2. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project management software website. Enter required data in web-based software site to fully identify submittal.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.

3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
  4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections, so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 14 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
  2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
  3. Resubmittal Review: Allow 14 days for review of each resubmittal.
  4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.
- D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
  2. Note date and content of revision in label or title block, and clearly indicate extent of revision.
  3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.
- 1.6 SUBMITTAL REQUIREMENTS
- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
  2. Mark each copy of each submittal to show which products and options are applicable.
  3. Include the following information, as applicable:

- a. Manufacturer's catalog cuts.
  - b. Manufacturer's product specifications.
  - c. Standard color charts.
  - d. Statement of compliance with specified referenced standards.
  - e. Testing by recognized testing agency.
  - f. Application of testing agency labels and seals.
  - g. Notation of coordination requirements.
  - h. Availability and delivery time information.
4. For equipment, include the following in addition to the above, as applicable:
    - a. Wiring diagrams that show factory-installed wiring.
    - b. Printed performance curves.
    - c. Operational range diagrams.
    - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
  5. Submit Product Data before Shop Drawings, and before or concurrently with Samples.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Identification of products.
    - b. Schedules.
    - c. Compliance with specified standards.
    - d. Notation of coordination requirements.
    - e. Notation of dimensions established by field measurement.
    - f. Relationship and attachment to adjoining construction clearly indicated.
    - g. Seal and signature of professional engineer if specified.
    - h. Two opaque (bond) copies of each submittal. Architect will return one copy.
  2. BIM Incorporation: Develop and incorporate Shop Drawing files into BIM established for Project.
- C. Samples: Submit Samples for review of type, color, pattern, and texture for a check of these characteristics with other materials.
1. Transmit Samples that contain multiple, related components, such as accessories together in one submittal package.
  2. Identification: Permanently attach label on unexposed side of Samples that includes the following:
    - a. Project name and submittal number.
    - b. Generic description of Sample.
    - c. Product name and name of manufacturer.
    - d. Sample source.

- e. Number and title of applicable Specification Section.
  - f. Specification paragraph number and generic name of each item.
3. Email Transmittal: Provide PDF transmittal. Include digital image file illustrating Sample characteristics and identification information for record.
  4. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project software website. Enter required data in web-based software site to fully identify submittal.
  5. Paper Transmittal: Include paper transmittal, including complete submittal information indicated.
  6. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
    - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
    - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
  7. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units, showing the full range of colors, textures, and patterns available.
    - a. Number of Samples: Submit one full set of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
  8. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
    - a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned.
      - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
      - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.

- D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
  2. Manufacturer and product name, and model number if applicable.
  3. Number and name of room or space.
  4. Location within room or space.
- E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- F. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.
- G. Certificates:
1. Certificates and Certifications Submittals: Submit a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity. Provide a notarized signature where indicated.
  2. Installer Certificates: Submit written statements on manufacturer's letterhead, certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
  3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead, certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
  4. Material Certificates: Submit written statements on manufacturer's letterhead, certifying that material complies with requirements in the Contract Documents.
  5. Product Certificates: Submit written statements on manufacturer's letterhead, certifying that product complies with requirements in the Contract Documents.
  6. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of AWS B2.1/B2.1M on AWS forms. Include names of firms and personnel certified.
- H. Test and Research Reports:
1. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for substrate preparation and primers required.
  2. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

3. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
4. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
5. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
6. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
  - a. Name of evaluation organization.
  - b. Date of evaluation.
  - c. Time period when report is in effect.
  - d. Product and manufacturers' names.
  - e. Description of product.
  - f. Test procedures and results.
  - g. Limitations of use.

#### 1.7 DELEGATED DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  1. If criteria indicated are insufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF file, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
  1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.
- C. BIM Incorporation: Incorporate delegated design drawing and data files into BIM established for Project.
  1. Prepare delegated design drawings in the following format: Same digital data software program, version, and operating system as original Drawings.

1.8 CONTRACTOR'S REVIEW

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

1.9 ARCHITECT'S REVIEW

- A. Action Submittals: Architect will review each submittal, indicate corrections or revisions required, and return.
  - 1. PDF Submittals: Architect will indicate, via markup on each submittal, the appropriate action.
  - 2. Submittals by Web-Based Project Management Software: Architect will indicate, on Project management software website, the appropriate action.
- B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Architect will return without review submittals received from sources other than Contractor.
- F. Submittals not required by the Contract Documents will be returned by Architect without action.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013300



## **SECTION 014000 - QUALITY REQUIREMENTS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specific quality-assurance and quality-control requirements for individual work results are specified in their respective Specification Sections. Requirements in individual Sections may also cover production of standard products.
  - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Requirements:
  - 1. Section 012100 "Allowances" for testing and inspection allowances.

#### **1.3 DEFINITIONS**

- A. Experienced: When used with an entity or individual, "experienced," unless otherwise further described, means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- B. Field Quality-Control Tests and Inspections: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- C. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, subcontractor, or sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.

1. Use of trade-specific terminology in referring to a Work result does not require that certain construction activities specified apply exclusively to specific trade(s).
- D. Mockups: Physical assemblies of portions of the Work constructed to establish the standard by which the Work will be judged. Mockups are not Samples.
1. Mockups are used for one or more of the following:
    - a. Verify selections made under Sample submittals.
    - b. Demonstrate aesthetic effects.
    - c. Demonstrate the qualities of products and workmanship.
    - d. Demonstrate successful installation of interfaces between components and systems.
    - e. Perform preconstruction testing to determine system performance.
  2. Product Mockups: Mockups that may include multiple products, materials, or systems specified in a single Section.
  3. In-Place Mockups: Mockups constructed on-site in their actual final location as part of permanent construction.
- E. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria. Unless otherwise indicated, copies of reports of tests or inspections performed for other than the Project do not meet this definition.
- F. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- G. Source Quality-Control Tests and Inspections: Tests and inspections that are performed at the source (e.g., plant, mill, factory, or shop).
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. The term "testing laboratory" has the same meaning as the term "testing agency."
- I. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work, to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- J. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work, to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Architect.

1.4 DELEGATED DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated Design Services Statement: Submit a statement signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

1.5 CONFLICTING REQUIREMENTS

- A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements is specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, inform the Architect regarding the conflict and obtain clarification prior to proceeding with the Work. Refer conflicting requirements that are different, but apparently equal, to Architect for clarification before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified is the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.6 ACTION SUBMITTALS

- A. Mockup Shop Drawings:
  - 1. Include plans, sections, elevations, and details, indicating materials and size of mockup construction.
  - 2. Indicate manufacturer and model number of individual components.
  - 3. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.7 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
- B. Qualification Data: For Contractor's quality-control personnel.

- C. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility submitted to authorities having jurisdiction before starting work on the following systems:
    - 1. Seismic-force-resisting system, designated seismic system, or component listed in the Statement of Special Inspections.
    - 2. Primary wind-force-resisting system or a wind-resisting component listed in the Statement of Special Inspections.
  - D. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
  - E. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
    - 1. Specification Section number and title.
    - 2. Entity responsible for performing tests and inspections.
    - 3. Description of test and inspection.
    - 4. Identification of applicable standards.
    - 5. Identification of test and inspection methods.
    - 6. Number of tests and inspections required.
    - 7. Time schedule or time span for tests and inspections.
    - 8. Requirements for obtaining samples.
    - 9. Unique characteristics of each quality-control service.
  - F. Reports: Prepare and submit certified written reports and documents as specified.
  - G. Permits, Licenses, and Certificates: For Owner's record, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents established for compliance with standards and regulations bearing on performance of the Work.
- 1.8 CONTRACTOR'S QUALITY-CONTROL PLAN
- A. Quality-Control Plan, General: Submit quality-control plan within 10 days of Notice to Proceed, and not less than five days prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities and to coordinate Owner's quality-assurance and quality-control activities. Coordinate with Contractor's Construction Schedule.
  - B. Quality-Control Personnel Qualifications: Engage qualified personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.
    - 1. Project quality-control manager may also serve as Project superintendent

- C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
- D. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:
  - 1. Contractor-performed tests and inspections, including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections. Distinguish source quality-control tests and inspections from field quality-control tests and inspections.
  - 2. Special inspections required by authorities having jurisdiction and indicated on the Statement of Special Inspections.
  - 3. Owner-performed tests and inspections indicated in the Contract Documents.
- E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring the Work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- F. Monitoring and Documentation: Maintain testing and inspection reports, including log of approved and rejected results. Include Work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming Work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

#### 1.9 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
  - 1. Date of issue.
  - 2. Project title and number.
  - 3. Name, address, telephone number, and email address of testing agency.
  - 4. Dates and locations of samples and tests or inspections.
  - 5. Names of individuals making tests and inspections.
  - 6. Description of the Work and test and inspection method.
  - 7. Identification of product and Specification Section.
  - 8. Complete test or inspection data.
  - 9. Test and inspection results and an interpretation of test results.
  - 10. Record of temperature and weather conditions at time of sample-taking and testing and inspection.
  - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  - 12. Name and signature of laboratory inspector.
  - 13. Recommendations on retesting and reinspecting.

- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
  - 1. Name, address, telephone number, and email address of technical representative making report.
  - 2. Statement on condition of substrates and their acceptability for installation of product.
  - 3. Statement that products at Project site comply with requirements.
  - 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
  - 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  - 6. Statement of whether conditions, products, and installation will affect warranty.
  - 7. Other required items indicated in individual Specification Sections.
  
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
  - 1. Name, address, telephone number, and email address of factory-authorized service representative making report.
  - 2. Statement that equipment complies with requirements.
  - 3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  - 4. Statement of whether conditions, products, and installation will affect warranty.
  - 5. Other required items indicated in individual Specification Sections.

#### 1.10 QUALITY ASSURANCE

- A. Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
  
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
  
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
  
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that is similar in material, design, and extent to those indicated for this Project.
- F. Specialists: Certain Specification Sections require that specific construction activities be performed by entities who are recognized experts in those operations. Specialists will satisfy qualification requirements indicated and engage in the activities indicated.
  - 1. Requirements of authorities having jurisdiction supersede requirements for specialists.
- G. Testing and Inspecting Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented in accordance with ASTM E329, and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect, demonstrate, repair, and perform service on installations of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following Contractor's responsibilities, including the following:
  - 1. Provide test specimens representative of proposed products and construction.
  - 2. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
  - 3. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
  - 4. Build site-assembled test assemblies and mockups, using installers who will perform same tasks for Project.
  - 5. When testing is complete, remove test specimens and test assemblies, and mockups; do not reuse products on Project.
  - 6. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections, and state in each report whether tested and inspected Work complies with or deviates from the Contract Documents.
- K. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:

1. Build mockups of size indicated.
2. Build mockups in location indicated or, if not indicated, as directed by Architect.
3. Notify Architect seven days in advance of dates and times when mockups will be constructed.
4. Employ supervisory personnel who will oversee mockup construction. Employ workers who will be employed to perform same tasks during the construction at Project.
5. Demonstrate the proposed range of aesthetic effects and workmanship.
6. Obtain Architect's approval of mockups before starting corresponding Work, fabrication, or construction.
  - a. Allow seven days for initial review and each re-review of each mockup.
7. Promptly correct unsatisfactory conditions noted by Architect's preliminary review, to the satisfaction of the Architect, before completion of final mockup.
8. Approval of mockups by the Architect does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
9. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
10. Demolish and remove mockups when directed unless otherwise indicated.

#### 1.11 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
  1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspection they are engaged to perform.
  2. Costs for retesting and reinspecting construction that replaces or is necessitated by Work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.
  1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
  2. Engage a qualified testing agency to perform quality-control services.
    - a. Contractor will not employ same entity engaged by Owner, unless agreed to in writing by Owner.
  3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspection will be performed.
  4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.

5. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- D. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
  2. Determine the locations from which test samples will be taken and in which in-situ tests are conducted.
  3. Conduct and interpret tests and inspections, and state in each report whether tested and inspected Work complies with or deviates from requirements.
  4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
  5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
  6. Do not perform duties of Contractor.
- E. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."
- F. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- G. Contractor's Associated Requirements and Services: Cooperate with agencies and representatives performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
  2. Incidental labor and facilities necessary to facilitate tests and inspections.
  3. Adequate quantities of representative samples of materials that require testing and inspection. Assist agency in obtaining samples.
  4. Facilities for storage and field curing of test samples.
  5. Delivery of samples to testing agencies.

6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
  7. Security and protection for samples and for testing and inspection equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents as a component of Contractor's quality-control plan. Coordinate and submit concurrently with Contractor's Construction Schedule. Update and submit with each Application for Payment.
1. Schedule Contents: Include tests, inspections, and quality-control services, including Contractor- and Owner-retained services, commissioning activities, and other Project-required services paid for by other entities.
  2. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

## PART 2 - PRODUCTS (Not Used)

## PART 3 - EXECUTION

### 3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
1. Date test or inspection was conducted.
  2. Description of the Work tested or inspected.
  3. Date test or inspection results were transmitted to Architect.
  4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's and authorities' having jurisdiction reference during normal working hours.
1. Submit log at Project closeout as part of Project Record Documents.

### 3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspection, sample-taking, and similar services, repair damaged construction and restore substrates and finishes.

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

### 3.3 TESTING SCHEDULE

- A. Moisture content of all lumber shall be tested at lumber yard prior to loading by supplier. Documentation to be provided to the Architect.
- B. Moisture content of all lumber shall be tested prior to unloading at the jobsite by the General Contractor. Documentation to be provided to the Architect.
- C. Moisture content of all sub floors and walls shall be tested by the Owner's third-party testing agency prior to finish flooring or GWB installation. Documentation to be provided to the Architect.
- D. All site testing and inspections shall be by the Owner's third-party testing agency. Documentation to be provided to the architect. Site testing to include soils compaction, concrete, mortar, grout asphalt etc.

END OF SECTION 014000



## **SECTION 014200 - REFERENCES**

### **PART 1 - GENERAL**

#### **1.1 DEFINITIONS**

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

#### **1.2 INDUSTRY STANDARDS**

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
  - 1. For standards referenced by applicable building codes, comply with dates of standards as listed in building codes.

- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

### 1.3 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States."

B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Abbreviations and acronyms not included in this list shall mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States." The information in this list is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. AABC - Associated Air Balance Council; [www.aabc.com](http://www.aabc.com).
2. AAMA - American Architectural Manufacturers Association; (See FGIA).
3. AAPFCO - Association of American Plant Food Control Officials; [www.aapfco.org](http://www.aapfco.org).
4. AASHTO - American Association of State Highway and Transportation Officials; [www.transportation.org](http://www.transportation.org).
5. AATCC - American Association of Textile Chemists and Colorists; [www.aatcc.org](http://www.aatcc.org).
6. ABMA - American Bearing Manufacturers Association; [www.americanbearings.org](http://www.americanbearings.org).
7. ABMA - American Boiler Manufacturers Association; [www.abma.com](http://www.abma.com).
8. ACI - American Concrete Institute; (Formerly: ACI International); [www.concrete.org](http://www.concrete.org).
9. ACPA - American Concrete Pipe Association; [www.concrete-pipe.org](http://www.concrete-pipe.org).
10. AEIC - Association of Edison Illuminating Companies, Inc. (The); [www.aeic.org](http://www.aeic.org).
11. AF&PA - American Forest & Paper Association; [www.afandpa.org](http://www.afandpa.org).
12. AGA - American Gas Association; [www.aga.org](http://www.aga.org).
13. AHAM - Association of Home Appliance Manufacturers; [www.aham.org](http://www.aham.org).
14. AHRI - Air-Conditioning, Heating, and Refrigeration Institute (The); [www.ahrinet.org](http://www.ahrinet.org).
15. AI - Asphalt Institute; [www.asphaltinstitute.org](http://www.asphaltinstitute.org).
16. AIA - American Institute of Architects (The); [www.aia.org](http://www.aia.org).
17. AISC - American Institute of Steel Construction; [www.aisc.org](http://www.aisc.org).
18. AISI - American Iron and Steel Institute; [www.steel.org](http://www.steel.org).
19. AITC - American Institute of Timber Construction; [www.plib.org](http://www.plib.org).
20. AMCA - Air Movement and Control Association International, Inc.; [www.amca.org](http://www.amca.org).
21. ANSI - American National Standards Institute; [www.ansi.org](http://www.ansi.org).
22. AOSA - Association of Official Seed Analysts, Inc.; [www.aosaseed.com](http://www.aosaseed.com).
23. APA - APA - The Engineered Wood Association; [www.apawood.org](http://www.apawood.org).
24. APA - Architectural Precast Association; [www.archprecast.org](http://www.archprecast.org).

25. API - American Petroleum Institute; [www.api.org](http://www.api.org).
26. ARI - Air-Conditioning & Refrigeration Institute; (See AHRI).
27. ARI - American Refrigeration Institute; (See AHRI).
28. ARMA - Asphalt Roofing Manufacturers Association; [www.asphaltroofing.org](http://www.asphaltroofing.org).
29. ASCE - American Society of Civil Engineers; [www.asce.org](http://www.asce.org).
30. ASCE/SEI - American Society of Civil Engineers/Structural Engineering Institute; (See ASCE).
31. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers; [www.ashrae.org](http://www.ashrae.org).
32. ASME - ASME International; (American Society of Mechanical Engineers); [www.asme.org](http://www.asme.org).
33. ASSE - American Society of Sanitary Engineering; [www.asse-plumbing.org](http://www.asse-plumbing.org).
34. ASSP - American Society of Safety Professionals (The); [www.assp.org](http://www.assp.org).
35. ASTM - ASTM International; [www.astm.org](http://www.astm.org).
36. ATIS - Alliance for Telecommunications Industry Solutions; [www.atis.org](http://www.atis.org).
37. AVIXA - Audiovisual and Integrated Experience Association; (Formerly: Infocomm International); [www.avixa.org](http://www.avixa.org).
38. AWEA - American Wind Energy Association; [www.awea.org](http://www.awea.org).
39. AWI - Architectural Woodwork Institute; [www.awinet.org](http://www.awinet.org).
40. AWMAC - Architectural Woodwork Manufacturers Association of Canada; [www.awmac.com](http://www.awmac.com).
41. AWWA - American Water Works Association; [www.awwa.org](http://www.awwa.org).
42. AWS - American Welding Society; [www.aws.org](http://www.aws.org).
43. AWWA - American Water Works Association; [www.awwa.org](http://www.awwa.org).
44. BHMA - Builders Hardware Manufacturers Association; [www.buildershardware.com](http://www.buildershardware.com).
45. BIA - Brick Industry Association (The); [www.gobrick.com](http://www.gobrick.com).
46. BICSI - BICSI, Inc.; [www.bicsi.org](http://www.bicsi.org).
47. BIFMA - BIFMA International; (Business and Institutional Furniture Manufacturer's Association); [www.bifma.org](http://www.bifma.org).
48. BISSC - Baking Industry Sanitation Standards Committee; [www.bissc.org](http://www.bissc.org).
49. BWF - Badminton World Federation; (Formerly: International Badminton Federation); [www.bissc.org](http://www.bissc.org).
50. CDA - Copper Development Association; [www.copper.org](http://www.copper.org).
51. CE - Conformite Europeenne; [www.ec.europa.eu/growth/single-market/ce-marking](http://www.ec.europa.eu/growth/single-market/ce-marking).
52. CEA - Canadian Electricity Association; [www.electricity.ca](http://www.electricity.ca).
53. CFFA - Chemical Fabrics and Film Association, Inc.; [www.chemicalfabricsandfilm.com](http://www.chemicalfabricsandfilm.com).
54. CFSEI - Cold-Formed Steel Engineers Institute; [www.cfsei.org](http://www.cfsei.org).
55. CGA - Compressed Gas Association; [www.cganet.com](http://www.cganet.com).
56. CIMA - Cellulose Insulation Manufacturers Association; [www.cellulose.org](http://www.cellulose.org).
57. CISCA - Ceilings & Interior Systems Construction Association; [www.cisca.org](http://www.cisca.org).
58. CISPI - Cast Iron Soil Pipe Institute; [www.cispi.org](http://www.cispi.org).
59. CLFMI - Chain Link Fence Manufacturers Institute; [www.chainlinkinfo.org](http://www.chainlinkinfo.org).
60. CPA - Composite Panel Association; [www.compositepanel.org](http://www.compositepanel.org).
61. CRI - Carpet and Rug Institute (The); [www.carpet-rug.org](http://www.carpet-rug.org).
62. CRRC - Cool Roof Rating Council; [www.coolroofs.org](http://www.coolroofs.org).
63. CRSI - Concrete Reinforcing Steel Institute; [www.crsi.org](http://www.crsi.org).
64. CSA - CSA Group; [www.csa-group.org](http://www.csa-group.org).
65. CSI - Cast Stone Institute; [www.caststone.org](http://www.caststone.org).

66. CSI - Construction Specifications Institute (The); [www.csiresources.org](http://www.csiresources.org).
67. CSSB - Cedar Shake & Shingle Bureau; [www.cedarbureau.org](http://www.cedarbureau.org).
68. CTA - Consumer Technology Association; [www.cta.tech](http://www.cta.tech).
69. CTI - Cooling Technology Institute; (Formerly: Cooling Tower Institute); [www.coolingtechnology.org](http://www.coolingtechnology.org).
70. CWC - Composite Wood Council; (See CPA).
71. DASMA - Door and Access Systems Manufacturers Association; [www.dasma.com](http://www.dasma.com).
72. DHA - Decorative Hardwoods Association; (Formerly: Hardwood Plywood & Veneer Association); [www.decorativehardwoods.org](http://www.decorativehardwoods.org).
73. DHI - Door and Hardware Institute; [www.dhi.org](http://www.dhi.org).
74. ECA - Electronic Components Association; (See ECIA).
75. ECAMA - Electronic Components Assemblies & Materials Association; (See ECIA).
76. ECIA - Electronic Components Industry Association; [www.ecianow.org](http://www.ecianow.org).
77. EIA - Electronic Industries Alliance; (See TIA).
78. EIMA - EIFS Industry Members Association; [www.eima.com](http://www.eima.com).
79. EJMA - Expansion Joint Manufacturers Association, Inc.; [www.ejma.org](http://www.ejma.org).
80. EOS/ESD Association; (Electrostatic Discharge Association); [www.esda.org](http://www.esda.org).
81. ESTA - Entertainment Services and Technology Association; (See PLASA).
82. ETL - Intertek (See Intertek); [www.intertek.com](http://www.intertek.com).
83. EVO - Efficiency Valuation Organization; [www.evo-world.org](http://www.evo-world.org).
84. FCI - Fluid Controls Institute; [www.fluidcontrolsintstitute.org](http://www.fluidcontrolsintstitute.org).
85. FGIA - Fenestration and Glazing Industry Alliance; <https://fgiaonline.org>.
86. FIBA - Federation Internationale de Basketball; (The International Basketball Federation); [www.fiba.com](http://www.fiba.com).
87. FIVB - Federation Internationale de Volleyball; (The International Volleyball Federation); [www.fivb.org](http://www.fivb.org).
88. FM Approvals - FM Approvals LLC; [www.fmapprovals.com](http://www.fmapprovals.com).
89. FM Global - FM Global; (Formerly: FMG - FM Global); [www.fmglobal.com](http://www.fmglobal.com).
90. FRSA - Florida Roofing, Sheet Metal Contractors Association, Inc.; [www.floridarroof.com](http://www.floridarroof.com).
91. FSA - Fluid Sealing Association; [www.fluidsealing.com](http://www.fluidsealing.com).
92. FSC - Forest Stewardship Council U.S.; [www.fscus.org](http://www.fscus.org).
93. GA - Gypsum Association; [www.gypsum.org](http://www.gypsum.org).
94. GANA - Glass Association of North America; (See NGA).
95. GS - Green Seal; [www.greenseal.org](http://www.greenseal.org).
96. HI - Hydraulic Institute; [www.pumps.org](http://www.pumps.org).
97. HI/GAMA - Hydronics Institute/Gas Appliance Manufacturers Association; (See AHRI).
98. HMMA - Hollow Metal Manufacturers Association; (See NAAMM).
99. HPVA - Hardwood Plywood & Veneer Association; (See DHA).
100. IAPSC - International Association of Professional Security Consultants; [www.iapsc.org](http://www.iapsc.org).
101. IAS - International Accreditation Service; [www.iasonline.org](http://www.iasonline.org).
102. ICBO - International Conference of Building Officials; (See ICC).
103. ICC - International Code Council; [www.iccsafe.org](http://www.iccsafe.org).
104. ICEA - Insulated Cable Engineers Association, Inc.; [www.icea.net](http://www.icea.net).
105. ICPA - International Cast Polymer Association; [www.theicpa.com](http://www.theicpa.com).
106. ICRI - International Concrete Repair Institute, Inc.; [www.icri.org](http://www.icri.org).
107. IEC - International Electrotechnical Commission; [www.iec.ch](http://www.iec.ch).

