

# **COWEEMAN MIDDLE SCHOOL CLADDING REPLACEMENT PROJECT**

---

**OWNER:**

Kelso School District  
601 Crawford Street  
Kelso, Washington 98626

Phone: (360) 501-1340

Contact: Paul Richie, Project Manager



**BUILDING ENVELOPE CONSULTANT:**

Professional Roof Consultants, Inc.  
606 SE 9<sup>TH</sup> Avenue  
Portland, Oregon 97214

Phone: (503) 280-8759

Contact: Thomas Bertrand, RRO



**STRUCTURAL ENGINEERING CONSULTANT:**

TM Rippey Consulting Engineers  
7650 Beveland Street, Suite 100  
Tigard, Oregon 97223

Phone: (503) 443-3900

Contact: Ralph Turnbaugh, PE



**January 17, 2025**

Copyright © 2025  
PROFESSIONAL ROOF CONSULTANTS, INC.

Job No. R3383.04

---

## TABLE OF CONTENTS

The following is a list of all Divisions, Sections, and Drawings which are included in the Project Manual

### **DIVISION 00      BIDDING AND CONTRACT REQUIREMENTS**

Document 00 00 01	Advertisement to Bid (Legal Publication)	2
Document 00 00 02	Invitation to Bid	3
Document 00 00 03	Instructions to Bidders	15
Document 00 00 04	Base Bid Proposal Form (Part 1)	5
Document 00 00 05	Alternate Bid & Subcontractor Proposal Form (Part 2)	4
Document 00 00 06	Form of Agreement – AIA Document A104-2017	54

### **DIVISION 01      GENERAL REQUIREMENTS**

Section 01 11 00	Summary	9
Section 01 21 00	Allowances	3
Section 01 22 00	Unit Prices	2
Section 01 25 00	Substitution Procedures	4
Section 01 26 00	Contract Modification Procedures	3
Section 01 29 00	Payment Procedures	4
Section 01 31 00	Project Management and Coordination	5
Section 01 33 00	Submittal Procedures	6
Section 01 40 00	Quality Requirements	5
Section 01 50 00	Temporary Facilities and Controls	7
Section 01 60 00	Product Requirements (Substitution Request Form)	2
Section 01 73 00	Execution	5
Section 01 77 00	Closeout Procedures	3
Section 01 78 23	Operation and Maintenance Data	5

### **DIVISION 02      EXISTING CONDITIONS**

Section 02 41 19	Selective Demolition	5
------------------	----------------------	---

### **DIVISION 06      WOODS, PLASTICS AND COMPOSITES**

Section 06 10 00	Rough Carpentry	5
------------------	-----------------	---

### **DIVISION 07      THERMAL AND MOISTURE PROTECTION**

Section 07 14 16	Cold Fluid-Applied Waterproofing	6
Section 07 21 00	Thermal Insulation	3
Section 07 25 00	Weather Barriers	2

Section 07 46 46	Fiber-Cement Siding	6
Section 07 62 00	Sheet Metal Flashing and Trim	13

**DIVISION 9 FINISHES**

Section 09 91 13	Exterior Painting	7
------------------	-------------------	---

**DIVISION 23 HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)**

Section 23 05 00	Basic Mechanical Materials and Methods	3
------------------	--	---

**DIVISION 26 ELECTRICAL**

Section 26 05 00	Basic Electrical Materials and Methods	3
------------------	--	---

**DRAWINGS (under separate cover)**

Gi-1	General Information
R100	Elevation Key Plan & Phasing Plan
R101	Exterior Elevations – Demo
R102	Exterior Elevations – Demo
R103	Exterior Elevations – Demo
R104	Exterior Elevations – Demo
R111	Exterior Elevations – New
R112	Exterior Elevations – New
R113	Exterior Elevations – New
R114	Exterior Elevations – New
R200	Exterior Wall Assemblies
R201	Exterior Wall Details
R202	Exterior Wall Details
R203	Exterior Wall Details
R204	Exterior Wall Details
R205	Exterior Wall Details
R206	Exterior Wall Details
R207	Exterior Wall Details
R208	Exterior Wall Details
S001	Structural General Notes
S101	Structural Exterior Wall Repair Key Plan
S201	Structural Exterior Wall Repair Details

**END OF TABLE OF CONTENTS**

ADVERTISEMENT FOR BID

Bids will be accepted for the following project:

TITLE: Coweeman Middle School Siding Replacement Project

AGENCY: Kelso School District No. 458

ESTIMATED CONSTRUCTION COST: **\$1,500,000 + WSST**

ABBREVIATED PROJECT DESCRIPTION: The Coweeman Middle School Siding Replacement project involves the removal and replacement of the existing siding on the school building to enhance durability, energy efficiency, and aesthetics. This work includes demolition and prep, installation and application of sealants and finishes.

SUBMITTAL TIME/DATE/LOCATION: **Prior to 3:00 P.M., Friday, February 21<sup>st</sup>, 2025** at  
The Kelso School District Business Office  
601 Crawford Street  
Kelso, WA 98626  
Bids will be opened at approximately 3:01 pm  
On site

BY: Kelso School District No. 458

**2:00 P.M. Wednesday, February 5, 2025**

PRE-PROPOSAL WALK-THROUGH: Attendance of Pre-Proposal Walk-Through is mandatory. Pre-proposal walk-throughs will be held at Coweeman Middle School.

Any questions asked on site will be recorded and answered via published addendum.

The School district will make the plans available for contractors to view online without charge at <https://www.kelso.wednet.edu/page/capital-projects-construction>

If contractors desire a paper copy of the documents they may download the files and have them printed at a printing company of their choice at their expense.

Please direct questions regarding this project to the office of the Consultant, Professional Roof Consultants (PRC), 606 SE 9<sup>th</sup> Avenue, Portland, OR, 97214, telephone (503) 208-8759.

No contractor may withdraw his bid after the hour and date set for the submittal thereof, or thereafter, before award of the Contract, unless award is delayed for a period exceeding thirty (30) days from the proposal submittal date.

The Owner reserves the right to accept or reject any or all proposals and to waive informalities.



# KELSO SCHOOL DISTRICT

601 Crawford Street • Kelso, WA 98626 • 360.501.1900 • [kelso.wednet.edu](http://kelso.wednet.edu) • #WeAreKelso

## **Invitation to Bid – Coweeman Middle School Siding Replacement Project**

Coweeman Middle School, 2000 Allen Street, Kelso, WA 98626

The Kelso School District is soliciting bids for a re-siding project located at Coweeman Middle School. The Coweeman Middle School Siding Replacement Project involves the removal and replacement of the existing siding on the school building.

This invitation includes the Legal Notice, Invitation to Bid, Bid Proposal Form, Draft Agreement, General Conditions, Instruction to Bidders, and Project Specifications and Drawings prepared by the engineer, which, when the contract award is made, will collectively constitute the Contract Documents.

Contractors must be registered contractors in the State of Washington at time of bid; have a current UBI number; have industrial insurance coverage as verified by WA Labor & Industries; have an Employment Security Department number; have a WA State Excise Tax Registration Number; and not disqualified from bidding per the Debarred Contractors list.

**Interested contractors shall submit the completed Bid Proposal Form utilizing the forms provided.**

Successful bidder must be compliant with local business license requirements. Five (5) percent retainage in lieu of a payment and performance bond is at the option of the contractor.

**The project will be completed in two phases, one each between mid-June and end of August in 2025 and 2026.**

The District requires prevailing wage rates per Washington State Department of Labor and Industries be paid for all work provided.

A draft agreement and general conditions are included in the project manual. Liquidated damages are estimated to be at \$750 per day.



# KELSO SCHOOL DISTRICT

601 Crawford Street • Kelso, WA 98626 • 360.501.1900 • [kelso.wednet.edu](http://kelso.wednet.edu) • #WeAreKelso

- Project Title:** Coweeman Middle School Siding Replacement
- Owner:** Kelso School District  
601 Crawford Street  
Kelso, WA 98626  
Contact: Paul Richie, Maintenance and Operations Supervisor  
Email: [paul.richie@kelsosd.org](mailto:paul.richie@kelsosd.org)  
Phone: 360-501-1340
- Roof Consultant:** Professional Roof Consultants, Inc.  
606 SE 9th Avenue  
Portland, OR 97214  
Phone: 503-208-8759  
Contact: Thomas W. Bertrand, RRO, CDT, AHERA
- Structural Consultant:** TM Rippey Consulting Engineers  
7650 Beveland Street, Suite 100  
Tigard, OR 97223  
Phone: 503-443-3900

## Scope of Work Summary:

The Coweeman Middle School Siding Replacement project involves the removal and replacement of the existing siding on the school building to enhance durability, energy efficiency, and aesthetics. This work includes but is not limited to the following:

- 1. Demolition and Preparation:**
  - a. Removal of existing siding and any associated materials as necessary.
  - b. Inspection of underlying structural components for damage or decay.
  - c. Proper disposal of all demolition debris in compliance with local regulations.
- 2. Installation:**
  - a. Installation of new weather-resistant barrier and flashing.
  - b. Installation of new siding materials as specified in project plans.
  - c. Application of sealants and finishes to ensure long-term weather resistance.
- 3. Finalization and Clean-up:**
  - a. Final inspection to ensure installation meets project specifications and quality standards.
  - b. Clean-up of the site and removal of all construction-related waste.



# KELSO SCHOOL DISTRICT

601 Crawford Street • Kelso, WA 98626 • 360.501.1900 • [kelso.wednet.edu](http://kelso.wednet.edu) • #WeAreKelso

**Submittal Time/Date/Location:** **Prior to 3:00 P.M., Friday, February 21, 2025** at  
Kelso School District Business Office  
c/o Scott Westlund, Chief Financial & Operations Officer  
601 Crawford Street  
Kelso, WA 98626  
Bids (Part 1) will be opened at approximately 3:01 p.m. onsite

**Pre-Proposal Walk-Through:** **2:00 P.M. Wednesday, February 5, 2025**  
  
Attendance of the pre-proposal walk-through is mandatory.  
Pre-proposal walk-through will be held at Coweeman Middle School.

Questions asked on site will be recorded and answered via published addendum.

The school district will make the plans available for contractors to view online without charge at <https://www.kelso.wednet.edu/page/capital-projects-construction>. If contractors desire a paper copy of the documents they may be download the files and have them printed at a printing company of their choice and expense.

The project will be conducted in accordance with Kelso School District's guidelines, ensuring minimal disruption to school operations. The work schedule and materials will adhere to the approved plans and specifications provided by the consultants.

No contractor may withdraw their bid after the hour and date set for the submittal thereof, or thereafter, before award of the Contract, unless award is delayed for a period exceeding thirty (30) days from the proposal.

The Kelso School District reserves the right, without any liability on our part, to accept a proposal of the bidder submitting the lowest responsible bid, to reject any or all bids, revise or cancel the work to be performed, or do the work otherwise, if in the best interest of the Kelso School District.



## INSTRUCTIONS TO BIDDERS

### 1.01 DEFINITIONS

- A. All definitions set forth in the General Conditions of the Contract for Construction or in other Contract Documents are applicable to the Bidding Documents.
- B. “**Addenda**” are written or graphic instruments issued by the Architect or the Kelso School District prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections. The contents of Addenda are issued in no particular order and therefore should be carefully and completely reviewed. Addenda relating to administrative matters, such as, for example, the date or time of meetings or Bid receipt, may be issued in writing by fax, mail or other delivery.
- C. An “**Alternate Bid**” (or “**Alternate**”) is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted by the Kelso School District.
- D. “**Award**” means the formal decision by the Kelso School District notifying a Bidder with the lowest Responsive Bid of the Kelso School District’s acceptance of the Bid and intent to enter into a contract with the Bidder. A contract is only formed upon execution of the contract, and not simply by Award.
- E. The “**Award Requirements**” include the following statutory requirements as a condition precedent to Award. The lowest Responsive Bidder shall:
  - (1) have a certificate of registration in compliance with RCW 18.27;
  - (2) have a current state unified business identifier number;
  - (3) if applicable, have industrial insurance coverage for the Bidder’s employees working in Washington as required in Title 51 RCW;
  - (4) have an employment security department number as required in Title 50 RCW;
  - (5) have a state excise tax registration number as required in Title 82 RCW;
  - (6) not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations);
  - (7) if bidding on a public works project subject to the apprenticeship utilization requirements in RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under RCW 49.04 for the one-year period immediately preceding the date of the Bid solicitation;
  - (8) have received training on the requirements related to public works and prevailing wages under chapters 39.04 and 39.12 RCW, or be exempt from such training requirements if the Bidder has completed three or more public works projects and has had a valid business license in Washington for three or more years; and

- (9) within the three-year period immediately preceding the date of the Bid solicitation, not have been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW.

Further, under revised RCW 39.04.350, if the Bidder has a history of receiving monetary penalties for not achieving the apprentice utilization requirements pursuant to RCW 39.04.320 or is habitual in utilizing the good faith effort exception process, the Bidder must submit an apprenticeship utilization plan within ten business days immediately following the Kelso School District's notice to proceed.

- F. The **"Base Bid"** is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base to which work may be added or from which work may be deleted for sums stated in Alternate Bids.
- G. A **"Bid"** is a complete and properly signed proposal to do the Work or designated portion thereof, submitted in accordance with the Bidding Documents, for the sums therein stipulated and supported by any data called for by the Bidding Documents.
- H. A **"Bidder"** is a person or entity who submits a Bid for a prime contract with the Kelso School District for the Work described in the Contract Documents.
- I. The **"Bidding Documents"** include the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid form, any other sample Bidding and contract forms, the Bid Bond, and the Contract Documents, including any Addenda issued prior to receipt of Bids.
- J. The **"Contract Documents"** for the Work consist of the Agreement Between Owner and Contractor, the General Conditions of the Contract (as well as any Supplemental, Special or other Conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.
- K. The **"Owner"** is the Kelso School District.
- L. To be considered **"Responsible"** or meet **"Responsibility"** requirements, a Bidder must meet the following supplemental criteria applicable to this Project to the satisfaction of the Architect and the Kelso School District:
- (1) The ability, capacity, and skill to perform the Contract;
  - (2) The character, integrity, reputation, judgment, experience, and efficiency of the Bidder;
  - (3) Whether the Bidder can perform the Contract within the time specified;
  - (4) The previous and existing compliance by the Bidder with laws relating to the Contract;
  - (5) The quality of performance of previous contracts, including demonstration of successful completion of similar projects of equal or greater size, scope and value in the last three (3) years;
  - (6) The designated Project Manager shall have a minimum of three (3) years of successful experience in project management and scheduling of projects of similar scope and complexity;
  - (7) The designated Superintendent shall have a minimum of five (5) years of successful supervision of projects of similar scope and complexity;

- (8) Any other qualifications required by the Contract Documents or Bidding Documents; and
  - (9) Such other information as may be secured having a bearing on the decision to award the Contract.
- M. 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.
- N. A “**Unit Price**” is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services as described in the Bidding Documents or in the Contract Documents. The Kelso School District reserves the right to reject at any time, without impairing the balance of the proposal, any or all such predetermined unit prices.

## **1.02 BIDDER’S REPRESENTATIONS**

By making its Bid, each Bidder represents that:

- A. **BIDDING DOCUMENTS.** The Bidder has read and understands the Bidding Documents, and its Bid is made in accordance therewith.
- B. **POSSIBLE SELF-PERFORMED WORK REQUIREMENT.** The Bidder will perform *with its own forces* at least that percentage (if any) of the Work required by the Bidding Documents or the Contract Documents.
- C. **PRE-BID MEETING.** The Bidder has attended any pre-bid meeting(s) required by the Bidding Documents.
- D. **BASIS.** Its Bid is based upon the materials, systems, services, and equipment required by the Bidding Documents, without exception.
- E. **EXAMINATION.** The Bidder has carefully examined and understands the Bidding Documents, the Contract Documents (including, without limitation, any liquidated damages and insurance provisions), and the Project site, including any existing buildings, it has familiarized itself with the local conditions under which the Work is to be performed and has correlated its observations with the requirements of the Contract Documents and it has satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services and other items to be furnished, and all other requirements of the Contract Documents. The Bidder has also satisfied itself as to the conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof, including but not limited to those conditions and matters affecting: transportation, access, disposal, handling and storage of materials, equipment and other items; availability and quality of labor, water, electric power and utilities; availability and condition of roads; climatic conditions and seasons; physical conditions at the Project site and the surrounding locality; topography and ground surface conditions; and equipment and facilities needed preliminary to and at all times during the performance of the Work. The failure of the Bidder fully to acquaint itself with any applicable condition or matter shall not in any way relieve the Bidder from the responsibility for performing the Work in accordance with, and for the Contract Sum and within the Contract Time provided for in, the Contract Documents.
- F. **PROJECT MANUAL.** The Bidder has checked its copies of the Project Manual with the Table of Contents bound therein to ensure the Project Manual is complete.
- G. **SEPARATE WORK.** The Bidder has examined and coordinated all Drawings, Contract Documents, and Specifications for any other contracts to be awarded separately from, but in connection with, the Work being bid upon, so that the Bidder is fully informed as to conditions affecting the Work under the contract being bid upon.

- H. **LICENSE REQUIREMENTS.** Bidders and their proposed Subcontractors shall be registered and shall hold such licenses as may be required by the laws of Washington, including RCW 18.27, for the performance of the Work specified in the Contract Documents. Subcontractors shall meet contractual and technical qualifications standards, and provide specialized certification, licensing, and/or payment and performance bonding where specified.
- I. **NO EXCEPTIONS.** Bids must be based upon the materials, systems and equipment described and required by the Bidding Documents, and terms and conditions in the Contract Documents, without exception.

### 1.03 BIDDING DOCUMENTS

#### A. COPIES

1. **Deposit.** Bidders may obtain complete sets of the Bidding Documents from the issuing office and other locations designated in the Advertisement or Invitation to Bid in the number and for the deposit amount, if any, stated. The deposit (if any) will be refunded to Bidders who submit a bona fide Bid and return the Bidding Documents in good condition within ten (10) days after receipt of Bids. The cost of replacement of any missing or damaged documents will be deducted from the deposit. A Bidder awarded a Contract may retain the Bidding Documents, and its deposit will be refunded.
2. **Sub-bidders.** Bidding Documents will not be issued directly to Sub-bidders or others unless specifically offered in the Advertisement or Invitation to Bid.
3. **Complete sets.** Bidders shall use complete sets of Bidding Documents in preparing Bids and are solely responsible for utilizing established plan holder identification processes to obtain updated bid information; neither the Kelso School District nor the Architect assumes any responsibility for errors or misinterpretations resulting from the use of incomplete and/or superseded sets of Bidding Documents. Printed copies of plans take precedence over any online images.
4. **Conditions.** The Kelso School District and/or the Architect make copies of the Bidding Documents available on the above terms only for the purpose of obtaining Bids on the Work and do not confer a license or grant permission for any other use.
5. **Legible Documents.** To the extent any drawings, specifications, or other Bidding documents are not legible, it is the Bidder's responsibility to notify the Kelso School District and the Architect and to obtain legible documents from the plan center.

#### B. INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

1. **Format.** The Contract Documents may be divided into parts, divisions, and sections for convenient organization and reference. Generally, there has been no attempt to divide the Specification sections into Work performed by the various building trades, any Work by separate contractors, or any Work required for separate facilities in or phases of the Project.
2. **Notify Owner and Architect.** Bidders and Sub-bidders shall promptly notify the Kelso School District and the Architect in writing of any ambiguity, inconsistency, or error that they may discover upon examination of the Bidding Documents or of the site and local conditions. All Bidders and Sub-bidders shall thoroughly familiarize themselves with specified products and installation procedures and submit to the Kelso School District and the Architect any objections (in writing) no later than seven (7) calendar days prior to the Bid Date. The submittal of the Bid constitutes acceptance of products and procedures specified as sufficient, adequate, and satisfactory for completion of the Contract.