108. IEEE - Institute of Electrical and Electronics Engineers, Inc. (The); [www.ieee.org](http://www.ieee.org).
109. IES - Illuminating Engineering Society; (Formerly: Illuminating Engineering Society of North America); [www.ies.org](http://www.ies.org).
110. IESNA - Illuminating Engineering Society of North America; (See IES).
111. IEST - Institute of Environmental Sciences and Technology; [www.iest.org](http://www.iest.org).
112. IGMA - Insulating Glass Manufacturers Alliance; (See FGIA).
113. IGSHPA - International Ground Source Heat Pump Association; [www.igshpa.org](http://www.igshpa.org).
114. II - Infocomm International; (See AVIXA).
115. ILI - Indiana Limestone Institute of America, Inc.; [www.ili.ai.com](http://www.ili.ai.com).
116. Intertek - Intertek Group; (Formerly: ETL SEMCO; Intertek Testing Service NA); [www.intertek.com](http://www.intertek.com).
117. ISA - International Society of Automation (The); (Formerly: Instrumentation, Systems, and Automation Society); [www.isa.org](http://www.isa.org).
118. ISAS - Instrumentation, Systems, and Automation Society (The); (See ISA).
119. ISFA - International Surface Fabricators Association; (Formerly: International Solid Surface Fabricators Association); [www.isfanow.org](http://www.isfanow.org).
120. ISO - International Organization for Standardization; [www.iso.org](http://www.iso.org).
121. ISSFA - International Solid Surface Fabricators Association; (See ISFA).
122. ITU - International Telecommunication Union; [www.itu.int](http://www.itu.int).
123. KCMA - Kitchen Cabinet Manufacturers Association; [www.kcma.org](http://www.kcma.org).
124. LMA - Laminating Materials Association; (See CPA).
125. LPI - Lightning Protection Institute; [www.lightning.org](http://www.lightning.org).
126. MBMA - Metal Building Manufacturers Association; [www.mbma.com](http://www.mbma.com).
127. MCA - Metal Construction Association; [www.metalconstruction.org](http://www.metalconstruction.org).
128. MFMA - Maple Flooring Manufacturers Association, Inc.; [www.maplefloor.org](http://www.maplefloor.org).
129. MFMA - Metal Framing Manufacturers Association, Inc.; [www.metalframingmfg.org](http://www.metalframingmfg.org).
130. MHI - Material Handling Industry; [www.mhi.org](http://www.mhi.org).
131. MIA - Marble Institute of America; (See NSI).
132. MMPA - Moulding & Millwork Producers Association; [www.wmmpa.com](http://www.wmmpa.com).
133. MPI - Master Painters Institute; [www.paintinfo.com](http://www.paintinfo.com).
134. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; [www.mss-hq.org](http://www.mss-hq.org).
135. NAAMM - National Association of Architectural Metal Manufacturers; [www.naamm.org](http://www.naamm.org).
136. NACE - NACE International; (National Association of Corrosion Engineers International); [www.nace.org](http://www.nace.org).
137. NADCA - National Air Duct Cleaners Association; [www.nadca.com](http://www.nadca.com).
138. NAIMA - North American Insulation Manufacturers Association; [www.naima.org](http://www.naima.org).
139. NALP - National Association of Landscape Professionals; [www.landscapeprofessionals.org](http://www.landscapeprofessionals.org).
140. NBGQA - National Building Granite Quarries Association, Inc.; [www.nbgqa.com](http://www.nbgqa.com).
141. NBI - New Buildings Institute; [www.newbuildings.org](http://www.newbuildings.org).
142. NCAA - National Collegiate Athletic Association (The); [www.ncaa.org](http://www.ncaa.org).
143. NCMA - National Concrete Masonry Association; [www.ncma.org](http://www.ncma.org).
144. NEBB - National Environmental Balancing Bureau; [www.nebb.org](http://www.nebb.org).
145. NECA - National Electrical Contractors Association; [www.necanet.org](http://www.necanet.org).
146. NeLMA - Northeastern Lumber Manufacturers Association; [www.nelma.org](http://www.nelma.org).
147. NEMA - National Electrical Manufacturers Association; [www.nema.org](http://www.nema.org).
148. NETA - InterNational Electrical Testing Association; [www.netaworld.org](http://www.netaworld.org).
149. NFHS - National Federation of State High School Associations; [www.nfhs.org](http://www.nfhs.org).

150. NFPA - National Fire Protection Association; [www.nfpa.org](http://www.nfpa.org).
151. NFPA - NFPA International; (See NFPA).
152. NFRC - National Fenestration Rating Council; [www.nfrc.org](http://www.nfrc.org).
153. NGA - National Glass Association (The); (Formerly: Glass Association of North America); [www.glass.org](http://www.glass.org).
154. NHLA - National Hardwood Lumber Association; [www.nhla.com](http://www.nhla.com).
155. NLGA - National Lumber Grades Authority; [www.nlga.org](http://www.nlga.org).
156. NOFMA - National Oak Flooring Manufacturers Association; (See NWFA).
157. NOMMA - National Ornamental & Miscellaneous Metals Association; [www.nomma.org](http://www.nomma.org).
158. NRCA - National Roofing Contractors Association; [www.nrca.net](http://www.nrca.net).
159. NRMCA - National Ready Mixed Concrete Association; [www.nrmca.org](http://www.nrmca.org).
160. NSF - NSF International; [www.nsf.org](http://www.nsf.org).
161. NSI - National Stone Institute; (Formerly: Marble Institute of America); [www.naturalstoneinstitute.org](http://www.naturalstoneinstitute.org).
162. NSPE - National Society of Professional Engineers; [www.nspe.org](http://www.nspe.org).
163. NSSGA - National Stone, Sand & Gravel Association; [www.nssga.org](http://www.nssga.org).
164. NTMA - National Terrazzo & Mosaic Association, Inc. (The); [www.ntma.com](http://www.ntma.com).
165. NWFA - National Wood Flooring Association; [www.nwfa.org](http://www.nwfa.org).
166. NWRA - National Waste & Recycling Association; [www.wasterecycling.org](http://www.wasterecycling.org)
167. PCI - Precast/Prestressed Concrete Institute; [www.pci.org](http://www.pci.org).
168. PDI - Plumbing & Drainage Institute; [www.pdionline.org](http://www.pdionline.org).
169. PLASA - PLASA; (Formerly: ESTA - Entertainment Services and Technology Association); [www.plasa.org](http://www.plasa.org).
170. RCSC - Research Council on Structural Connections; [www.boltcouncil.org](http://www.boltcouncil.org).
171. RFCI - Resilient Floor Covering Institute; [www.rfci.com](http://www.rfci.com).
172. RIS - Redwood Inspection Service; [www.redwoodinspection.com](http://www.redwoodinspection.com).
173. SAE - SAE International; [www.sae.org](http://www.sae.org).
174. SCTE - Society of Cable Telecommunications Engineers; [www.scte.org](http://www.scte.org).
175. SDI - Steel Deck Institute; [www.sdi.org](http://www.sdi.org).
176. SDI - Steel Door Institute; [www.steeldoor.org](http://www.steeldoor.org).
177. SEFA - Scientific Equipment and Furniture Association (The); [www.sefalabs.com](http://www.sefalabs.com).
178. SEI/ASCE - Structural Engineering Institute/American Society of Civil Engineers; (See ASCE).
179. SIA - Security Industry Association; [www.siaonline.org](http://www.siaonline.org).
180. SJI - Steel Joist Institute; [www.steeljoist.org](http://www.steeljoist.org).
181. SMA - Screen Manufacturers Association; [www.smainfo.org](http://www.smainfo.org).
182. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association; [www.smacna.org](http://www.smacna.org).
183. SMPTE - Society of Motion Picture and Television Engineers; [www.smpete.org](http://www.smpete.org).
184. SPFA - Spray Polyurethane Foam Alliance; [www.sprayfoam.org](http://www.sprayfoam.org).
185. SPIB - Southern Pine Inspection Bureau; [www.spib.org](http://www.spib.org).
186. SPRI - Single Ply Roofing Industry; [www.spri.org](http://www.spri.org).
187. SRCC - Solar Rating & Certification Corporation; [www.solar-rating.org](http://www.solar-rating.org).
188. SSINA - Specialty Steel Industry of North America; [www.ssina.com](http://www.ssina.com).
189. SSPC - SSPC: The Society for Protective Coatings; [www.sspc.org](http://www.sspc.org).
190. STI - Steel Tank Institute; [www.steeltank.com](http://www.steeltank.com).
191. SWI - Steel Window Institute; [www.steelwindows.com](http://www.steelwindows.com).
192. SWPA - Submersible Wastewater Pump Association; [www.swpa.org](http://www.swpa.org).
193. TCA - Tilt-Up Concrete Association; [www.tilt-up.org](http://www.tilt-up.org).
194. TCNA - Tile Council of North America, Inc.; [www.tileusa.com](http://www.tileusa.com).

195. TEMA - Tubular Exchanger Manufacturers Association, Inc.; [www.tema.org](http://www.tema.org).
196. TIA - Telecommunications Industry Association (The); (Formerly: TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance); [www.tiaonline.org](http://www.tiaonline.org).
197. TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance; (See TIA).
198. TMS - The Masonry Society; [www.masonrysociety.org](http://www.masonrysociety.org).
199. TPI - Truss Plate Institute; [www.tpinst.org](http://www.tpinst.org).
200. TPI - Turfgrass Producers International; [www.turfgrassod.org](http://www.turfgrassod.org).
201. TRI - Tile Roofing Institute; [www.tilerroofing.org](http://www.tilerroofing.org).
202. UL - Underwriters Laboratories Inc.; [www.ul.com](http://www.ul.com).
203. UL LLC - UL LLC; [www.ul.com](http://www.ul.com).
204. UNI - Uni-Bell PVC Pipe Association; [www.uni-bell.org](http://www.uni-bell.org).
205. USAV - USA Volleyball; [www.usavolleyball.org](http://www.usavolleyball.org).
206. USGBC - U.S. Green Building Council; [www.usgbc.org](http://www.usgbc.org).
207. USITT - United States Institute for Theatre Technology, Inc.; [www.usitt.org](http://www.usitt.org).
208. WA - Wallcoverings Association; [www.wallcoverings.org](http://www.wallcoverings.org).
209. WCLIB - West Coast Lumber Inspection Bureau; [www.wclib.org](http://www.wclib.org).
210. WCMA - Window Covering Manufacturers Association; [www.wcmanet.org](http://www.wcmanet.org).
211. WDMA - Window & Door Manufacturers Association; [www.wdma.com](http://www.wdma.com).
212. WI - Woodwork Institute; [www.wicnet.org](http://www.wicnet.org).
213. WSRCA - Western States Roofing Contractors Association; [www.wsrca.com](http://www.wsrca.com).
214. WWPA - Western Wood Products Association; [www.wwpa.org](http://www.wwpa.org).

C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.

1. DIN - Deutsches Institut für Normung e.V.; [www.din.de](http://www.din.de).
2. IAPMO - International Association of Plumbing and Mechanical Officials; [www.iapmo.org](http://www.iapmo.org).
3. ICC - International Code Council; [www.iccsafe.org](http://www.iccsafe.org).
4. ICC-ES - ICC Evaluation Service, LLC; [www.icc-es.org](http://www.icc-es.org).

D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Information is subject to change and is up to date as of the date of the Contract Documents.

1. COE - Army Corps of Engineers; [www.usace.army.mil](http://www.usace.army.mil).
2. CPSC - Consumer Product Safety Commission; [www.cpsc.gov](http://www.cpsc.gov).
3. DOC - Department of Commerce; National Institute of Standards and Technology; [www.nist.gov](http://www.nist.gov).
4. DOD - Department of Defense; [www.quicksearch.dla.mil](http://www.quicksearch.dla.mil).
5. DOE - Department of Energy; [www.energy.gov](http://www.energy.gov).
6. EPA - Environmental Protection Agency; [www.epa.gov](http://www.epa.gov).
7. FAA - Federal Aviation Administration; [www.faa.gov](http://www.faa.gov).
8. FG - Federal Government Publications; [www.gpo.gov/fdsys](http://www.gpo.gov/fdsys).
9. GSA - General Services Administration; [www.gsa.gov](http://www.gsa.gov).
10. HUD - Department of Housing and Urban Development; [www.hud.gov](http://www.hud.gov).

11. LBL - Lawrence Berkeley National Laboratory; Environmental Energy Technologies Division; [www.eetd.lbl.gov](http://www.eetd.lbl.gov).
12. OSHA - Occupational Safety & Health Administration; [www.osha.gov](http://www.osha.gov).
13. SD - Department of State; [www.state.gov](http://www.state.gov).
14. TRB - Transportation Research Board; National Cooperative Highway Research Program; The National Academies; [www.trb.org](http://www.trb.org).
15. USDA - Department of Agriculture; Agriculture Research Service; U.S. Salinity Laboratory; [www.ars.usda.gov](http://www.ars.usda.gov).
16. USDA - Department of Agriculture; Rural Utilities Service; [www.usda.gov](http://www.usda.gov).
17. USDOJ - Department of Justice; Office of Justice Programs; National Institute of Justice; [www.ojp.usdoj.gov](http://www.ojp.usdoj.gov).
18. USP - U.S. Pharmacopeial Convention; [www.usp.org](http://www.usp.org).
19. USPS - United States Postal Service; [www.usps.com](http://www.usps.com).

E. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. CFR - Code of Federal Regulations; Available from Government Printing Office; [www.govinfo.gov](http://www.govinfo.gov).
2. DOD - Department of Defense; Military Specifications and Standards; Available from DLA Document Services; [www.quicksearch.dla.mil](http://www.quicksearch.dla.mil).
3. DSCC - Defense Supply Center Columbus; (See FS).
4. FED-STD - Federal Standard; (See FS).
5. FS - Federal Specification; Available from DLA Document Services; [www.quicksearch.dla.mil](http://www.quicksearch.dla.mil).
  - a. Available from Defense Standardization Program; [www.dsp.dla.mil](http://www.dsp.dla.mil).
  - b. Available from General Services Administration; [www.gsa.gov](http://www.gsa.gov).
  - c. Available from National Institute of Building Sciences/Whole Building Design Guide; [www.wbdg.org](http://www.wbdg.org).
6. MILSPEC - Military Specification and Standards; (See DOD).
7. USAB - United States Access Board; [www.access-board.gov](http://www.access-board.gov).
8. USATBCB - U.S. Architectural & Transportation Barriers Compliance Board; (See USAB).

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

**SECTION 014339 - MOCKUPS**

**PART 1 - GENERAL**

**1.1 SUMMARY**

**A. Section Includes:**

1. Integrated exterior mockups.
2. Preconstruction laboratory mockups.
3. Room mockups.

**B. Related Requirements:**

1. Section 014000 "Quality Requirements" for quality assurance requirements for aesthetic and workmanship mockups specified in other Sections.

**1.2 DEFINITIONS**

- A. Integrated Exterior Mockups: Mockups of the exterior envelope constructed on-site as part of permanent construction, consisting of multiple products, assemblies, and subassemblies.
- B. Preconstruction Laboratory Mockups: Integrated exterior mockups constructed at testing facility to verify performance characteristics.
- C. Room Mockups: Mockups of typical interior spaces complete with wall, floor, and ceiling finishes; doors; windows; millwork; casework; specialties; furnishings and equipment; and lighting as indicated.

**1.3 PREINSTALLATION MEETINGS**

**A. Preinstallation Conference: Conduct conference at Project site.**

1. Meet with Owner, Architect, testing and inspecting agency representative, and installers of major systems whose Work is included in integrated exterior preconstruction laboratory and room mockups.
2. Review coordination of equipment and furnishings provided by the Owner for room mockups.
3. Review locations and extent of mockups.
4. Review testing procedures to be performed on mockups.
5. Review and finalize schedule for mockups, and verify availability of materials, personnel, equipment, and facilities needed to complete mockups and testing and maintain schedule for the Work.

1.4 ACTION SUBMITTALS

- A. Shop Drawings: For integrated exterior preconstruction laboratory and room mockups.
  - 1. Include plans, elevations, sections, and mounting attachment and support details.
  - 2. Indicate manufacturer and model number of individual components, subassemblies, and assemblies.
  - 3. Include site location drawing indicating orientation of mockup.
  - 4. Revise and resubmit Shop Drawings to reflect approved modifications in details and component interfaces resulting from changes made during testing procedures.
- B. Delegated Design Submittal: For temporary structural supports for mockups not attached to building structure, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For testing agency.
- B. Preconstruction Test Reports: For integrated exterior preconstruction laboratory mockups.

1.6 QUALITY ASSURANCE

- A. Preconstruction Laboratory Mockup Testing Agency Qualifications: Qualified in accordance with ASTM E699 for testing indicated and accredited by IAS or ILAC Mutual Recognition Arrangement as complying with ISO/IEC 17025.
- B. Testing Agency Qualifications: Qualified in accordance with ASTM E699 for testing indicated and accredited by IAS or ILAC Mutual Recognition Arrangement as complying with ISO/IEC 17025 and acceptable to Owner and Architect.
- C. Build mockups to do the following:
  - 1. Verify selections made under Sample submittals.
  - 2. Demonstrate aesthetic effects.
  - 3. Demonstrate the qualities of products and workmanship.
  - 4. Demonstrate acceptable coordination between components and systems.
  - 5. Perform preconstruction testing, such as window air- and water-leakage testing.
- D. Fabrication: Before fabricating or installing portions of the Work requiring mockups, build mockups for each form of construction and finish required. Use materials and installation methods as required for the Work.
  - 1. Build mockups of size indicated.
  - 2. Build mockups in location indicated or, if not indicated, as directed by Architect.
  - 3. Employ supervisory personnel who will oversee mockup construction. Employ workers who will be employed to perform same tasks during the construction at Project.

4. Demonstrate the proposed range of aesthetic effects and workmanship.
5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
6. Demolish and remove mockups when directed unless otherwise indicated.

E. Notifications:

1. Notify Architect seven days in advance of the dates and times when mockups will be constructed.
2. Notify Architect seven days in advance of the dates and times when mockups will be tested.
3. Allow seven days for initial review and each re-review of each mockup.

F. Approval: Obtain Architect's approval of mockups before starting fabrication or construction of corresponding Work.

1. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## 1.7 COORDINATION

- A. Coordinate schedule for construction of mockups, so construction, testing, and review of mockups do not impact Project schedule.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design support structure for free-standing mockups.
- B. Structural Performance:
1. Seismic Performance: Mockups and support structure to withstand the effects of earthquake motions determined in accordance with ASCE/SEI 7.
  2. Wind Loads: As indicated on Drawings.
- C. Mockup Testing Performance Requirements: Perform tests using design pressures and performance criteria indicated for assemblies and products that are specified in other Sections and incorporated into integrated exterior preconstruction laboratory mockups.

**2.2 INTEGRATED EXTERIOR MOCKUPS**

- A. Construct integrated exterior mockups as indicated on Drawings. Construct mockups to demonstrate constructability, coordination of trades, and sequencing of Work; and to ensure materials, components, subassemblies, assemblies, and interfaces integrate into a system complying with indicated performance and aesthetic requirements.
- B. Design and construct foundation and superstructure to support free-standing integrated exterior mockups.
- C. Build integrated exterior mockups using installers and construction methods that will be used in completed construction.
- D. Use specified products that have been approved by Architect. Coordinate installation of materials and products specified in individual Specification Sections that include Work included in integrated exterior mockups.
- E. The Work of integrated exterior mockups includes, but is not limited to, the following:
  - 1. Precast architectural concrete.
  - 2. Masonry veneer.
  - 3. Stone cladding.
  - 4. Cold-formed metal framing and sheathing.
  - 5. Air and weather barriers.
  - 6. Thermal insulation.
  - 7. Through-wall flashing.
  - 8. Flashing and sheet metal trim.
  - 9. Joint sealants.
  - 10. Metal wall panels.
  - 11. Aluminum-framed entrances and storefront.
  - 12. Glazed curtain walls.
  - 13. Aluminum windows.
  - 14. Glazing.
- F. Photographic Documentation: Document construction of integrated exterior mockups with photographs in accordance with Section 013233 "Photographic Documentation." Provide photographs showing details of interface of different materials and assemblies.
  - 1. Document testing procedures, including water leakage and other deficiencies. Photograph modifications to component interfaces intended to correct deficiencies.
- G. Provide and document modifications to construction details and interfaces between components and systems required to properly sequence the Work, or to pass performance testing requirements. Obtain Architect's approval for modifications.
- H. Retain approved mockups constructed in place. Incorporate fully into the Work.

**2.3 PRECONSTRUCTION LABORATORY MOCKUPS**

- A. Construct preconstruction laboratory mockups as indicated on Drawings. Construct mockups to demonstrate constructability, coordination of trades, and sequencing of Work; ensure materials, components, subassemblies, assemblies, and interfaces integrate into a system complying with indicated performance and aesthetic requirements; and conduct performance testing indicated.
- B. Build preconstruction laboratory mockups at testing agency facility using installers and construction methods that will be used at Project site.
- C. Use specified products that have been approved by Architect. Coordinate installation of materials and products specified in individual Specification Sections that include Work included in preconstruction laboratory mockups.
- D. The Work of preconstruction laboratory mockups includes, but is not limited to, the following:
  - 1. Precast architectural concrete.
  - 2. Masonry veneer.
  - 3. Stone cladding.
  - 4. Cold-formed metal framing and sheathing.
  - 5. Air and weather barriers.
  - 6. Thermal insulation.
  - 7. Through-wall flashing.
  - 8. Flashing and sheet metal trim.
  - 9. Joint sealants.
  - 10. Metal wall panels.
  - 11. Aluminum-framed entrances and storefront.
  - 12. Glazed curtain walls.
  - 13. Aluminum windows.
  - 14. Glazing.
- E. Photographic Documentation: Document construction of preconstruction laboratory mockups with photographs in accordance with Section 013233 "Photographic Documentation." Provide photographs showing details of interface of different materials and assemblies.
  - 1. Document testing procedures, including water leakage and other deficiencies. Photograph modifications to component interfaces intended to correct deficiencies.
- F. Provide and document modifications to construction details and interfaces between components and systems required to properly sequence the Work, or to pass performance testing requirements. Obtain Architect's approval for modifications.
- G. When testing is complete, remove test specimens and test assemblies, and preconstruction laboratory mockups; do not reuse products on Project.