3. **Written request.** Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect at least seven (7) calendar days prior to the date for receipt of Bids.
4. **Addenda.** Any interpretation, correction or change of the Bidding Documents will be made by written Addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes.
5. **Singular references.** Reference to the singular to an article, device, or piece of equipment shall include as many of such articles, devices, or pieces as are indicated in the Contract Documents or as are required to complete the installation.
6. **Utilities and runs.** The Bidder should assume that the exact locations of any underground or hidden utilities, underground fuel tanks, and any plumbing and electrical runs may be somewhat different from any location indicated in the surveys or Contract Documents.
7. **Division of Contract Documents.** The Contract Documents may be divided into parts, divisions, and sections for convenient organization and reference. Generally, there has been no attempt to divide the Specification sections into Work performed by the various building trades, any Work by separate contractors, any Work required for separate facilities, or any Work required for separate phases of the Project.

C. SUBSTITUTIONS

1. **Standard.** The materials, products, procedures and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality that must be met by any proposed substitution.
2. **Substitution procedure.** No substitution will be considered prior to receipt of Bids unless the Architect receives a written request for approval on the Kelso School District's Substitution Request form for the Project, with all data requested on the form completed, at least seven (7) days prior to the date for receipt of Bids. Each such request shall be submitted with a Request for Substitution form identical to or equivalent in content to the form found in the Project Manual, and shall include the name of the material or equipment proposed to be replaced and a complete description of the proposed substitute, including drawings, cuts, performance and test data, warranty information, and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or other Work that incorporation of the substitute would require shall be included. The proposer has the burden to prove the merit of the proposed substitute; by proposing the substitution, the Bidder represents that it has personally investigated the proposed material or product and determined that it is equal or better in all respects to that specified, that the same or better warranty will be provided for the substitution, that complete cost data, including all direct and indirect costs of any kind, has been presented, that the Contract Time will not be increased, and that it will coordinate the installation of the substitute if accepted and make all associated changes in the Work. The Architect's decision to approve or disapprove a proposed substitution shall be final. Written requests for approval shall constitute a guarantee by the Bidder that the articles or materials are in all respects, including warranty and installation, equal or superior to those specified, unless otherwise noted. To the extent the proposed substitution will require additional services by the Architect or its consultants after Bid award, the Bidder, if successful, will be required to pay the Architect or its consultants for these services at their customary hourly rates.
3. **Addendum.** If the Architect approves a proposed substitution prior to receipt of Bids, the approval will be set forth in a written Addendum. Bidders shall not rely upon approvals made in any other

manner. Substitution request forms returned by the Architect are a courtesy only, and Bidders/Sub-bidders shall rely solely on substitution approvals listed in Addenda.

4. **Post-Bid substitutions.** After the Contract has been executed, the Kelso School District and the Architect may consider a written request for the substitution of material or products in place of those specified in the Contract Documents only under the circumstances as specified therein.

D. ADDENDA

1. **Written.** All Addenda will be written. They will be mailed, emailed, faxed delivered, and/or posted electronically with notice to those the Architect knows to have received a complete set of Bidding Documents.
2. **Copies.** Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
3. **Verification and acknowledgment of receipt.** Prior to bidding, each Bidder shall ascertain that it has received all Addenda issued. Each Bidder shall acknowledge its receipt of all Addenda in its Bid.

1.04 BIDDING PROCEDURE

A. FORM AND STYLE OF BIDS

1. **Form.** Bids (including any required attachments) shall be submitted on forms identical to the form included with the Bidding Documents. Bids on different forms may be rejected. Oral, email, or telephonic responses or modifications will not be considered to be Bids.
2. **Entries on the Bid form.** All blanks on the Bid form shall be filled in by typewriter or manually in ink.
3. **Words and figures.** Where so indicated by the makeup of the Bid form, sums shall be expressed in both words and figures; in case of discrepancy between the two and regardless of any statement to the contrary on the Bid form, *the amount written in figures shall govern and the words shall be used to determine any ambiguities in the figures*. Portions of the Bid form may require the addition of component bids to a total or the identification of component amounts within a total. In case of discrepancy between component amounts listed and their sum(s), the component amounts listed shall govern.
4. **Initial changes.** Any interlineation, alteration or erasure must be initialed by an authorized representative of the Bidder.
5. **Alternates and Unit Prices.** All requested Alternates and unit prices should be bid. The Kelso School District reserves the right, but is not obligated, to reject any Bid on which all requested Alternates or unit prices are not bid. If no change in the Base Bid is required for an Alternate, enter “No Change.” If there is no entry, it will be presumed that the Bidder has made no offer to accomplish this Alternate. If it is not otherwise clear from the Bid or nature of the Alternate, it will be presumed that the amount listed for an Alternate is an add rather than a deduct.
6. **No conditions.** The Bidder shall make no conditions or stipulations on the Bid form nor qualify its Bid in any other manner.
7. **Identity of Bidder.** The Bidder shall include in the specified location on the Bid form the legal name of the Bidder and, if requested, a description of the Bidder as a sole proprietor, a partnership,

a joint venture, a corporation (including the state of incorporation), or another described form of legal entity. The Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder, and provide other information requested.

8. **Bid amounts do not include sales tax.** The Bid shall include in the sum stated all taxes imposed by law, EXCEPT STATE AND LOCAL SALES TAX ON THE CONTRACT SUM.
9. **Bid breakdown.** The Bid form may contain, for the Kelso School District's accounting purposes only, a breakdown of some or all of the components included in the Base Bid.

B. POTENTIAL LISTING OF SUBCONTRACTORS

1. **Procedure.** On certain projects of the Kelso School District, the Bid form includes a requirement that certain Subcontractors be listed, and the list must be submitted to the Kelso School District as described in the bidding documents. In these circumstances, the Bidder must name the Subcontractor with whom the Bidder, if awarded the Contract, will subcontract *directly* (i.e., not lower-tier Subcontractors) for performance of the work of:

- (a) HVAC (heating, ventilation and air conditioning),
- (b) plumbing as described in RCW 18.106,
- (c) electrical work as described in RCW 19.28,
- (d) structural steel installation,
- (e) rebar installation, and
- (f) any other categories of Work listed on the Subcontractor listing form(s).

**TIMING:** The listing of HVAC, plumbing, and electrical subcontractors shall occur within one hour of the published bid submittal time. The listing of structural steel installation and rebar installation subcontractors shall occur within forty-eight hours of the published bid submittal time. The listing of any other categories of Work listed on the Subcontractor listing form(s) shall occur as indicated on such forms or as otherwise described in the bidding documents.

**SELF-PERFORMANCE:** If the Bidder intends to self-perform any of these categories of Work, it must name itself for each such category of Work.

**IF NO SUBCONTRACTORS:** If there is no work to be performed by a HVAC, plumbing, electrical, structural steel installation, rebar installation, or other subcontractor category identified on the Bid form(s), the Bidder should insert "None" or "N/A" on the Bid form. If a category is left blank, that shall indicate that the Bidder believes that there is no Work to be performed by that trade.

**MULTIPLE ENTRIES:** The Bidder shall not list more than one (1) entity for a particular category of Work identified, unless a Subcontractor varies with an Alternate Bid, in which case the Bidder shall identify the Subcontractor to be used for the Alternate and the affected portion of the Work and otherwise make its Bid clear as to which subcontractor shall be utilized depending upon the selection of alternates.

**MULTIPLE SUBMITTAL TIMES.** In the event the Bidding Documents call for a second submittal time for receipt of alternate bids, and no additional Subcontractors are listed with such alternate

bids, the Kelso School District will consider that there is no change in the Subcontractors from those listed with regard to the Base Bid.

2. **Failure to Submit.** In accordance with RCW 39.30.060, failure of a Bidder to submit the names of such proposed heating, ventilation and air conditioning, plumbing, electrical, structural steel installation, and rebar installation Subcontractors or to name itself to perform such Work or the naming of two or more Subcontractors to perform the same Work in the time periods described above shall render the Bidder's Bid nonresponsive and, therefore, void.
3. **Requirement to Subcontract.** The Bidder, if awarded the Contract, will subcontract with the listed Subcontractor for performance of the portion of the Work designated on the Form of Proposal, subject to the provisions of the Contract for Construction and RCW 39.30.060. The Bidder shall not substitute a listed Subcontractor in furtherance of bid shopping or bid peddling.
4. **Replacement.** If a listed Subcontractor is unable to comply with any bondability, qualification, or other requirements of the Contract or Bidding Documents (including without limitation a finding of Subcontractor non-Responsibility), the Kelso School District may require the Bidder to replace the Subcontractor with a Subcontractor acceptable to the Kelso School District without any changes to the Contract Sum or Contract Time.

C. BID SECURITY

1. **Purpose and procedure.** Each Bid shall be accompanied by a Bid security payable to the Kelso School District in the form required in the Bidding Documents and equal to five percent (5%) of the Base Bid. The Bid security constitutes a pledge that the Bidder will enter into the Contract with the Kelso School District in the form provided, in a timely manner, and on the terms stated in its Bid and will furnish in a timely manner the payment and performance bonds, certificates of insurance, Contractor's Construction Schedule, and all other documents required in the Contract Documents. Should the Bidder fail or refuse to enter into the Contract or fail to furnish such documents, the amount of the Bid security shall be forfeited to the Kelso School District as liquidated damages, not as a penalty. By submitting its Bid and Bid security, the Bidder agrees that any forfeiture is a reasonable prediction at the time of Bid submittal of future damages to the Kelso School District.
2. **Form.** The Bid security shall be in the form of a certified or bank cashier's check payable to the Kelso School District or a bid bond executed by a bonding company acceptable to the Kelso School District and licensed in the State of Washington on the form included with the Bidding Documents (if any) or on an acceptable and equivalent form. The Attorney-in-Fact who executes the bond on behalf of the surety shall be licensed to do business in the State of Washington and shall affix to the bond a certified and current copy of that person's Power of Attorney.
3. **Retaining Bid Security.** The Kelso School District will have the right to retain the Bid security of Bidders to whom an award is being considered until the earliest of either (a) the Contract has been executed, and payment and performance bonds have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn, or (c) all Bids have been rejected.
4. **Return of Bid Security.** Within forty-five (45) days after the Bid Date, the Kelso School District will release or return Bid securities to Bidders whose Bids are not to be further considered in awarding the Contract. Bid securities of the three apparent low Bidders will be held until the Contract has been finally executed, after which all unforfeited Bid securities will be returned.

D. SUBMISSION OF BIDS

1. **Procedure.** 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



specified in the Advertisement or Invitation to Bidders 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.

2. **Deposit.** Bids shall be deposited at the designated location prior to the time and date for receipt of Bids indicated in the Advertisement or Invitation to Bid, or any extension thereof made by Addendum. Bids received after the time and date for receipt of Bids may be opened, retained unopened, or returned (open or unopened), all at the discretion of the Kelso School District.
3. **Responsibility.** The Bidder assumes full responsibility for timely delivery at the location designated for receipt of Bids.
4. **Form.** Oral, fax, telephonic, email, electronic, or telegraphic Bids are invalid and will not be considered.

E. MODIFICATION OR WITHDRAWAL OF BID

1. **After receipt time.** A Bid may not be modified, withdrawn or canceled by the Bidder during a forty-five (45)-day period following the time and date designated for the receipt of Bids, and each Bidder so agrees by virtue of submitting its Bid.
2. **Before receipt time.** Prior to the time and date designated for receipt of Bids, any Bid submitted may be modified or withdrawn only by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder or by fax; if by fax, written confirmation over the signature of the Bidder shall be mailed and postmarked on or before the date and time set for receipt of Bids. The notice shall be worded so as not to reveal the amount of the original Bid. Email notice will not be considered. It shall be the Bidder's sole responsibility to verify that the notice has been received by the Kelso School District in time to be withdrawn before the Bid opening.
3. **Resubmittal.** Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.
4. **Bid security with resubmission.** Bid security shall be in an amount sufficient for the Bid as modified or resubmitted.

F. NOTICE

1. Notice or a request from a Bidder under these Instructions to Bidders must be in writing over the signature of the Bidder and delivered in person or by mail, email, express delivery, or fax. If the notice is by email or fax, written confirmation over the signature of the Bidder must be mailed and postmarked on or before the date and time set for the notice.

1.05 CONSIDERATION OF BIDS

- A. **OPENING OF BIDS:** Unless stated otherwise in the Advertisement or Invitation to Bid or any Addendum, the properly identified Bids received on time will be opened publicly and will be read aloud. An abstract of the Base Bids and Alternate Bids, if any, will be made available to Bidders and other interested parties.

- B. **REJECTION OF BIDS:** The Kelso School District shall have the right but not the obligation to reject any or all Bids for any reason or for no reason, to reject a Bid not accompanied by required Bid security or by other material or data required by the Bidding Documents, or to reject a Bid which is in any way incomplete or irregular.
- C. **ACCEPTANCE OF BID (AWARD)**
1. **Owner.** The Kelso School District intends (but is not bound) to award a Contract to the lowest Responsible and Responsive Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Kelso School District has the right to waive any informality or irregularity in any Bid(s) received and to accept the Bid which, in its judgment, is in its own best interests.
  2. **Alternates.** The Kelso School District shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Contract Documents or Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and the Alternates (if any) accepted. The Kelso School District retains the right to accept Alternate Bid items at the price bid within 45 days after the Agreement is executed.
  3. **Requirements for Award.** Before the Award, the lowest Responsive Bidder shall meet the Award Requirements.
- D. **BID PROTEST PROCEDURES**
1. **Procedure.** A Bidder protesting for any reason the Bidding Documents; a bidding procedure; the Kelso School District's objection to the Bidder or a person or entity proposed by the Bidder, including but not limited to a finding of non-Responsibility; the rejection of a Bid; the award of the Contract; or any other aspect arising from or relating in any way to the bidding or award or lack thereof, shall cause a written protest to be filed with the Kelso School District within two (2) business days of the event giving rise to the protest and, in any event, no later than two (2) business days after the date upon which Bids are opened. (Intermediate Saturdays, Sundays, and legal holidays are not counted.) The written protest shall include the name of the protesting Bidder, a detailed description of the specific factual and legal grounds for the protest, copies of all supporting documents, and the specific relief requested. The written protest shall be delivered to:  
  
Mary Beth Tack, Superintendent  
Kelso School District No. 458  
601 Crawford Street  
Kelso, WA 98626  
Marybeth.tack@kelsosd.org
  2. **Consideration.** Upon receipt of the written protest, the Kelso School District will consider the protest. The Kelso School District may, within three (3) business days of the Kelso School District's receipt of the protest, provide any other affected Bidder(s) the opportunity to respond in writing to the protest. If the protest is not resolved by mutual agreement of the protesting Bidder and the Kelso School District, the Superintendent of the Kelso School District or the Superintendent's designee will review the issues and promptly furnish a final and binding written decision to the protesting Bidder and any other affected Bidder(s) within six (6) business days of the Kelso School District's receipt of the protest. (If more than one (1) protest is filed, the Kelso School District's decision will be provided within six (6) business days of the Kelso School District's receipt of the last protest.) If no reply is received from the Kelso School District during the six (6) business-day period, the protest shall be deemed rejected.
  3. **Waiver.** Failure to comply with these protest procedures will render a protest waived.

4. **Condition precedent.** Timely and proper compliance with and exhaustion of these protest procedures shall be a condition precedent to any otherwise permissible judicial consideration of a protest.

## 1.06 POST BID INFORMATION

### A. INFORMATION FROM APPARENT LOW BIDDER

1. **Submittal.** Within twenty-four (24) hours of the Architect's request, the apparent low Bidder and any other Bidders so requested shall submit the following to the Architect and the Kelso School District:

- (a) additional information regarding the use of their own forces and the use of subcontractors and suppliers;

- (b) a properly executed Contractor's Qualification Statement on the form provided (unless otherwise required to be submitted at the time of the Bid);

- (c) a letter or form from the Bidder's insurance company stating that the insurance required by the Contract Documents will become effective upon execution of the Contract;

- (d) a letter or form from the Bidder's surety stating that the bond(s) required by the Contract Documents will become effective upon execution of the Contract;

- (e) if requested by the Kelso School District, a detailed breakdown of the Bid in a form acceptable to the Kelso School District;

- (f) the names of the persons or entities (including a designation of the Work to be performed with the Contractor's own forces, and the names of those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work;

- (g) the proprietary names and the suppliers of the principal items or systems of materials and equipment proposed for the Work;

- (h) a State Board of Education Form D-9, if requested; and

- (i) a signed statement in accordance with RCW 9A.72.085 verifying under penalty of perjury that the bidder is in compliance with the responsible bidder criteria of RCW 39.04.350(1)(g).

Failure to provide any of the above information in a timely manner may constitute an event of breach permitting forfeiture of the Bid security.

2. **Responsibility.** The Bidder will be required to establish to the satisfaction of the Architect and the Kelso School District the reliability and Responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents as well as qualifications set forth in the sections of the Project Manual pertaining to such proposed Subcontractor's respective trades. The Responsibility of the Bidder may be judged in part by the Responsibility of these proposed entities. The following will be considered:

- The ability, capacity, and skill to perform the contract;
- The character, integrity, reputation, judgment, experience, and efficiency of the Bidder;
- Whether the Bidder can perform the Contract within the time specified;
- The quality of performance of previous contracts;
- The previous and existing compliance by the Bidder with laws relating to the Contract; and

- Such other information as may be secured having a bearing on the decision to award the Contract.

CONSIDERATION. In considering a Bidder's Responsibility, a Bidder shall be deemed to be unqualified to perform the Contract if, after review and verification of the representations included upon the Contractor's Qualification Statement submitted by the Bidder, conditions such as, but not limited to, the following appear:

- (a) The Bidder does not have sufficient prior experience (or an acceptable substitute thereof, as described below) with projects of a similar nature in technical, managerial, and financial requirements to that in the present Contract being bid. In addition to such established contractors, a newly established contractor may be considered qualified if it has shown on the Contractor's Qualification Statement that it is staffed with sufficient technical, managerial, and financial personnel with prior experience in the nature of construction for which the Bids are invited.
  - (b) The Bidder does not have sufficient capability to undertake the obligations of the Contract. A determination will be made when the Kelso School District's review of the probable cash flow needs of the Bidder for this Project (including payroll, cost of material and supplies, equipment rental costs, and any other direct or incidental costs of the Contract) concludes that the Bidder does not have sufficient financial resources to enable it to satisfy its financial obligations under the Contract.
  - (c) The Bidder has submitted unrealistic unit prices as determined by other Bidder's' unit prices for this Project.
  - (d) The Bidder does not have sufficient staff, equipment, or plant available to perform the Contract. The Kelso School District's determination in this matter will be based upon that represented by Bidder in the Contractor's Qualification Statement.
  - (e) The Bidder has a history of unsatisfactory performance of contracts of this or similar nature, regardless of whether such contracts existed between the Kelso School District and the Bidder, or other parties.
    - A determination of this nature will be made if the Kelso School District, after review of the Bidder's previous work experience, determines that the Bidder's unsatisfactory performance has resulted predominantly from the Bidder's failure rather than a failure to perform by another party. The Kelso School District will give the Contractor an opportunity to explain such nonperformance before any final determination is reached.
    - A determination of failure to perform will be made if the Kelso School District is satisfied after review of the Bidder's prior experience, that the Bidder has failed to satisfy its obligations under past contracts and the Kelso School District cannot safely assume satisfactory performance of the Contract by the Bidder.
    - In reaching its determination, the Kelso School District may consider statements of other parties to the prior unperformed contracts, as well as the representations of the Bidder on its Contractor's Qualification Statement.
3. **Subcontractors.** The Responsibility of the Bidder may be judged in part by the Responsibility of its Subcontractors. Bidders must verify Responsibility criteria for each first-tier Subcontractor. A Subcontractor of any tier that hires other Subcontractors must verify Responsibility criteria for each of its next lower-tier Subcontractors. Verification shall include that each Subcontractor, at the time of subcontract execution, is Responsible and possesses an electrical contractor license, if required by RCW 19.28, or an elevator contractor license, if required by RCW 70.87, and can obtain any payment and performance bonds required by the Bidding or Contract Documents.
4. **Request to Modify Criteria.** No later than ten (10) days prior to the Bid Date, a potential Bidder may request in writing that the Kelso School District modify the Responsibility criteria listed in clause (2) above or elsewhere in the Contract Documents or the Bidding Documents. The Kelso

School District will evaluate the information submitted by the potential Bidder and respond before the Bid Date. If the evaluation results in a change of the criteria, the Kelso School District will issue an Addendum identifying the new criteria.