2.4 ROOM MOCKUPS

- A. Build room mockups as indicated on Drawings to evaluate constructability, demonstrate the coordination of trades and sequencing of Work, and to demonstrate aesthetic requirements. Include each visible finish, component, and equipment item within room mockups; include operable lighting.
- B. Provide room mockups of the following rooms:
  - 1. Apartment unit
- C. The Work of room mockups includes, but is not limited to, the following:
  - 1. Millwork and casework.
  - 2. Doors and frames.
  - 3. Access doors and frames.
  - 4. Glazing.
  - 5. Metal framing.
  - 6. Gypsum board.
  - 7. Ceramic tiling.
  - 8. Acoustical ceilings.
  - 9. Resilient flooring.
  - 10. Painting.
  - 11. Registers and grilles.
  - 12. Wiring devices.
  - 13. Lighting.

PART 3 - EXECUTION

3.1 TESTING OF INTEGRATED EXTERIOR MOCKUPS

- A. Integrated Exterior Mockup Testing Agency: Engage a qualified testing agency to perform tests and inspections.
  - 1. Testing and inspecting agency will interpret tests and state in each report whether tested Work complies with or deviates from requirements.
- B. Integrated Exterior Mockup Testing Services: Perform the following tests in the following order:
  - 1. Water-Spray Test: Before installation of interior finishes has begun, test areas designated by Architect in accordance with AAMA 501.2 for evidence of water penetration.
    - a. Perform a minimum of two tests in areas as directed by Architect.
- C. Integrated exterior mockup will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.

3.2 TESTING OF PRECONSTRUCTION LABORATORY MOCKUPS

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
  - 1. Testing and inspecting agency will interpret tests and state in each report whether tested Work complies with or deviates from requirements.
- B. Unlock, open, and relock operable windows and doors five times. Perform necessary hardware adjustments, if any, and repeat cycling.
- C. Preconstruction laboratory mockup will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.

END OF SECTION 014339



**SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Requirements:
  - 1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

**1.3 USE CHARGES**

- A. Installation, removal, and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, testing agencies, and authorities having jurisdiction.
- B. Sewer Service: Pay sewer-service use charges for sewer usage by all entities for construction operations.
- C. Water Service: Pay water-service use charges for water used by all entities for construction operations.
- D. Electric Power Service: Pay electric-power-service use charges for electricity used by all entities for construction operations.

**1.4 INFORMATIONAL SUBMITTALS**

- A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.
- B. Implementation and Termination Schedule: Within 14 days of date established for commencement of the Work, submit schedule indicating implementation and termination dates of each temporary utility.

- C. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, timesteps, graphic elements, and message content.
- D. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
- E. Moisture- and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold. Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.
  - 1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and requirements for replacing water-damaged Work.
  - 2. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
  - 3. Indicate methods to be used to avoid trapping water in finished work.
- F. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Include the following:
  - 1. Locations of dust-control partitions at each phase of work.
  - 2. HVAC system isolation schematic drawing.
  - 3. Location of proposed air-filtration system discharge.
  - 4. Waste-handling procedures.
  - 5. Other dust-control measures.
- G. Noise and Vibration Control Plan: Identify construction activities that may impact the occupancy and use of existing spaces within the building or adjacent existing buildings, whether occupied by others, or occupied by the Owner. Include the following:
  - 1. Methods used to meet the goals and requirements of the Owner.
  - 2. Concrete cutting method(s) to be used.
  - 3. Location of construction devices on the site.
  - 4. Show compliance with the use and maintenance of quieted construction devices for the duration of the Project.
  - 5. Indicate activities that may disturb building occupants and that are planned to be performed during non-standard working hours as coordinated with the Owner.
  - 6. Indicate locations of sensitive equipment areas or other areas requiring special attention as identified by Owner. Indicate means for complying with Owner's requirements.

1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in the United States Access Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

1.6 PROJECT CONDITIONS

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

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top rails.
- B. Portable Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top and bottom rails. Provide galvanized-steel bases for supporting posts.
- C. Fencing Windscreen Privacy Screen: Polyester fabric scrim with grommets for attachment to chain-link fence, sized to height of fence, in color selected by Architect from manufacturer's standard colors.
- D. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil (0.25-mm) minimum thickness, with flame-spread rating of 15 or less in accordance with ASTM E84 and passing NFPA 701 Test Method 2.
- E. Dust-Control Adhesive-Surface Walk-Off Mats: Provide mats, minimum 36 by 60 inches (914 by 1524 mm).
- F. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

## 2.2 TEMPORARY FACILITIES

- A. Field Offices: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:
  - 1. Furniture required for Project-site documents, including file cabinets, plan tables, plan racks, and bookcases.
  - 2. Conference room of sufficient size to accommodate meetings of 10 individuals. Provide electrical power service and 120-V ac duplex receptacles, with no fewer than one receptacle on each wall. Furnish room with conference table, chairs, and 4-foot- (1.2-m-) square tack and marker boards.
  - 3. Drinking water and private toilet.
  - 4. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F (20 to 22 deg C).
  - 5. Lighting fixtures capable of maintaining average illumination of 20 fc (215 lx) at desk height.
- C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
  - 1. Store combustible materials apart from building.

## 2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
  - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
  - 2. Heating, Cooling, and Dehumidifying Units: Listed and labeled for type of fuel being consumed, by a qualified testing agency acceptable to authorities having jurisdiction, and marked for intended location and application.
  - 3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return-air grille in system and remove at end of construction and clean HVAC system as required in Section 017700 "Closeout Procedures."
- C. Air-Filtration Units: Primary and secondary HEPA-filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

PART 3 - EXECUTION

3.1 TEMPORARY FACILITIES, GENERAL

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

3.2 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
  - 1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.
- C. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
  - 1. Prior to commencing work, isolate the HVAC system in area where work is to be performed according to coordination drawings.
    - a. Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
    - b. Maintain negative air pressure within work area, using HEPA-equipped air-filtration units, starting with commencement of temporary partition construction, and continuing until removal of temporary partitions is complete.
  - 2. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
  - 3. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

3.3 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
  - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
  - 1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
- C. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.
- D. Sanitary Facilities: Provide temporary toilets, wash facilities, safety shower and eyewash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
  - 1. Use of Permanent Toilets: Use of Owner's existing or new toilet facilities is not permitted
- E. Temporary Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
  - 1. Provide temporary dehumidification systems when required to reduce ambient and substrate moisture levels to level required to allow installation or application of finishes and their proper curing or drying.
- F. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
- G. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
  - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- H. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install WiFi cell phone access equipment land-based telephone line(s) for each field office.
- I. Electronic Communication Service: Provide secure WiFi wireless connection to internet with provisions for access by Architect and Owner.
- J. Project Computer: Provide a desktop computer in the primary field office adequate for use by Architect and Owner to access Project electronic documents and maintain electronic communications. Equip computer with not less than the following:
  - 1. Processor: Intel Core i5 or i7.
  - 2. Memory: 16 gigabyte.
  - 3. Disk Storage: 1 -terabyte hard-disk drive and combination DVD-RW/CD-RW drive.
  - 4. Display: 24-inch (610-mm) LCD monitor with 256-Mb dedicated video RAM.
  - 5. Full-size keyboard and mouse.

6. Network Connectivity: 10/100BaseT Ethernet.
7. Operating System: Microsoft Windows 10 Professional.
8. Productivity Software:
  - a. Microsoft Office Professional, 2013 or higher, including Word, Excel, and Outlook.
  - b. Adobe Reader DC.
9. Printer: "All-in-one" unit equipped with printer server, combining color printing, photocopying, scanning, and faxing, or separate units for each of these three functions.
10. Internet Service: Broadband modem, router, and ISP, equipped with hardware firewall, providing minimum 10.0 -Mbps upload and 15 -Mbps download speeds at each computer.
11. Internet Security: Integrated software, providing software firewall, virus, spyware, phishing, and spam protection in a combined application.

### 3.4 SUPPORT FACILITIES INSTALLATION

- A. Comply with the following:
  1. Provide construction for temporary field offices, shops, and sheds located within construction area or within 30 feet (9 m) of building lines that is noncombustible in accordance with ASTM E136. Comply with NFPA 241.
  2. Utilize designated area within existing building for temporary field offices.
  3. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas within construction limits indicated on Drawings.
  1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.
- C. Temporary Use of Planned Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.
  1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
  2. Prepare subgrade and install subbase and base for temporary roads and paved areas in accordance with Section 312000 "Earth Moving."
  3. Recondition base after temporary use, including removing contaminated material, regrading, proofrolling, compacting, and testing.

4. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Substantial Completion. Repair hot-mix asphalt base-course pavement before installation of final course in accordance with Section 321216 "Asphalt Paving."
- D. Traffic Controls: Comply with requirements of authorities having jurisdiction.
    1. Protect existing site improvements to remain, including curbs, pavement, and utilities.
    2. Maintain access for fire-fighting equipment and access to fire hydrants.
  - E. Parking: Use designated areas of Owner's existing parking areas for construction personnel.
  - F. Storage and Staging: Use designated areas of Project site for storage and staging needs.
  - G. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
    1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties or endanger permanent Work or temporary facilities.
    2. Remove snow and ice as required to minimize accumulations.
  - H. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
    1. Identification Signs: Provide Project identification signs as indicated on Drawings.
    2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
      - a. Provide temporary, directional signs for construction personnel and visitors.
    3. Maintain and touch up signs, so they are legible at all times.
  - I. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
  - J. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
    1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
  - K. Temporary Elevator Use: Use of elevators is not permitted.
  - L. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate.
  - M. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.

1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas, so no evidence remains of correction work.

- N. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

### 3.5 SECURITY AND PROTECTION FACILITIES INSTALLATION

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

1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.

- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

1. Comply with work restrictions specified in Section 011000 "Summary."

- C. Temporary Erosion and Sedimentation Control: Comply with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent and requirements specified in Section 311000 "Site Clearing."

- D. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.

1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant-protection zones.
2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
4. Remove erosion and sedimentation controls, and restore and stabilize areas disturbed during removal.

- E. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.

- F. Tree and Plant Protection: Comply with requirements specified in Section 015639 "Temporary Tree and Plant Protection."

- G. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals, so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using materials approved by authorities having jurisdiction.
- H. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.
  - 1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations or As indicated on Drawings.
- I. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.
- J. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- K. Temporary Egress: Provide temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction. Provide signage directing occupants to temporary egress.
- L. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
  - 1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.
- M. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner and tenants from fumes and noise.
  - 1. Construct dustproof partitions with gypsum wallboard, with joints taped on occupied side, and fire-retardant-treated plywood on construction operations side.
  - 2. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
  - 3. Insulate partitions to control noise transmission to occupied areas.
  - 4. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
  - 5. Protect air-handling equipment.
  - 6. Provide walk-off mats at each entrance through temporary partition.
- N. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.

1. Prohibit smoking in construction areas. Comply with additional limits on smoking specified in other Sections.
2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition in accordance with requirements of authorities having jurisdiction.
3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign, stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

### 3.6 MOISTURE AND MOLD CONTROL

- A. Moisture and Mold Protection: Protect stored materials and installed Work in accordance with Moisture and Mold Protection Plan.
- B. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
  1. Protect porous materials from water damage.
  2. Protect stored and installed material from flowing or standing water.
  3. Keep porous and organic materials from coming into prolonged contact with concrete.
  4. Remove standing water from decks.
  5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Period: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
  1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
  2. Keep interior spaces reasonably clean and protected from water damage.
  3. Periodically collect and remove waste containing cellulose or other organic matter.
  4. Discard or replace water-damaged material.
  5. Do not install material that is wet.
  6. Discard and replace stored or installed material that begins to grow mold.
  7. Perform work in a sequence that allows wet materials adequate time to dry before enclosing the material in gypsum board or other interior finishes.
- D. Controlled Construction Period: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
  1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
  2. Use temporary or permanent HVAC system to control humidity within ranges specified for installed and stored materials.

3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
  - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective and require replacing.
  - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
  - c. Remove and replace materials that cannot be completely restored to their manufactured moisture level within 48 hours.

### 3.7 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
  1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
  1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
  2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
  3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 015000

## **SECTION 016000 - PRODUCT REQUIREMENTS**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
  - 1. Section 011000 "Summary" for Contractor requirements related to Owner-furnished products.
  - 2. Section 012500 "Substitution Procedures" for requests for substitutions.
  - 3. Section 014200 "References" for applicable industry standards for products specified.
  - 4. Section 01770 "Closeout Procedures" for submitting warranties.

#### **1.3 DEFINITIONS**

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

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

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

#### 1.4 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
  1. Resolution of Compatibility Disputes between Multiple Contractors:
    - a. Contractors are responsible for providing products and construction methods compatible with products and construction methods of other contractors.
    - b. If a dispute arises between the multiple contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

- B. Identification of Products: Except for required labels and operating data, do not attach or imprint manufacturer or product names or trademarks on exposed surfaces of products or equipment that will be exposed to view in occupied spaces or on the exterior.
  - 1. Labels: Locate required product labels and stamps on a concealed surface, or, where required for observation following installation, on a visually accessible surface that is not conspicuous.
  - 2. Equipment Nameplates: Provide a permanent nameplate on each item of service- or power-operated equipment. Locate on a visually accessible but inconspicuous surface. Include information essential for operation, including the following:
    - a. Name of product and manufacturer.
    - b. Model and serial number.
    - c. Capacity.
    - d. Speed.
    - e. Ratings.
  - 3. See individual identification Sections in Divisions 21, 22, 23, and 26 for additional equipment identification requirements.

#### 1.5 COORDINATION

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

#### 1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products, using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
  - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  - 4. Inspect products on delivery to determine compliance with the Contract Documents and that products are undamaged and properly protected.
- C. Storage:
  - 1. Provide a secure location and enclosure at Project site for storage of materials and equipment.

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

## 1.7 PRODUCT WARRANTIES

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

## PART 2 - PRODUCTS

### 2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties meeting requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
6. Or Equal: For products specified by name and accompanied by the term "or equal," "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
  - a. Submit additional documentation required by Architect in order to establish equivalency of proposed products. Unless otherwise indicated, evaluation of "or equal" product status is by the Architect, whose determination is final.

**B. Product Selection Procedures:**

1. Sole Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
  - a. Sole product may be indicated by the phrase "Subject to compliance with requirements, provide the following."
2. Sole Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
  - a. Sole manufacturer/source may be indicated by the phrase "Subject to compliance with requirements, provide products by the following."
3. Limited List of Products: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered unless otherwise indicated.
  - a. Limited list of products may be indicated by the phrase "Subject to compliance with requirements, provide one of the following."
4. Non-Limited List of Products: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed or an unnamed product that complies with requirements.
  - a. Non-limited list of products is indicated by the phrase "Subject to compliance with requirements, available products that may be incorporated in the Work include, but are not limited to, the following."

- b. Provision of an unnamed product is not considered a substitution, if the product complies with requirements.
  - 5. Limited List of Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
    - a. Limited list of manufacturers is indicated by the phrase "Subject to compliance with requirements, provide products by one of the following."
  - 6. Non-Limited List of Manufacturers: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed or a product by an unnamed manufacturer that complies with requirements.
    - a. Non-limited list of manufacturers is indicated by the phrase "Subject to compliance with requirements, available manufacturers whose products may be incorporated in the Work include, but are not limited to, the following."
    - b. Provision of products of an unnamed manufacturer is not considered a substitution, if the product complies with requirements.
  - 7. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications may additionally indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
    - a. For approval of products by unnamed manufacturers, comply with requirements in Section 012500 "Substitution Procedures" for substitutions for convenience.
- C. Visual Matching Specification: Where Specifications require the phrase "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
  - 1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012500 "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or a similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.
- E. Sustainable Product Selection: Where Specifications require product to meet sustainable product characteristics, select products complying with indicated requirements. Comply with requirements in Division 01 sustainability requirements Section and individual Specification Sections.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration of Comparable Products: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with the following requirements:
1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work.
  2. Detailed comparison of significant qualities of proposed product with those of the named basis-of-design product. Significant product qualities include attributes, such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
  3. Evidence that proposed product provides specified warranty.
  4. List of similar installations for completed projects, with project names and addresses and names and addresses of architects and owners, if requested.
  5. Samples, if requested.
- B. Architect's Action on Comparable Products Submittal: If necessary, Architect will request additional information or documentation for evaluation, as specified in Section 013300 "Submittal Procedures."
1. Form of Approval of Submittal: As specified in Section 013300 "Submittal Procedures."
  2. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- C. Submittal Requirements, Single-Step Process: When acceptable to Architect, incorporate specified submittal requirements of individual Specification Section in combined submittal for comparable products. Approval by the Architect of Contractor's request for use of comparable product and of individual submittal requirements will also satisfy other submittal requirements.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000



## **SECTION 017300 - EXECUTION**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

- A. Section includes general administrative and procedural requirements governing execution of the Work, including, but not limited to, the following:
  - 1. Construction layout.
  - 2. Field engineering and surveying.
  - 3. Installation of the Work.
  - 4. Cutting and patching.
  - 5. Coordination of Owner's portion of the Work.
  - 6. Coordination of Owner-installed products.
  - 7. Progress cleaning.
  - 8. Starting and adjusting.
  - 9. Protection of installed construction.
  - 10. Correction of the Work.
  
- B. Related Requirements:
  - 1. Section 011000 "Summary" for coordination of Owner-furnished products, Owner's separate contracts, and limits on use of Project site.
  - 2. Section 013300 "Submittal Procedures" for submitting surveys.
  - 3. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.
  - 4. Section 078413 "Penetration Firestopping" for patching penetrations in fire-rated construction.

#### **1.2 DEFINITIONS**

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

#### **1.3 PREINSTALLATION MEETINGS**

- A. Cutting and Patching Conference: Conduct conference at Project site.
  - 1. Prior to commencing work requiring cutting and patching, review extent of cutting and patching anticipated and examine procedures for ensuring satisfactory result from cutting and patching work. Inform Architect of scheduled meeting. Require

representatives of each entity directly concerned with cutting and patching to attend, including the following:

- a. Contractor's superintendent.
  - b. Trade supervisor responsible for cutting operations.
  - c. Trade supervisor(s) responsible for patching of each type of substrate.
  - d. Mechanical, electrical, and utilities subcontractors' supervisors, to the extent each trade is affected by cutting and patching operations.
2. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.
- B. Layout Conference: Conduct conference at Project site.
1. Prior to establishing layout of new perimeter and structural column grid(s), review building location requirements. Review benchmark, control point, and layout and dimension requirements. Inform Architect of scheduled meeting. Require representatives of each entity directly concerned with Project layout to attend, including the following:
    - a. Contractor's superintendent.
    - b. Professional surveyor responsible for performing Project surveying and layout.
  2. Review meanings and intent of dimensions, notes, terms, graphic symbols, and other layout information indicated on the Drawings.
  3. Review requirements for including layouts on Shop Drawings and other submittals.
  4. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For land surveyor.
- B. Certified Surveys: Submit two copies signed by land surveyor.
- C. Certificates: Submit certificate signed by land surveyor, certifying that location and elevation of improvements comply with requirements.
- D. Cutting and Patching Plan: Submit plan describing procedures at least 10 days prior to the time cutting and patching will be performed. Include the following information:
  1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
  2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
  3. Products: List products to be used for patching and firms or entities that will perform patching work.
  4. Dates: Indicate when cutting and patching will be performed.

- E. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

1.5 CLOSEOUT SUBMITTALS

- A. Final Property Survey: Submit 10 copies showing the Work performed and record survey data.

1.6 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.
- B. Professional Engineer Qualifications: Refer to Section 014000 "Quality Requirements."
- C. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
  - 1. Structural Elements: When cutting and patching structural elements, or when encountering the need for cutting and patching of elements whose structural function is not known, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.
  - 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
  - 3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
    - a. Water, moisture, or vapor barriers.
    - b. Membranes and flashings.
    - c. Exterior curtain-wall construction.
    - d. Sprayed fire-resistive material.
    - e. Equipment supports.
    - f. Piping, ductwork, vessels, and equipment.
    - g. Noise- and vibration-control elements and systems.
  - 4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

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

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
  - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials. Use materials that are not considered hazardous.
- C. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
  - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, gas service piping, and water-service piping; underground electrical services; and other utilities.
  - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
  - 1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
  - 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.

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

### 3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect in accordance with requirements in Section 013100 "Project Management and Coordination."

### 3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks and existing conditions. If discrepancies are discovered, notify Architect promptly.
- B. Engage a land surveyor experienced in laying out the Work, using the following accepted surveying practices:
1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
  2. Establish limits on use of Project site.

3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
  4. Inform installers of lines and levels to which they must comply.
  5. Check the location, level and plumb, of every major element as the Work progresses.
  6. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
  7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

### 3.4 FIELD ENGINEERING

- A. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
  2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- B. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
  2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
  3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

**3.5 INSTALLATION**

- A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  - 1. Make vertical work plumb, and make horizontal work level.
  - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
  - 3. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
  - 4. Maintain minimum headroom clearance of 96 inches (2440 mm) in occupied spaces and 90 inches (2300 mm) in unoccupied spaces, unless otherwise indicated on Drawings.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure satisfactory results as judged by Architect. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations, so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy of type expected for Project.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on-site and placement in permanent locations.
- F. Tools and Equipment: Select tools or equipment that minimize production of excessive noise levels.
- G. Templates: Obtain and distribute to the parties involved templates for Work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions with manufacturer.
  - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
  - 2. Allow for building movement, including thermal expansion and contraction.
  - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- I. Joints: Make joints of uniform width. Where joint locations in exposed Work are not indicated, arrange joints for the best visual effect, as judged by Architect. Fit exposed connections together to form hairline joints.

**3.6 CUTTING AND PATCHING**

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
  - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
- C. Temporary Support: Provide temporary support of Work to be cut.
- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching in accordance with requirements in Section 011000 "Summary."
- F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.
- G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
  - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
  - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  - 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
  - 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
  - 6. Proceed with patching after construction operations requiring cutting are complete.
- H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as practicable, as judged by Architect. Provide materials and comply with installation requirements specified in other Sections, where applicable.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
  2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
    - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
    - b. Restore damaged pipe covering to its original condition.
  3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch, corner to corner of wall and edge to edge of ceiling. Provide additional coats until patch blends with adjacent surfaces.
  4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
  5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

### 3.7 COORDINATION OF OWNER'S PORTION OF THE WORK

- A. Site Access: Provide access to Project site for Owner's construction personnel and Owner's separate contractors.
1. Provide temporary facilities required for Owner-furnished, Contractor-installed and Owner-furnished, Owner-installed products.
  2. Refer to Section 011000 "Summary" for other requirements for Owner-furnished, Contractor-installed and Owner-furnished, Owner-installed products.
- B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel and Owner's separate contractors.
1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
  2. Preinstallation Conferences: Include Owner's construction personnel and Owner's separate contractors at preinstallation conferences covering portions of the Work

that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction personnel if portions of the Work depend on Owner's construction.

### 3.8 PROGRESS CLEANING

- A. Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
  - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
  - 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
  - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
    - a. Use containers intended for holding waste materials of type to be stored.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where Work is in progress to the level of cleanliness necessary for proper execution of the Work.
  - 1. Remove liquid spills promptly.
  - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 017419 "Construction Waste Management and Disposal."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

- J. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

### 3.9 STARTING AND ADJUSTING

- A. Coordinate startup and adjusting of equipment and operating components with requirements in Section 019113 "General Commissioning Requirements."
- B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
- D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- E. Manufacturer's Field Service: Comply with qualification requirements in Section 014000 "Quality Requirements."

### 3.10 PROTECTION OF INSTALLED CONSTRUCTION

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

### 3.11 CORRECTION OF THE WORK

- A. Repair or remove and replace damaged, defective, or nonconforming Work. Restore damaged substrates and finishes.
  - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Repair Work previously completed and subsequently damaged during construction period. Repair to like-new condition.
- C. Restore permanent facilities used during construction to their specified condition.
- D. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

**Pierpont CTC Clarksburg Campus Improvements**

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- E. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- F. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

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

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for the following:
  - 1. Salvaging nonhazardous demolition and construction waste.
  - 2. Recycling nonhazardous demolition and construction waste.
  - 3. Disposing of nonhazardous demolition and construction waste.
- B. Related Requirements:
  - 1. Section 042000 "Unit Masonry" for disposal requirements for masonry waste.
  - 2. Section 311000 "Site Clearing" for disposition of waste resulting from site clearing and removal of above- and below-grade improvements.

**1.3 DEFINITIONS**

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

1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition and construction waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
  - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.5 ACTION SUBMITTALS

- A. Waste Management Plan: Submit plan within 30 days of date established for the Notice to Proceed.

1.6 INFORMATIONAL SUBMITTALS

- A. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- B. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- C. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

1.7 QUALITY ASSURANCE

- 1. Review and discuss waste management plan including responsibilities of each contractor and waste management coordinator.
- 2. Review requirements for documenting quantities of each type of waste and its disposition.
- 3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
- 4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
- 5. Review waste management requirements for each trade.

1.8 WASTE MANAGEMENT PLAN

- A. General: Develop a waste management plan according to requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
  - 1. Comply with operation, termination, and removal requirements in Section 015000 "Temporary Facilities and Controls."
- B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.
  - 1. Distribute waste management plan to everyone concerned within three days of submittal return.
  - 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- C. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
  - 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged and recycled.
  - 2. Comply with Section 015000 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 RECYCLING CONSTRUCTION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.
- C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.

3.3 RECYCLING CONSTRUCTION WASTE

- A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Wood Materials:

1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
  - a. Comply with requirements in Section 329300 "Plants" for use of clean sawdust as organic mulch.

C. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location.

D. Paint: Seal containers and store by type.

3.4 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged or recycled, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. General: Except for items or materials to be salvaged or recycled, remove waste materials and legally dispose of at designated spoil areas on Owner's property.

C. Burning: Do not burn waste materials.

3.5 ATTACHMENTS

END OF SECTION 017419

## **SECTION 017700 - CLOSEOUT PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for Contract closeout, including, but not limited to, the following:
  - 1. Substantial Completion procedures.
  - 2. Final completion procedures.
  - 3. Warranties.
  - 4. Final cleaning.
- B. Related Requirements:
  - 1. Section 012900 "Payment Procedures" for requirements for Applications for Payment for Substantial Completion and Final Completion.
  - 2. Section 013233 "Photographic Documentation" for submitting Final Completion construction photographic documentation.
  - 3. Section 017823 "Operation and Maintenance Data" for additional operation and maintenance manual requirements.
  - 4. Section 017839 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
  - 5. Section 017900 "Demonstration and Training" for requirements to train the Owner's maintenance personnel to adjust, operate, and maintain products, equipment, and systems.

#### **1.3 DEFINITIONS**

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

#### **1.4 ACTION SUBMITTALS**

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

1.5 CLOSEOUT SUBMITTALS

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

1.6 MAINTENANCE MATERIAL SUBMITTALS

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

1.7 SUBSTANTIAL COMPLETION PROCEDURES

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

- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Advise Owner of pending insurance changeover requirements.
  2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
  3. Complete startup and testing of systems and equipment.
  4. Perform preventive maintenance on equipment used prior to Substantial Completion.
  5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
  6. Advise Owner of changeover in utility services.
  7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
  8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
  9. Complete final cleaning requirements.
  10. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
  2. Results of completed inspection will form the basis of requirements for Final Completion.

## 1.8 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining Final Completion, complete the following:
1. Submit a final Application for Payment in accordance with Section 012900 "Payment Procedures."
  2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  4. Submit pest-control final inspection report.
  5. Submit Final Completion photographic documentation.

- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
  - 1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

#### 1.9 LIST OF INCOMPLETE ITEMS

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
  - 1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor, listed by room or space number.
  - 2. Organize items applying to each space by major element, including categories for ceilings, individual walls, floors, equipment, and building systems.
  - 3. Include the following information at the top of each page:
    - a. Project name.
    - b. Date.
    - c. Name of Architect.
    - d. Name of Contractor.
    - e. Page number.
  - 4. Submit list of incomplete items in the following format:
    - a. MS Excel Electronic File: Architect will return annotated file.
    - b. PDF Electronic File: Architect will return annotated file.

#### 1.10 SUBMITTAL OF PROJECT WARRANTIES

- A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.
- B. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
- C. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
  - 1. Submit on digital media acceptable to Architect.

- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

## PART 3 - EXECUTION

### 3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
    - a. Clean Project site of rubbish, waste material, litter, and other foreign substances.
    - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    - c. Rake grounds that are not planted, mulched, or paved to a smooth, even-textured surface.
    - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
    - e. Remove snow and ice to provide safe access to building.
    - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
    - g. Remove debris and surface dust from limited-access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
    - h. Clean flooring, removing debris, dirt, and staining; clean according to manufacturer's recommendations.
    - i. Vacuum and mop concrete.

- j. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
  - k. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
  - l. Remove labels that are not permanent.
  - m. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
  - n. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
  - o. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
  - p. Clean ducts, blowers, and coils
  - q. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.
  - r. Clean strainers.
  - s. Leave Project clean and ready for occupancy.
- C. Pest Control: Comply with pest control requirements in Section 015000 "Temporary Facilities and Controls." Prepare written report.
- D. Construction Waste Disposal: Comply with waste-disposal requirements in 017419 "Construction Waste Management and Disposal."

### 3.2 REPAIR OF THE WORK

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

END OF SECTION 017700

## **SECTION 017823 - OPERATION AND MAINTENANCE DATA**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
  - 1. Operation and maintenance documentation directory manuals.
  - 2. Emergency manuals.
  - 3. Systems and equipment operation manuals.
  - 4. Systems and equipment maintenance manuals.
  - 5. Product maintenance manuals.
- B. Related Requirements:
  - 1. Section 013300 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.

#### **1.3 DEFINITIONS**

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

#### **1.4 CLOSEOUT SUBMITTALS**

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

1. Submit on digital media acceptable to Architect Enable reviewer comments on draft submittals.
  2. Submit two paper copies of the final approved document.
- C. Initial Manual Submittal: Submit draft copy of each manual at least **30** days before commencing demonstration and training. Architect will comment on whether general scope and content of manual are acceptable.
- D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect will return copy with comments.
1. Correct or revise each manual to comply with Architect's comments. Submit copies of each corrected manual within **15** days of receipt of Architect's comments and prior to commencing demonstration and training.
- E. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

#### 1.5 FORMAT OF OPERATION AND MAINTENANCE MANUALS

- A. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.
1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
  2. File Names and Bookmarks: Bookmark individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.
- B. Manuals, Paper Copy: Submit manuals in the form of hard-copy, bound and labeled volumes.
1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by-280-mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
    - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
    - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of

contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.

2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment. Enclose title pages and directories in clear plastic sleeves.
4. Supplementary Text: Prepared on 8-1/2-by-11-inch (215-by-280-mm) white bond paper.
5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
  - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
  - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

#### 1.6 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

- A. Organization of Manuals: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
  1. Title page.
  2. Table of contents.
  3. Manual contents.
- B. Title Page: Include the following information:
  1. Subject matter included in manual.
  2. Name and address of Project.
  3. Name and address of Owner.
  4. Date of submittal.
  5. Name and contact information for Contractor.
  6. Name and contact information for Construction Manager.
  7. Name and contact information for Architect.
  8. Name and contact information for Commissioning Authority.
  9. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
  10. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.

1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

## 1.7 EMERGENCY MANUALS

- A. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
- B. Content: Organize manual into a separate section for each of the following:
  1. Type of emergency.
  2. Emergency instructions.
  3. Emergency procedures.
- C. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
  1. Fire.
  2. Flood.
  3. Gas leak.
  4. Water leak.
  5. Power failure.
  6. Water outage.
  7. System, subsystem, or equipment failure.
  8. Chemical release or spill.
- D. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
- E. Emergency Procedures: Include the following, as applicable:
  1. Instructions on stopping.
  2. Shutdown instructions for each type of emergency.
  3. Operating instructions for conditions outside normal operating limits.
  4. Required sequences for electric or electronic systems.
  5. Special operating instructions and procedures.

1.8 SYSTEMS AND EQUIPMENT OPERATION MANUALS

- A. Systems and Equipment Operation Manual: Assemble a complete set of data indicating operation of each system, subsystem, and piece of equipment not part of a system. Include information required for daily operation and management, operating standards, and routine and special operating procedures.
1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
  2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- B. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:
1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
  2. Performance and design criteria if Contractor has delegated design responsibility.
  3. Operating standards.
  4. Operating procedures.
  5. Operating logs.
  6. Wiring diagrams.
  7. Control diagrams.
  8. Piped system diagrams.
  9. Precautions against improper use.
  10. License requirements including inspection and renewal dates.
- C. Descriptions: Include the following:
1. Product name and model number. Use designations for products indicated on Contract Documents.
  2. Manufacturer's name.
  3. Equipment identification with serial number of each component.
  4. Equipment function.
  5. Operating characteristics.
  6. Limiting conditions.
  7. Performance curves.
  8. Engineering data and tests.
  9. Complete nomenclature and number of replacement parts.
- D. Operating Procedures: Include the following, as applicable:
1. Startup procedures.
  2. Equipment or system break-in procedures.
  3. Routine and normal operating instructions.
  4. Regulation and control procedures.
  5. Instructions on stopping.
  6. Normal shutdown instructions.
  7. Seasonal and weekend operating instructions.
  8. Required sequences for electric or electronic systems.

9. Special operating instructions and procedures.

- E. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
- F. Piped Systems: Diagram piping as installed, and identify color coding where required for identification.

**1.9 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS**

- A. Systems and Equipment Maintenance Manuals: Assemble a complete set of data indicating maintenance of each system, subsystem, and piece of equipment not part of a system. Include manufacturers' maintenance documentation, preventive maintenance procedures and frequency, repair procedures, wiring and systems diagrams, lists of spare parts, and warranty information.
  - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
  - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- B. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranties and bonds as described below.
- C. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- D. Manufacturers' Maintenance Documentation: Include the following information for each component part or piece of equipment:
  - 1. Standard maintenance instructions and bulletins; include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
    - a. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
  - 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
  - 3. Identification and nomenclature of parts and components.

4. List of items recommended to be stocked as spare parts.
  - E. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
    1. Test and inspection instructions.
    2. Troubleshooting guide.
    3. Precautions against improper maintenance.
    4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
    5. Aligning, adjusting, and checking instructions.
    6. Demonstration and training video recording, if available.
  - F. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
    1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
    2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
  - G. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
  - H. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
  - I. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
    1. Include procedures to follow and required notifications for warranty claims.
  - J. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.
    1. Do not use original project record documents as part of maintenance manuals.
- 1.10 PRODUCT MAINTENANCE MANUALS
- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
  - B. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

- C. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.
- D. Product Information: Include the following, as applicable:
  - 1. Product name and model number.
  - 2. Manufacturer's name.
  - 3. Color, pattern, and texture.
  - 4. Material and chemical composition.
  - 5. Reordering information for specially manufactured products.
- E. Maintenance Procedures: Include manufacturer's written recommendations and the following:
  - 1. Inspection procedures.
  - 2. Types of cleaning agents to be used and methods of cleaning.
  - 3. List of cleaning agents and methods of cleaning detrimental to product.
  - 4. Schedule for routine cleaning and maintenance.
  - 5. Repair instructions.
- F. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- G. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
  - 1. Include procedures to follow and required notifications for warranty claims.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017823

**SECTION 017839 - PROJECT RECORD DOCUMENTS**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for Project Record Documents, including the following:
  - 1. Record Drawings.
  - 2. Record specifications.
  - 3. Record Product Data.
  - 4. Miscellaneous record submittals.
- B. Related Requirements:
  - 1. Section 017300 "Execution" for final property survey.
  - 2. Section 017700 "Closeout Procedures" for general closeout procedures.
  - 3. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.

**1.3 CLOSEOUT SUBMITTALS**

- A. Record Drawings: Comply with the following:
  - 1. Number of Copies: Submit copies of Record Drawings as follows:
    - a. Initial Submittal:
      - 1) Submit PDF electronic files of scanned record prints and one set of file prints.
      - 2) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
    - b. Final Submittal:
      - 1) Submit PDF electronic files of scanned Record Prints and two sets of file prints.
      - 2) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Specifications: Submit annotated PDF electronic files and two paper copies of Project's Specifications, including addenda and Contract modifications.

- C. Record Product Data: Submit annotated PDF electronic files and directories and two paper copies of each submittal.
  - 1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.

#### 1.4 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.
  - 1. Preparation: Mark record prints to show the actual installation, where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
    - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    - b. Accurately record information in an acceptable drawing technique.
    - c. Record data as soon as possible after obtaining it.
    - d. Record and check the markup before enclosing concealed installations.
    - e. Cross-reference record prints to corresponding photographic documentation.
  - 2. Content: Types of items requiring marking include, but are not limited to, the following:
    - a. Dimensional changes to Drawings.
    - b. Revisions to details shown on Drawings.
    - c. Depths of foundations.
    - d. Locations and depths of underground utilities.
    - e. Revisions to routing of piping and conduits.
    - f. Revisions to electrical circuitry.
    - g. Actual equipment locations.
    - h. Duct size and routing.
    - i. Locations of concealed internal utilities.
    - j. Changes made by Change Order or Change Directive.
    - k. Changes made following Architect's written orders.
    - l. Details not on the original Contract Drawings.
    - m. Field records for variable and concealed conditions.
    - n. Record information on the Work that is shown only schematically.
  - 3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
  - 4. Mark record prints with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
  - 5. Mark important additional information that was either shown schematically or omitted from original Drawings.

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

## 1.5 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation, where installation varies from that indicated in Specifications, addenda, and Contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  2. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
  3. Note related Change Orders and Record Drawings where applicable.
- B. Format: Submit record specifications as annotated PDF electronic file.

1.6 RECORD PRODUCT DATA

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

1.7 MISCELLANEOUS RECORD SUBMITTALS

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

1.8 MAINTENANCE OF RECORD DOCUMENTS

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017839

## **SECTION 017900 - DEMONSTRATION AND TRAINING**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

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

#### **1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
  - 1. Instruction in operation and maintenance of systems, subsystems, and equipment.
  - 2. Demonstration and training video recordings.

#### **1.3 INFORMATIONAL SUBMITTALS**

- A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
  - 1. Indicate proposed training modules using manufacturer-produced demonstration and training video recordings for systems, equipment, and products in lieu of video recording of live instructional module.
- B. Qualification Data: For facilitator, instructor, or videographer.
- C. Attendance Record: For each training module, submit list of participants and length of instruction time.
- D. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.

#### **1.4 CLOSEOUT SUBMITTALS**

- A. Demonstration and Training Video Recordings: Submit two copies within seven days of end of each training module.
  - 1. Identification: On each copy, provide an applied label with the following information:
    - a. Name of Project.
    - b. Name and address of videographer.

- c. Name of Architect.
- d. Name of Construction Manager.
- e. Name of Contractor.
- f. Date of video recording.
- 2. Transcript: Prepared in PDF electronic format. Include a cover sheet with same label information as the corresponding video recording and a table of contents with links to corresponding training components. Include name of Project and date of video recording on each page.
- 3. At completion of training, submit complete training manual(s) for Owner's use prepared in same paper and PDF file format required for operation and maintenance manuals specified in Section 017823 "Operation and Maintenance Data."

#### 1.5 QUALITY ASSURANCE

- A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.
- B. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 014000 "Quality Requirements," experienced in operation and maintenance procedures and training.
- C. Videographer Qualifications: A professional videographer who is experienced photographing demonstration and training events similar to those required.

#### 1.6 COORDINATION

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

#### 1.7 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to

master. For each module, include instruction for the following as applicable to the system, equipment, or component:

1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
  - a. System, subsystem, and equipment descriptions.
  - b. Performance and design criteria if Contractor is delegated design responsibility.
  - c. Operating standards.
  - d. Regulatory requirements.
  - e. Equipment function.
  - f. Operating characteristics.
  - g. Limiting conditions.
  - h. Performance curves.
  
2. Documentation: Review the following items in detail:
  - a. Emergency manuals.
  - b. Systems and equipment operation manuals.
  - c. Systems and equipment maintenance manuals.
  - d. Product maintenance manuals.
  - e. Project Record Documents.
  - f. Identification systems.
  - g. Warranties and bonds.
  - h. Maintenance service agreements and similar continuing commitments.
  
3. Emergencies: Include the following, as applicable:
  - a. Instructions on meaning of warnings, trouble indications, and error messages.
  - b. Instructions on stopping.
  - c. Shutdown instructions for each type of emergency.
  - d. Operating instructions for conditions outside of normal operating limits.
  - e. Sequences for electric or electronic systems.
  - f. Special operating instructions and procedures.
  
4. Operations: Include the following, as applicable:
  - a. Startup procedures.
  - b. Equipment or system break-in procedures.
  - c. Routine and normal operating instructions.
  - d. Regulation and control procedures.
  - e. Control sequences.
  - f. Safety procedures.
  - g. Instructions on stopping.
  - h. Normal shutdown instructions.
  - i. Operating procedures for emergencies.
  - j. Operating procedures for system, subsystem, or equipment failure.
  - k. Seasonal and weekend operating instructions.
  - l. Required sequences for electric or electronic systems.

- m. Special operating instructions and procedures.
- 5. Adjustments: Include the following:
  - a. Alignments.
  - b. Checking adjustments.
  - c. Noise and vibration adjustments.
  - d. Economy and efficiency adjustments.
- 6. Troubleshooting: Include the following:
  - a. Diagnostic instructions.
  - b. Test and inspection procedures.
- 7. Maintenance: Include the following:
  - a. Inspection procedures.
  - b. Types of cleaning agents to be used and methods of cleaning.
  - c. List of cleaning agents and methods of cleaning detrimental to product.
  - d. Procedures for routine cleaning.
  - e. Procedures for preventive maintenance.
  - f. Procedures for routine maintenance.
  - g. Instruction on use of special tools.
- 8. Repairs: Include the following:
  - a. Diagnosis instructions.
  - b. Repair instructions.
  - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  - d. Instructions for identifying parts and components.
  - e. Review of spare parts needed for operation and maintenance.

## 1.8 PREPARATION

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

## 1.9 INSTRUCTION

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

- C. Scheduling: Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
  - 1. Schedule training with Owner with at least seven days' advance notice.
- D. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.
- E. Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of a demonstration performance-based test.
- F. Cleanup: Collect used and leftover educational materials and give to Owner. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

#### 1.10 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

- A. General: Engage a qualified commercial videographer to record demonstration and training video recordings. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.
  - 1. At beginning of each training module, record each chart containing learning objective and lesson outline.
- B. Digital Video Recordings: Provide high-resolution, digital video in MPEG format, produced by a digital camera with minimum sensor resolution of 12 megapixels and capable of recording in full HD mod with vibration reduction technology.
  - 1. Submit video recordings on a thumb drive.
  - 2. File Hierarchy: Organize folder structure and file locations according to Project Manual table of contents. Provide complete screen-based menu.
  - 3. File Names: Utilize file names based on name of equipment generally described in video segment, as identified in Project specifications.
  - 4. Contractor and Installer Contact File: Using appropriate software, create a file for inclusion on the equipment demonstration and training recording that describes the following for each Contractor involved on the Project, arranged according to Project Manual table of contents:
    - a. Name of Contractor/Installer.
    - b. Business address.
    - c. Business phone number.
    - d. Point of contact.
    - e. Email address.
- C. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to adequately cover area of demonstration and training. Display continuous running time.

1. Film training session(s) in segments not to exceed 15 minutes.
  - a. Produce segments to present a single significant piece of equipment per segment.
  - b. Organize segments with multiple pieces of equipment to follow order of Project Manual table of contents.
  - c. Where a training session on a particular piece of equipment exceeds 15 minutes, stop filming and pause training session. Begin training session again upon commencement of new filming segment.
- D. Light Levels: Verify light levels are adequate to properly light equipment. Verify equipment markings are clearly visible prior to recording.
  1. Furnish additional portable lighting as required.
- E. Narration: Describe scenes on video recording by dubbing audio narration off-site after video recording is recorded. Include description of items being viewed.
- F. Transcript: Provide a transcript of the narration. Display images and running time captured from videotape opposite the corresponding narration segment.
- G. Preproduced Video Recordings: Provide video recordings used as a component of training modules in same format as recordings of live training.

PART 2 - PRODUCTS

PART 3 - EXECUTION

END OF SECTION 017900

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected site elements.

1.2 MATERIALS OWNERSHIP

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

1.3 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner.

- E. Storage or sale of removed items or materials on-site is not permitted.

- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

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

1.4 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

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

## PART 3 - EXECUTION

### 3.1 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

### 3.2 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
- C. Remove temporary barricades and protections where hazards no longer exist.

### 3.3 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
  - 1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
  - 2. Do not use cutting torches until work area is cleared of flammable materials. Maintain portable fire-suppression devices during flame-cutting operations.
  - 3. Maintain fire watch during and for at least two (2) hours after flame-cutting operations.
  - 4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  - 5. Dispose of demolished items and materials promptly.

- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

#### 3.4 CLEANING

- A. Remove demolition waste materials from Project site [and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn demolished materials.
- C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119



## SECTION 024119 - SELECTIVE DEMOLITION

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. The Work of this Section Includes:

1. Demolition and removal of selected portions of exterior of building or structure and site elements.
2. Removal and salvage of existing items for delivery to Owner and removal of existing items for reinstallation.

B. Related Requirements:

1. Section 011000 "Summary" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.
2. Section 017300 "Execution" for cutting and patching procedures.

#### 1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of off-site unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner as indicated.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage; prepare for reuse; and reinstall where indicated.
- D. Existing to Remain: Existing items of construction that are not to be removed.

#### 1.3 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

#### 1.4 COORDINATION

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

1.5 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Project site.
  - 1. Inspect and discuss condition of construction to be selectively demolished.
  - 2. Review structural load limitations of existing structure.
  - 3. Review and finalize selective demolition schedule and verify availability of demolition personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
  - 5. Review areas where existing construction is to remain and requires protection.
  - 6. Review and finalize protection requirements.
  - 7. Review procedures for noise control and dust control.
  - 8. Review storage, protection, and accounting for items to be removed for salvage or reinstallation.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Statements: For refrigerant recovery technician.
- B. Engineering Survey: Submit engineering survey of condition of building.
- C. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for dust control and, for noise control. Indicate proposed locations and construction of barriers.
- D. Schedule of Selective Demolition Activities: Indicate the following:
  - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
  - 2. Temporary interruption of utility services. Indicate how long utility services will be interrupted.
  - 3. Coordination for shutoff, capping, and continuation of utility services.
  - 4. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.

1.7 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.