5. **Objection.** Prior to the Award of the Contract, the Architect will notify the Bidder in writing if either the Kelso School District or the Architect, after due investigation, has reasonable objection to the Bidder or a person or entity proposed by the Bidder, and the Kelso School District will provide the reasons for the determination. The Bidder may appeal the determination within two (2) business days of its receipt of the objection by presenting additional information to the Kelso School District, and the Kelso School District will consider the additional information before issuing its final determination. The Bidder may, after the Kelso School District's objection or determination, and at Bidder's option, (1) withdraw the Bid, (2) submit an acceptable substitute person or entity with no change in the Contract Time and no adjustment in the Base Bid or any Alternate Bid, even if there is a cost to the Bidder occasioned by the substitution, or (3) appeal by filing a protest in accordance with paragraph 1.05.D. In the event of withdrawal, Bid security will not be forfeited.
  6. **Change.** Persons and entities proposed by the Bidder and to whom the Kelso School District or the 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 Kelso School District and the Architect.
  7. **Right to Terminate.** The Bidder's representations concerning its qualifications will be construed as a covenant under the Contract. Should it appear that the Bidder has made a material misrepresentation on its Contractor's Qualification Statement, the Kelso School District shall have the right to terminate the Contract for cause for the Contractor's breach, and the Kelso School District may then pursue such remedies as exist elsewhere under this Contract, or as otherwise are provided at law or equity.
- B. **INFORMATION FROM OTHER BIDDERS:** All other Bidders designated by the Architect as under consideration for award of a Contract shall also provide a properly executed Contractor's Qualification Statement, if so requested by the Kelso School District.
- C. **BIDDING MISTAKES:** The Kelso School District will not be obligated to consider notice of claimed bidding mistakes received more than three (3) business days after the Bid opening. In accordance with Washington law, a low Bidder that claims error and fails to enter into the Contract is prohibited from bidding on the Project if a subsequent call for Bids is made for the Project.

#### **1.07 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND**

- A. **BOND REQUIREMENTS:** Within twenty-four (24) hours after the issuance of the Kelso School District's notice of intent to award the Contract, and prior to the date of execution of the Contract, the Bidder shall furnish evidence satisfactory to the Kelso School District of its ability to obtain statutory bonds pursuant to RCW 39.08 covering the faithful performance of the Contract and the payment of all obligations arising thereunder in the form and amount prescribed in the Contract Documents. The cost of such bond shall be included in the Base Bid.
- B. **SUBCONTRACTOR BONDS.** The Kelso School District reserves the right to require certain Subcontractors to furnish performance and labor and material payment bonds in form as set forth herein and as set forth under the Bidding Documents or Contract Documents. The Kelso School District shall not, however, be responsible for any costs for any Subcontractor bonds unless the Kelso School District, prior to the execution of the Owner-Contractor Agreement, requires the Bidder, in writing, to furnish such bonds from designated Subcontractors. Should any bonds be furnished by subcontract bidders, or be required by any Bidder to be furnished by any subcontract bidder or Subcontractor, without the written

request of the Kelso School District prior to the execution of the Owner-Contractor Agreement, the costs for any such bonds shall be at the expense of the Bidder and shall not be added to the Contract Sum.

- C. **TIME OF DELIVERY AND FORM OF BONDS.** The Bidder shall deliver the bonds and other documents required by the Contract Documents to the Kelso School District pursuant to the Contract Documents and in no event any later than seven (7) days after the date of execution of the Contract and prior to commencing operations at the site. The bonds shall be written in the form approved by the Kelso School District for public work, as required by RCW 39.08. The bonds shall be written by a surety firm licensed to do business in the State of Washington, with an A.M. Best rating of at least A/VIII. The Bidder shall require the Attorney-in-Fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of that person's Power of Attorney.

#### **1.08 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR**

- A. **FORM TO BE USED:** The Agreement for the Work will be written on the form(s) contained in the Bidding Documents, including any General, Supplemental or Special Conditions, and the other Contract Documents included with the Project Manual.
- B. **CONFLICTS:** In case of conflict between the provisions of these Instructions and any other Bidding Document, these Instructions shall govern. In case of conflict between the provisions of the Bidding Documents and the Contract Documents, the Contract Documents shall govern.

#### **1.09 CONTRACT DOCUMENTS**

This paragraph contains descriptions of some but not all of the provisions of the Contract Documents.

- A. **RETAINAGE:** The Contract Documents specify the statutory retainage requirements of RCW 60.28 for this Project.
- B. **CONTRACT TIME:** The Contract Documents specify the Contract Time. Timely completion of this Project is essential to the Kelso School District.
- C. **PREVAILING WAGES:** The Contract Documents contain requirements regarding the payment of prevailing wages pursuant to RCW 39.12.
- D. **WRITTEN CLAIMS AND NOTICE:** The Contract Documents contain a number of provisions that require the Contractor to provide notice of Claims and to make and support Claims, in writing, within a specified time in order to maintain the Claim. The Kelso School District is under no obligation to consider Claims that fail, in any respect, to meet these requirements.
- E. **CHANGES IN CONTRACT SUM:** The Contract Documents contain provisions specifying requirements for and pricing of changes in the Contract Sum.
- F. **DISPUTE RESOLUTION:** The Contract Documents contain alternative dispute resolution procedures which, among other things, requires non-binding mediation of all disputes.
- G. **CONTRACTOR REGISTRATION:** Pursuant to RCW 39.06, the Bidder shall be registered or licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27.
- H. **COMMISSIONING OF OPERATIONAL SYSTEMS:** Certain systems may be designated in the Contract Documents as "Operational Systems." If so, prior to the Date of Substantial Completion the Operational Systems must be up and running, ready for normal operation, and subject to a pre-commissioning inspection.

- I. TAXES. The Contractor shall include in its Bid and pay for all applicable taxes except Washington State Sales Tax and Local Sales Tax on the Contract Sum, which shall be excluded in the preparation of its Bid. Such State and Local Sales Taxes shall be added to the Contract Sum, paid by the Kelso School District to the Contractor, and then paid by the Contractor over the course of the Project. Refer to general, supplementary or other conditions regarding further information.
- J. OTHER PROVISIONS: The above paragraphs contain descriptions of some but not all of the provisions of the Contract Documents. Bidders must review in detail the Contract Documents themselves and not rely upon the above paragraphs in this article as complete or inclusive.

**1.10 POSSIBLE TRENCH EXCAVATION SAFETY PROVISIONS**

- A. To ensure that the Bidder agrees to comply with relevant trenching safety requirements of RCW 39.04.180 and RCW 49.17, the Base Bid must include the cost of any required trench safety provisions. The Bidder shall enter in the blank (if any) provided on the Bid form the dollar amount the Bidder has included in its Base Bid for any trench safety provisions for trenching that will exceed a depth of four feet. If trench excavation safety provisions do not pertain to the Project, the Bidder should enter "N.A." or "Not Applicable" in the blank (if any) on the Bid form.

END OF SECTION

KELSO SCHOOL DISTRICT # 458  
The Kelso School District Business Office  
601 Crawford Street  
Kelso, WA 98626

**COWEEMAN MIDDLE SCHOOL SIDING REPLACEMENT PROJECT**

**BASE BID PROPOSAL FORM (Part 1)**

(BASE BID DUE 3:00 P.M., Friday, February 21, 2025)

**1.01 To:** KELSO SCHOOL DISTRICT # 458  
The Kelso School District Business Office  
601 Crawford Street  
Kelso, WA 98626  
ATTN: Scott Westlund



**1.02 SUBMITTED BY (BIDDER TO ENTER NAME AND ADDRESS):**

- A. BIDDER'S NAME \_\_\_\_\_
- B. ADDRESS: \_\_\_\_\_
- C. CITY, STATE, ZIP: \_\_\_\_\_

**1.03 OFFER:**

Having carefully examined the Project Manual and the Drawings entitled Coweeman Middle School Siding Replacement Project, as well as the premises and conditions affecting the Work, the undersigned represents that it has the personnel, qualifications, expertise and means to complete the Work in a timely manner and proposes to furnish all labor, equipment, and materials to perform the Base Bid Work required in strict accordance with the proposed Contract Documents for the following amount:

*Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in figures shall govern.*

**2.01 THE BASE BID AMOUNT INCLUDES ALL WORK SHOWN ON THE DRAWINGS AND SPECIFIED IN THE BIDDING AND CONTRACT DOCUMENTS**

**TOTAL BASE BID:**

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

DOLLARS (\$ \_\_\_\_\_)

**2.04 OVERHEAD AND PROFIT:**

All of the above bid prices include overhead and profit.

**2.05 SALES TAX:**

None of the above bid prices include State, County, or City Sales Tax.

**2.05 TRENCH EXCAVATION SAFETY SYSTEM INCLUDED ABOVE:**

Included in the above Base Bid is an amount for Trench Excavation Safety for any trenching exceeding a depth of four feet. (In accordance with Chapter 39.04 RCW and WAC 296-155-650, all costs for adequate trench safety systems are required to be identified in this Bid.) The Bidder certifies that the following amount is included in the Base Bid for Trench Excavation Safety Provisions. **If no** amount is entered, the Owner will presume that the Bidder represents that there are no Trench Excavation Safety costs for this Project.

Trench Safety System                      DOLLARS(\$ \_\_\_\_\_ )

**3.01 SUBCONTRACTOR LISTING:**

THE BIDDER SHALL LIST SUBCONTRACTORS ON THE ALTERNATE BID PROPOSAL FORM (PART 2). IF SUBCONTRACTORS VARY WITH BID ALTERNATES, THE BIDDER MUST SO INDICATE ON THE ALTERNATE BID PROPOSAL FORM.

**4.01 CONTRACT, BOND, INSURANCE CERTIFICATES:**

If the undersigned is notified of the acceptance of this Bid within forty-five (45) calendar days after the time set for opening of bids (the "Bid Date"), or such longer period identified in the Bidding Documents, it agrees to execute and deliver to the Owner the Agreement Between Owner and Contractor in the form provided by the Owner for a compensation computed from the above sum and any Alternates selected by the Owner and to furnish the bond, insurance certificates and other documents as required by the Contract Documents within ten (10) days after issuance of the Letter of Intent to Award a Contract.

**4.02 TIME OF COMPLETION:**

The undersigned agrees, if awarded the Contract, to achieve Substantial Completion of the Work as described in the Standard Form of Agreement Between the Owner and Contractor.

**4.03 LIQUIDATED DAMAGES:**

The Bidder, by submitting its Bid, represents that the liquidated damages specified in the Contract Documents are a reasonable estimate of the costs and damages to the Owner that would be incurred if the Contractor fails to achieve Substantial Completion within the Contract Time.

**5.01. APPRENTICES**

The undersigned understands that, pursuant to RCW 39.04.320, the Contractor will be required to achieve apprentice participation of at least fifteen percent (15%) of the total construction labor hours and that further information on this requirement is contained in the statute and the Contract Documents.

**6.01. ADDENDA:**

Receipt of the following addenda is hereby acknowledged and all costs of the Work therefore have been included in the proposal.

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

**6.02 AS A CONDITION OF SUBMITTAL OF THIS BID, THE CONTRACTOR CERTIFIES THAT:**

- A. It will comply with the current Cowlitz County prevailing wages pursuant to RCW 39.12. See Washington State Prevailing Wage Rates and Benefit Code Key.
- B. It is a registered contractor with RCW 18.27.

- C. It will comply with RCW 70.92, Aged and Physically Handicapped.
- D. It will comply with RCW 26A.400.330, Crimes Against Children.
- E. It has a current state unified business identifier number.
- F. It has industrial insurance coverage for the its employees working in Washington as required in Title 51 RCW
- G. It has an employment security department number as required in Title 50 RCW.
- H. It has a state excise tax registration number as required in Title 82 RCW
- I. It is not disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations).
- J. Within the three-year period immediately preceding the Bid Date, the Bidder has not been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provisions of chapter 49.46, 49.48 or 49.52 RCW.

The undersigned certifies under penalty of perjury under the laws of the State of Washington that the foregoing representations are true and correct.

**7.01 BID FORM SIGNATURES:**

**THE UNDERSIGNED CERTIFIES THAT THEY ARE AUTHORIZED TO BIND THE LEGAL ENTITY MAKING THIS PROPOSAL.**

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

Name of Firm:\_\_\_\_\_

Bidder's Signature:\_\_\_\_\_

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

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

Street Address:\_\_\_\_\_

City:\_\_\_\_\_

State:\_\_\_\_\_ Zip Code:\_\_\_\_\_

Telephone Number:\_\_\_\_\_

STATE OF WASHINGTON CONTRACTOR'S NO:\_\_\_\_\_

FEDERAL ID NO: \_\_\_\_\_

DEPARTMENT OF LABOR & INDUSTRY REG. NO: \_\_\_\_\_

WASHINGTON STATE DEPARTMENT OF REVENUE NO: \_\_\_\_\_

**7.02 NOTE: IF A BIDDER IS A CORPORATION, WRITE STATE OF INCORPORATION; AND IF A PARTNERSHIP, PROVIDE FULL NAMES AND ADDRESSES OF ALL PARTNERS BELOW.**

A. (If Corporation) – State of Incorporation: \_\_\_\_\_

B. (If Partnership) – List all Partners:

1. Name: \_\_\_\_\_

a. Address: \_\_\_\_\_

2. Name: \_\_\_\_\_

a. Address: \_\_\_\_\_

3. Name: \_\_\_\_\_

a. Address: \_\_\_\_\_

**END OF BASE BID PROPOSAL FORM (PART 1)**

KELSO SCHOOL DISTRICT # 458  
The Kelso School District Business Office  
601 Crawford Street  
Kelso, WA 98626

**COWEEMAN MIDDLE SCHOOL SIDING REPLACEMENT PROJECT**

**ALTERNATE BID & SUBCONTRACTOR PROPOSAL FORM (Part 2)**

(ALTERNATE BIDS DUE 4:00 P.M., Friday, February 21, 2025)

**1.01 To:** KELSO SCHOOL DISTRICT # 458  
Kelso School District Business Office  
601 Crawford Street  
Kelso, WA 98626  
ATTN: Scott Westlund, CFO

**9.01 ALTERNATE BIDS:**

The undersigned proposes to perform the Alternate Bid Work called for in the following Alternates, as shown on the Drawings for the following additions to the Base Bid, which include all costs associated with the Alternate, including overhead and profit:

**No Alternates Specified**

**9.02 OVERHEAD AND PROFIT:**

All of the above Alternate bid prices include overhead and profit.

**9.03 SALES TAX:**

None of the above Alternate bid prices includes State, County, or City Sales Tax that will be paid on the Contract Sum.

**10.01 REINSTATEMENT OF ALTERNATE BIDS:**

The undersigned agrees that the Owner has the right to reinstate, at the bid price, any or all of the Alternate Bids not originally incorporated into the Contract, provided the Owner so notifies the undersigned within forty-five (45) calendar days after the date of Contract execution, or such longer period identified in the Bidding Documents.

**11.01 SUBCONTRACTOR LIST:**

**THE BIDDER SHALL NOT LIST MORE THAN ONE SUBCONTRACTOR FOR EACH CATEGORY OF WORK IDENTIFIED BELOW. (IF SUBCONTRACTORS VARY WITH BID ALTERNATES, THE BIDDER MUST SO INDICATE IN 11.02 BELOW.)**

- A. If awarded the Contract for the Work, the undersigned Bidder will subcontract directly with the Subcontractors listed below for performance of the categories of the Work designated.
- B. The Bidder must list itself if it intends to perform a category of the Work itself.

**FAILURE OF THE BIDDER TO SUBMIT THE NAMES OF THE FOLLOWING SUBCONTRACTORS OR TO NAME ITSELF TO PERFORM SUCH WORK WITHIN ONE HOUR OF THE PUBLISHED BID OPENING TIME SHALL RENDER THE BIDDER'S BID NONRESPONSIVE AND, THEREFORE VOID.**

Category of Work	Subcontractor/Self
Heating, ventilation, and air conditioning	
Plumbing as described in RCW 18.106	
Electrical work as described in RCW 19.28	

**FAILURE OF THE BIDDER TO SUBMIT THE NAMES OF THE FOLLOWING SUBCONTRACTORS OR TO NAME ITSELF TO PERFORM SUCH WORK WITHIN FORTY-EIGHT HOURS OF THE PUBLISHED BID OPENING TIME SHALL RENDER THE BIDDER'S BID NONRESPONSIVE AND, THEREFORE VOID.**

Category of Work	Subcontractor/Self
Structural Steel Installer	
Rebar Installer	

C. ALTERNATE SUBCONTRACTORS: Should the bid for an Alternate require a different Subcontractor, the Subcontractor must be identified in 11.02 below.

**11.02 ALTERNATE SUBCONTRACTOR LIST:**

**SHOULD THE BID FOR AN ALTERNATE REQUIRE A SUBCONTRACTOR DIFFERENT FROM THE SUBCONTRACTOR LISTED IN 11.01 ABOVE, THE SUBCONTRACTOR MUST BE IDENTIFIED BELOW ALONG WITH THE AFFECTED CATEGORY OF THE WORK AND ALTERNATE NUMBER(S).**

Name of Different Subcontractor for Alternate(s)	Category of Work	Alternate Number(s)

**12.01 PART 2 BID FORM SIGNATURES:**

**THE UNDERSIGNED CERTIFIES THAT THEY ARE AUTHORIZED TO BIND THE LEGAL ENTITY MAKING THIS PROPOSAL.**

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

Name of Firm: \_\_\_\_\_

Bidder's Signature: \_\_\_\_\_

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

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

Street Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

STATE OF WASHINGTON CONTRACTOR'S NO: \_\_\_\_\_

FEDERAL ID NO: \_\_\_\_\_

DEPARTMENT OF LABOR & INDUSTRY REG. NO: \_\_\_\_\_

WASHINGTON STATE DEPARTMENT OF REVENUE NO: \_\_\_\_\_

**12.02 NOTE: IF A BIDDER IS A CORPORATION, WRITE STATE OF INCORPORATION; AND IF A PARTNERSHIP, GIVE FULL NAMES AND ADDRESSES OF ALL PARTNERS BELOW.**

A. (If Corporation) – State of Incorporation: \_\_\_\_\_

B. (If Partnership) – List all Partners:

1. Name: \_\_\_\_\_

a. Address: \_\_\_\_\_

2. Name: \_\_\_\_\_

a. Address: \_\_\_\_\_

3. Name: \_\_\_\_\_

a. Address: \_\_\_\_\_

**END OF ALTERNATE BID PROPOSAL FORM  
(PART 2)**



## **SECTION 011000**

### **SUMMARY**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

**A. Section Includes:**

**1. Part 1 – General:**

- a. Project information.
- b. Specification and drawing conventions.
- c. Work covered by the Contract Documents.
- d. Schedule.
- e. Access to site, use of premises, and work restrictions.
- f. Coordination with occupants.
- g. Protection, waste management and disposal.
- h. Temporary utilities and facilities.
- i. Product delivery, storage, and handling.
- j. Demolition.
- k. Pre-construction conference.
- l. Project observer.