1.8 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

## Pierpont CTC Clarksburg Campus Improvements

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- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials:
  - 1. It is not expected that hazardous materials will be encountered in the Work.
    - a. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. On-site sale of removed items or materials is not permitted.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

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

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or video and measured drawings. Comply with Section 013233 "Photographic Documentation."
  - 1. Inventory and record the condition of items to be removed for salvage or reinstallation. Photograph or video conditions that might be misconstrued as damage caused by removal.
  - 2. Photograph or video existing conditions of adjoining construction including finish surfaces, that might be misconstrued as damage caused by selective demolition operations or removal of items for salvage or reinstallation.

### 3.2 PREPARATION

- A. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
  - 1. Strengthen or add new supports when required during progress of selective demolition.
- B. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
- C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location and cleaned and reinstalled in their original locations after selective demolition operations are complete.

### 3.3 UTILITY SERVICES AND BUILDING SYSTEMS

- A. Existing Services/Systems to Remain: Maintain utilities and building systems and equipment to remain and protect against damage during selective demolition operations.
  - 1. Maintain fire-protection facilities in service during selective demolition operations.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utilities and building systems serving areas to be selectively demolished.
  - 1. Owner will arrange to shut off indicated utilities when requested by Contractor.
  - 2. Arrange to shut off utilities with utility companies.
  - 3. If disconnection of utilities and building systems will affect adjacent occupied parts of the building, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to those parts of the building.
  - 4. Demolish and remove existing building systems, equipment, and components indicated on Drawings to be removed.

3.4 SALVAGE/REINSTALL

A. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

B. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

3.5 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
5. Maintain fire watch during and for at least 2 hours after flame-cutting operations.
6. Maintain adequate ventilation when using cutting torches.
7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
8. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
9. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.

- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
  - 1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed trafficways if required by authorities having jurisdiction.
  - 2. Use water mist and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations. Do not use water when it may damage adjacent construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.

### 3.6 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete:
  - 1. Demolish in small sections. Using power-driven saw, cut concrete to a depth of at least 3/4 inch at junctures with construction to remain. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete. Neatly trim openings to dimensions indicated.
  - 2. Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, and then remove concrete between saw cuts.
- B. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, and then remove masonry between saw cuts.
- C. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, and then break up and remove.

### 3.7 DISPOSAL OF DEMOLISHED MATERIALS

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

3.8 CLEANING

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

3.9 SELECTIVE DEMOLITION SCHEDULE

- A. Remove: Masonry entry \ wing wall as identified on Drawings.
- B. Remove and Salvage: Items identified by Owner.
- C. Existing to Remain: Adjacent construction.

END OF SECTION 024119



SECTION 040110 - MASONRY CLEANING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
  - 1. Cleaning materials.
  - 2. Liquid strippable masking agent.

1.2 DEFINITIONS

- A. Very Low-Pressure Spray: Under 100 psi.
- B. Low-Pressure Spray: 100 to 400 psi; 4 to 6 gpm.
- C. Medium-Pressure Spray: 400 to 800 psi; 4 to 6 gpm.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
  - 1. Review methods and procedures related to cleaning masonry, including, but not limited to, the following:
    - a. Scheduling a pre-mockup meeting.
    - b. Manufacturer's representative of cleaning materials to be present during testing for consultation.
    - c. Mockup locations.
    - d. Masonry types.
    - e. Soiling types.
    - f. Verify masonry-cleaning equipment and facilities needed to make progress and avoid delays.
    - g. Materials, material application, and sequencing.
    - h. Cleaning types and cleaning methods.
    - i. Quality-control program.
    - j. Review cleaning program.
    - k. Coordination with building occupants.

1.4 SEQUENCING AND SCHEDULING

- A. Work Sequence: Perform masonry-cleaning Work in the following sequence:
  - 1. Remove plant growth and any other biological growth.

2. Inspect for open mortar joints. Where repairs are required, delay further cleaning Work until after repairs are completed, cured, and dried to prevent the intrusion of water and other cleaning materials into the wall.
  3. Clean masonry surfaces.
- B. As scaffolding is removed, patch anchor holes used to attach scaffolding. Patch holes in masonry units and joints in accordance with masonry repair Sections.

#### 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
1. Include material descriptions and application instructions.
  2. Include test data substantiating that products comply with requirements.
- B. Material certificates signed by manufacturer and Contractor certifying that each material complies with requirements.
- C. Each type of chemical cleaning material.
- D. Qualification data for firms and specialists to demonstrate their capabilities and experience. Include list of five completed projects with project names and references.
- E. Cleaning Program:
1. Describe cleaning protocol, materials, methods, and equipment to be used.
  2. Indicate protection of surrounding materials on people, vehicles, buildings, and site items.
  3. Describe control method of runoff during operations.
  4. Create written report of final cleaning methods and process used.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For chemical-cleaner manufacturer.
- B. Preconstruction Test Reports: For cleaning materials and methods.
- C. Cleaning program.

#### 1.7 QUALITY ASSURANCE

- A. Source of Materials: Obtain materials for masonry cleaning from a single source for each type of substrate required to ensure quality of cleaning.
- B. Masonry-Cleaning Specialist Firms: A firm that provides masonry cleaning, including masonry cleaners that have been used for similar applications with successful results, and is manufacturer authorized for consultation and Project-site inspection, preconstruction product testing, and on-site assistance.

- C. Chemical-Cleaner Manufacturer Qualifications: A firm regularly engaged in producing masonry cleaners that have been used for similar applications with successful results, who employs factory-authorized service representatives who are available for consultation and Project-site inspection, preconstruction product testing, and on-site assistance.
- D. Quality-Control Program: Prepare a written quality-control program for this Project to systematically demonstrate the ability of personnel to properly follow methods and use materials and tools without damaging masonry. Include provisions for supervising performance and preventing damage.
- E. Cleaning Program: Prepare a written cleaning program that describes cleaning process in detail, including materials, methods, and equipment to be used; protection of surrounding materials; and control of runoff during operations. Include provisions for supervising worker performance and preventing damage.
  - 1. If materials and methods other than those indicated are proposed for any phase of cleaning Work, add a written description of such materials and methods, including evidence of successful use on comparable projects and demonstrations to show their effectiveness for this Project.

#### 1.8 MOCKUPS

- A. Prepare mockups of cleaning on existing surfaces to evaluate and establish cleaning materials and processes. Consult cleaning manufacturer for project applications.
  - 1. Masonry Substrate: Clay masonry, Concrete masonry units, Limestone, Sandstone.
  - 2. Cleaning: Clean an existing area approximately 25 sq. ft. for each type of masonry and surface condition.
    - a. Test cleaners and methods on samples of adjacent materials for possible adverse reactions. Do not test cleaners and methods known to have deleterious effect.
    - b. Consult with chemical cleaning product manufacturer to verify what products require pre-wetting of substrate before cleaner application.
    - c. Dilute chemical cleaners with water to produce solutions not exceeding concentration recommended in writing by chemical-cleaner manufacturer.
    - d. Allow a waiting period of not less than seven days after completion of sample cleaning to permit a study of sample panels for negative reactions.
  - 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

#### 1.9 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Engage one or more chemical-cleaner manufacturers to perform preconstruction testing on masonry surfaces.

1. Use test areas as indicated and representative of proposed materials and existing construction.
2. Propose changes to materials and methods to suit Project.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Deliver masonry materials to Project in undamaged condition.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

1.11 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit masonry-cleaning Work to be performed in accordance with product manufacturers' written instructions and specified requirements.
- B. Clean masonry surfaces only when air temperature is 40 deg F and above and is predicted to remain so for at least seven days after completion of cleaning.
  1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until masonry has thawed and dried out, but not less than seven days after completion of cleaning.
  2. Hot-Weather Requirements: Protect unit masonry Work when temperature and humidity conditions produce excessive evaporation of water from masonry. Provide artificial shade and wind breaks and use cooled materials as required.
- C. Refer to chemical cleaner manufacturer's recommendations for application techniques when hot-weather conditions exist.

PART 2 - PRODUCTS

2.1 CLEANING MATERIALS

- A. Water: Potable.
- B. Hot Water: Water heated to a temperature of 140 to 160 deg F.
- C. Detergent Solution, Job Mixed: Solution prepared by mixing 2 cups of tetrasodium pyrophosphate (TSPP), 1/2 cup of laundry detergent, and 20 quarts of hot water for every 5 gal. of solution required.
- D. Mold, Mildew, and Algae Remover, Job Mixed: Solution prepared by mixing 2 cups of tetrasodium pyrophosphate (TSPP), 5 quarts of 5 percent sodium hypochlorite (bleach), and 15 quarts of hot water for every 5 gal. of solution required.

- E. Nonacidic Gel Cleaner: Manufacturer's standard gel formulation, with pH between 6 and 9, that contains detergents with chelating agents and is specifically formulated for cleaning masonry surfaces.
  - 1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
    - a. [Cathedral Stone Products, Inc.](#)
    - b. [PROSOCO, Inc.](#)
    - c. [Price Research, Ltd. dba Charles Paint Research.](#)
  - 2. Masonry Substrate: Clay masonry, Glazed masonry, Concrete masonry units, Sandstone.
  
- F. Mild-Acid Cleaner: Manufacturer's standard mild-acid cleaner containing no muriatic (hydrochloric), hydrofluoric, or sulfuric acid; or ammonium bifluoride or chlorine bleaches.
  - 1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
    - a. [American Building Restoration Products, Inc.](#)
    - b. [Cathedral Stone Products, Inc.](#)
    - c. [Diedrich Technologies, Inc.; a Hohmann & Barnard company.](#)
    - d. [PROSOCO, Inc.](#)
  - 2. Masonry Substrate: Clay masonry, Glazed masonry, Concrete masonry units, Sandstone.

## 2.2 LIQUID STRIPPABLE MASKING AGENT

- A. Liquid Strippable Masking Agent: Manufacturer's standard liquid, film-forming, strippable masking material for protecting glass, metal, glazed masonry, and polished stone surfaces from damaging effects of acidic and alkaline masonry cleaners.
  - 1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
    - a. [American Building Restoration Products, Inc.](#)
    - b. [PROSOCO, Inc.](#)
    - c. [Price Research, Ltd. dba Charles Paint Research.](#)

## 2.3 ACCESSORY MATERIALS

- A. Retain materials of use based on the approval of a mockup.
  - 1. Provide materials with previous effectiveness in performing the Work involved.
    - a. Include materials with minimal possibility of damaging exposed surfaces.

- b. Materials with consistency of each application.
  - c. Materials that provide uniformity of the resulting overall appearance.
- B. Do not use products or tools that could do the following:
  - 1. Remove, alter, or harm the present condition or future preservation of existing surfaces, including surrounding surfaces.
  - 2. Leave residue on surfaces.
- C. Equipment: Provide equipment for controlled spray application of water and chemical cleaners.
  - 1. For chemical cleaner spray applications, provide a low-pressure tank or chemical pump suitable for the chemical cleaner indicated, equipped with spray tip for cleaning method applications.
- D. Natural bristles brushes only.
- E. Wood scrappers.
- F. Trowels.
- G. Provide additional accessories applicable to project conditions, including tapes, sheets, etc., to suit Project.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrate conditions with specialist present, for compliance with approved mockup requirements for cleaning type, methods, products, and other conditions affecting performance.

#### 3.2 PREPARATION

- A. General: Comply with each manufacturer's written instructions for protecting people, motor vehicles, surrounding buildings, masonry areas not to be cleaned, nonmasonry surfaces, landscaping, equipment, and other surfaces that could be injured or harmed by such Work.
  - 1. Provide temporary protective covers over pedestrian walkway areas and at points of entrance and exit for people, motor vehicles, and equipment that must remain during duration of cleaning procedures.
  - 2. Cover adjacent surfaces with materials that are proven to resist paint removers and chemical cleaners used unless products being used will not damage adjacent surfaces. Use protective materials that are waterproof and UV resistant.
  - 3. Temporarily protect all open joints to prevent intrusion of washing waters into the wall structure or building interior.

4. Remove all extraneous items no longer in use on face of surface unless indicated to remain. Where not indicated, obtain approval with Architect.
  5. Apply masking agents in accordance with manufacturer's written instructions. Do not apply liquid strippable masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.
  6. Neutralize alkaline and acid wastes before disposal where applicable.
- B. Provide disposal of runoff from operations by legal means and in a manner that prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.
- C. Remove downspouts and associated hardware adjacent to immediate work area and store during masonry cleaning. Reinstall when masonry cleaning is complete.
1. Provide temporary rain drainage during work to direct water away from building.

### 3.3 APPLICATION OF PRELIMINARY CLEANING MATERIALS

- A. Preliminary Cleaning: Before beginning general cleaning, remove extraneous substances that are resistant to planned cleaning methods.
1. Carefully remove heavy accumulations of rigid materials from masonry surface with sharp chisel. Do not scratch or chip masonry surface.
  2. Removing Biological Growth: Completely remove visible biological, moss, and shrub growth from masonry surfaces. Carefully remove biological growths, creepers, and vegetation by cutting at roots and allowing remaining growth to dry as long as possible before removal. Remove loose soil and biological debris from open joints to whatever depth they occur.
  3. Mold, Mildew, and Algae Removal:
    - a. Wet surface with hot water applied by low-pressure spray.
    - b. Apply mold, mildew, and algae remover by brush or low-pressure spray.
    - c. Scrub surface with medium-soft brushes until mold, mildew, and algae are thoroughly dislodged and can be removed by rinsing. Use small brushes for mortar joints and crevices. Dip brush in mold, mildew, and algae remover often to ensure that adequate fresh cleaner is used and that surface remains wet.
    - d. Rinse with cold water applied by medium-pressure spray to remove mold, mildew, and algae remover and soil.
- B. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.

### 3.4 GENERAL APPLICATION OF CLEANING METHODS

- A. Chemical Cleaning: Do not apply during winds of enough force to spread them to unprotected surfaces.

- B. Cleaning Appearance Standard: Cleaned surfaces are to have a uniform appearance as viewed from 10 ft. away by Architect.
- C. Proceed with cleaning in an orderly manner; work from top to bottom of each scaffold width and from one end of each elevation to the other. Ensure that dirty residues and rinse water do not wash over dry, cleaned surfaces.
- D. Use only those cleaning methods indicated for each masonry material and location.
  - 1. Brushes: Do not use wire brushes or brushes that are not resistant to chemical cleaner being used.
  - 2. Spray Equipment: Use spray equipment that provides controlled application at volume and pressure indicated, measured at nozzle. Adjust pressure and volume to ensure that cleaning methods do not damage surfaces, including joints.
    - a. Equip units with pressure gages.
    - b. For chemical-cleaner spray application, use low-pressure tank or chemical pump suitable for chemical cleaner indicated, equipped with nozzle having a cone-shaped spray.
    - c. For water-spray application, use fan-shaped spray that disperses water at an angle of 25 to 50 degrees.
    - d. For high-pressure water-spray application, use fan-shaped spray that disperses water at an angle of at least 40 degrees.
    - e. For heated water-spray application, use equipment capable of maintaining temperature between 140 and 160 deg F at flow rates indicated.
    - f. For steam application, use steam generator capable of delivering live steam at nozzle.
- E. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging masonry surfaces. Keep wall wet below area being cleaned to prevent streaking from runoff.
- F. Perform additional general cleaning, paint and stain removal, and spot cleaning of small areas that are noticeably different when viewed in accordance with "Cleaning Appearance Standard" Paragraph, so that cleaned surfaces blend smoothly into surrounding areas.
- G. Remove minor stains (cuprous, ferrous, etc.) if any.
- H. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.

### 3.5 WATER-CLEANING TYPE

- A. Water Application Methods:
  - 1. Water-Spray Applications: Unless otherwise indicated, hold spray nozzle at least 6 inches from masonry surface and apply water in horizontal back-and-forth sweeping motion, overlapping previous strokes to produce uniform coverage.

- B. Cold-Water Wash: Use cold water applied by medium-pressure spray.
- C. Hot-Water Wash: Use hot water applied by medium-pressure spray.
- D. Steam Cleaning: Apply steam at very low pressures not exceeding 80 psi. Remove dirt softened by steam with wood scrapers, stiff-nylon or -fiber brushes, or cold-water wash, as indicated by cleaning tests.

### 3.6 CHEMICAL-CLEANING TYPE

- A. Chemical-Cleaner Application Methods: Apply chemical cleaners to masonry surfaces in accordance with chemical-cleaner manufacturer's written instructions; use brush or spray application. Do not spray apply at pressures exceeding 50 psi. Do not allow chemicals to remain on surface for periods longer than those indicated or recommended in writing by manufacturer.
  - 1. Consult with cleaning product manufacturer to verify what products require pre-wetting of substrate before cleaner application.
- B. Dilute chemical cleaners with water when required to produce solutions not exceeding concentration recommended in writing by chemical-cleaner manufacturer.
- C. Rinse off chemical residue and soil by working upward from bottom to top of each treated area at each stage or scaffold setting. Periodically during each rinse, test pH of rinse water running off of cleaned area to determine that chemical cleaner is completely removed.
  - 1. Apply neutralizing agent and repeat rinse if necessary to produce tested pH of between 6.7 and 7.5.
- D. After cleaning is complete, remove protection no longer required. Remove tape and adhesive marks.
- E. Detergent Cleaning:
  - 1. Wet surface with hot water applied by low-pressure spray.
  - 2. Scrub surface with detergent solution using medium-soft brushes until soil is thoroughly dislodged and can be removed by rinsing. Use small brushes to remove soil from mortar joints and crevices. Dip brush in solution often to ensure that adequate fresh detergent is used and that surface remains wet.
  - 3. Rinse with cold water applied by medium-pressure spray to remove detergent solution and soil.
- F. Nonacidic Gel Chemical Cleaning:
  - 1. Wet surface with hot water applied by low-pressure spray.
  - 2. Apply gel cleaner in 1/8-inch thickness by brush, working into joints and crevices. Apply quickly and do not brush out excessively, so area is uniformly covered with fresh cleaner and dwell time is uniform throughout area being cleaned.

3. Let cleaner remain on surface for period recommended in writing by chemical-cleaner manufacturer.
4. Remove bulk of gel cleaner.
5. Rinse with cold water applied by medium-pressure spray to remove chemicals and soil.
6. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use steam cleaning.

G. Mild-Acid Chemical Cleaning:

1. Wet surface with cold water applied by low-pressure spray.
2. Apply cleaner to surface in two applications by brush or low-pressure spray.
3. Let cleaner remain on surface for period recommended in writing by chemical-cleaner manufacturer.
4. Rinse with cold water applied by medium-pressure spray to remove chemicals and soil.
5. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use steam cleaning.

3.7 FINAL CLEANING

- A. Clean adjacent nonmasonry surfaces of spillage and debris. Use detergent and soft brushes or cloths.
- B. Remove debris from gutters and downspouts. Rinse off roof and flush gutters and downspouts.
- C. Remove masking materials, leaving no residues that could trap dirt.
- D. Clean landscaping areas of debris.

3.8 PROTECTION

- A. Provide final protection and maintain conditions in a manner acceptable to Architect, which ensures cleaning Work without being soiled at time of substantial completion.

END OF SECTION 040110

SECTION 040120.64 - BRICK MASONRY REPOINTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Mortar materials.
2. Mortar mixes.

B. Related Requirements:

1. Section 040110 "Masonry Cleaning" for cleaning and paint removal from both clay masonry and stone.

1.2 DEFINITIONS

- A. Low-Pressure Spray: 100 to 400 psi; 4 to 6 gpm.

1.3 SEQUENCING AND SCHEDULING

- A. Order sand and gray portland cement for pointing mortar immediately after approval of Samples. Take delivery of and store at Project site enough quantity to complete Project.

- B. Work Sequence: Perform brick masonry repointing Work in the following sequence, which includes Work specified in this and other Sections:

1. Remove plant growth.
2. Inspect masonry for open mortar joints and permanently or temporarily point them before cleaning to prevent the intrusion of water and other cleaning materials into the wall.
3. Remove paint.
4. Clean masonry.
5. Rake out mortar from joints surrounding masonry to be replaced and from joints adjacent to masonry repairs along joints.
6. Rake out mortar from joints to be repointed.
7. Point mortar and sealant joints.
8. After repairs and repointing have been completed and cured, perform a final cleaning to remove residues from this work.

- C. As scaffolding is removed, patch anchor holes used to attach scaffolding.

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### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
  - 2. Include recommendations for product application and use.
  - 3. Include test data substantiating that products comply with requirements.
- B. Samples for Initial Selection: For the following:
  - 1. Pointing Mortar: Submit sets of mortar for pointing in the form of sample mortar strips, 6 inches long by 1/2 inch wide, set in aluminum or plastic channels.
    - a. Have each set contain a close color range of at least three Samples of different mixes of colored sands and cements that produce a mortar matching existing, cleaned mortar when cured and dry.
    - b. Submit with precise measurements on ingredients, proportions, gradations, and source of colored sands from which each Sample was made.
  - 2. Sand Type Used for Pointing Mortar: Minimum 8 oz. of each in plastic screw-top jars.
  - 3. Sealant materials.
  - 4. Include similar Samples of accessories involving color selection.
- C. Samples for Verification: For the following:
  - 1. Each type, color, and texture of pointing mortar in the form of sample mortar strips, 6 inches long by 1/2 inch wide, set in aluminum or plastic channels.
    - a. Include with each Sample a list of ingredients with proportions of each. Identify sources, both supplier and quarry, of each type of sand and brand names of cementitious materials and pigments if any.
  - 2. Sealant materials.
  - 3. Accessories: Each type of accessory and miscellaneous support.

### 1.5 INFORMATIONAL SUBMITTALS

- A. Preconstruction Test Reports: For existing bricks and mortar.
- B. Quality-control program.
- C. Qualification Statements: For brick masonry repointing specialist.

### 1.6 QUALITY ASSURANCE

- A. Brick Masonry Repointing Specialist Qualifications: Engage an experienced brick masonry repointing firm to perform work of this Section. Firm is to have completed

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work similar in material, design, and extent to that indicated for this Project with a record of successful in-service performance. Experience in only installing masonry is insufficient experience for masonry repointing work.

### **1.7 PRECONSTRUCTION TESTING**

- A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on masonry units as follows:
  - 1. Provide test specimens as indicated and representative of proposed materials and existing construction.
  - 2. Existing Mortar: Test in accordance with ASTM C1324, modified as agreed by testing service and Architect for Project requirements, to determine proportional composition of original ingredients, sizes and colors of aggregates, and approximate strength.
  - 3. Temporary Patch: As directed by Architect, provide temporary materials followed by permanent repairs at locations from which existing samples were taken.

### **1.8 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver packaged materials to Project site in manufacturer's original and unopened containers, labeled with manufacturer's name and type of products.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store hydrated lime in manufacturer's original and unopened containers. Discard lime if containers have been damaged or have been opened for more than two days.
- D. Store sand where grading and other required characteristics can be maintained and contamination avoided.

### **1.9 FIELD CONDITIONS**

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit repointing work to be performed in accordance with product manufacturers' written instructions and specified requirements.
- B. Temperature Limits: Repoint mortar joints only when air temperature is between 40 and 90 deg F and is predicted to remain so for at least seven days after completion of the Work unless otherwise indicated.
- C. Cold-Weather Requirements: Comply with the following procedures for mortar-joint pointing unless otherwise indicated:
  - 1. When air temperature is below 40 deg F, heat mortar ingredients and existing masonry walls to produce temperatures between 40 and 120 deg F.

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2. When mean daily air temperature is below 40 deg F, provide enclosure and heat to maintain temperatures above 32 deg F within the enclosure for seven days after pointing.
- D. Hot-Weather Requirements: Protect mortar-joint pointing when temperature and humidity conditions produce excessive evaporation of water from mortar materials. Provide artificial shade and wind breaks, and use cooled materials as required to minimize evaporation. Do not apply mortar to substrates with temperatures of 90 deg F and above unless otherwise indicated.

### PART 2 - PRODUCTS

#### 2.1 SOURCE LIMITATIONS

- A. Obtain each type of material for repointing brick masonry (cement, sand, etc.) from single source with resources to provide materials of consistent quality in appearance and physical properties.

#### 2.2 MORTAR MATERIALS

- A. Portland Cement: ASTM C150/C150M, Type I or Type II, except Type III may be used for cold-weather construction; white[ **or gray, or both**] where required for color matching of mortar.
  1. Provide cement containing not more than 0.60 percent total alkali when tested in accordance with ASTM C114.
- B. Hydrated Lime: ASTM C207, Type S.
- C. Masonry Cement: ASTM C91/C91M.
  1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
    - a. Cemex S.A.B. de C.V.
    - b. Holcim (US) Inc.
    - c. Quikrete; The QUIKRETE Companies, LLC.
- D. Mortar Cement: ASTM C1329/C1329M.
  1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
    - a. Holcim (US) Inc.
- E. Mortar Sand: ASTM C144.

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1. Match size, texture, and gradation of existing mortar sand as closely as possible. Blend several sands if necessary to achieve suitable match.
  2. Color: Natural sand or ground marble, granite, or other sound stone of color necessary to produce required mortar color.
- F. Mortar Pigments: ASTM C979/C979M, compounded for use in mortar mixes, and having a record of satisfactory performance in masonry mortars.
1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
    - a. Davis Colors.
    - b. Lanxess Corporation.
    - c. Solomon Colors Inc.
- G. Water: Potable.

### 2.3 MORTAR MIXES

- A. Measurement and Mixing: Measure cementitious materials and sand in a dry condition by volume or equivalent weight. Do not measure by shovel; use known measure. Mix materials in a clean, mechanical batch mixer.
1. Mixing Pointing Mortar: Thoroughly mix cementitious materials and sand together before adding any water. Then mix again, adding only enough water to produce a damp, unworkable mix that retains its form when pressed into a ball. Maintain mortar in this dampened condition for 15 to 30 minutes. Add remaining water in small portions until mortar reaches desired consistency. Use mortar within one hour of final mixing; do not retemper or use partially hardened material.
- B. Colored Mortar: Produce mortar of color required by using specified ingredients. Do not alter specified proportions without Architect's written approval.
1. Mortar Pigments: Where mortar pigments are indicated, do not add pigment exceeding 10 percent by weight of the cementitious or binder materials, except for carbon black which is limited to 2 percent, unless otherwise demonstrated by a satisfactory history of performance.
- C. Do not use admixtures in mortar unless otherwise indicated.
- D. Mixes: Mix mortar materials in the following proportions:
1. Pointing Mortar by Volume: ASTM C270, Proportion Specification, 1 part portland cement, 1 part lime, and 6 parts sand. Add mortar pigments to produce mortar colors required.

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### 2.4 ACCESSORY MATERIALS

#### A. Sealant Materials:

1. Sealant manufacturer's standard elastomeric sealant(s) of base polymer and characteristics in accordance with applicable requirements in Section 079200 "Joint Sealants."

#### B. Masking Tape: Nonstaining, nonabsorbent material; compatible with mortar, joint primers, sealants, and surfaces adjacent to joints; and that easily comes off entirely, including adhesive.

## PART 3 - EXECUTION

### 3.1 PROTECTION

#### A. Prevent mortar from staining face of surrounding masonry and other surfaces.

1. Cover sills, ledges, and other projecting items to protect them from mortar droppings.
2. Keep wall area wet below pointing work to discourage mortar from adhering.
3. Immediately remove mortar splatters in contact with exposed masonry and other surfaces.

#### B. Remove downspouts and associated hardware adjacent to masonry and store during masonry repointing. Reinstall when repointing is complete.

1. Provide temporary rain drainage during work to direct water away from building.

### 3.2 MASONRY REPOINTING, GENERAL

#### A. Appearance Standard: Repointed surfaces are to have a uniform appearance as viewed from 50 ft. away by Architect.

### 3.3 REPOINTING

#### A. Rake out and repoint joints to the following extent:

1. Joints at locations of the following defects:
  - a. Holes and missing mortar.
  - b. Cracks that can be penetrated 1/4 inch or more by a knife blade 0.027 inch thick.
  - c. Cracks 1/8 inch or more in width and of any depth.
  - d. Hollow-sounding joints when tapped by metal object.
  - e. Eroded surfaces 1/4 inch deep or deeper.
  - f. Deterioration to point that mortar can be easily removed by hand, without tools.

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- g. Joints filled with substances other than mortar.
- B. Do not rake out and repoint joints where not required.
- C. Rake out joints as follows, in accordance with procedures demonstrated in approved mockup:
  - 1. Remove mortar from joints to depth of not less than that required to expose sound, unweathered mortar. Do not remove unsound mortar more than 2 inches deep; consult Architect for direction.
  - 2. Remove mortar from brick and other masonry surfaces within raked-out joints to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum, or flush joints to remove dirt and loose debris.
  - 3. Do not spall edges of brick or other masonry units or widen joints. Replace or patch damaged brick or other masonry units as directed by Architect.
- D. Notify Architect of unforeseen detrimental conditions including voids in mortar joints, cracks, loose masonry units, rotted wood, rusted metal, and other deteriorated items.
- E. Pointing with Mortar:
  - 1. Rinse joint surfaces with water to remove dust and mortar particles. Time rinsing application so, at time of pointing, joint surfaces are damp but free of standing water. If rinse water dries, dampen joint surfaces before pointing.
  - 2. Apply pointing mortar first to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 3/8 inch until a uniform depth is formed. Fully compact each layer, and allow it to become thumbprint hard before applying next layer.
  - 3. After deep areas have been filled to same depth as remaining joints, point joints by placing mortar in layers not greater than 3/8 inch. Fully compact each layer and allow to become thumbprint hard before applying next layer. Where existing masonry units have worn or rounded edges, slightly recess finished mortar surface below face of masonry to avoid widened joint faces. Take care not to spread mortar beyond joint edges onto exposed masonry surfaces or to featheredge the mortar.
  - 4. When mortar is thumbprint hard, tool joints to match original appearance of joints as demonstrated in approved mockup. Remove excess mortar from edge of joint by brushing.
  - 5. Cure mortar by maintaining in thoroughly damp condition for at least 72 consecutive hours, including weekends and holidays.
  - 6. Hairline cracking within mortar or mortar separation at edge of a joint is unacceptable. Completely remove such mortar and repoint.
- F. Pointing with Sealant:
  - 1. After raking out, keep joints dry and free of mortar and debris.
  - 2. Clean and prepare joint surfaces. Prime joint surfaces unless sealant manufacturer recommends against priming. Do not allow primer to spill or migrate onto adjoining surfaces.
  - 3. Fill sealant joints with specified joint sealant.

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- a. Install cylindrical sealant backing beneath the sealant. Where space is insufficient for cylindrical sealant backing, install bond-breaker tape.
  - b. Install sealant using only proven installation techniques that ensure that sealant is deposited in a uniform, continuous ribbon, without gaps or air pockets, and with complete wetting of the joint bond surfaces equally on both sides. Fill joint flush with surrounding masonry and matching the contour of adjoining mortar joints.
  - c. Install sealant as recommended in writing by sealant manufacturer but within the following general limitations, measured at the center (thin) section of the bead:
    - 1) Fill joints to a depth equal to joint width, but not more than 1/2 inch deep or less than 1/4 inch deep.
  - d. Tool sealant to form smooth, uniform beads, slightly concave. Remove excess sealant from surfaces adjacent to joint.
  - e. Do not allow sealant to overflow or spill onto adjoining surfaces, or to migrate into the voids of adjoining surfaces, particularly rough textures. Remove excess and spillage of sealant promptly as the work progresses. Clean adjoining surfaces by the means necessary to eliminate evidence of spillage, without damage to adjoining surfaces or finishes, as demonstrated in an approved mockup.
- G. Where repointing work precedes cleaning of existing masonry, allow mortar to harden at least 30 days before beginning cleaning work.

### 3.4 FINAL CLEANING

- A. After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter; use wood scrapers, stiff-nylon or -fiber brushes, and clean water applied by low-pressure spray.
  - 1. Do not use metal scrapers or brushes.
  - 2. Do not use acidic or alkaline cleaners.
- B. Clean adjacent nonmasonry surfaces. Use detergent and soft brushes or cloths.
- C. Clean mortar and debris from roof; remove debris from gutters and downspouts. Rinse off roof and flush gutters and downspouts.
- D. Remove masking materials, leaving no residues that could trap dirt.

### 3.5 FIELD QUALITY CONTROL

- A. Architect's Project Representatives: Architect will assign Project representatives to help carry out Architect's responsibilities at the site, including observing progress and quality of portion of the Work completed. Allow Architect's Project representatives use of lift devices and scaffolding, as needed, to observe progress and quality of portion of the Work completed.

END OF SECTION 040120.64



SECTION 311000 - SITE CLEARING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Protecting existing vegetation to remain.
2. Removing existing vegetation.
3. Clearing and grubbing.
4. Stripping and stockpiling topsoil.
5. Removing above- and below-grade site improvements.
6. Disconnecting, capping, or sealing site utilities.
7. Temporary erosion and sedimentation control.

1.2 MATERIAL OWNERSHIP

- A. Except for materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.3 FIELD CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
  2. Provide alternate routes around closed or obstructed trafficways if required by Owner or authorities having jurisdiction.
- B. Salvageable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises.
- C. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
- D. Do not commence site clearing operations until temporary erosion- and sedimentation-control measures are in place.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 312000 "Earth Moving."
  - 1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Protect existing site improvements to remain from damage during construction.
  - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

### 3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.
- B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction in accordance with Drawings and until permanent vegetation has been established.
- D. Remove erosion and sedimentation controls, and restore and stabilize areas disturbed during removal.

### 3.3 EXISTING UTILITIES

- A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.
  - 1. Arrange with utility companies to shut off indicated utilities.

## Pierpont CTC Clarksburg Campus Improvements

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- B. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others, unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
  - 1. Notify Architect not less than five working days in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without Architect's written permission.

### 3.4 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
  - 1. Grind down stumps and remove roots larger than 3 inches in diameter, obstructions, and debris to a depth of 18 inches below exposed subgrade.
  - 2. Use only hand methods or air spade for grubbing within protection zones.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
  - 1. Place fill material in horizontal layers and compact each layer in accordance with Section 312000 "Earth Moving.

### 3.5 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil in a manner to prevent intermingling with underlying subsoil or other waste materials.
- C. Stockpile topsoil away from edge of excavations without intermixing with subsoil or other materials. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.

### 3.6 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.

### 3.7 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Unless otherwise indicated or authorized by the Architect, remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 311000



## SECTION 312319 - DEWATERING

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Construction dewatering.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Dewatering Performance: Design, furnish, install, test, operate, monitor, and maintain dewatering system of sufficient scope, size, and capacity to control hydrostatic pressures and to lower, control, remove, and dispose of groundwater and permit excavation and construction to proceed on dry, stable subgrades.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning dewatering. Comply with water- and debris-disposal regulations of authorities having jurisdiction.

### PART 3 - EXECUTION

#### 3.1 PREPARATION

- A. Provide temporary grading to facilitate dewatering and control of surface water.
- B. Protect and maintain temporary erosion and sedimentation controls during dewatering operations.

#### 3.2 INSTALLATION

- A. Install dewatering system pump equipment, filter material gradation, valves, appurtenances, water disposal, and surface-water controls.
  - 1. Use filters or other means to prevent pumping of fine sands or silts from the subsurface.
- B. Place dewatering system into operation as required before and during excavating operations.

- C. Provide sumps, sedimentation tanks, and other flow-control devices as required by authorities having jurisdiction.
- D. Provide standby equipment on-site, installed and available for immediate operation, to maintain dewatering on continuous basis if any part of system becomes inadequate or fails.

3.3 OPERATION

- A. Operate system continuously until Work has been completed or until dewatering is no longer required.
- B. Operate system to lower and control groundwater to permit excavation, construction of structures, and placement of fill materials on dry subgrades. Drain water-bearing strata above and below bottom of foundations, drains, sewers, and other excavations.
  - 1. Do not permit open-sump pumping that leads to loss of fines, soil piping, subgrade softening, and slope instability.
  - 2. Reduce hydrostatic head in water-bearing strata below subgrade elevations of foundations, drains, sewers, and other excavations.
- C. Remove dewatering system from Project site on completion of dewatering.

END OF SECTION 312319

SECTION 32 90 00

SITE RESTORATION

1.1 DESCRIPTION OF WORK

- A. The work of this section consists of providing labor, materials, tools, equipment and services necessary to furnish and install all planting as indicated on the drawings and specified herein. The work generally includes:
  - 1. Finish grading.
  - 2. Soil preparation including soil supplements.
  - 3. The search, selection, transportation and the establishment of lawn.
  - 4. Protection, maintenance, guarantee and replacement of lawns.
  - 5. Seeding (permanent and temporary).
  - 6. Repair of existing lawns disturbed by construction.

1.2 QUALITY ASSURANCE

- A. Perform all work in accordance with the West Virginia Department of Highways Specifications, latest edition as modified by these specifications.

1.3 SUBMITTALS

- A. Certification: Submit certificates of inspection as required by governmental authorities. Submit manufacturer's or vendor's certified analysis for soil amendments and fertilizer materials. Submit other data substantiating that materials comply with specified requirements.
- B. Submit seed manufacturer's or vendor's certified statement for each grass seed mixture required, stating botanical and common name, percentage by weight, and percentages of purity, germination, and weed seed for each grass seed species. Submit all original seed tags to the Owner's Representative.
- C. Maintenance Instructions: Submit typewritten instructions recommending procedures to be established by the Owner for continued maintenance of after the contract maintenance period, including watering requirements, fertilizing, weeding, etc. Submit prior to expiration of required maintenance period(s).
- D. Furnish soil test results made by a qualified independent soil-testing agency stating percentages of organic matter, inorganic matter (silt, clay and sand), deleterious material, pH and mineral and plant-nutrient content of topsoil. Test results shall make recommendations on amendments based on the specified seeding varieties. Submit topsoil test results to the Owner's Representative before seeding is started.
- E. Hydroseeding (Contractor's Option): If the Contractor prefers to hydroseed, then it is the responsibility of the Contractor to submit in writing, the hydroseeding specifications and

procedures. Submit to the Owner's Representative for approval prior to seeding operations.

1.4 SEQUENCING AND SCHEDULING

- A. Coordinate installation of seeding during normal planting seasons.
- B. Prior to the start of seeding activity, the Contractor shall have the existing soil and stockpiled topsoil tested by an approved soils testing laboratory.
- C. Restore lawn areas, existing and proposed, that have been disturbed by construction.

PART 2 - PRODUCTS

2.1 TOPSOIL

- A. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; sodium absorption ratio; deleterious material; pH; and mineral and plant-nutrient content of topsoil.
  - 1. Report suitability of topsoil for lawn growth. State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory topsoil.
- B. Topsoil Source: Reuse surface soil stockpiled on the site if acceptable by the Owner's Representative. Verify suitability of surface soil to produce topsoil meeting requirements and amend when necessary. Supplement when quantities are insufficient. Clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful to plant growth.
- C. If imported topsoil is necessary, the source of the topsoil must be approved by the Owner's Representative before delivering topsoil to the site. It shall be obtained from naturally well-drained sites where topsoil occurs at least 4 inches deep; do not obtain from lakes, ponds, bogs or marshes.

2.2 SOIL AMENDMENTS

- A. Lime: In accordance with the soil test recommendations, lime shall be natural dolomitic limestone containing not less than 85% of total carbonates with a minimum of 30% magnesium carbonates, ground so that not less than 90% passes a 20-mesh sieve and not less than 50% passes a 100-mesh sieve.
- B. Organic Matter: If required by the soil test, organic matter shall be polymer dewatered recycled composted leaf and/or bark mulch.
- C. Peat Humus: Decomposed peat free of disease and fungus with no identifiable fibers and with pH range suitable for intended use.
- D. Bonemeal: Commercial, raw, finely ground; 4% nitrogen and 20% phosphoric acid.
- E. Superphosphate: Soluble mixture of treated minerals; 20% available phosphoric acid.

- F. Sand: Clean, washed sand, free of toxic materials and in accordance with ASTM C33-81.
- G. Manure: Well rotted, unleached stable or cattle manure containing not more than 25% by volume of straw, sawdust or other bedding materials and containing no chemicals or ingredients harmful to plants.
- H. Commercial Fertilizer: Complete high grade fertilizer of neutral character, with some elements derived from organic sources and conforming to the requirements of all federal, state, and local laws. Provide proper fertilizer to remedy deficiencies found in the soil tests. Provide nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.

**2.3 GRASS**

- A. Grass Seed: Provide certified fresh, clean, new-crop seed complying with tolerance for purity and germination established by Official Seed Analysts of North America. Provide seed mixture composed of grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed, as specified. Mixture shall not contain more than .05% weed or crop seed nor more than 1.5% inert matter.

- B. Permanent Seed Mixture:

- 1. LAWN MIX - ERNEST 5311 CONSERVATION MIX OR EQUAL
  - a. 30% Creeping Red Fescue (*Festuca rubra*)
  - b. 25% Kentucky Bluegrass, 'Arc' (*Poa pratensis*, 'Arc')
  - c. 25% Kentucky Bluegrass, 'Corsair' (*Poa pratensis*, 'Corsair')
  - d. 10% Annual Ryegrass (*Lolium multiflorum* (L. perenne var. italicum))
  - e. 10% Perennial Ryegrass, 'Confetti III' (turf type) (*Lolium perenne*, 'Confetti III')
  - f. Seed @ 200 lb per acre, or 5 lb per 1,000 SF

- C. Temporary Seed Mixture: Provide annual rye consisting of the following:

Seed Mixture	min % germ	min % pure sd.	max % weed sd.
Annual Rye	90	99.54	0.08

- 1. Application Rate: 5 lbs. per 1,000 square feet

- D. Wood Cellulose Fiber Mulch: Provide specially prepared wood cellulose processed into a uniform fibrous physical state. Wood cellulose to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry. The fiber mulch, including dye, shall contain no germination or growth inhibiting factors. The mulch material shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture

absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.

- E. The mulch material shall contain no elements or compounds at concentration levels that will be phyto-toxic. Wood cellulose fiber must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.
  - 1. Application rate: Net dry weight of 1500 lbs per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water. In areas where erosion may be a problem, use an organic tackifier such as CON-TACK™ or approved equal in accordance with manufacturer's instructions.
  - 2. When seeding occurs after acceptable seeding dates, over-winter protection shall consist of applying five bales clean straw per 1,000 sq. ft. and anchor mulch by commercial mulch netting or 20 lbs. per 1,000 sq. ft. cellulose fiber. Asphalt emulsion anchoring is not acceptable.
- F. Anti-Erosion Mulch (Used only for winter application): Provide clean, seed-free salt hay or threshed straw of wheat, rye, oats, or barley.

#### 2.4 MISCELLANEOUS LANDSCAPE MATERIALS

- A. Herbicide: "Round Up" or equal. No spraying shall be done without first submitting a spray program to the Owner's Representative for approval. After approval, application will only be permitted by licensed individuals.

#### 2.5 SATISFACTORY LAWNS

- A. Satisfactory Seeded Lawn: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.
- B. Satisfactory Sodded Lawn: At end of maintenance period, a healthy, well-rooted, even-colored, viable lawn has been established, free of weeds, open joints, bare areas, and surface irregularities.
- C. Satisfactory Plugged Lawn: At end of maintenance period, the required number of plugs has been established as well-rooted, viable patches of grass; and areas between plugs are free of weeds and other undesirable vegetation.
- D. Satisfactory Sprigged Lawn: At end of maintenance period, the required number of sprigs has been established as well-rooted, viable plants; and areas between sprigs are free of weeds and other undesirable vegetation.
- E. Reestablish lawns that do not comply with requirements and continue maintenance until lawns are satisfactory.

2.6 MAINTENANCE

- A. Mow grass at regular intervals to maintain at a maximum height of 2½ inches; three (3) mowings required. Do not cut more than 1/3 of grass blade at any one mowing.
- B. Neatly trim edges and hand clip where necessary.
- C. Immediately remove clippings after mowing and trimming.
- D. Water to prevent grass and soil from drying out.
- E. Roll surface to remove mirror depressions or irregularities.
- F. Control growth of weeds. Apply herbicides in accordance with manufacturer's instruction.
- G. Immediately reseed areas showing bare spots.
- H. Provide maintenance log detailing the dates which mowings occurred.

2.7 FINAL INSPECTION AND ACCEPTANCE OF LAWNS

- A. Notice, by the contractor, shall be given in writing as to when maintenance of the lawn areas by the contractor is to be discontinued. Maintenance shall cease in accordance with the time periods presented in these specifications, providing all lawn areas are properly established healthy and uniform, free of washouts, depressions, bare spots, weeds, and large off-color areas. Final inspection of seeded lawns shall follow and written approval given, by the Owner's representative, if acceptable. Any lawn area under this contract that is not in satisfactory condition, as determined by the Owner's Representative, shall be reworked as soon as conditions permit. All reworked lawn areas shall be maintained as previously specified in maintenance until final inspection and acceptance occurs. Contractor is responsible for furnishing and maintaining an established lawn in all areas designated on the plans for new lawn as well as areas of existing lawn (within and outside the limit of construction) disturbed by construction activities

END OF SECTION 32 90 00



SECTION 32 93 00

PLANTS AND PLANTING

1.1 DESCRIPTION OF WORK

- A. The work of this section consists of providing labor, materials, tools, equipment and services necessary to furnish and install all planting as indicated on the drawings and specified herein. The work generally includes:
  - 1. Plant bed preparation including soil supplements.
  - 2. The search, selection, transportation and planting of nursery plants and the establishment of plant beds and edging of beds.
  - 3. Protection, maintenance, guarantee and replacement of plant material and mulched beds.
  - 4. Installation of plant bed underdrains (if applicable).
  - 5. Planting mixture backfill at buildings.
  
- B. As a requirement of bidding, the contractor shall visit the site prior to submitting bid, contractor shall become familiar with the site and local conditions under which the work is to be performed and has correlated the Bidders personal observations with the requirements of the proposed drawing specifications.

1.2 SEQUENCING AND SCHEDULING

- A. Restore all existing lawn areas that have been disturbed by construction.
  
- B. Planting Time: Plant or install materials during normal planting seasons for each type of landscape work required. Correlate planting with specified maintenance periods to provide maintenance from date of substantial completion.
  - 1. General:
    - a. Dig deciduous material after the leaves fall or during the period just prior to leafing, weather permitting.
    - b. Dig needled evergreen material no sooner than after new growth hardens.
    - c. Dig broadleaf evergreen material in spring prior to development of new growth.
  
  - 2. Planting Dates:
    - a. Plant deciduous plants in the fall after the leaves fall and while the ground temperatures are above 45 degrees F. In the spring plant between the time the ground becomes workable and before new growth starts.
    - b. Plant needled evergreens between the time that the new growth has hardened and while the ground temperatures are above 45 degrees F (late summer/early fall) or prior to the development of new growth (spring).

- c. Plant broadleafed evergreens prior to the development of new growth (spring).
- d. Plant bulbs as soon as they become available in the fall and before November 15.

Coordinate with lawns: Plant trees, shrubs and bulbs prior to the planting of lawns.