**2. Part 2 – Products:**

- a. Re-use of existing materials.
- b. Materials and equipment.
- c. Manufactured and fabricated products.
- d. Fire suppression equipment.

**3. Part 3 – Execution:**

- a. Supervision.
- b. Quality control.
- c. Material handling.
- d. Re-use of existing materials and equipment.
- e. Fire safety.
- f. Examination and preparation.
- g. Testing.

##### **1.2 PROJECT INFORMATION**

**A. Project Identification: Coweeman Middle School Cladding Replacement.**

- 1. Project Location: 2000 Allen Street, Kelso, WA 98626

**B. Owner: Kelso School District**

- 1. Owner's Representative: Paul Richie, (360) 501-1340

**C. Building Envelope Consultant (Consultant): Professional Roof Consultants, Inc.**

- 1. Consultant Representative: Thomas Bertrand, (971) 312-7807

### 1.3 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. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

### 1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents. The Work defined applies within the Area(s) of Work indicated on the Drawings and includes, but is not limited to, the following:
  - 1. Base Bid:
    - a. Demolition of existing cladding exterior wall cladding systems and weather barriers.
    - b. Incidental repair and/or replacement of existing damaged sheathing and wall framing elements.
    - c. Installation of new weather barrier system, exterior insulation, fiber cement panel cladding system (including sub-framing), sheet metal flashings, and other incidental work as identified in the Contract Documents.
- B. Type of Contract: Project will be constructed under a single prime contract.

### 1.5 SCHEDULE

- A. Work shall commence after agreement is properly executed.
- B. Contractor's agreement shall not be signed, nor shall Work commence, prior to Owner approval.
- C. This project will be broken into two construction phases. The windows for construction are as follows:
  - 1. **Phase One: June 13, 2025 – August 22, 2025.**
  - 2. **Phase Two: Summer 2026 (exact start date for this phase TBD)**
- D. Substantial Completion of entire Project shall occur no later than: **August 14, 2026.**
- E. Final Completion of the Project shall occur no later than: **August 21, 2026**

### 1.6 ACCESS TO SITE, USE OF PREMISES, AND WORK RESTRICTIONS

- A. General: Access to the Project site is limited to construction operations as indicated by requirements of this Section.
- B. Use of Site: Limit use of Project site to Work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Vehicle and Pedestrian Areas: Keep driveways, parking areas, loading areas, walkways, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times.
  - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
  - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
2. Limit use of premises for Work and material/equipment storage/staging to allow for:
  - a. Owner occupancy, day and night.
  - b. Public use, during the day.
  - c. Unobstructed safe entry and egress to and from the building and premises for vehicles and pedestrians.
- C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations to pre-construction condition.
- D. 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 to pre-construction condition except where modifications are otherwise indicated in the Drawings.
- E. Comply with limitations on use of public right-of-way and other requirements of authorities having jurisdiction.
- F. Coordinate all operations with Owner's Representative during construction period.
- G. Coordinate access to each roof area with Owner's Representative.
- H. Coordinate location of material/equipment storage areas with Owner's Representative. Location will be identified, and areas made available to Contractor at time of pre-construction conference.
- I. Coordinate location of construction staging and parking areas with Owner's Representative and authorities having jurisdiction (for areas in the public right-of-way).
- J. On-Site Work Hours: Limit construction activities to working hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, unless otherwise indicated. Coordinate with Owner's Representative to establish acceptable noise levels for all activities.
  1. Weekend Hours: 7:00 a.m. to 6:00 p.m. as necessary.
- K. Noise, Vibration, Dust, and Odors: Coordinate operations that may result in high levels of noise and vibration, dust, odors, or other disruption to Owner occupancy with Owner's Representative.
  1. Notify Owner's Representative not less 48 hours in advance of proposed disruptive operations.
  2. Obtain Owner's written permission before proceeding with disruptive operations.
- L. Special Requirements for Indoor Air Temperature:
  1. Coordinate with Owner's Representative to establish indoor air temperature requirements for interior spaces served by mechanical equipment affected by the Work.
  2. Provide means to maintain inside room air temperature at or below 70 degrees Fahrenheit at all times within the IT server room.

- M. Restricted Substances: Use of tobacco products and other controlled substances on Project site is prohibited.

#### 1.7 COORDINATION WITH OCCUPANTS

- A. Full Owner Occupancy: Owner will occupy Project site and existing building during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.
  - 1. Notify Owner not less than 48 hours in advance of activities that will affect Owner's operations.

#### 1.8 PROTECTION, WASTE MANAGEMENT, AND DISPOSAL

- A. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
- B. During the course of construction, protect interior building surfaces, finishes, and other features from damage resulting from foot traffic or any other activity. Provide walkway pads to protect carpet in locations where interior foot traffic is anticipated.
  - 1. Take necessary precautions to protect interior furnishings, equipment, and personal property from falling dust/debris resulting from construction activities.
- C. Except where the Drawings indicate specific modifications to the adjacent landscape, continuously protect site hardscape surfaces, landscape areas, and vegetation from damage and/or contamination resulting from activities and materials used in performance of Work.
  - 1. Repair damage at no cost to Owner.
  - 2. Remove contaminants and return surfaces to pre-construction condition at no cost to the Owner.
- D. Prevent materials from obstructing catch basins and storm drains; leave drains clean and in proper working condition.
- E. Continuously, for entire duration of the Project, protect building surfaces, building contents, and utilities/equipment adjacent to the Area of Work from damage and/or contamination resulting from activities and materials used in performance of Work.
  - 1. Repair damage at no cost to Owner.
  - 2. Remove contaminants and return surfaces to pre-construction condition at no cost to Owner.
- F. Secure and protect materials and equipment from vandalism and/or theft.
- G. Provide and maintain suitable barricades, shelter, lights, and danger signals during performance of the Work. Comply with applicable Federal, State, and local laws and regulations.
- H. Provide and maintain a safe work environment for all construction and quality assurance / quality control personnel within the Area of Work at all times for the duration of the Project. Ensure safety of construction personnel, building occupants, and members of the public in areas adjacent to the Area of Work at all times for the duration of the Project.
- I. Compile and dispose of debris and waste material as rapidly as accumulated for the duration of the Project.

- J. Remove waste materials from Owner's property and dispose of legally.

#### 1.9 TEMPORARY UTILITIES AND FACILITIES

- A. Electrical Service: Electric power from Owner's existing supply is available for reasonable use without metering and without payment of use charges; limited to 20 amp, 120-volt circuits. Provide connections and extensions of services as required for construction operations.
- B. Water Service: Water from Owner's existing domestic supply is available for reasonable use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- C. Restroom Facilities: Use of Owner's restroom facilities by Contractor, Contractor's Subcontractors, and other construction and/or quality assurance / quality control personnel is prohibited.
  - 1. Provide temporary restroom facilities on site, in location approved by Owner's Representative.
  - 2. Temporary facilities shall be maintained in a clean and sanitary condition.
  - 3. Temporary facilities shall be locked after hours to prevent unauthorized access.
- D. Interruption of existing utility service(s) shall not occur without prior written notification and consent of the Owner's Representative. The Owner's Representative has the sole authority to interrupt service.
  - 1. Notify Owner's Representative not less than 48 hours in advance of proposed utility interruptions.
  - 2. Obtain written permission from Owner's Representative before proceeding with utility interruptions.

#### 1.10 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
  - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  - 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
  - 1. Store products to allow for inspection and measurement of quantity or counting of units, and to verify that products are maintained under specified conditions and free from damage.

2. Store materials in a manner that will not endanger Project structure.
  3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
  4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
  5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
  6. Protect stored products from damage and liquids from freezing.
- D. Provide and remove temporary coverings as necessary to protect installed products from damage from foot traffic and subsequent construction operations.
- E. Coordinate on-site storage activities and location with Owner's Representative.
- F. Notify Owner one (1) week prior to requiring on-site storage space.
- G. Stored materials shall not interfere with building operations or building egress.

#### 1.11 DEMOLITION

- A. Uninstall / demolish portions of existing construction as necessary to complete Work shown on Drawings and specified in individual Specification Sections.
- B. All demolished materials shall become the property of the Contractor unless otherwise noted.
- C. Remove, transport, and dispose of demolition materials off-site in a legal manner and location.

#### 1.12 PRE-CONSTRUCTION CONFERENCE

- A. Preconstruction Conference: Consultant will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Contractor, but no later than 15 days after execution of the Agreement.
1. Attendees: Authorized representatives of Owner, Consultant and their subconsultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  2. Agenda: Discuss items of significance that could affect progress, including the following:
    - a. Responsibilities and personnel assignments.
    - b. Tentative construction schedule.
    - c. Phasing.
    - d. Critical work sequencing and long lead items.
    - e. Designation of key personnel and their duties.
    - f. Lines of communications.
    - g. Use of web-based Project software.
    - h. Procedures for processing field decisions and Change Orders.
    - i. Procedures for RFIs.
    - j. Procedures for testing and inspecting.
    - k. Procedures for processing Applications for Payment.
    - l. Distribution of the Contract Documents.
    - m. Submittal procedures.
    - n. Preparation of Record Documents.
    - o. Use of the premises[ **and existing building**].

- p. Work restrictions.
  - q. Working hours.
  - r. Owner's occupancy requirements.
  - s. Responsibility for temporary facilities and controls.
  - t. Procedures for moisture and mold control.
  - u. Procedures for disruptions and shutdowns.
  - v. Construction waste management and recycling.
  - w. Parking availability.
  - x. Office, work, and storage areas.
  - y. Equipment deliveries and priorities.
  - z. First aid.
  - aa. Security.
  - bb. Progress cleaning.
3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

#### 1.13 PROJECT OBSERVER

- A. Consultant will provide periodic on-site observations during construction.

### **PART 2 - PRODUCTS**

#### 2.1 RE-USE OF EXISTING MATERIAL

- A. Except as specifically indicated or specified, materials and equipment removed from existing construction shall not be used in completed Work.

#### 2.2 MATERIALS AND EQUIPMENT

- A. Unless otherwise specified, all material and equipment shall be new, free from defects impairing strength, durability, and appearance, and of current manufacture.
- B. Items specified shall be considered minimum as to quality, function, capacity, and suitability for application intended.
- C. Items incorporated into Work shall conform to applicable specifications and standards designated, and shall be of size, make, type, and quality specified, unless otherwise approved.

#### 2.3 MANUFACTURED AND FABRICATED PRODUCTS

- A. Design, fabricate, and assemble products in accordance with current best engineering, industry, and shop practices.
- B. Like parts of duplicate units shall be interchangeable and manufactured to standard sizes and gauges.
- C. Two (2) or more items of same kind shall be identical and made by same Manufacturer.

## 2.4 FIRE SUPPRESSION EQUIPMENT

- A. Provide portable, UL rated equipment of adequate capacity to extinguish minor fires in combustible material on job site; class and extinguishing agent as required by location and class of fire exposure.

## PART 3 - EXECUTION

### 3.1 SUPERVISION

- A. Contractor shall designate a qualified Superintendent to maintain effective supervision on the Project at all times Work is being performed.
  - 1. Superintendent duties shall be performed by the same individual throughout the entire duration of the Project.
  - 2. Superintendent shall attend the pre-construction conference.

### 3.2 QUALITY CONTROL

- A. Contractor and Contractor's Subcontractors shall employ, and Work shall be executed by, workers skilled in the particular trade(s) involved in the aspects of the Work for which the Contractor or Contractor's Subcontractor are responsible.
- B. Should Owner, in writing, deem any individual performing Work incompetent or unfit for assigned duties, Contractor shall dismiss said worker immediately or reassign said worker to a different task requiring a lesser degree of competence.
- C. Quality of Work shall be first class in every respect and all Work performed shall be in accordance with best trade practices.

### 3.3 MATERIAL HANDLING

- A. Use of cranes, hoists, towers, or other lifting devices deemed necessary by Contractor for proper and efficient movement of materials, the following requirements apply:
  - 1. Use only experienced personnel.
  - 2. Remove equipment as soon as possible after task is ended.
  - 3. Coordinate placement of such equipment with Owner's Representative.
  - 4. Obtain required permits and meet requirements of Authorities Having Jurisdiction regarding street and sidewalk closures, safety, noise, and other applicable regulations.
- B. Materials and debris shall not be allowed to free fall from the roof or other elevated platforms; chutes or conveyors must be utilized in conjunction with suitable barricades, warning lines, and other means of protection are erected to prevent damage to adjacent surfaces, and to prevent unauthorized persons from entering into work areas.
- C. Materials shall not be transported through building interiors unless agreed upon by Owner's Representative.
- D. Schedule material delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.



### 3.4 RE-USE OF EXISTING MATERIALS AND EQUIPMENT

- A. Where existing materials and/or equipment are specifically indicated or permitted to be re-used in Work, comply with the following:
  - 1. Exercise special care in removal, storage, and handling of products which require off-site storage, restoration, or renovation.
  - 2. Arrange and bear the cost of protection, transportation, storage, and handling of products which may require off-site storage, restoration, or renovation.

### 3.5 FIRE SAFETY

- A. Abide by all fire safety requirements for buildings under construction, alteration, or demolition as required by the 2021 Edition of the International Building Code with Washington State Amendments and the 2021 Edition of the International Fire Code with Washington State Amendments.
- B. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
- C. Maintain fire suppression equipment in working condition with current inspection certificate attached.

### 3.6 EXAMINATION AND PREPARATION

- A. Inspect existing conditions and review project requirements and Contract Documents. Proceed with Work only after unsatisfactory conditions have been corrected.
- B. Verify that materials and equipment being furnished meet requirements specified.

### 3.7 TESTING

- A. Owner reserves the right to require testing as necessary to confirm compliance with Contract Documents.
- B. Owner shall bear the cost of testing except as otherwise indicated.
  - 1. Contractor shall bear the cost of testing in the event that testing indicates non-compliance with the Contract Documents.
- C. Non-compliant Work shall be corrected and retested until determined to comply with Contract Documents.
- D. Contractor shall bear the cost for retesting non-compliant Work.
- E. Cooperate with activities of testing agency.

**END OF SECTION 011000**

## **SECTION 012100**

### **ALLOWANCES**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
  - 1. Quantity allowances.
- C. Related Requirements:
  - 1. Section 012200 "Unit Prices" for procedures for using unit prices, including adjustment of quantity allowances when applicable.
  - 2. Section 012600 "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

##### **1.2 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.

##### **1.3 ACTION SUBMITTALS**

- A. Submit proposals for purchase of products or systems included in allowances in the form specified for Change Orders.

##### **1.4 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.

##### **1.5 QUANTITY ALLOWANCES**

- A. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Consultant 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 Consultant 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 Consultant, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

#### 1.6 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.

### **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. Allowance No. 1: Quantity Allowance for 1/2" Plywood Sheathing:
  - 1. Include cost for replacement of existing deteriorated plywood sheathing found along the base of the wall in situations described in Detail 1/S201. Allowance shall be based upon

removal and replacement of fourteen (14) boards of plywood sheathing with each replacement board measuring **2 feet** by 8 feet by 1/2 inch and installed in accordance with Detail 1/S201. Finished sheathing configuration to match existing, see wall assemblies.

2. Coordinate quantity allowance adjustment with unit-price requirements in Section 012200 "Unit Prices."

B. Allowance No. 2: Quantity Allowance for 5/8" Plywood Sheathing:

1. Include cost for replacement of existing deteriorated plywood sheathing found along the base of the wall in situations similar to Detail 1/S201. Allowance shall be based upon removal and replacement of forty (40) boards of plywood sheathing with each replacement board measuring **2 feet** by 8 feet by 5/8 inch and installed in accordance with Detail 1/S201. Finish sheathing configuration to match existing, see wall assemblies.
2. Coordinate quantity allowance adjustment with unit-price requirements in Section 012200 "Unit Prices."

C. Allowance No. 3: Quantity Allowance for 5/8" Gypsum Sheathing:

1. Include cost for replacement of existing deteriorated gypsum sheathing found along the base of the wall in situations similar to Detail 1/S201. Allowance shall be based upon removal and replacement of fourteen (14) boards of gypsum sheathing with each replacement board measuring **2 feet** by 8 feet by 5/8 inch and installed in a similar condition to Detail 1/S201. Finished sheathing configuration to match existing, see wall assemblies.
2. Coordinate quantity allowance adjustment with unit-price requirements in Section 012200 "Unit Prices."

D. Allowance No. 4: Quantity Allowance for 5/8" Type 'X' Gypsum Sheathing:

1. Include cost for replacement of existing deteriorated Type 'X' gypsum sheathing found along the base of the wall in situations similar to Detail 1/S201. Allowance shall be based upon removal and replacement of eight (8) boards of Type 'X' gypsum sheathing with each replacement board measuring **2 feet** by 8 feet by 5/8 inch and installed in a similar condition to Detail 1/S201. Finished sheathing configuration to match existing, see wall assemblies.
2. Coordinate quantity allowance adjustment with unit-price requirements in Section 012200 "Unit Prices."

**END OF SECTION 012100**

## **SECTION 012200**

### **UNIT PRICES**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

- A. Section includes administrative and procedural requirements for unit prices.

##### **1.2 DEFINITIONS**

- A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

##### **1.3 PROCEDURES**

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- C. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the Part 3 "Schedule of Unit Prices" Article contain requirements for materials described under each unit price.

##### **1.4 QUALITY ASSURANCE**

- A. For each Unit Price item that is performed, coordinate Work of various trades involved, and modify surrounding Work as required to complete Project as intended.
- B. In figure for each Unit Price, include incidental costs which, as attribute to adjustments in Work of other trades, may be required to achieve contemplated final conditions.
- C. If there is a question regarding the extent, scope, nature, or intent of the Unit Price Work, contact the Owner for clarification.
- D. Failure on the Contractor's part to clarify unclear items shall not relieve the Contractor of responsibility for performing Work in accordance with the intent and requirements of the Contract Documents.
- E. Description of Unit Price items listed hereinafter is qualitative and not quantitative.
- F. Contractor shall determine quantities of labor and materials and extent of same required to execute Work in accordance with the intent and requirements of the Contract Documents.
- G. Notify Owner 's Representative prior to any application of Unit Price Work.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION**

**3.1 SCHEDULE OF UNIT PRICES**

**A. Unit Price No. 1: 1/2" Plywood Sheathing.**

1. Description: Installation of new 1/2-inch-thick plywood replacement sheathing according to Section 061000 "Rough Carpentry" and the drawings where deterioration is found along the base of the wall in existing sheathing as shown in Detail 1/S201.
2. Unit of Measurement: One panel of plywood sheathing measuring **2 feet** by 8 feet by 1/2 inch (installed per Detail 1/S201).
3. Quantity Allowance: Unit price is for each individual board replacement above and beyond the allowance adjustment requirements in Section 012100 "Allowances" for this same item.