## PART 2 - PRODUCTS

### 2.1 GENERAL PRODUCTS

- A. Topsoil as specified in Section 32 90 00 "Site Restoration."
- B. Peat Heat Humus as specified in Section 32 90 00 "Site Restoration."
- C. Organic matter as specified in Section 32 90 00 "Site Restoration."
- D. Mulch: Organic mulch free from deleterious materials and suitable for top dressing of trees, shrubs or plants and consisting of the following:
  - 1. Bark mulch (Premium Ground Bark) shall be produced to an approved size from dust to 1" with 50% over 1/2". Only bark mulch that has not been subjected to any conditions that would cause it to lose any of its value as mulch, and free from twigs, leaves, wood shavings, sawdust, toxic substances and foreign materials shall be used.
- E. Sand as specified in Section 32 90 00 "Site Restoration."
- F. Manure as specified in Section 32 90 00 "Site Restoration."
- G. Commercial Fertilizer as specified in Section 32 90 00 "Site Restoration."

### 2.2 PLANTING MIXTURE

- A. Before mixing, clean existing soil of roots, plants, sods, stones over 1" in size, clay lumps, and other extraneous materials harmful or toxic to plant growth.
- B. Planting mixture shall be three (3) parts by volume of topsoil to one (1) part by volume of peat humus.
- C. For pit and trench type backfill, mix planting mixture prior to backfilling, and stockpile at site.
- D. For planting beds mix planting mixture either prior to planting or apply on surface of topsoil and mix thoroughly to specified depth before planting.

**2.3 PLANTS**

- A. Quality: Provide trees, shrubs, and other plants of size, genus, species and variety shown and scheduled for landscape work and complying with recommendations and requirements of the current ANSI Z60.1 "American Standard for Nursery Stock", grown in zones 5 and 6.
- B. Deciduous Trees: Provide balled and burlapped (B&B) trees of height and caliper scheduled or shown and with branching configuration and rootball recommended by ANSI Z60.1 for type and species required. Provide single stem trees except where special forms are shown or listed. Plants must be locally grown.
- C. Deciduous Shrubs: Provide balled and burlapped (B&B) shrubs of the height or spread shown or listed and with not less than minimum number of canes and rootball required by ANSI Z60.1 for type and size of shrub required. Plants must be locally grown.
- D. Evergreens: Provide balled and burlapped (B&B) evergreens of sizes shown or listed. Dimensions indicate minimum spread for spreading and semi-spreading type evergreens and height for other types, such as globe, dwarf, cone, pyramidal, broad up-right, and columnar. Provide normal quality evergreens with well-balanced form complying with requirements for other size relationships to the primary dimension shown. Rootball to conform with ANSI Z60.1 Standards. Plants must be locally grown.
- E. Container grown evergreen shrubs will be acceptable upon written approval by the Owner's Representative, subject to specified limitations for container grown stock.
- F. Bulbs: Provide double nosed, DNII bulbs free of disease, fungus and soft spots.

**2.4 MISCELLANEOUS LANDSCAPE MATERIALS**

- A. Landscape Fabric: Water permeable filtration fabric of fiberglass or polypropylene fabric manufactured by Reemay, Inc. Submit sample for approval.
- B. Herbicide: Herbicide as specified in Section 329200 "Finish Grading & Seeding."
- C. Stakes and Guys: Staking and guying is a Contractor option, however trees must be straight and plumb at end of specified warranty period. Do not wrap trees.

**2.5 UNDERDRAIN**

- A. Corrugated Polyethylene Drainage Tubing 4": 'Hancor' perforated with filter sock, size and type as indicated on the drawings, manufactured by Hancor Inc., P.O. Box 1047 West Findlay, Ohio 45839, ph: 800-457-0616, or equal.
- B. Furnish drainage pipe complete with bends, reducers, adapters, couplings, collars, and joint materials.
- C. Filter Fabric: Typar Landscape Fabric style 3301, manufactured by Reemay, or equal.
- D. Porous Fill: See Section 312000, "Earth Moving."

**2.6 MAINTENANCE**

- A. Begin maintenance immediately after planting.
- B. Maintain trees, shrubs and other plants until final acceptance but in no case less than one year after substantial completion.
- C. Maintain trees, shrubs and other plants by pruning, cultivating, watering and weeding as required for healthy growth. Restore planting saucers. Reset trees and shrubs to proper grades or vertical position as required. Spray as required to keep trees and shrubs free of insects and disease.
  - 1. Weeding: Weed control shall be by mechanical means. Herbicide use is acceptable with Owner approval.
- D. At the end of the maintenance/guarantee period the Contractor shall remove all tree staking (installed by the Contractor's option) and related appurtenances and dispose of off site.

**2.7 PLANTING GUARANTEE AND REPLACEMENT**

- A. Guarantee: Plants are guaranteed for the entire maintenance period, one year after the date of substantial completion. Plants shall be alive and in satisfactory growth at the end of the guarantee period. Any plants required under this contract that is dead or not growing satisfactorily, as determined by the Owner's Representative, shall be removed by the Contractor within ten days of notice or the Owner will remove the plants and bill the Contractor accordingly. Replacement plants shall be planting during the next normal planting season, as soon as weather permits. All replacements shall be of the same kind and size as specified in the plant list. They shall be furnished and planted as specified under planting; the cost shall be borne by the Contractor except for possible replacements resulting from vandalism, or acts of neglect on the part of others.
- B. Contractor shall maintain a written log of all plants that had died, including location and date of plant that was determined to be dead, date of removal, and date of replanting. Logs shall be submitted to the Owner's Representative for approval prior to acceptance of replanted plants. Replanted plants shall not be accepted without written log.

**2.8 FINAL INSPECTION AND ACCEPTANCE OF PLANTING**

- A. At the end of the maintenance/guarantee period, the Owner's Representative, upon written request of the Contractor submitted at least ten (10) days prior to anticipated inspection date, will inspect the work to determine acceptance. The condition of the work will be noted and a determination made regarding any continued maintenance.
- B. After inspection, the Contractor shall be notified in writing by the Owner's Representative of acceptance of work, subject to guarantee, or, if there are any deficiencies, of the requirements for completion of the work. All work remaining to be done shall be subject to subsequent inspection before acceptance.

END OF SECTION 32 93 00



SECTION 321216 - ASPHALT PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Hot-mix asphalt paving.
2. Hot-mix asphalt overlay.
3. Cold milling of existing asphalt pavement.

B. Related Requirements:

1. Section 312000 "Earth Moving" for subgrade preparation, fill material, separation geotextiles, unbound-aggregate subbase and base courses, and aggregate pavement shoulders.
2. Section 321313 "Concrete Paving" for concrete pavement and for separate concrete curbs, gutters, and driveway aprons.

1.2 ACTION SUBMITTALS

- A. Hot-mix asphalt designs.

1.3 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of West Virginia Department of Transportation, Division of Highways (WVDOH) for asphalt paving work.

PART 2 - PRODUCTS

2.1 AGGREGATES

- A. Coarse Aggregate: ASTM D692, sound; angular crushed stone or crushed gravel.
- B. Fine Aggregate: ASTM D1073, sharp-edged natural sand or sand prepared from stone or gravel.

2.2 ASPHALT MATERIALS

- A. Asphalt Binder: ASTM D6373 binder designation PG 64-22.

## Pierpont CTC Clarksburg Campus Improvements

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- B. Tack Coat: ASTM D977 emulsified asphalt, slow setting, diluted in water, of suitable grade and consistency for application.

### 2.3 AUXILIARY MATERIALS

- A. Recycled Materials for Hot-Mix Asphalt Mixes: Reclaimed asphalt pavement and reclaimed, unbound-aggregate base material from sources and gradations that have performed satisfactorily in previous installations, equal to performance of required hot-mix asphalt paving produced from all new materials.

### 2.4 MIXES

- A. Hot-Mix Asphalt: Dense-graded, hot-laid, hot-mix asphalt plant mixes approved by WVDOH complying with the following requirements:
  - 1. Base Course: WVDOH Item 401001-020, Marshall Asphalt Base Course, Stone or Gravel, Type I.
  - 2. Binder Course: WVDOH Item 401001-023, Marshall Asphalt Base Course, Stone or Gravel, Type II.
  - 3. Surface Course: WVDOH Item 401002-020, Marshall Asphalt Wearing Course, Stone or Gravel, Type I.

## PART 3 - EXECUTION

### 3.1 COLD MILLING

- A. Clean existing pavement surface of loose and deleterious material immediately before cold milling. Remove existing asphalt pavement by cold milling to grades and cross sections indicated.
  - 1. Mill to a depth of 1-1/2 inches.
  - 2. Patch surface depressions deeper than 1 inch after milling, before wearing course is laid.

### 3.2 SURFACE PREPARATION

- A. Ensure that prepared subgrade is ready to receive paving. Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces.

### 3.3 HOT-MIX ASPHALT PLACEMENT

- A. Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand in areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.

1. Place hot-mix asphalt courses in number of lifts and thicknesses indicated in Drawings.
  2. Spread mix at a minimum temperature of 250 deg F.
  3. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- B. Place paving in consecutive strips not less than 10 feet wide unless infill edge strips of a lesser width are required.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

### 3.4 JOINTS

- A. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of hot-mix asphalt course.
1. Clean contact surfaces and apply tack coat to joints.
  2. Offset longitudinal joints, in successive courses, a minimum of 6 inches.
  3. Offset transverse joints, in successive courses, a minimum of 24 inches.
  4. Construct transverse joints at each point where paver ends a day's work and resumes work at a subsequent time. Construct these joints using either "bulkhead" or "papered" method in accordance with AI MS-22, for both "Ending a Lane" and "Resumption of Paving Operations."

### 3.5 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot hand tampers or with vibratory-plate compactors in areas inaccessible to rollers.
1. Complete compaction before mix temperature cools to 185 deg F.
- B. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
1. Average Density, Rice Test Method: 92 percent of reference maximum theoretical density in accordance with ASTM D2041, but not less than 90 percent or greater than 96 percent.
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.

## Pierpont CTC Clarksburg Campus Improvements

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- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- F. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- G. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

### 3.6 INSTALLATION TOLERANCES

- A. Pavement Thickness: Compact each course to produce thickness indicated within the following tolerances:
  - 1. Base Course and Binder Course: Plus or minus 1/2 inch.
  - 2. Surface Course: Plus 1/4 inch, no minus.
- B. Pavement Surface Smoothness: Compact each course to produce surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:
  - 1. Base Course and Binder Course: 1/4 inch.
  - 2. Surface Course: 1/8 inch.
  - 3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.

### 3.7 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Replace and compact hot-mix asphalt where core tests were taken.
- C. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

### 3.8 WASTE HANDLING

- A. General: Dispose of asphalt-paving waste in accordance with Section 311000 "Site Clearing".

END OF SECTION 321216

SECTION 321313 - CONCRETE PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Walks.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

- B. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

1.3 QUALITY ASSURANCE

- A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C94 requirements for production facilities and equipment.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

- A. ACI Publications: Comply with ACI 301 unless otherwise indicated.

2.2 STEEL REINFORCEMENT

- A. Plain-Steel Welded-Wire Reinforcement: ASTM A1064, fabricated from as-drawn steel wire into flat sheets.

- B. Deformed-Steel Welded-Wire Reinforcement: ASTM A1064, flat sheet.

- C. Reinforcing Bars: ASTM A615, Grade 60; deformed.

- D. Joint Dowel Bars: ASTM A615, Grade 60 plain-steel bars. Cut bars true to length with ends square and free of burrs.

- E. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded-wire reinforcement, and dowels in place.

Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified.

## 2.3 CONCRETE MATERIALS

- A. Cementitious Materials: Use the following cementitious materials, of same type, brand, and source throughout Project:
  - 1. Portland Cement: ASTM C150, gray portland cement Type IL.
  - 2. Fly Ash: ASTM C618, Class C or Class F.
- B. Normal-Weight Aggregates: ASTM C33, Class 4M, uniformly graded. Provide aggregates from a single source.
- C. Air-Entraining Admixture: ASTM C260.
- D. Chemical Admixtures: Admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.
- E. Water: Potable and complying with ASTM C94.

## 2.4 FIBER REINFORCEMENT

- A. Synthetic Fiber, Monofilament Fibers: Monofilament polypropylene fibers engineered and designed for use in decorative concrete paving, complying with ASTM C1116, Type III, 1/2 to 1-1/2 inches long.
- B. Synthetic Fiber, Fibrillated Fibers: Fibrillated polypropylene fibers engineered and designed for use in decorative concrete paving, complying with ASTM C1116, Type III, 1/2 to 1-1/2 inches long.

## 2.5 CURING MATERIALS

- A. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. dry.
- B. Moisture-Retaining Cover: ASTM C171, polyethylene film or white burlap-polyethylene sheet.
- C. Water: Potable.
- D. Evaporation Retarder: Waterborne, monomolecular, film forming, manufactured for application to fresh concrete.
- E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C309, Type 1, Class B, dissipating.

2.6 RELATED MATERIALS

- A. Joint Fillers: ASTM D8139, semirigid, closed-cell polypropylene foam in preformed strips.
- B. Slip-Resistive Aggregate Finish: Factory-graded, packaged, rustproof, nonglazing, abrasive aggregate of fused aluminum-oxide granules or crushed emery aggregate containing not less than 50 percent aluminum oxide and not less than 20 percent ferric oxide; unaffected by freezing, moisture, and cleaning materials.

2.7 CONCRETE MIXTURES

- A. Prepare design mixtures, proportioned according to ACI 301, for each type and strength of normal-weight concrete, and as determined by either laboratory trial mixtures or field experience.
- B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:
  - 1. Fly Ash or Pozzolan: 25 percent.
- C. Add air-entraining admixture at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content as follows:
  - 1. Air Content: 6 percent plus or minus 1-1/2 percent.
- D. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.
- E. Synthetic Fiber: Uniformly disperse in concrete mixture at manufacturer's recommended rate, but not less than 1.0 lb/cu. yd.
- F. Concrete Mixtures: Normal-weight concrete.
  - 1. Compressive Strength (28 Days): 4000 psi.
  - 2. Maximum W/C Ratio at Point of Placement: 0.50.
  - 3. Slump Limit: 4 inches, plus or minus 1 inch.

2.8 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C94 and ASTM C1116. Furnish batch certificates for each batch discharged and used in the Work.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Proof-roll prepared subbase surface below concrete paving to identify soft pockets and areas of excess yielding.

3.2 PREPARATION

- A. Remove loose material from compacted subbase surface immediately before placing concrete.

3.3 EDGE FORMS AND SCREED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.4 INSTALLATION OF STEEL REINFORCEMENT

- A. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

3.5 JOINTS

- A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.
- B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.
- C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.
- D. Contraction / Control Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction / control joints for a depth equal to at least one-fourth of the concrete thickness.
- E. Edging: After initial floating, tool edges of paving and joints in concrete with an edging tool to a 3/8-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate edging-tool marks on concrete surfaces.

**3.6 CONCRETE PLACEMENT**

- A. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.
- B. Comply with ACI 301 requirements for measuring, mixing, transporting, and placing concrete.
- C. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- D. Screed paving surface with a straightedge and strike off.
- E. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleedwater appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.

**3.7 FLOAT FINISHING**

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleedwater sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
  - 1. Medium-to-Fine-Textured Broom Finish: Draw a soft-bristle broom across float-finished concrete surface, perpendicular to line of traffic, to provide a uniform, fine-line texture.

**3.8 CONCRETE PROTECTION AND CURING**

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound, or a combination of these.

3.9 PAVING TOLERANCES

A. Comply with tolerances in ACI 117 and as follows:

1. Elevation: 1/2 inch
2. Thickness: Plus 3/8 inch, minus 1/4 inch.
3. Surface: Gap below 10-feet-long; unlevelled straightedge not to exceed 1/2 inch.
4. Joint Spacing: 2 inches.
5. Contraction Joint Depth: Plus 1/4 inch, no minus.
6. Joint Width: Plus 1/8 inch, no minus.

3.10 REPAIR AND PROTECTION

- A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Architect.
- B. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.
- C. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 321313

SECTION 321723 - PAVEMENT MARKINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Painted markings applied to asphalt paving.
2. Painted markings applied to concrete surfaces.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data:

1. Pavement-marking paint, latex.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Accessibility Standard: Comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design".

2.2 PAVEMENT-MARKING PAINT

- A. Pavement-Marking Paint, Latex: MPI #97, latex traffic-marking paint.

1. Color: Blue.

PART 3 - EXECUTION

3.1 PAVEMENT MARKING

- A. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Architect.

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- B. Allow asphalt paving or concrete surfaces to age for a minimum of seven (7) days before starting pavement marking.
- C. Sweep and clean surface to eliminate loose material and dust.
- D. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils.
  - 1. Apply graphic symbols and lettering with paint-resistant, die-cut stencils, firmly secured to asphalt paving or concrete surface.

END OF SECTION 321723

SECTION 321726 - TACTILE WARNING SURFACING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Cast-in-place detectable warning tiles.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 TACTILE WARNING SURFACING, GENERAL

- A. Accessibility Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities for tactile warning surfaces.

1. For tactile warning surfaces composed of multiple units, provide units that when installed provide consistent side-to-side and end-to-end dome spacing that complies with requirements.

2.2 DETECTABLE WARNING TILES

- A. Cast-in-Place Detectable Warning Tiles: Accessible truncated-dome detectable warning tiles with replaceable surface configured for setting flush in new concrete walkway surfaces, with slip-resistant surface treatment on domes and field of tile.

1. Material: Molded glass- and carbon-fiber-reinforced polyester.
2. Color: As selected by Architect from manufacturer's full line.
3. Shapes and Sizes: Manufacturer's standard compliant rectangular panel.
4. Dome Spacing and Configuration: Manufacturer's standard compliant spacing, in manufacturer's standard pattern.
5. Mounting:
  - a. Detectable warning tile set into formed recess in concrete and adhered with adhesive.

2.3 ACCESSORIES

- A. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of tactile warning surfaces, noncorrosive and compatible with each material joined, and complying with the following:
  - 1. Furnish Type 316 stainless-steel fasteners for exterior use.
  - 2. Fastener Heads: For nonstructural connections, use flathead or oval countersunk screws and bolts with tamper-resistant heads, colored to match tile.
- B. Adhesive: As recommended by manufacturer for adhering tactile warning surfacing unit to pavement.
- C. Sealant: As recommended by manufacturer for sealing perimeter of tactile warning surfacing unit.

PART 3 - EXECUTION

3.1 INSTALLATION OF TACTILE WARNING SURFACING

- A. General: Prepare substrate and install tactile warning surfacing according to manufacturer's written instructions unless otherwise indicated.
- B. Place tactile warning surfacing units in dimensions and orientation indicated. Comply with location requirements of AASHTO MP 12.
- C. Cast-in-Place Detectable Warning Tiles: Set each detectable warning tile accurately and firmly in place and completely seat tile back and embedments in wet concrete by tamping or vibrating. Set surface of tile flush with surrounding concrete and adjacent tiles. Remove concrete from tile surfaces and clean using methods recommended in writing by manufacturer.
- D. Protect tactile warning surfacing from damage and maintain free of stains, discoloration, dirt, and other foreign material.

END OF SECTION 321726

SECTION 323113 - CHAIN LINK FENCES AND GATES

1.1 SUMMARY

A. Section Includes:

1. Chain-link fences.
2. Swing gates.
3. Privacy slats.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at location to be determined.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For each type of fence and gate assembly.
1. Include plans, elevations, sections, details, and attachments to other work.
- C. Samples: For each exposed product and for each color and texture specified.
- D. Delegated-Design Submittal: For structural performance of chain-link fence and gate frameworks, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.4 INFORMATIONAL SUBMITTALS

- A. Product certificates.
- B. Product test reports.
- C. Sample warranty.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Chain-link fence and gate frameworks shall withstand the design wind loads and stresses for fence height(s) and under exposure conditions indicated according to ASCE/SEI 7:

- a. Minimum Post Size: Determine according to ASTM F1043 for post spacing not to exceed 10 feet for Material Group IA, ASTM F1043, Schedule 40 steel pipe.
- b. Minimum Post Size and Maximum Spacing: Determine according to CLFMI WLG 2445, based on mesh size and pattern specified.

## 2.2 CHAIN-LINK FENCE FABRIC

- A. General: Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage knuckle or twist according to "CLFMI Product Manual" and requirements indicated below:
1. Fabric Height: As indicated on Drawings.
  2. Steel Wire for Fabric: Wire diameter of 0.192 inch.
    - a. Zinc-Coated Fabric: ASTM A392, Type II, Class 2, 2.0 oz./sq. ft. (610 g/sq. m) with zinc coating applied before weaving.
    - b. Polymer-Coated Fabric: ASTM F668, Class 2b over Zn-5-Al-MM-alloy-coated steel wire.
      - 1) Color: Black, according to ASTM F934.
    - c. Coat selvage ends of metallic-coated fabric before the weaving process with manufacturer's standard clear protective coating.
  3. Selvage: Twisted top and knuckled bottom.

## 2.3 FENCE FRAMEWORK

- A. Posts and Rails: ASTM F1043 for framework, including rails, braces, and line; terminal; and corner posts. Provide members with minimum dimensions and wall thickness according to ASTM F1043 or ASTM F1083 based on the following:
1. Fence Height: 96 inches.
  2. Light-Industrial-Strength Material: Group IC-L, round steel pipe, electric-resistance-welded pipe.
    - a. Line Post: 2.375 inches in diameter
    - b. End, Corner, and Pull Posts: 2.875 inches.
  3. Heavy-Industrial-Strength Material: [Group IC, round steel pipe, electric-resistance-welded pipe]
    - a. Line Post: 2.375 inches in diameter
    - b. End, Corner, and Pull Posts: 2.875 inches in diameter
  4. Horizontal Framework Members: Intermediate, top, and bottom rails according to ASTM F1043.
  5. Metallic Coating for Steel Framework:

- a. Type C, Zn-5-Al-MM alloy coating.
- 6. Polymer coating over metallic coating.
  - a. Color: Black, according to ASTM F934.

## 2.4 SWING GATES

- A. General: ASTM F900 for gate posts and single and double swing gate types.
  - 1. Gate Leaf Width: As indicated.
  - 2. Framework Member Sizes and Strength: Based on gate fabric height of more than 72 inches.
- B. Pipe and Tubing:
  - 1. Zinc-Coated Steel: ASTM F1043 and ASTM F1083; protective coating and finish to match fence framework.
  - 2. Gate Posts: Round tubular steel.
  - 3. Gate Frames and Bracing: Round tubular steel.
- C. Frame Corner Construction: assembled with corner fittings.
- D. Extended Gate Posts and Frame Members: Fabricate gate posts and frame end members to extend 12 inches above top of chain-link fabric at both ends of gate frame to attach barbed wire assemblies.
- E. Hardware:
  - 1. Hinges: 360-degree inward and outward swing.
  - 2. Latch: Permitting operation from both sides of gate with provision for padlocking accessible from both sides of gate.
  - 3. Lock: Manufacturer's standard internal device.
  - 4. Closer: Manufacturer's standard

## 2.5 FITTINGS

- A. Provide fittings according to ASTM F626.
- B. Barbed Wire Arms: Pressed steel or cast iron, with clips, slots, or other means for attaching strands of barbed wire, and means for attaching to posts , integral with post cap, for each post unless otherwise indicated, and as follows:
  - 1. Provide line posts with arms that accommodate top rail or tension wire.
  - 2. Provide corner arms at fence corner posts unless extended posts are indicated.
  - 3. Single-Arm Type: Type I, slanted arm.
- C. Finish:

1. Metallic Coating for Pressed Steel or Cast Iron: Not less than 1.2 oz./sq. ft. of zinc.
  - a. Polymer coating over metallic coating.

## 2.6 PRIVACY SLATS

- A. Fiber-Glass-Reinforced Plastic Slats: UV-light-stabilized fiber-glass-reinforced plastic, not less than 0.06 inch (1.5 mm) thick, sized to fit mesh specified for direction indicated.
- B. Color: Black

## 2.7 BARBED WIRE

- A. Polymer-Coated, Galvanized-Steel Barbed Wire: ASTM F1665, two-strand barbed wire, 0.080-inch- (2.03-mm-) diameter line wire with 0.080-inch- (2.03-mm-) diameter, four-point, round galvanized-steel] barbs spaced not more than 5 inches (127 mm) o.c.:
  1. Polymer Coating: Class 2b over Zn-5-Al-MM-alloy-coated steel wire.
    - a. Color: Match chain-link fabric according to ASTM F934.

## 2.8 GROUT AND ANCHORING CEMENT

- A. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M. Provide grout, recommended in writing by manufacturer, for exterior applications.
- B. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound. Provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating, and that is recommended in writing by manufacturer for exterior applications.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Do not begin installation before final grading is completed unless otherwise permitted by Architect.

### 3.2 PREPARATION

- A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

### 3.3 CHAIN-LINK FENCE INSTALLATION

- A. Install chain-link fencing according to ASTM F567 and more stringent requirements specified.
- B. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed soil.
- C. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.
  - 1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
  - 2. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
    - a. Concealed Concrete: Place top of concrete 2 inches below grade to allow covering with surface material.
- D. Terminal Posts: Install terminal end, corner, and gate posts according to ASTM F567 and terminal pull posts at changes in horizontal or vertical alignment of 15 degrees or more . For runs exceeding 500 feet, space pull posts an equal distance between corner or end posts.
- E. Line Posts: Space line posts uniformly at 96 inches o.c.
- F. Chain-Link Fabric: Apply fabric to [outside] of enclosing framework. Leave 2-inch bottom clearance between finish grade or surface and bottom selvage unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released.
- G. Privacy Slats: Install slats in direction indicated, securely locked in place.
  - 1. Diagonally for privacy factor of 80 to 85.
- H. Barbed Wire: Install barbed wire uniformly spaced, angled toward security side of fence. Pull wire taut, install securely to extension arms, and secure to end post or terminal arms.

### 3.4 ADJUSTING

- A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

- B. Lubricate hardware and other moving parts.

END OF SECTION 323113

## SECTION 329113 - SOIL PREPARATION

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section includes planting soils specified by composition of the mixes.
- B. Related Requirements:
  - 1. Section 311000 "Site Clearing" for topsoil stripping and stockpiling.

#### 1.2 DEFINITIONS

- A. Duff Layer: A surface layer of soil, typical of forested areas, that is composed of mostly decayed leaves, twigs, and detritus.
- B. Imported Soil: Soil that is transported to Project site for use.
- C. Manufactured Soil: Soil produced by blending soils, sand, stabilized organic soil amendments, and other materials to produce planting soil.
- D. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified as specified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- E. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- F. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.
- G. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil"; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- H. USCC: U.S. Composting Council.

### PART 2 - PRODUCTS

#### 2.1 PLANTING SOILS SPECIFIED BY COMPOSITION

- A. Planting-Soil: Existing, on-site surface soil, with the duff layer, if any, modified to produce viable planting soil. Blend existing, on-site surface soil with the following soil amendments and fertilizers in the following quantities to produce planting soil:

1. Weight of Lime: in amounts recommended in soil reports from a qualified testing agency.
2. Weight of Superphosphate: in amounts recommended in soil reports from a qualified testing agency.
3. Weight of Commercial Fertilizer: in amounts recommended in soil reports from a qualified testing agency.

## 2.2 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:
  1. Class: T, with a minimum of 99 percent passing through a No. 8 sieve and a minimum of 75 percent passing through a No. 60 sieve.
  2. Form: Provide lime in form recommended in soil reports from a qualified testing agency.

## 2.3 FERTILIZERS

- A. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- B. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
  1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified testing agency.

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. Place planting soil and fertilizers according to requirements in other Specification Sections.
- B. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in planting soil.
- C. Unacceptable Materials: Clean soil of concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.

- D. Unsuitable Materials: Clean soil to contain a maximum of 10 percent by dry weight of stones, roots, plants, sod, clay lumps, and pockets of coarse sand.

### 3.2 PLACING AND MIXING PLANTING SOIL OVER EXPOSED SUBGRADE

- A. General: Apply and mix unamended soil with amendments on-site to produce required planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.
- B. Mixing: Spread unamended soil to total depth of 4 inches, but not less than required to meet finish grades after mixing with amendments and natural settlement. Do not spread if soil or subgrade is frozen, muddy, or excessively wet.
  - 1. Amendments: Apply soil amendments and fertilizer, if required, evenly on surface, and thoroughly blend them with unamended soil to produce planting soil.
    - a. Mix lime and sulfur with dry soil before mixing fertilizer.
    - b. Mix fertilizer with planting soil no more than seven days before planting.
  - 2. Lifts: Apply and mix unamended soil and amendments in lifts not exceeding 4 inches.
- C. Compaction: Compact each blended lift of planting soil to 75 to 82 percent of maximum Standard Proctor density according to ASTM D698 and tested in-place.
- D. Finish Grading: Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

END OF SECTION 329113



SECTION 334200 - STORMWATER CONVEYANCE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
  - 1. PE pipe and fittings.
  - 2. PVC pipe and fittings.
  - 3. Concrete pipe and fittings.
  - 4. Non-pressure transition couplings.
  - 5. Cleanouts.
  - 6. Encasement for piping.
  - 7. Manholes.
  - 8. Stormwater inlets.
  - 9. Stormwater detention structures.
  - 10. Pipe outlets.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings:
  - 1. Manholes: Include plans, elevations, sections, details, frames, and covers.
  - 2. Stormwater inlets. Include plans, elevations, sections, details, frames, covers, and grates.
  - 3. Stormwater Detention Structures: Include plans, elevations, sections, details, frames, covers, design calculations, and concrete design-mix reports.

1.3 INFORMATIONAL SUBMITTALS

- A. Product Certificates: For each type of pipe and fitting.
- B. Field quality-control reports.

1.4 QUALITY ASSURANCE

- A. Piping materials shall bear label, stamp, or other markings of specified testing agency.

PART 2 - PRODUCTS

2.1 CORRUGATED-PE PIPE AND FITTINGS

- A. Corrugated-PE Drainage Pipe and Fittings NPS 3 to NPS 10: AASHTO M 252, Type S, with smooth waterway for coupling joints.
- B. Corrugated-PE Pipe and Fittings NPS 12 to NPS 60: AASHTO M 294, Type S, with smooth waterway for coupling joints.
- C. Corrugated-PE Silttight Couplings: PE sleeve with ASTM D 1056, Type 2, Class A, Grade 2 gasket material that mates with pipe and fittings.
- D. Corrugated-PE Soiltight Couplings: AASHTO M 294, corrugated, matching pipe and fittings.

2.2 PVC PIPE AND FITTINGS

- A. NSF Marking: Comply with NSF 14, "Plastics Piping Systems Components and Related Materials," for plastic piping components. Include marking with "NSF-drain" for plastic storm drain and "NSF-sewer" for plastic storm sewer piping.
- B. PVC Corrugated Sewer Piping:
  - 1. Pipe: ASTM F 949, PVC, corrugated pipe with bell-and-spigot ends for gasketed joints.
  - 2. Fittings: ASTM F 949, PVC molded or fabricated, socket type.
  - 3. Gaskets: ASTM F 477, elastomeric seals.
- C. Adhesive Primer: ASTM F 656.

2.3 CONCRETE PIPE AND FITTINGS

- A. Reinforced-Concrete Sewer Pipe and Fittings: ASTM C 76.
  - 1. Bell-and-spigot ends and gasketed joints with ASTM C 443 rubber gaskets Retain first subparagraph below only for NPS 60 to NPS 144 (DN 1500 to DN 3600).
  - 2. Class III, Wall A.
  - 3. Class IV, Wall A.

2.4 NONPRESSURE TRANSITION COUPLINGS

- A. Comply with ASTM C 1173, elastomeric, sleeve-type, reducing or transition coupling, for joining underground non-pressure piping. Include ends of same sizes as piping to be joined, and corrosion-resistant-metal tension band and tightening mechanism on each end.

B. Sleeve Materials:

1. For Concrete Pipes: ASTM C 443, rubber.
2. For Plastic Pipes: ASTM F 477, elastomeric seal or ASTM D 5926, PVC.
3. For Dissimilar Pipes: ASTM D 5926, PVC or other material compatible with pipe materials being joined.

2.5 CLEANOUTS

A. PVC Cleanouts:

1. Description: PVC body with PVC threaded plug. Include PVC sewer pipe fitting and riser to cleanout of same material as sewer piping.

2.6 MANHOLES

A. Standard Precast Concrete Manholes:

1. Description: ASTM C 478, precast, reinforced concrete, of depth indicated, with provision for sealant joints.
2. Diameter: 48 inches minimum unless otherwise indicated.
3. Ballast: Increase thickness of precast concrete sections or add concrete to base section as required to prevent flotation.
4. Base Section: 9-inch minimum thickness for floor slab and 5-inch minimum thickness for walls and base riser section, and separate base slab or base section with integral floor.
5. Riser Sections: 5-inch minimum thickness, and lengths to provide depth indicated.
6. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type is indicated, and top of cone of size that matches grade rings.
7. Joint Sealant: ASTM C 990, bitumen or butyl rubber.
8. Resilient Pipe Connectors: ASTM C 923, cast or fitted into manhole walls, for each pipe connection.
9. Steps: ASTM A 615/A 615M, deformed, 1/2-inch steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12-inch intervals. Omit steps if total depth from floor of manhole to finished grade is less than 48 inches.
10. Grade Rings: Reinforced-concrete rings, 6- to 9-inch total thickness, to match diameter of manhole frame and cover, and height as required to adjust manhole frame and cover to indicated elevation and slope.

2.7 CONCRETE

A. General: Cast-in-place concrete in accordance with ACI 318, ACI 350, and the following:

1. Cement: ASTM C 150/C 150M, Type II.
2. Fine Aggregate: ASTM C 33/C 33M, sand.

3. Coarse Aggregate: ASTM C 33/C 33M, crushed gravel.
  4. Water: Potable.
- B. Portland Cement Design Mix: 5000 psi minimum, with 0.45 maximum water/cementitious materials ratio.
1. Reinforcing Fabric: ASTM A 1064/A 1064M, steel, welded wire fabric, plain.
  2. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (420 MPa) deformed steel.
- C. Manhole Channels and Benches: Factory or field formed from concrete. Portland cement design mix, 4000 psi minimum, with 0.45 maximum water/cementitious materials ratio. Include channels and benches in manholes.
1. Channels: Concrete invert, formed to same width as connected piping, with height of vertical sides to 1/2 of pipe diameter. Form curved channels with smooth, uniform radius and slope.
    - a. Invert Slope: 6.25 percent through manhole for incoming and outgoing pipes of the same diameter (minimum of 0.25' drop from lowest pipe invert in to invert out.) Match crowns of incoming and outgoing pipes of differing diameters.
  2. Benches: Concrete, sloped to drain into channel.
    - a. Slope: 25 percent.
- D. Ballast and Pipe Supports: Portland cement design mix, 3000 psi minimum, with 0.58 maximum water/cementitious materials ratio.
1. Reinforcing Fabric: ASTM A 1064/A 1064M, steel, welded wire fabric, plain.
  2. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (420 MPa) deformed steel.

## 2.8 POLYMER-CONCRETE, CHANNEL DRAINAGE SYSTEMS

- A. Narrow, Sloped-Invert, Polymer-Concrete Channel Drainage Systems
1. Description: Modular system of channel sections, grates, and appurtenances; designed so grates fit into channel recesses without rocking or rattling.
  2. Channel Sections: Narrow, interlocking-joint, sloped-invert, polymer-concrete modular units with end caps.
    - a. Include rounded bottom, with built-in invert slope of 0.6 percent and with outlets in number, sizes, and locations indicated.
    - b. Include extension sections necessary for required depth.
    - c. Dimensions: 4-inch inside width. Include number of units required to form total lengths indicated.
    - d. Frame: Gray-iron.
  3. Grates: Manufacturer's designation "heavy duty," with slots or perforations, and of width and thickness that fit recesses in channel sections.

- a. Material: Gray iron.
    - 1) Locking Mechanism: Not required.
  - 4. Covers: Solid gray iron, of width and thickness that fit recesses in channel sections, and of lengths indicated.
  - 5. Supports, Anchors, and Setting Devices: Manufacturer's standard unless otherwise indicated.
  - 6. Channel-Section Joining and Fastening Materials: As recommended by system manufacturer.
- B. Wide, Level-Invert, Polymer-Concrete Channel Drainage Systems
- 1. Description: Modular system of channel sections, grates, and appurtenances; designed so grates fit into channel recesses without rocking or rattling.
  - 2. Channel Sections: Wide, interlocking-joint, precast, polymer-concrete modular units with end caps.
    - a. Include flat or rounded bottom, with level invert and with outlets in number, sizes, and locations indicated.
    - b. Dimensions: 8-inch inside width and 13-3/4 inches deep. Include number of units required to form total lengths indicated.
      - 1) Frame: Gray iron.
  - 3. Grates: Manufacturer's designation "heavy duty," with slots or perforations, and of width and thickness that fit recesses in channel sections.
    - a. Material: Gray iron.
    - b. Locking Mechanism: Not required.
  - 4. Covers: Solid gray iron, of width and thickness that fit recesses in channel sections, and of lengths indicated.
  - 5. Supports, Anchors, and Setting Devices: Manufacturer's standard unless otherwise indicated.
  - 6. Channel-Section Joining and Fastening Materials: As recommended by system manufacturer.

## 2.9 CATCH BASINS

### A. Standard Precast Concrete Catch Basins:

- 1. Consistent with WVDOH.
- 2. Description: ASTM C 478, precast, reinforced concrete, of depth indicated, with provision for sealant joints.
- 3. Base Section: 8-inch minimum thickness for floor slab and 8-inch minimum thickness for walls and base riser section, and separate base slab or base section with integral floor.
- 4. Riser Sections: 8-inch minimum thickness and lengths to provide depth indicated.

5. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type is indicated.
6. Joint Sealant: ASTM C 990, bitumen or butyl rubber.
7. Adjusting Rings: Interlocking rings with level or sloped edge in thickness and shape matching catch basin frame and grate. Include sealant recommended by ring manufacturer.
8. Grade Rings: Include two or three reinforced-concrete rings, of 6- to 9-inch total thickness, that match diameter frame and grate.
9. Steps: ASTM A 615/A 615M, deformed, 1/2-inch steel reinforcing rods encased in ASTM D 4101, PP, wide enough to allow worker to place both feet on one step and designed to prevent lateral slippage off step. Cast or anchor steps into sidewalls at 12-inch intervals. Omit steps if total depth from floor of catch basin to finished grade is less than 48-inches.
10. Pipe Connectors: ASTM C 923, resilient, of size required, for each pipe connecting to base section.

B. Frames and Grates: ASTM A 536, Grade 60-40-18, ductile iron designed for A-16 (AASHTO HS20-44), structural loading. Include flat grate with small square or short-slotted drainage openings.

1. As per WVDOH, bicycle and pedestrian safe grates.
2. Size: as indicated on plans based on box dimensions.
3. Grate Free Area: Approximately 50 percent unless otherwise indicated.

C. Frames and Grates: ASTM A 536, Grade 60-40-18, ductile iron designed for A-16 (AASHTO HS20-44), structural loading. Include 24-inch ID by 7- to 9-inch riser with 4-inch- ) minimum width flange, and 26-inch diameter flat grate with small square or short-slotted drainage openings.

1. Grate Free Area: Approximately 50 percent unless otherwise indicated.

## 2.10 STORMWATER INLETS

A. Curb Inlets: Made with vertical curb opening[, of materials and dimensions in accordance with WisDOT standards].

B. Gutter Inlets: Made with horizontal gutter opening[, of materials and dimensions in accordance with WisDOT standards. Include heavy-duty frames and grates.

C. Combination Inlets: Made with vertical curb and horizontal gutter openings[, of materials and dimensions in accordance with WVDOT standards. Include heavy-duty frames and grates.

D. Frames and Grates: Heavy duty, in accordance WVDOT standards.

## 2.11 PIPE OUTLETS

A. Head Walls: Cast-in-place reinforced concrete, with apron and tapered sides.

- B. Riprap Basins: Broken, irregularly sized and shaped, graded stone in accordance with NSSGA's "Quarried Stone for Erosion and Sediment Control."
  - 1. Average Size: NSSGA No. R-3, screen opening 2 inches.
  - 2. Average Size: NSSGA No. R-4, screen opening 3 inches.
  - 3. Average Size: NSSGA No. R-5, screen opening 5 inches.
- C. Filter Stone: In accordance with NSSGA's "Quarried Stone for Erosion and Sediment Control," No. FS-2, No. 4 screen opening, average-size graded stone.
- D. Energy Dissipaters: In accordance with NSSGA's "Quarried Stone for Erosion and Sediment Control," No. A-1, 3-ton average weight armor stone, unless otherwise indicated.

### PART 3 - EXECUTION

#### 3.1 EARTHWORK

- A. Excavation, trenching, and backfilling are specified in Section 312000 "Earth Moving."

#### 3.2 PIPING INSTALLATION

- A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take into account design considerations. Install piping as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.
- B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings in accordance with manufacturer's written instructions for use of lubricants, cements, and other installation requirements.
- C. Install manholes for changes in direction unless fittings are indicated. Use fittings for branch connections unless direct tap into existing sewer is indicated.
- D. Install proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited.
- E. When installing pipe under streets or other obstructions that cannot be disturbed, use pipe-jacking process of microtunneling.
- F. Install gravity-flow, non-pressure drainage piping in accordance with the following:
  - 1. Install PE corrugated sewer piping in accordance with ASTM D 2321.
  - 2. Install PVC sewer piping in accordance with ASTM D 2321 and ASTM F 1668.
  - 3. Install reinforced-concrete sewer piping in accordance with ASTM C 1479 and ACPA's "Concrete Pipe Installation Manual."

**3.3 PIPE JOINT CONSTRUCTION**

- A. Join gravity-flow, non-pressure drainage piping in accordance with the following:
  - 1. Join corrugated-PE piping in accordance with ASTM D 3212 for push-on joints.
  - 2. Join PVC corrugated sewer piping in accordance with ASTM D 2321 for elastomeric-seal joints.
  - 3. Join reinforced-concrete sewer piping in accordance with ACPA's "Concrete Pipe Installation Manual" for rubber-gasketed joints.
  - 4. Join dissimilar pipe materials with non-pressure-type flexible couplings.

**3.4 MANHOLE INSTALLATION**

- A. General: Install manholes, complete with appurtenances and accessories indicated.
- B. Install precast concrete manhole sections with sealants in accordance with ASTM C 891.
- C. Where specific manhole construction is not indicated, follow manhole manufacturer's written instructions.
- D. Set tops of frames and covers flush with finished surface of manholes that occur in pavements. Set tops 3 inches above finished surface elsewhere unless otherwise indicated.

**3.5 CATCH BASIN INSTALLATION**

- A. Construct catch basins to sizes and shapes indicated.
- B. Set frames and grates to elevations indicated.

**3.6 STORMWATER INLET AND OUTLET INSTALLATION**

- A. Construct inlet head walls, aprons, and sides of reinforced concrete, as indicated.
- B. Construct riprap of broken stone, as indicated.
- C. Install outlets that spill onto grade, anchored with concrete, where indicated.
- D. Install outlets that spill onto grade, with flared end sections that match pipe, where indicated.
- E. Construct energy dissipaters at outlets, as indicated.

**3.7 CONCRETE PLACEMENT**

- A. Place cast-in-place concrete in accordance with ACI 318.

3.8 CHANNEL DRAINAGE SYSTEM INSTALLATION

- A. Install with top surfaces of components, except piping, flush with finished surface.
- B. Assemble channel sections to form slope down toward drain outlets. Use sealants, adhesives, fasteners, and other materials recommended by system manufacturer.
- C. Embed channel sections and drainage specialties in 4-inch minimum concrete around bottom and sides.
- D. Fasten grates to channel sections if indicated.
- E. Assemble channel sections with flanged or interlocking joints.
- F. Embed channel sections in 4-inch minimum concrete around bottom and sides.

3.9 CONNECTIONS

- 1. Use commercially manufactured wye fittings for piping branch connections. Remove section of existing pipe; install wye fitting into existing piping; and encase entire wye fitting, plus 6-inch overlap, with not less than 6 inches of concrete with 28-day compressive strength of 3000 psi.
  - 2. Make branch connections from side into existing piping, NPS 4 to NPS 20. Remove section of existing pipe, install wye fitting into existing piping, and encase entire wye with not less than 6 inches of concrete with 28-day compressive strength of 3000 psi.
  - 3. Make branch connections from side into existing piping, NPS 21 or larger, or to underground manholes and structures by cutting into existing unit and creating an opening large enough to allow 3 inches of concrete to be packed around entering connection. Cut end of connection pipe passing through pipe or structure wall to conform to shape of and be flush with inside wall unless otherwise indicated. On outside of pipe, manhole, or structure wall, encase entering connection in 6 inches of concrete for minimum length of 12 inches to provide additional support of collar from connection to undisturbed ground.
    - a. Use concrete that will attain a minimum 28-day compressive strength of 3000 psi unless otherwise indicated.
    - b. Use epoxy-bonding compound as interface between new and existing concrete and piping materials.
  - 4. Protect existing piping, manholes, and structures to prevent concrete or debris from entering while making tap connections. Remove debris or other extraneous material that may accumulate.
- B. Connect to sediment interceptors specified in Section 221323 "Sanitary Waste Interceptors."

3.10 IDENTIFICATION

- A. Materials and their installation are specified in Section 312000 "Earth Moving." Arrange for installation of green warning tape directly over piping and at outside edge of underground structures.
1. Use warning tape warning tape over ferrous piping.
  2. Use detectable warning tape over nonferrous piping and over edges of underground structures.

3.11 FIELD QUALITY CONTROL

- A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches of backfill is in place, and again at completion of Project.
1. Submit separate reports for each system inspection.
  2. Defects requiring correction include the following:
    - a. Alignment: Less than full diameter of inside of pipe is visible between structures.
    - b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
    - c. Damage: Crushed, broken, cracked, or otherwise damaged piping.
    - d. Infiltration: Water leakage into piping.
    - e. Exfiltration: Water leakage from or around piping.
  3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
  4. Reinspect and repeat procedure until results are satisfactory.
- B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
1. Testing shall be provided by the contractor and approved by the owner's representative prior to final acceptance.
  2. Do not enclose, cover, or put into service before inspection and approval.
  3. Test completed piping systems in accordance with requirements of authorities having jurisdiction.
  4. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
  5. Submit separate report for each test.
  6. Gravity-Flow Storm Drainage Piping: Test in accordance with requirements of authorities having jurisdiction, UNI-B-6, and the following:
    - a. Exception: Piping with soiltight joints unless required by authorities having jurisdiction.
    - b. Option: Test plastic piping in accordance with ASTM F 1417.
- C. Leaks and loss in test pressure constitute defects that must be repaired.

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- D. Replace leaking piping using new materials and repeat testing until leakage is within allowances specified.

3.12 CLEANING

- A. Clean interior of piping of dirt and superfluous materials. Flush with water.

END OF SECTION 334200