**B. Unit Price No. 2: 5/8" Plywood Sheathing.**

1. Description: Installation of new 5/8-inch-thick plywood replacement sheathing according to Section 061000 "Rough Carpentry" and the drawings where deterioration is found along the base of the wall in existing sheathing for similar conditions to Detail 1/S201.
2. Unit of Measurement: One panel of plywood sheathing measuring **2 feet** by 8 feet by 5/8 inch (installed per Detail 1/S201).
3. Quantity Allowance: Unit price is for each individual board replacement above and beyond the allowance adjustment requirements in Section 012100 "Allowances" for this same item.

**C. Unit Price No. 3: 5/8" Gypsum Sheathing.**

1. Description: Installation of new 5/8-inch-thick gypsum replacement sheathing to match existing where deterioration is found along the base of the wall in existing sheathing for similar conditions to Detail 1/S201.
2. Unit of Measurement: One panel of gypsum sheathing measuring **2 feet** by 8 feet by 5/8 inch (installed similar to Detail 1/S201).
3. Quantity Allowance: Unit price is for each individual board replacement above and beyond the allowance adjustment requirements in Section 012100 "Allowances" for this same item.

**D. Unit Price No. 4: 5/8" Type 'X' Gypsum Sheathing.**

1. Description: Installation of new 5/8-inch-thick Type 'X' gypsum replacement sheathing to match existing where deterioration is found along the base of the wall in existing sheathing for similar conditions to Detail 1/S201.
2. Unit of Measurement: One panel of Type 'X' gypsum sheathing measuring **2 feet** by 8 feet by 5/8 inch (installed similar to Detail 1/S201).
3. Quantity Allowance: Unit price is for each individual board replacement above and beyond the allowance adjustment requirements in Section 012100 "Allowances" for this same item.

**E. Provide Unit Prices based on above identified products being installed or replaced in addition to the figure provided in the Base Bid. Replacement includes removal of existing materials and installation of new materials.**

**END OF SECTION 012200**

## **SECTION 012500**

### **SUBSTITUTION PROCEDURES**

#### **PART 1 - GENERAL**

##### **1.1 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.

##### **1.2 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 an advantage to Contractor or Owner.

##### **1.3 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. 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. Cost information, including a proposal of change, if any, in the Contract Sum.
  - g. 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.
  - h. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
- 2. BE Consultant's Action: If necessary, BE Consultant (Consultant) will request additional information or documentation for evaluation within five (5) days of receipt of a request for substitution. Consultant will notify Contractor of acceptance or rejection of proposed substitution within five (5) days of receipt of receipt of additional information or documentation.
  - a. Forms of Acceptance: Change Order, Construction Change Directive, or Consultant's Supplemental Instructions for minor changes in the Work.
  - b. Use product specified if Consultant does not issue a decision on use of a proposed substitution within time allocated.

#### 1.4 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.

#### 1.5 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

#### 1.6 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.
  - 1. Conditions: Consultant will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Consultant will return requests without action, except to record noncompliance with these requirements:
    - a. Substitutions must be written and submitted by the contractor awarded the project. If the substitution occurs during bidding, the substitution must be written and submitted by a bidding contractor.
    - b. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - c. Substitution request is fully documented and properly submitted.
    - d. Requested substitution will not adversely affect Contractor's construction schedule.
    - e. Requested substitution has received necessary approvals of authorities having jurisdiction.
    - f. Requested substitution is compatible with other portions of the Work.
    - g. Requested substitution has been coordinated with other portions of the Work.



- h. Requested substitution provides specified warranty.
    - i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: Consultant will consider requests for substitution if received within during the bidding phase. Requests received after that time may be considered or rejected at discretion of Consultant.
  - 1. Conditions: Consultant will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Consultant will return requests without action, except to record noncompliance with these requirements:
    - a. Substitutions must be written and submitted by a bidding contractor.
    - b. 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 Consultant for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
    - c. Requested substitution does not require extensive revisions to the Contract Documents.
    - d. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - e. Substitution request is fully documented and properly submitted.
    - f. Requested substitution will not adversely affect Contractor's construction schedule.
    - g. Requested substitution has received necessary approvals of authorities having jurisdiction.
    - h. Requested substitution is compatible with other portions of the Work.
    - i. Requested substitution has been coordinated with other portions of the Work.
    - j. Requested substitution provides specified warranty.
    - k. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

## PART 2 - PRODUCTS (Not Used)

## PART 3 - EXECUTION

### 3.1 SUBSTITUTION REQUIREMENTS DURING THE BIDDING PERIOD

- A. Submit the following information with each Proposal:
  - 1. Construction Specifier's Institute (CSI) Substitution Request Form.
  - 2. Itemized comparison of proposed substitution with product or method specified.
  - 3. Complete data on each material and system for this Project only, substantiating compliance of proposed substitution with Contract Documents.
  - 4. Complete evidence including test numbers and supporting reports indicating compliance with referenced standards relating to this Project only.
  - 5. A statement from materials Manufacturers stating that warranty requirements specified are acceptable and that such warranty shall be issued upon successful completion of Project.

6. Set of Details for this Project clearly indicating specific deviations proposed for the substitution.
7. Mark Specification Sections within Project Manual to indicate all deviations in materials, products, and methods specified.
8. Submit samples of all materials and products including accessories, anchors, and similar items.
9. All substitution requests must be submitted by a bidding contractor.
10. All substitution requests shall be submitted not less than 3 days prior to the bid due date unless stated otherwise in the instructions to bidders.

### 3.2 SUBSTITUTIONS REQUESTED AFTER AWARD OF CONTRACT

- A. To be considered, a substitution must be for one or more of the following conditions and must be documented in any such request:
  1. Required for compliance with final interpretation of code requirements or insurance regulations.
  2. Required due to unavailability of specified product, through no fault of the Contractor.
  3. Required because subsequent information disclosed the inability of the specified product to perform properly or to fit in the designated space.
  4. Required because it has become clearly evident, in the judgment of the Owner that a substitute would be substantially in the best interest of the Owner in terms of cost, time (schedule), or other considerations.

### 3.3 SUBSTITUTIONS NOT PERMITTED

- A. Materials that are indicated or implied on Shop Drawings or product data submitted without first requesting approval thereof in accordance with requirements of this section.
- B. Acceptance will require substantial revision of the Contract Documents, except as allowed by Article 3.2 above.
- C. Any substitution request submitted by a manufacturer.

**END OF SECTION 012500**

## **SECTION 012600**

### **CONTRACT MODIFICATION PROCEDURES**

#### **PART 1 - GENERAL**

##### **1.1 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.

##### **1.2 MINOR CHANGES IN THE WORK**

- A. BE Consultant (Consultant) will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time as Consultant's Supplemental Instructions (CSI).

##### **1.3 PROPOSAL REQUESTS**

- A. Owner-Initiated Proposal Requests: Consultant 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 Consultant 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.
    - e. Quotation Form: Use forms acceptable to Consultant.
- 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 the Consultant.

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 discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Proposal Request Form: Use forms acceptable to Consultant.

#### 1.4 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.

#### 1.5 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Work Change Proposal Request, Consultant will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

#### 1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Consultant may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
  1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
  1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION 012600**

## **SECTION 012900**

### **PAYMENT PROCEDURES**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
  - 1. Section 012100 "Allowances" for procedural requirements governing the handling and processing of allowances.
  - 2. Section 012200 "Unit Prices" for administrative requirements governing the use of unit prices.
  - 3. Section 012600 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.

##### **1.2 DEFINITIONS**

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

##### **1.3 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 the BE Consultant (Consultant) at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
- 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. 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.
4. 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.
5. 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.
6. Overhead Costs, Proportional Distribution: Include total cost and proportionate share of general overhead and profit for each line item.
7. 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.
8. Closeout Costs. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling **[five]** **<Insert number>** percent of the Contract Sum and subcontract amount.
9. 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.

#### 1.4 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 the Consultant and paid for by Owner.
- B. Payment Application Times: The date for each progress payment is indicated in the Owner/Contractor Agreement. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Consultant 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 an electronic copy of each Application for Payment to the Consultant. Include a copy of 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. Products list (preliminary if not final).
  5. Schedule of unit prices.
  6. Submittal schedule (preliminary if not final).
- H. Application for Payment at Substantial Completion: After Consultant issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
    - 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. Evidence that claims have been settled.



8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
9. Final liquidated damages settlement statement.
10. Proof that taxes, fees, and similar obligations are paid.
11. 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 SUMMARY**

- A. Section includes administrative provisions for coordinating construction operations on Project, including, but not limited to, the following:
  - 1. RFIs.
  - 2. Digital project management procedures.
  - 3. Project meetings.
- B. Related Requirements:
  - 1. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
  - 2. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

##### **1.2 DEFINITIONS**

- A. RFI: Request for Information. Request from Owner, BE Consultant (Consultant), or Contractor seeking information required by or clarifications of the Contract Documents.

##### **1.3 INFORMATIONAL SUBMITTALS**

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
  - 1. Name, address, telephone number, and email address of entity performing subcontract or supplying products.
  - 2. Number and title of related Specification Section(s) covered by subcontract.
  - 3. Drawing number and detail references, as appropriate, covered by subcontract.
- B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses, cellular telephone numbers, and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.
  - 1. Post copies of list in Project meeting room, in temporary field office, in web-based Project software directory, and in prominent location in built facility. Keep list current at all times.

#### 1.4 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. Consultant will return without response those RFIs submitted to Consultant 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 Consultant.
  - 5. Consultant'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: Software-generated form with substantially the same content as indicated above, acceptable to Consultant.
  - 1. Attachments shall be electronic files in PDF format.
- D. Consultant's Action: Consultant will review each RFI, determine action required, and respond. Allow five days for Architect's response for each RFI. RFIs received by the Consultant 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 Consultant's actions on submittals.
    - g. Incomplete RFIs or inaccurately prepared RFIs.

2. Consultant's action may include a request for additional information, in which case Consultant's time for response will date from time of receipt by Consultant of additional information.
  3. Consultant'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 Consultant in writing within 5 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 with not less than the following:
1. Project name.
  2. Name and address of Contractor.
  3. Name and address of Consultant.
  4. RFI number, including RFIs that were returned without action or withdrawn.
  5. RFI description.
  6. Date the RFI was submitted.
  7. Date Consultant's response was received.
  8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
- F. On receipt of Consultant's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Consultant within three days if Contractor disagrees with response.

#### 1.5 DIGITAL PROJECT MANAGEMENT PROCEDURES

- A. Consultant's Data Files Not Available: Consultant will not provide Consultant's data files for Contractor's use during construction.
- B. PDF Document Preparation: Where PDFs are required to be submitted to the Consultant, 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.

#### 1.6 PROJECT MEETINGS

- A. General: Contractor will schedule 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 Consultant 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: Contractor will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Consultant within three days of the meeting.
- B. Preconstruction Conference: Reference Section 011000 "Summary" for requirements.
- C. Progress Meetings: Conduct progress meetings at regular intervals.
  1. Coordinate dates of meetings with preparation of payment requests.
  2. Attendees: In addition to representatives of Owner, and Consultant, 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.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION 013100**

**SECTION 013300**  
**SUBMITTAL PROCEDURES**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Section Includes: Administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals when required by an individual Specification Section.
- B. Related Requirements:
  - 1. Section 011000 "Summary" for the Work covered by the Contract Documents, restrictions on use of Project site, coordination with occupants, and work restrictions.
  - 2. Section 014000 "Quality Requirements" for submitting test and inspection reports, and schedule of tests and inspections.
  - 3. Section 016000 "Product Requirements" for selection requirements of products for use in Project.
  - 4. Section 017700 "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.
  - 5. Section 061000 "Rough Carpentry" for products used in installation of wood curbs, nailers, and sheathing, as applicable.
  - 6. Section 072100 "Thermal Insulation" for products used in installation of thermal insulation systems.
  - 7. Section 072500 "Weather Barriers" for products used in installation of weather barrier systems.
  - 8. Section 074646 "Fiber-Cement Siding" for products used in installation of fiber-cement siding systems.
  - 9. Section 076200 "Sheet Metal Flashing and Trim" for products used in installation of sheet metal flashing and trim systems.

**1.2 DEFINITIONS**

- A. Action Submittal: Written and graphic information and physical samples that require BE Consultant's (Consultant) responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittal: Written and graphic information and physical samples that do not require Consultant's responsive action. Submittals may be rejected for non-compliance with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. Consultant will mark reviewed submittal materials as follows:
  - 1. "No Exceptions Taken": Submittal content complies with the general intent of the Contract Documents.
  - 2. "Make Revisions Noted": Submittal content complies with the general intent of the Contract Documents given that corrections noted are incorporated.
  - 3. "Revise and Resubmit": Submittal content cannot be evaluated for compliance with the general intent of the Contract Documents as submitted. Information provided does not apply in whole or in part, or is incomplete.

4. "Rejected": Submittal content does not comply with the general intent of the Contract Documents. Product or system does not meet Project requirements and is not acceptable for proposed use.

### 1.3 SUBMITTAL FORMATS

A. Submittal Information: Include the following information in each submittal:

1. Project name.
2. Date.
3. Name of Consultant.
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. Submittal purpose and description.
9. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
10. Drawing number and detail references, as appropriate.
11. Indication of full or partial submittal.
12. Location(s) where product is to be installed, as appropriate.
13. Other necessary identification.
14. Remarks.
15. Signature of transmitter.

B. Options: Identify options requiring selection by Consultant.

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 Consultant 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. Include bookmarks for each document included in the submittal package.

### 1.4 SUBMITTAL PROCEDURES

A. Prepare and submit submittals required by individual Specification Sections. Required submittals are indicated in individual Specification Sections.

1. Email: Prepare submittals as PDF package and transmit to Consultant by sending via email. Include PDF transmittal form. Include information in email subject line as requested by Consultant.
  - a. For action submittals, Consultant will return annotated file. Annotate and retain one copy of file as a digital Project Record Document file.

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. Consultant reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Resubmittals: Make resubmittals in same form 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 when initial submittals are stamped "Revise and Resubmit" or "Rejected" by Consultant. Submittals stamped "Make Corrections Noted" by Consultant need not be resubmitted.
- D. 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.
- E. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with Consultant's "No Exceptions Taken" or "Make Corrections Noted" stamp.

## 1.5 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.
    6. Safety Data Sheets (SDS): SDS are for Contractor's use in maintaining safe working conditions and are not required submittals. As such, they are not reviewed by Consultant. SDS sheets shall be submitted directly to Owner.
    7. Prohibited or Limited Submittals to Consultant:
      - a. Do not submit Safety Data Sheets (SDS) to Consultant. If SDS are included in any given submittal, the entire submittal will be rejected.
      - b. Do not submit Environmental Product Declarations (EPD) unless specifically requested by Consultant.
      - c. Do not submit Health Product Declarations (HPD) unless specifically required by Consultant.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale.
  1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Identification of products.
    - b. Schedules.
    - c. Compliance with specified standards.
    - d. Notation of coordination requirements.
    - e. Notation of dimensions established by field measurement.
    - f. Relationship and attachment to adjoining construction clearly indicated.
    - g. Seal and signature of professional engineer if specified.
- C. Samples: Submit Samples for review of 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. 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.
  5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.

- D. 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.
- E. 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.
- F. 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.

#### 1.6 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 Consultant.
- B. Delegated Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF file of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
  - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

#### 1.7 CONTRACTOR'S REVIEW

- A. 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 Consultant.

- 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. Consultant will not review submittals received from Contractor that do not have Contractor's review and approval.

#### 1.8 CONSULTANT'S REVIEW

- A. Consultant will review each submittal, indicate corrections or revisions required, and return.
  - 1. PDF Submittals: Consultant will indicate, via markup on each submittal, the appropriate action. Refer to Definitions article of this Section.
- B. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Consultant.
- C. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- D. Consultant will return without review submittals received from sources other than Contractor.
- E. Submittals not required by the Contract Documents will be returned by Consultant 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 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 BE Consultant (Consultant), Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Requirements:
  - 1. Section 011000 "Summary" for the Work covered by the Contract Documents, restrictions on use of Project site, coordination with occupants, and work restrictions.
  - 2. Section 013300 "Submittal Procedures" for submitting test and inspection reports, and schedule of tests and inspections.
  - 3. Section 016000 "Product Requirements" for selection requirements of products for use in Project.
  - 4. Section 017700 "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.
  - 5. Section 061000 "Rough Carpentry" for products used in installation of wood curbs, nailers, and sheathing, as applicable.
  - 6. Section 072100 "Thermal Insulation" for products used in installation of thermal insulation systems.
  - 7. Section 072500 "Weather Barriers" for products used in installation of weather barrier systems.
  - 8. Section 074646 "Fiber-Cement Siding" for products used in installation of fiber-cement siding systems.
  - 9. Section 076200 "Sheet Metal Flashing and Trim" for products used in installation of sheet metal flashing and trim systems.

**1.2 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. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) in accordance with 29 CFR 1910.7, by a testing agency accredited in accordance with 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.
- E. Source Quality-Control Tests and Inspections: Tests and inspections that are performed at the source (e.g., plant, mill, factory, or shop).
- F. 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."
- G. 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.
- H. 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 Consultant.

### 1.3 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 Consultant regarding the conflict and obtain clarification prior to proceeding with the Work. Refer conflicting requirements that are different, but apparently equal, to Consultant 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 Consultant for a decision before proceeding.

### 1.4 REPORTS AND DOCUMENTS

- A. 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.

## 1.5 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. 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.
- F. 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.

## 1.6 QUALITY CONTROL

- A. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.
  1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
  2. Engage a qualified testing agency to perform quality-control services.
    - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
  3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspection will be performed.

4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  5. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- B. 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.
- C. Testing Agency Responsibilities: Cooperate with Consultant and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Consultant 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.
- D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- E. 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.
- F. 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.



## 1.7 SPECIAL TESTS AND INSPECTIONS

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

## **PART 2 - PRODUCTS (Not Used)**

## **PART 3 - EXECUTION**

### 3.1 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.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

**END OF SECTION 014000**

## **SECTION 015000**

### **TEMPORARY FACILITIES AND CONTROLS**

#### **PART 1 - GENERAL**

##### **1.1 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.
  - 2. Section 012100 "Allowances" for allowance for metered use of temporary utilities.

##### **1.2 USE CHARGES**

- A. Installation, removal, and use charges for temporary facilities to 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, BE Consultant (Consultant), occupants of Project, testing agencies, and authorities having jurisdiction.
- B. Water Service: Owner will pay water-service use charges for water used by all entities for construction operations.
- C. Electric Power Service: Owner will pay electric-power-service use charges for electricity used by all entities for construction operations.
- D. Water Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- E. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

##### **1.3 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. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.

- C. 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 Owner. Include the following:
  - 1. Methods used to meet the goals and requirements of 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 Owner.
  - 6. Indicate locations of areas requiring special attention as identified by Owner. Indicate means for complying with Owner's requirements.

#### 1.4 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.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Portable Chain-Link Fencing: Minimum 2-inch, 0.148-inch-thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch-OD line posts and 2-7/8-inch-OD corner and pull posts, with 1-5/8-inch-OD top and bottom rails. Provide galvanized-steel bases for supporting posts.

#### 2.2 TEMPORARY FACILITIES

- A. Field Offices:
  - 1. 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 and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep the 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 6 individuals. Provide electrical power service and 120-V ac duplex receptacles, with no fewer than one receptacle on each wall. Furnish room with conference table, chairs, and 4-foot- square tack and marker boards.
  - 3. Drinking water.
  - 4. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F.

5. Lighting fixtures capable of maintaining average illumination of 20 fc at desk height.
- C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
  1. Store combustible materials apart from building.

## 2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

## PART 3 - EXECUTION

### 3.1 TEMPORARY FACILITIES, GENERAL

- A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
  1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

### 3.2 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
  1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

### 3.3 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
  1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. 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.
- C. Electric Power Service:

1. Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.
- D. 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.
- E. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install WiFi cell phone access equipment.
  1. At each telephone, post a list of important telephone numbers.
    - a. Police and fire departments.
    - b. Ambulance service.
    - c. Contractor's home office.
    - d. Contractor's emergency after-hours telephone number.
    - e. Consultant's office.
    - f. Owner's Representative office.
    - g. Engineers' offices.
    - h. Owner's office.
    - i. Principal subcontractors' field and home offices.
- F. Electronic Communication Service: Provide secure WiFi wireless connection to internet with provisions for access by Consultant and Owner.

### 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 of building lines that is noncombustible in accordance with ASTM E136. Comply with NFPA 241.
  2. Maintain support facilities until Consultant 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. Parking: Use designated areas of Owner's existing parking areas for construction personnel.
- C. Storage and Staging: Use designated areas of Project site for storage and staging needs.
- D. 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.
- E. 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.

F. Waste Disposal Facilities:

1. Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction and Section 017419 "Construction Waste Management and Disposal." Comply with progress cleaning requirements in Section 017300 "Execution."
2. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

### 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:
1. Comply with requirements of EPA Construction General Permit or authorities having jurisdiction.
  2. 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, in accordance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
    - a. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant-protection zones.
    - b. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
    - c. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
    - d. Remove erosion and sedimentation controls, and restore and stabilize areas disturbed during removal.
- D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.

- E. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- F. 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.
- G. 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.

### 3.6 MOISTURE AND MOLD CONTROL

- A. Moisture and Mold Protection: Protect stored materials and installed Work.
- B. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
  - 1. Protect porous materials from water damage.
  - 2. Protect stored and installed material from flowing or standing water.
  - 3. Keep porous and organic materials from coming into prolonged contact with concrete.
  - 4. Remove standing water from decks.
  - 5. Keep deck openings covered or dammed.
- C. 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 72 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 72 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 72 hours.

### 3.7 OPERATION, TERMINATION, AND REMOVAL

- A. 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.
- B. 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 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product substitutions; and comparable products.
- B. Related Requirements:
  - 1. Section 011000 "Summary" for the Work covered by the Contract Documents, restrictions on use of Project site, coordination with occupants, and work restrictions.
  - 2. Section 012500 "Substitution Procedures" for administrative and procedural requirements for substitutions.
  - 3. Section 013300 "Submittal Procedures" for submitting schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
  - 4. Section 014000 "Quality Requirements" for general testing and inspecting requirements.
  - 5. Section 017700 "Close-Out Procedures" for coordinating closeout of the Contract.

1.2 CONTRACTORS RESPONSIBILITIES

- A. Investigate proposed products and determine that they are equal or superior in all respects to products specified.
- B. Provide same guarantee for accepted substitutions as for products specified.
- C. Coordinate installation of accepted substitutions into Work, making such changes as may be required for the Work to be complete in all respects.
- D. Waive all claims for additional costs related to substituted materials.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION**

3.1 PRODUCT OPTIONS

- A. For products specified only be referenced standards, provide products by any Manufacturer meeting standards specified.
- B. For products specified by naming one or more products, provide any product named.
- C. If conditional requirements are stipulated, each product must comply with those requirements.
- D. Products not specifically named must be approved prior to award of contract.

- E. There is no option and no substitution will be allowed for products specified by naming a product to match existing products or systems; provide product of the same name.

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.
  - 3. Installation.
  - 4. Cutting and patching.
  - 5. Coordination of Owner's portion of the Work.
  - 6. Progress cleaning.
  - 7. Starting and adjusting.
  - 8. Protection of installed construction.
  - 9. Correction of the Work.
- B. Related Requirements:
  - 1. Section 011000 "Summary" for coordination of limits on use of Project site.
  - 2. Section 024119 "Selective Demolition" for demolition and removal of selected portions of the building.

##### **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 QUALITY ASSURANCE**

- A. 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 Consultant 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 concealed, underground and other utilities and construction indicated as existing are not guaranteed.
- 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. Ensure resulting built conditions will not negatively impact drainage.
  - 2. Upon discovery of an issue, notify the BE Consultant (Consultant) in a timely fashion of any storm drain, irrigation lines or other concealed / underground utilities that may be negatively impacted by the resulting construction and will need to be adjusted or modified to ensure operation in the same manner as was present pre-construction.
  - 3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
  - 4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
  - 5. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. 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 Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Consultant in accordance with requirements in Section 013100 "Project Management and Coordination."

### 3.3 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.
- 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 the Consultant. 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 Consultant.
  - 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 Consultant. Fit exposed connections together to form hairline joints.

### 3.4 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.
  3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, in accordance with 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 in accordance with 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.

### 3.5 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.

3.6 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.
- 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 017700**  
**CLOSEOUT PROCEDURES**

**PART 1 - GENERAL**

**1.1 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. List of incomplete items.
  - 4. Submittal of Project warranties.
  - 5. Final cleaning.
- B. Related Requirements:
  - 1. Section 011000 "Summary" for the Work covered by the Contract Documents, restrictions on use of Project site, coordination with occupants, and work restrictions.
  - 2. Section 013300 "Submittal Procedures" for submitting schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
  - 3. Section 014000 "Quality Requirements" for general testing and inspecting requirements.
  - 4. Section 016000 "Product Requirements" for selection requirements of products for use in Project.

**1.2 SUBSTANTIAL COMPLETION**

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
  - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
  - 2. Advise Owner of pending insurance changeover requirements.
  - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 5. Prepare and submit Project Record Documents, operation, and maintenance manuals, damage or settlement surveys, and similar final record information.
  - 6. Deliver extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
  - 7. Terminate and remove temporary facilities from Project site, along with stair towers, dumpsters, construction tools and containers, and similar elements.
  - 8. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
  - 9. Complete final cleaning requirements, including touchup painting.
  - 10. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, BE Consultant (Consultant) will either proceed with inspection or notify Contractor of



unfulfilled requirements. Owners Representative 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 Owners Representative, that must be completed or corrected before certificate will be issued.

1. Re-Inspection: Request re-inspection 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.

### 1.3 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
  1. Submit certified copy of Consultant Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Owners Representative. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  2. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  3. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Consultant will either proceed with inspection or notify Contractor of unfulfilled requirements. Owners Representative 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. Re-Inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

### 1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
  1. Include the following information at the top of each page:
    - a. Project name.
    - b. Date.
    - c. Name of Owner's Representative.
    - d. Name of Contractor.
    - e. Page number.

## 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 labels that are not permanent.
    - h. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication and foreign substances.
    - i. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
    - j. Clean interior finishes and surfaces in spaces affected by execution of the Work.
    - k. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess material on Owner's property. Do not discharge volatile, harmful, or dangerous material into drainage systems. Remove waste material from the Project site and dispose of lawfully.

**END OF SECTION 017700**

## **SECTION 017823**

### **OPERATION AND MAINTENANCE DATA**

#### **PART 1 - GENERAL**

##### **1.1 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. Systems and equipment maintenance manuals.
  - 3. Product maintenance manuals.
- B. Related Requirements:
  - 1. Section 013300 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.

##### **1.2 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.

##### **1.3 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. BE Consultant (Consultant) 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 Consultant. Enable reviewer comments on draft submittals.
- C. Authority] 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. Consultant will return copy with comments.

1. Correct or revise each manual to comply with Consultant's comments. Submit copies of each corrected manual within 15 days of receipt of Consultant's comments and prior to commencing demonstration and training.
- E. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

#### 1.4 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.

#### 1.5 REQUIREMENTS FOR 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 Consultant.
  8. Name and contact information for Commissioning Authority.
  9. Names and contact information for major consultants to the Consultant 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.

- 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."

#### 1.6 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. 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.
- H. 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.

#### 1.7 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 024119**

### **SELECTIVE DEMOLITION**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

**A. Section Includes:**

1. Demolition and removal of selected portions of building or structure.
2. Salvage of existing items to be reused or recycled.

**B. Related Requirements:**

1. Section 011000 "Summary" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.

##### **1.2 DEFINITIONS**

- A. Remove:** Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage:** Detach items from existing construction, in a manner to prevent damage, and store.
- C. Remove and Reinstall:** Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. "Existing" or "Existing to Remain":** Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
- E. Dismantle:** To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

##### **1.3 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 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 Consultant 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 suspected hazardous materials are encountered, do not disturb; immediately notify BE Consultant (Consultant) and Owner.
    - b. Hazardous materials will be removed by Owner under a separate contract or via a change order process.
- 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.

## **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. Where wall framing replacement is specified, perform an engineering survey of the repair area after the sheathing is removed to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
  - 1. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

### 3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
  - 1. Arrange to shut off utilities with utility companies.
  - 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
  - 3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
    - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
    - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
    - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
    - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
    - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
    - f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
    - g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

### 3.3 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
  - 5. Comply with requirements for temporary facilities, dust control, heating, and cooling specified in Section 011000 "Summary."
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
  - 1. Strengthen or add new supports when required during progress of selective demolition.
- C. Remove temporary barricades and protections where hazards no longer exist.

### 3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
  - 1. Proceed with selective demolition systematically, from high to low.
  - 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.
  - 5. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  - 6. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
  - 7. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  - 8. 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. Removed and Salvaged Items:
  - 1. Clean salvaged items.
  - 2. Pack or crate items after cleaning. Identify contents of containers.
  - 3. Store items in a secure area until delivery to Owner.
  - 4. Transport items to Owner's storage area designated by Owner.
  - 5. Protect items from damage during transport and storage.
- D. Removed and Reinstalled Items:
  - 1. Clean and repair items to functional condition adequate for intended reuse.
  - 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  - 3. Protect items from damage during transport and storage.
  - 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition.

### 3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and dispose of lawfully.
  - 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.

- B. Burning: Do not burn demolished materials.

### 3.6 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

**END OF SECTION 024119**

**SECTION 061000**  
**ROUGH CARPENTRY**

**PART 1 - GENERAL**

**1.1 SUMMARY**

**A. Section Includes:**

1. Wood products.
2. Wood-preserved-treated lumber.
3. Dimension lumber framing, blocking, and nailers.
4. Plywood sheathing.

**B. Related Requirements:**

1. Section 024119 "Selective Demolition" for methods of existing cladding removal procedures and requirements.
2. Section 072100 "Thermal Insulation" for installation of thermal insulation systems.
3. Section 072500 "Weather Barriers" for installation of weather barrier systems.
4. Section 074646 "Fiber-Cement Siding" for installation of fiber-cement siding systems.
5. Section 076200 "Sheet Metal Flashing and Trim" for installation of sheet metal flashing and trim systems.

**1.2 DEFINITIONS**

- A. Boards or Strips:** Lumber of less than 2 inches nominal size in least dimension.
- B. Dimension Lumber:** Lumber of 2 inches nominal size or greater but less than 5 inches nominal size in least dimension.
- C. Exposed Framing:** Framing not concealed by other construction.
- D. Lumber grading agencies, and abbreviations used to reference them, include the following:**
1. NLGA: National Lumber Grades Authority.
  2. WCLIB: West Coast Lumber Inspection Bureau.
  3. WWP: Western Wood Products Association.

**1.3 ACTION SUBMITTALS**

- A. Product Data:** For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
1. Include data for wood-preserved treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
  2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.

3. For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency in accordance with ASTM D5664.
4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by storing in an elevated position and covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

### PART 2 - PRODUCTS

#### 2.1 WOOD PRODUCTS

- A. Lumber: Comply with DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Grade lumber by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
  1. Factory mark each piece of lumber with grade stamp of grading agency.
  2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry wood products.
  3. Dress lumber, S4S, unless otherwise indicated.
- B. Maximum Moisture Content:
  1. 19 percent unless otherwise indicated.

#### 2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWPA U1, Use Category UC2.
  1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
  1. Nailers, furring, blocking, stripping, and similar members in connection with cladding, flashing, WRB, and waterproofing.

## 2.3 DIMENSION LUMBER FRAMING

- A. Provide dimension lumber indicated and lumber for support or attachment of other construction, including the following:
  - 1. Blocking.
  - 2. Nailers.
- B. Dimension Lumber Items: Construction or No. 2 or better grade lumber of any of the following species:
  - 1. Hem-fir (north); NLGA.
  - 2. Spruce-pine-fir; NLGA.
  - 3. Hem-fir; WCLIB or WWP.
  - 4. Northern species; NLGA.
- C. Concealed Boards: 19 percent maximum moisture content and any of the following species and grades:
  - 1. Hem-fir or hem-fir (north); Construction or No. 2 Common grade; NLGA, WCLIB, or WWP.
  - 2. Northern species; No. 2 Common grade; NLGA.
- D. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.
- E. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work

## 2.4 PLYWOOD SHEATHING

- A. Plywood Sheathing: CDX plywood sheathing, exterior 5-ply laminated wood panels, 1/2-inch thick x 4-foot x 8-foot panels unless otherwise noted on the Drawings.

## 2.5 FASTENERS

- A. General: Fasteners are to be of size and type indicated and comply with requirements specified in this article for material and manufacture. Provide nails or screws, in sufficient length, to penetrate not less than 1-1/2 inches into wood substrate for solid wood and completely through plywood sheathing.
  - 1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A153/A153M or ASTM F2329.
- B. Nails, Brads, and Staples: ASTM F1667.
- C. Wood Screws: ASME B18.6.1.
- D. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION**

- A. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- B. Set work to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry accurately to other construction. Locate furring, nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- C. Do not splice structural members between supports unless otherwise indicated.
- D. Provide framing, blocking, furring and nailers as indicated.
- E. Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- F. Comply with AWPAC M4 for applying field treatment to cut surfaces of preservative-treated lumber.
  - 1. Use inorganic boron for items that are continuously protected from liquid water.
  - 2. Use copper naphthenate for items not continuously protected from liquid water.
- G. Where wood-preservative-treated lumber is installed adjacent to metal decking or aluminum extrusions, install continuous flexible flashing separator between wood and metal decking or aluminum extrusions.
- H. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
  - 1. NES NER-272 for power-driven fasteners.
  - 2. Table 2304.10.1, "Fastening Schedule," in ICC's International Building Code (IBC).
  - 3. ICC-ES evaluation report for fastener.
- I. Nails in contact with pressure treated wood: Use galvanized nails compatible with the pressure treatment chemicals unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.
- J. Nails not in contact with pressure treated wood: Use galvanized or common steel nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

### **3.2 PROTECTION**

- A. Verify that all substrates are in sound condition and ready to receive Work.
- B. Verify that related Work of other trades has been properly completed prior to starting Work. Beginning of installation means acceptance of existing conditions.



### 3.3 INSPECTION

- A. Existing Structural Wood Decking: Verify that surfaces are in sound condition and ready to receive Work. Notify Owner if any portion of decking is found to be deteriorated or damaged.

### 3.4 WOOD BLOCKING AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Unless otherwise indicated, align tops of blocking/nailers at roof penetrations with top of adjacent roof system cover board; rip as necessary and follow slope of finished plane of adjacent roof for full perimeter of roof penetration.
- C. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.
- D. Provide solid wood blocking between framing members where required to support edges of curbs or other load-bearing items.

### 3.5 EXISTING STRUCTURAL DECKING, GENERAL

- A. Damaged portions of existing structural decking shall be replaced if determined damaged beyond acceptable use.
- B. For this project, portions of existing structural decking shall be considered Damaged Beyond Acceptable Use and selected for replacement when found to contain decay that has resulted in loss of structural integrity.
- C. Portions of existing structural decking determined to be damaged beyond acceptable use shall be identified and documented for Owner's approval.
- D. Portions of existing structural decking identified for replacement shall be documented and quantified in writing for Owner's records.

### 3.6 CLEANING

- A. Clean up Work and leave site in clean, finished condition.

**END OF SECTION 061000**

## **SECTION 071416**

### **COLD FLUID-APPLIED WATERPROOFING**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

**A. Section Includes:**

1. PMMA waterproofing system complete with all preparation and accessories.

**B. Related Requirements:**

1. Section 061000 "Rough Carpentry" for wood framing, nailers, curbs, blocking, and plywood sheathing.
2. Section 076200 "Sheet Metal Flashing and Trim" for metal flashings and counter flashings.

##### **1.2 ACTION SUBMITTALS**

**A. Product Data:** For each type of product.

1. Include construction details, material descriptions, and tested physical and performance properties of waterproofing.
2. Include manufacturer's written instructions for evaluating, preparing, and treating substrate.

**B. Shop Drawings:**

1. Indicate locations and extent of waterproofing.
2. Include details for substrate joints and cracks, sheet flashings, penetrations, inside and outside corners, tie-ins with adjoining waterproofing, and other termination conditions.

##### **1.3 INFORMATIONAL SUBMITTALS**

**A. Qualification Data:** For Installer.

**B. Sample Warranties:** For special warranties.

##### **1.4 QUALITY ASSURANCE**

**A. Installer Qualifications:**

1. A qualified firm that is approved, authorized, or licensed by waterproofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
2. In continuous business under same name and license for past five (5) years.
3. Completed at least five (5) successful installations of specified materials and systems on projects of similar scope, in the same geographic region as the Project, within the last five (5) years.

4. Contractor shall provide all personnel trained in application of the materials and systems specified and shall maintain supervision as specified.
5. Installer Field Supervision: Maintain a full-time supervisor / foreman, who is experienced in installation of the specified systems, on the job site during all times that waterproofing system installation is in progress.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver waterproofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Store materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by waterproofing manufacturer.
  1. Protect stored material from direct sunlight.
  2. Discard and legally dispose of material that cannot be applied within its stated shelf life.

#### 1.6 FIELD CONDITIONS

- A. Environmental Limitations: Apply waterproofing within the range of ambient and substrate temperatures recommended in writing by waterproofing manufacturer.
  1. Do not apply waterproofing to a damp or wet substrate, when relative humidity exceeds 85 percent, or when temperatures are less than 5 deg F above dew point.
  2. Do not apply waterproofing in snow, rain, fog or mist, or when such weather conditions are imminent during application and curing period.
- B. Maintain adequate ventilation during application and curing of waterproofing materials.

#### 1.7 WARRANTY

- A. Manufacturer's Special Warranty: Manufacturer agrees to repair or replace waterproofing that fails in materials or workmanship within specified warranty period.
  1. Warranty Period: 5 years from date of Substantial Completion.
- B. Installer's Special Warranty: Specified form, signed by Installer, covering Work of this Section, for warranty period of two years.
  1. Warranty includes removing and reinstalling protection course, drainage composite, overburden insulation, and insulated precast concrete pavers.

### PART 2 - PRODUCTS

#### 2.1 SOURCE LIMITATIONS

- A. Obtain waterproofing materials from single source and from single manufacturer.

## 2.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed waterproofing system to withstand thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Waterproofing system to remain watertight.
- B. Material Compatibility: Waterproofing system materials to be compatible with one another and adjacent materials under conditions of service and installation required, as demonstrated by waterproofing membrane manufacturer based on testing and field experience.

## 2.3 WATERPROOFING

- A. Reinforced Fluid-Applied Waterproofing: Two-component, 100% Polymethyl Methacrylate (PMMA) catalyzed resin (primer, base coat, and top coat), with polyester fleece reinforcing fabric.
  - 1. Acceptable manufacturers:
    - a. Laurengo Waterproofing.
    - b. Siplast.
    - c. Soprema.
    - d. Or pre-bid approved.

## 2.4 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials (including primers, sealants, etc.) recommended in writing by waterproofing manufacturer for intended use and compatible with one another and with waterproofing.
  - 1. Furnish liquid-type auxiliary materials that comply with VOC limits of authorities having jurisdiction.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
  - 1. Verify that penetrations are in place, set, and securely anchored/braced.
  - 2. Verify that sheathing is securely anchored to wall framing at penetrations and terminations.
  - 3. Verify that wall surfaces and other penetrations indicated to receive waterproofing materials are configured to allow full-height flashing.
  - 4. Verify that substrate is visibly dry and within the moisture limits recommended in writing by manufacturer. Test for capillary moisture by plastic sheet method in accordance with ASTM D4263.
  - 5. Inspect all substrates for irregularities and defects that prohibit the proper installation of new waterproofing materials.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Clean, prepare, and treat substrates in accordance with manufacturer's written instructions. Provide clean, dust-free, and dry substrates for waterproofing application. Substrates shall be smooth, without raised edges, sharp edges, protruding or loose fasteners, and free of foreign materials.
- B. Mask off adjoining surfaces not receiving waterproofing to prevent spillage and overspray affecting other construction.
- C. Remove grease, oil, bitumen, form-release agents, paints, curing compounds, acid residues, and other penetrating contaminants or film-forming coatings from concrete.
  - 1. Shot blast and/or scarify concrete surfaces to result in CSP-3 surface profile. Remove material as necessary to provide a sound surface free of laitance, asphalt remnants, and other contaminants that may be detrimental to waterproofing adhesion.
- D. Remove fins, ridges, and other projections, and fill honeycomb, aggregate pockets, holes, and other voids with repair mortar.
- E. Prepare all surfaces and details in accordance with waterproofing system manufacturer's written instructions and the Contract Documents.
- F. Treat cracks and joints in substrates in accordance with waterproofing system manufacturer's written instructions and the Contract Documents.

### 3.3 REINFORCED FLUID-APPLIED WATERPROOFING INSTALLATION

- A. Substrate Examination/Preparation:
  - 1. General: Ensure that substrates are free from gross irregularities, loose, unsound or foreign material such as dirt, ice, snow, water, grease, oil, bituminous products, release agents, laitance, paint, loose particles friable matter, rust or any other material that would be detrimental to adhesion of the catalyzed primer and/or resin to the substrate. Some surfaces may require scarification, shotblasting, or grinding to achieve a suitable substrate.
  - 2. Preparation of Steel/Aluminum Substrates: Grind to generate a "white-metal" surface and remove loose particles. Extend preparation area a minimum of 1/2-inch beyond the termination of the roofing/flashing system. Notch steel surfaces to provide a rust-stop where detailed.
  - 3. Rigid Plastic Flashing Substrates: Evaluate the plastic for compatibility with the resin materials. Lightly abrade the surface to receive the flashing system, clean plastic substrates using the specified cleaner/solvent and allow to dry. Extend the preparation area a minimum of 1/2-inch beyond the termination of the flashing system.
  - 4. Preparation of Wood/Plywood Flashing Substrates to receive Resin: Prime wood/plywood surfaces to receive the specified flashing system with the specified PMMA-based primer at the rate specified by the resin manufacturer and allow primer to cure. Tape the joints between plywood or wood panels using the specified tape and prior to application of the flashing system.
- B. Mixing of Resin Products:
  - 1. Preparation/Mixing/Catalyzing Resin Products: Pour the desired quantity of resin into a clean container and using a spiral mixer or mixing paddle, stir the liquid for the time period specified by the resin manufacturer. Calculate the amount of catalyst powder needed using

the manufacturer's guidelines and add the pre-measured catalyst to the resin component. Mix again for the time period specified by the resin manufacturer, ensuring that the product is free from swirls and bubbles. To avoid aeration, do not use a spiral mixer unless the spiral section of the mixer can be fully contained in the liquid during the mixing process. Mix only enough product to ensure that it can be applied before pot life expires.

C. Preparation Paste and Primer Mixing/Applications:

1. Primer Application: Apply primer resin using a roller or brush at the rate specified by the primer manufacturer over qualified and prepared substrates. Apply primer resin at the increased rate specified by the primer manufacturer over gypsum or other porous substrates. Do not let resin pool or pond. Do not under-apply or over-apply primers as this may interfere with proper primer catalyzation. Make allowances for waste, including saturation of roller covers and application equipment.
2. Paste Application: Apply catalyzed preparation paste using a trowel over prepared and primed substrates. Before application of any resin product over cured paste, wipe the surface of the paste using the specified cleaner/solvent and allow to dry. Treat the surface again if not followed up by resin application within 60 minutes.

D. Flashing Membrane Application:

1. Base Flashing Application:
  - a. Using masking tape, mask the perimeter of the area to receive the flashing system. Apply resin primer to substrates requiring additional preparation and allow primer to cure.
  - b. Pre-cut fleece to ensure a proper fit at transitions and corners prior to membrane application.
  - c. Apply an even, generous base coat of flashing resin to prepared surfaces using a roller at the rate specified by the resin manufacturer. Work the fleece into the wet, catalyzed resin using a brush or roller to fully embed the fleece in the resin and remove trapped air. Lap fleece layers a minimum of 2 inch (5 cm) and apply an additional coat of catalyzed resin between layers of overlapping fleece. Again using a roller, apply an even top coat of catalyzed resin immediately following embedment of the fleece at the rate specified by the resin manufacturer, ensuring that the fleece is fully saturated. Ensure that the flashing resin is applied to extend beyond the fleece (maximum 1/4-inch (6 mm)). Remove the tape before the catalyzed resin cures. Make allowances for waste, including saturation of roller covers and application equipment.
  - d. Should work be interrupted for more than 12 hours or the surface of the cured resin becomes dirty or contaminated by the elements, wipe the surface to be lapped with new flashing resin using the specified cleaner/solvent. Allow the surface to dry for a minimum 20 minutes and a maximum 60 minutes before continuing work.

3.4 FIELD QUALITY CONTROL

- A. Final Inspection: Arrange for waterproofing system manufacturer's technical personnel to inspect waterproofing installation on completion and submit report to Owner.
  1. Notify Owner and Consultant 48 hours in advance of date and time of inspection.

3.5 PROTECTION AND CLEANING

- A. Protect waterproofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger waterproofing, inspect waterproofing for deterioration and damage, describing its nature and extent in a written report, with copy to Owner.
- B. Correct deficiencies in or remove waterproofing that does not comply with requirements; repair substrates and repair or reinstall waterproofing system to a condition free of damage and deterioration at the time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

**END OF SECTION 071416**

**SECTION 072100**  
**THERMAL INSULATION**

**PART 1 - GENERAL**

**1.1 ACTION SUBMITTALS**

- A. Product Data:
  - 1. Glass-fiber blanket insulation.
  - 2. Mineral-wool board insulation.

**1.2 DELIVERY, STORAGE, AND HANDLING**

- A. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

**PART 2 - PRODUCTS**

**2.1 PERFORMANCE REQUIREMENTS**

- A. Surface-Burning Characteristics: Maximum flame-spread and smoke-developed indexes less than 25 and 450 when tested in accordance with ASTM E84.
- B. Fire-Resistance Ratings: Comply with ASTM E119 or UL 263; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
  - 1. Indicate design designations from UL's "Fire Resistance Directory" or from listings of another qualified testing agency.
- C. Labeling: Provide identification of mark indicating R-value of each piece of insulation 12 inches and wider in width.
- D. Thermal-Resistance Value (R-Value): R-value as indicated on Drawings in accordance with ASTM C518.

**2.2 GLASS-FIBER BLANKET INSULATION**

- A. Glass-Fiber Blanket Insulation, Kraft Faced: ASTM C665, Type II (nonreflective faced), Class C (faced surface not rated for flame propagation); Category 1 (membrane is a vapor barrier).
  - 1. Use: As replacement for demolished fiberglass batt insulation as part of any structural framing repair or where sheathing removal exposed existing insulation which was found to be compromised or damaged beyond the reasonable ability for reuse.
  - 2. Approved Manufacturers:



- a. CertainTeed; Saint Gobain
- b. Owens Corning
- c. Johns Manville
- d. Knauf Insulation
- e. Or pre-bid approved

## 2.3 MINERAL-WOOL BOARD INSULATION

- A. Mineral-Wool Board Insulation, Type IVB: ASTM C612, Type IVB; unfaced.

- 1. Nominal Density: 8 lb/cu. ft.
- 2. Basis of Design Product: Rockwool Comfortboard 80.
- 3. Other Approved Manufacturers:
  - a. Pre-bid approved equal.

## 2.4 INSULATION FASTENERS

- A. Adhesively Attached, Spindle-Type Anchors: Plate welded to projecting spindle; capable of holding insulation of specified thickness securely in position with self-locking washer in place.
- B. Insulation-Retaining Washers: Self-locking washers formed from 0.016-inch-thick galvanized-steel sheet, with beveled edge for increased stiffness, sized as required to hold insulation securely in place, but not less than 1-1/2 inches square or in diameter.
- C. Anchor Adhesive: Product with demonstrated capability to bond insulation anchors securely to substrates without damaging insulation, fasteners, or substrates.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Clean substrates of substances that are harmful to insulation, including removing projections capable of puncturing insulation or vapor retarders, or that interfere with insulation attachment.

### 3.2 INSTALLATION, GENERAL

- A. Comply with insulation manufacturer's written instructions applicable to products and applications.
- B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain, or snow at any time.
- C. Install insulation with manufacturer's R-value label exposed after insulation is installed.
- D. Extend insulation to envelop entire area to be insulated. Fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.

- E. Provide sizes to fit applications and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units unless multiple layers are otherwise shown or required to make up total thickness or to achieve R-value.

### 3.3 INSTALLATION OF CAVITY-WALL INSULATION

- A. Mineral-Wool Board Insulation: Install insulation fasteners 4 inches from each corner of board insulation, at center of board, and as recommended by manufacturer.
  - 1. Fit courses of insulation between Z-girts and other obstructions, with edges butted tightly in both directions, and with faces flush.
  - 2. Press units firmly against inside substrates.

### 3.4 INSTALLATION OF INSULATION IN FRAMED CONSTRUCTION

- A. Blanket Insulation: Install as replacement/repair materials in cavities formed by framing members according to the following requirements:
  - 1. Use insulation widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill the cavities, provide lengths that will produce a snug fit between ends.
  - 2. Place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
  - 3. Maintain 3-inch clearance of insulation around recessed lighting fixtures not rated for or protected from contact with insulation.
  - 4. For wood-framed construction, install blankets in accordance with ASTM C1320 and as follows:
    - a. With faced blankets having stapling flanges, lap blanket flange over flange of adjacent blanket to maintain continuity of vapor retarder once finish material is installed over it.
  - 5. Vapor-Retarder-Faced Blankets: Tape joints and ruptures in vapor-retarder facings, and seal each continuous area of insulation to ensure airtight installation.
    - a. Exterior Walls: Set units with facing placed toward interior of construction.

### 3.5 PROTECTION

- A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes.
- B. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

**END OF SECTION 072100**

**SECTION 072500**  
**WEATHER BARRIERS**

**PART 1 - GENERAL**

**1.1 SUMMARY**

**A. Section Includes:**

1. Water-resistive barrier.

**1.2 ACTION SUBMITTALS**

**A. Product Data:**

1. Water-resistive barrier and associated components.

**B. Product Data Submittals:** For WRB, include data on air and water-vapor permeance based on testing in accordance with referenced standards.

**C. Shop Drawings:** Show details of WRB at terminations, openings, and penetrations. Show details of flexible flashing applications.

**PART 2 - PRODUCTS**

**2.1 WATER-RESISTIVE BARRIER**

**A. Water-Resistive Barrier:** Self-adhering vapor permeable air barrier membrane sheet with an integral self-adhered pressure sensitive adhesive backing covered by a release film; with a flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested in accordance with ASTM E84; UV stabilized; and acceptable to authorities having jurisdiction.

1. Water-Vapor Permeance: Between 10 and 51 perms per ASTM E96/E96M, Desiccant Method (Procedure A).
2. Air Permeance: Maximum 0.004 cfm/sq. ft. when tested in accordance with ASTM E2178.
3. Allowable UV Exposure Time: Minimum 6 months (180 days).
4. Flame Propagation Test: Materials and construction to be as tested in accordance with NFPA 285.
5. Acceptable Products:
  - a. Blueskin VP160, by Henry Company
  - b. Perm-a-Barrier VPS 30, by Grace Construction Products
  - c. Sopraseal Stick VP, by Soprema
  - d. WrapShield SA, by Vaproshield LLC
  - e. Or pre-bid approved equal.

## 2.2 FLEXIBLE FLASHING

- A. Self-Adhered Flashing: Composite, self-adhesive, flashing product consisting of a pliable, butyl rubber compound adhesive, bonded to a high-density polyethylene film or aluminum foil to produce an overall thickness of not less than 19-mils.
  - 1. Utilize WRB manufacturer's flashing products or flashing products by other manufacturers as approved by the WRB manufacturer.
- B. Primer for Flexible Flashing: Product recommended in writing by flexible flashing manufacturer for substrate.

## 2.3 LIQUID FLASHING

- A. Liquid Flashing: Utilize WRB manufacturer's standard liquid flashing or liquid flashing products by other manufacturers as approved by the WRB manufacturer.

# PART 3 - EXECUTION

## 3.1 INSTALLATION OF WATER-RESISTIVE BARRIER

- A. Cover exposed exterior surface of sheathing with water-resistive barrier securely fastened to framing immediately after sheathing is installed.
- B. Install all WRB products in accordance with the manufacturer's written instructions.
- C. Cover sheathing with water-resistive barrier as follows:
  - 1. Cut back barrier 1/2 inch on each side of the break in supporting members at expansion- or control-joint locations.
  - 2. Apply barrier to cover vertical flashing with a minimum 4-inch overlap unless otherwise indicated.

## 3.2 INSTALLATION OF FLEXIBLE & LIQUID FLASHINGS

- A. Apply flexible and liquid flashing where indicated to comply with manufacturer's written instructions.
  - 1. Prime substrates as recommended by flashing manufacturer.
  - 2. Lap seams and junctures with other materials at least 4 inches except that at flashing flanges of other construction, laps need not exceed flange width.
  - 3. Lap flashing over water-resistive barrier at bottom and sides of openings.
  - 4. Lap water-resistive barrier over flashing at heads of openings.
  - 5. After flashing has been applied, roll surfaces with a hard rubber or metal roller to ensure that flashing is completely adhered to substrates.

**END OF SECTION 072500**

**SECTION 074646**  
**FIBER-CEMENT SIDING**

**PART 1 - GENERAL**

**1.1 SUMMARY**

**A. Section Includes:**

1. Fiber-cement siding.
2. Fiber-cement trim.
3. Fiber-cement accessories.
4. Exterior cladding support system.
5. Extruded aluminum trim.

**B. Related Requirements:**

1. Section 061000 "Rough Carpentry" for wood furring, grounds, nailers, and blocking.
2. Section 072100 "Thermal Insulation" for mineral-wool board insulation.
3. Section 072500 "Weather Barriers" for weather-resistive barriers.
4. Section 099113 "Exterior Painting" for field-finished exterior cladding and trim.

**1.2 COORDINATION**

- A.** Coordinate siding installation with flashings and other adjoining construction to ensure proper sequencing.

**1.3 PREINSTALLATION MEETINGS**

- A.** Preinstallation Conference: Conduct conference at Project site.

**1.4 ACTION SUBMITTALS**

**A. Product Data:**

1. Fiber-cement siding.
2. Fiber-cement trim and accessories.
3. Exterior cladding support system.
4. Extruded aluminum trim.

- B.** Product Data Submittals: For each type of fiber-cement siding and trim. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

**1.5 INFORMATIONAL SUBMITTALS**

- A.** Sample Warranty: For special warranty.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For each type of fiber-cement siding including related accessories, to include in maintenance manuals.

1.7 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Furnish full lengths of fiber-cement siding including related accessories, in a quantity equal to 2 percent of amount installed.

1.8 MOCKUPS

- A. Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and to set quality standards for fabrication and installation.
  - 1. Build mockups for fiber-cement siding and trim including accessories.
    - a. Size: 96 inches long by 96 inches high.
    - b. Include outside corner and window trim details in mockup.
  - 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.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store packaged materials in original containers with labels intact until time of use.
- B. Store materials on elevated platforms, under cover, and in a dry location.

1.10 WARRANTY

- A. Product Warranty: Manufacturer agrees to reimburse original retail cost or replace products that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures including cracking and deforming.
    - b. Deterioration of materials beyond normal weathering.
  - 2. Warranty Period: 30 years for siding, 15 years for trim, from date of Substantial Completion.

## **PART 2 - PRODUCTS**

### **2.1 SOURCE LIMITATIONS**

- A. Obtain products, including related accessories, from single source from single manufacturer.

### **2.2 FIBER-CEMENT SIDING**

- A. General: ASTM C1186, Type A, Grade II, fiber-cement board, noncombustible when tested in accordance with ASTM E136; with a flame-spread index of 25 or less when tested in accordance with ASTM E84.
- B. Labeling: Provide fiber-cement siding that is tested and labeled in accordance with ASTM C1186 by a qualified testing agency acceptable to authorities having jurisdiction.
- C. Fiber-Cement Panel Siding: Factory primed with manufacturer's standard acrylic primer.
  - 1. Panel Size: 48-inch by 96-inches, 108-inches and 120-inches. Cut boards to fit the dimensions indicated on the Elevations.
  - 2. Thickness: 0.312-inch.
  - 3. Surface Texture: Smooth
  - 4. Color: Reference Section 099114 "Exterior Painting (MPI Standards)."
  - 5. Basis of Design Product: HardiePanel Vertical Siding, by James Hardie.

### **2.3 FIBER-CEMENT TRIM**

- A. General: ASTM C 1186, Type A, Grade II, fiber-cement board, noncombustible when tested according to ASTM E 136; with a flame-spread index of 25 or less when tested according to ASTM E 84.
- B. Fiber-Cement Trim (TYPE 1): Factory primed with manufacturer's standard acrylic primer.
  - 1. Size: 5.5-inch by 144-inch boards.
  - 2. Thickness: 0.75-inch.
  - 3. Surface Texture: Smooth
  - 4. Color: Reference Section 099114 "Exterior Painting (MPI Standards)."
  - 5. Basis of Design Product: HardieTrim 4/4, by James Hardie.
- C. Fiber-Cement Belly Trim (TYPE 2): Factory primed with manufacturer's standard acrylic primer.
  - 1. Size: 5.5-inch by 144-inch boards, ripped to sizes shown in drawings where required.
  - 2. Thickness: 1-inch.
  - 3. Surface Texture: Smooth
  - 4. Color: Reference Section 099114 "Exterior Painting (MPI Standards)."
  - 5. Basis of Design Product: HardieTrim 5/4, by James Hardie.

### **2.4 FIBER CEMENT ACCESSORIES**

- A. Siding Accessories, General: Provide starter strips, edge trim, outside and inside corner caps, and other items as recommended by siding manufacturer for building configuration.

1. Provide accessories matching color and texture of adjacent siding unless otherwise indicated.
- B. Elastomeric Joint Sealant: Single component, Nonsag, Fast Curing, Silyl-Terminated Polyether or Polyurethane Sealant: ASTM C920, Type S, Grade NS, Class 50 for Use NT, M, A, G and O.
  1. Products:
    - a. Sika USA; Sikaflex HY 150.
    - b. Tremco Incorporated; Dymonic FC.
    - c. Or approved.
  2. Location of Use:
    - a. Exposed joints in fiber-cement siding to be painted.
- C. Fasteners:
  1. For fastening to wood, use ribbed bugle-head screws of sufficient length to penetrate a minimum of 1 inch into substrate.
  2. For fastening to metal, use ribbed bugle-head screws of sufficient length to penetrate a minimum of 1/4 inch, or three screw-threads, into substrate.
  3. For fastening fiber cement, use stainless steel fasteners.
  4. Select fasteners per the manufacturer's published research and evaluation reports for the product type and wind exposure category.
- D. Insect Screening for Soffit Vents and Wall Cladding: PVC-coated, glass-fiber fabric, 18-by-14 or 18-by-16 mesh.

## 2.5 EXTERIOR CLADDING SUPPORT SYSTEM

- A. Cold-Formed Steel Horizontal Z-Girt: Secondary sub-girt framing, furring and soffit framing system designed to support exterior finishes, attached through sheathing to exterior wall framing.
  1. Size, Shape and Spacing: Provide sizes, shape and spacing as required to meet cladding attachment requirements and as indicated on the Structural Drawings.
  2. Provide standard sections, furring angles, plates, bracing and other framing members indicated. ASTM C 645, cold-formed metallic-coated sheet steel, ASTM A 653/ A 653M, hot-dipped galvanized.
    - a. Provide G90/Z275 coating designation for all profiles behind exterior cladding but outside of weather barrier.
  3. Minimum thickness and depth as required to meet structural requirements, in no cases shall thickness be less than 18 gauge.
  4. Fasteners: As indicated in structural drawings.
- B. PT Plywood Vertical Furring: Pressure treated furring as indicated in the Drawings and as outlined in Section 061000 "Rough Carpentry."
- C. Separation Sheet: Provide same products/materials as the water-resistive barrier system as specified in Section 072500 "Weather Barriers".
- D. Shim Plates: Solid HDPE shim plates, size as indicated on the drawings.



## 2.6 EXTRUDED ALUMINUM TRIM

- A. Extruded Aluminum Trim: Grade 6063-T5 aluminum containing up to 70% recycled content, dimensionally stable, rigid and non-ferrous material, factory applied primed finish to receive field-applied paint.
  - 1. Color: Painted to match adjacent fiber-cement siding. Reference Section 099113 "Exterior Painting."
  - 2. Basis of Design Product/Manufacturer: Fiber Cement Panel Trims, by Fry Reglet Corporation.
  - 3. Acceptable Alternative Manufacturers:
    - a. Tamlyn XtremeTrim.
    - b. JamesHardie

## 2.7 EXTRUDED ALUMINUM TRIM SCHEDULE

- A. Extruded Double 'T' Molding:
  - 1. Product Identification (Number): V7 DOUBLE T (FCP-VERTLP50)
- B. Extruded Drip Cap Molding:
  - 1. Product Identification (Number): H7 DRIP CAP (FCP-DRIP CAP 875)
- C. Extruded 'F' Molding:
  - 1. Product Identification (Number): T1 F MOLDING (FCP-F MOLD)
- D. Extruded Horizontal Molding:
  - 1. Product Identification (Number): H1 HORIZONTAL (FCP-HOZ 50-375)
- E. Extruded Inside Corner:
  - 1. Product Identification (Number): IC1 INSIDE CORNER (FCP-INSIDE CNR)
- F. Extruded 'J' Channel – For Use with Panel Cladding:
  - 1. Product Identification (Number): T2 J CHANNEL (FCP-J CHANNEL)
- G. Extruded 'J' Channel – For Use with Trim:
  - 1. Product Identification (Number): T20 J CHANNEL LAP (FCP-JAM75)
- H. Extruded Outside Corner:
  - 1. Product Identification (Number): OC5 SLEEK OUTSIDE CORNER (FCP-LPO/SCNR)

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting performance of fiber-cement siding and trim and related accessories.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### **3.2 PREPARATION**

- A. Clean substrates of projections and substances detrimental to application.

#### **3.3 INSTALLATION**

- A. General: Comply with manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply.
  - 1. Do not install damaged components.
  - 2. Install fasteners no more than 24 inches o.c. – Reference the structural drawings for additional fastening requirements.
  - 3. Install separation sheet between aluminum and galvanized steel components.
  - 4. Install separation sheet between aluminum and pressure treated wood components.
  - 5. Install joint sealants where indicated to produce a weathertight installation.
  - 6. Prime paint field cut edges before installing. Verify that primer is acceptable to manufacturer.
  - 7. Pre-drill holes if necessary to prevent breakage.
  - 8. Place fasteners no closer than 3/8-inch from panel edges and 2-inches from panel corners.

#### **3.4 PAINTING**

- A. Reference Section 099114 "Exterior Painting (MPI Standards).

#### **3.5 ADJUSTING AND CLEANING**

- A. Remove damaged, improperly installed, or otherwise defective materials and replace with new materials complying with specified requirements.
- B. Clean finished surfaces according to manufacturer's written instructions and maintain in a clean condition during construction.

**END OF SECTION 074646**

## **SECTION 076200**

### **SHEET METAL FLASHING AND TRIM**

#### **PART 1 - GENERAL**

##### **1.1 SUMMARY**

**A. Section Includes:**

1. Sheet metal fabrications.

**B. Related Requirements:**

1. Section 061000 "Rough Carpentry" for wood nailers, curbs, and blocking.
2. Section 072500 "Weather Barriers" for weather barrier system and accessories.
3. Section 074646 "Fiber-Cement Siding" for fiber cement cladding and trim.

##### **1.2 COORDINATION**

- A.** Coordinate sheet metal flashing and trim layout and seams with sizes and locations of penetrations to be flashed, and joints and seams in adjacent materials.
- B.** Coordinate sheet metal flashing and trim installation with adjoining roofing and wall materials, joints, and seams to provide leakproof, secure, and noncorrosive installation.

##### **1.3 ACTION SUBMITTALS**

- A. Product Data:** For each sheet metal, underlayment, and accessory product.

- B. Shop Drawings:** For sheet metal flashing and trim complete with underlayment and accessories.

1. Include plans, elevations, sections, and attachment details as necessary to clearly illustrate fabrications and installations.
2. Detail fabrication and installation layouts, and keyed details. Distinguish between shop- and field-assembled Work.
3. Include identification of material, thickness, weight, and finish for each item and location in Project.
4. Include details for forming, including profiles, shapes, seams, and dimensions.
5. Include details for joining, supporting, and securing, including layout and spacing of fasteners, cleats, clips, and other attachments. Include pattern of seams.
6. Include details of termination points and assemblies.
7. Include details of special conditions.
8. Include details of connections to adjoining work.
9. Detail formed flashing and trim at scale of not less than 3 inches per 12 inches.

##### **1.4 INFORMATIONAL SUBMITTALS**

- A. Qualification Data:** For fabricator.
- B. Sample Warranty:** For special warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For sheet metal flashing and trim, and its accessories, to include in maintenance manuals.
- B. Special warranty.

1.6 QUALITY ASSURANCE

- A. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.
- B. Mockups: Build mockups as directed by Consultant to verify selections, to demonstrate aesthetic effects, and to set quality standards for fabrication and installation.
  - 1. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Owner specifically approves such deviations in writing.
  - 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage.
  - 1. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
  - 2. Protect stored sheet metal flashing and trim from contact with water.
- B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

1.8 WARRANTY

- A. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Delta E units when tested in accordance with ASTM D2244.
    - b. Chalking in excess of a No. 8 rating when tested in accordance with ASTM D4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. Finish Warranty Period: 20 years from date of Substantial Completion.

## **PART 2 - PRODUCTS**

### **2.1 PERFORMANCE REQUIREMENTS**

- A. Sheet metal flashing and trim assemblies, including cleats, anchors, and fasteners, are to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim are not to rattle, leak, or loosen, and are to remain watertight.
- B. Sheet Metal Standard for Flashing and Trim: Comply with NRCA's "The NRCA Roofing Manual: Architectural Metal Flashing, Condensation and Air Leakage Control, and Reroofing" and SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.
- C. Wind Design Standard: Manufacture and install copings and roof edge flashings tested in accordance with ANSI/SPRI/FM 4435/ES-1 and capable of resisting the following design pressure:
  - 1. Design Pressure: As indicated on Drawings.
- D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

### **2.2 SHEET METALS**

- A. Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.
- B. Stainless Steel Sheet: ASTM A240/A240M, Type 304, dead soft, fully annealed; with smooth, flat surface.
  - 1. Finish: ASTM A480/A480M, No. 2B (bright, cold rolled).
    - a. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
- C. Metallic-Coated Steel Sheet: Provide zinc-coated (galvanized) steel sheet in accordance with ASTM A653/A653M, G90 coating designation or aluminum-zinc alloy-coated (i.e., Galvalume) steel sheet in accordance with ASTM A792/A792M, Class AZ50 coating designation, Grade 40.
- D. Prefinished Steel Sheet: Provide zinc-coated (galvanized) steel sheet in accordance with ASTM A653/A653M, G90 coating designation or aluminum-zinc alloy-coated (i.e., Galvalume) steel sheet in accordance with ASTM A792/A792M, Class AZ50 coating designation, Grade 40; prepainted by coil-coating process to comply with ASTM A755/A755M.
  - 1. Surface: Smooth, flat.
  - 2. Exposed Coil-Coated Finish:
    - a. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent polyvinylidene fluoride (PVDF) resin by weight in color coat. Prepare,

pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

3. Color: As selected by Owner from manufacturer's full range.
4. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with minimum total dry film thickness of 0.5 mil.

## 2.3 UNDERLAYMENT MATERIALS

- A. Self-Adhering, High-Temperature Sheet Underlayment: Minimum 30 mils thick, consisting of a slip-resistant top surface (polyethylene film, foil-facer factory laminated to cross-laminated polyethylene film, or polypropylene film) laminated to a layer of butyl adhesive, butyl-modified asphalt adhesive, or SBS-modified asphalt adhesive, with release-paper backing; specifically designed to withstand high temperatures beneath metal copings and other similar applications. Provide primer in accordance with underlayment manufacturer's written instructions.
  1. Source Limitations: Obtain underlayment from single source from single manufacturer.
  2. Low-Temperature Flexibility: ASTM D1970/D1970M; passes after testing at minus 20 deg F or lower.
  3. Thermal Stability: Stable after testing at 240 deg F; ASTM D1970.
  4. Products:
    - a. GCP Applied Technologies Perm-A-Barrier Ultra
    - b. Henry Blueskin PE200HT
    - c. Or pre-bid approved.

## 2.4 MISCELLANEOUS MATERIALS

- A. Provide materials and types of fasteners, solder, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item. As applicable for the conditions encountered, provide screw fasteners in lengths sufficient to penetrate solid wood by 1 1/4 inch minimum, completely through plywood sheathing, and cold-formed steel by 1/4 inch minimum as measured from the thread nearest the tip.
  1. General:
    - a. Exposed Fasteners: Hex-washer heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM sealing washers under heads of exposed fasteners bearing on weather side of metal.
    - b. Concealed Fasteners: Pancake heads.
    - c. Rivets: Pop rivets with stainless steel mandrels of size and length suitable for metal being fastened and bodies prefinished to match metal being fastened.
    - d. Fasteners for masonry, concrete, and other cementitious non-nailable substrates shall be threaded. Expanding drive-anchors are not permitted.
  2. Fasteners for Stainless Steel Sheet: Series 300 stainless steel.

3. Fasteners for Zinc-Coated (Galvanized) or Aluminum-Zinc Alloy-Coated Steel Sheet: Series 300 stainless steel or hot-dip galvanized steel in accordance with ASTM A153/A153M or ASTM F2329/F2329M.
- C. Solder:
1. For Stainless Steel: ASTM B32, Grade Sn60, with acid flux of type recommended by stainless steel sheet manufacturer.
  2. For Zinc-Coated (Galvanized) Steel: ASTM B32, Grade Sn50, 50 percent tin and 50 percent lead or Grade Sn60, 60 percent tin and 40 percent lead.
- D. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.
- E. Elastomeric Sealant: ASTM C920, elastomeric silicone or silyl-terminated polyether (STPe) polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- F. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement; non-skinning, non-hardening type.
- G. Bituminous Coating: Cold-applied asphalt emulsion in accordance with ASTM D1187/D1187M.

## 2.5 FABRICATION, GENERAL

- A. Custom fabricate sheet metal flashing and trim to comply with details indicated and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required.
1. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
  2. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
  3. Verify shapes and dimensions of surfaces to be covered and obtain field measurements for accurate fit before shop fabrication.
  4. Form sheet metal flashing and trim to fit substrates without excessive oil-canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
  5. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.
- B. Fabrication Tolerances:
1. Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.
- C. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.
1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
  2. Use lapped expansion joints only where indicated on Drawings.

- D. Sealant Joints: Where movable, non-expansion-type joints are required, form metal in accordance with cited sheet metal standard to provide for proper installation of elastomeric sealant.
- E. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
- F. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard for application, but not less than thickness of metal being secured.
- G. Seams:
  - 1. Fabricate nonmoving seams in stainless steel with flat-lock seams. Tin edges to be seamed, form seams, rivet, and solder.
    - a. Provide tabs of appropriate width on sections to be overlapped.
    - b. Rivet seams at maximum 3-inches on center.
    - c. Solder seams watertight, filling the entire width of overlap.
  - 2. Fabricate nonmoving seams in prefinished steel with flat-lock seams. Form seams, blind seal, and rivet. Orient horizontal and sloping seams to result in a weatherlapped configuration.
    - a. Provide tabs of appropriate width on sections to be overlapped.
    - b. Blind seal seam tabs continuously with butyl sealant.
    - c. Rivet seams at maximum 3-inches on center through sealant.
    - d. Back-seal pin holes at corners.
- H. Do not use graphite pencils to mark metal surfaces.

## 2.6 SHEET METAL FABRICATIONS

- A. Closure Flashing: Fabricate in minimum 96-inch-long, but not exceeding 12-foot-long sections.
  - 1. Material: 24 gage prefinished steel.
  - 2. Profile: Configurations shown on the Drawings.
  - 3. Joint Style: Overlapped, 4 inches wide set in two rows of butyl sealant, hems nested.
- B. Conductor Heads: Fabricate conductor heads to match configuration shown on the Drawings, complete with outlet tubes.
  - 1. Material: 24 gage prefinished sheet metal.
  - 2. Joint Style: Tab, blind seal, and rivet.
- C. Continuous Cleat:
  - 1. Material: 22 gage metallic-coated steel.
  - 2. Profile: Configurations shown on the Drawings.
  - 3. Joint Style: Butted.
- D. Coping: Fabricate in minimum 96-inch-long, but not exceeding 10-foot-long, sections. Shop fabricate and miter inside and outside corners.
  - 1. Material: 24 gage prefinished steel.
  - 2. Profile: Configurations shown on the Drawings.
  - 3. Joint Style:



- a. Sloping Surfaces: 1-inch-high standing seams, with nesting seam leg corners trimmed and overlapping seam leg corners folded and sealed; do not trim overlapping seam leg corners.
  - b. Vertical Surfaces: Overlapped 4 inches wide, hems nested.
- E. Coping Transition Flashing: Fabricate in minimum 96-inch-long, but not exceeding 10-foot-long, sections. Shop fabricate and miter inside and outside corners.
  1. Material: 24 gage prefinished steel.
  2. Profile: Configurations shown on the Drawings.
  3. Joint Style:
    - a. Sloping Surfaces: 1-inch-high standing seams, with nesting seam leg corners trimmed and overlapping seam leg corners folded and sealed; do not trim overlapping seam leg corners.
    - b. Vertical Surfaces: Overlapped 4 inches wide, hems nested.
- F. Downspouts: Fabricate round downspouts to dimensions indicated on Drawings. Shop fabricate elbows, 135-degree bend unless otherwise indicated.
  1. Material: 24 gage prefinished steel.
  2. Joint Style: Telescoping overlap, 1 1/2 inches.
  3. Furnish hangers fabricated from 16 gage metallic-coated steel shop-painted to match downspout.
- G. Drip Flashing: Fabricate in minimum 96-inch-long, but not exceeding 10-foot-long sections.
  1. Material: 24 gage stainless steel.
  2. Profile: Configurations shown on the Drawings.
  3. Joint Style: Overlapped, 4 inches wide set in two rows of butyl sealant, hems nested.
- H. Floor Break Flashing: Fabricate in minimum 96-inch-long, but not exceeding 10-foot-long sections.
  1. Material: 24 gage prefinished steel.
  2. Profile: Configurations shown on the Drawings.
  3. Joint Style: Overlapped, 4 inches wide set in two rows of butyl sealant, hems nested.
- I. Headwall Flashing: Fabricate in minimum 96-inch-long, but not exceeding 10-foot-long sections. Shop fabricate and miter inside and outside corners.
  1. Material: 24 gage prefinished steel.
  2. Profile: Configurations shown on the Drawings.
  3. Joint Style: Overlapped, 4 inches wide set in two rows of butyl sealant, hems nested.
- J. Headwall Flashing Receiver: Fabricate in minimum 96-inch-long, but not exceeding 10-foot-long sections.
  1. Material: 24 gage prefinished steel.
  2. Profile: Configurations shown on the Drawings.
  3. Joint Style: Overlapped, 4 inches wide set in two rows of butyl sealant, hems nested.
- K. Jamb Flashing: Fabricate in minimum 96-inch-long, but not exceeding 12-foot-long sections.
  1. Material: 24 gage prefinished steel.
  2. Profile: Configurations shown on the Drawings.
  3. Joint Style: Overlapped, 4 inches wide set in two rows of butyl sealant, hems nested.

- L. Jamb Flashing (2-piece): Fabricate in minimum 96-inch-long, but not exceeding 12-foot-long sections.
  - 1. Material: 24 gage prefinished steel.
  - 2. Profile: Configurations shown on the Drawings.
  - 3. Joint Style: Overlapped, 4 inches wide set in two rows of butyl sealant, hems nested.
- M. Joggle Cleat:
  - 1. Material: 22 gage metallic-coated steel.
  - 2. Profile: Configurations shown on the Drawings.
  - 3. Joint Style: Butted.
- N. Louver Sill Pan:
  - 1. Material: 24 gage prefinished steel.
  - 2. Profile: Configurations shown on the Drawings.
  - 3. Joint Style: Tab, blind seal, and rivet with back and end dams.
- O. Metal Wall Closure:
  - 1. Material: 24 gage stainless steel.
  - 2. Profile & Joint Style: Configurations shown on the Drawings.
- P. Rake Drip Receiver: Fabricate in minimum 96-inch-long, but not exceeding 10-foot-long sections.
  - 1. Material: 24 gage prefinished steel.
  - 2. Profile: Configurations shown on the Drawings.
  - 3. Joint Style: Overlapped, 4 inches wide set in two rows of butyl sealant, hems nested.
- Q. Receiver Flashing:
  - 1. Material: 24 gage prefinished steel.
  - 2. Profile: Configurations shown on the Drawings.
  - 3. Joint Style: Overlapped, 4 inches wide set in two rows of butyl sealant, hems nested.
- R. Recess Flashing Head:
  - 1. Material: 24 gage prefinished steel.
  - 2. Profile: Configurations shown on the Drawings.
- S. Recess Flashing Jamb:
  - 1. Material: 24 gage prefinished steel.
  - 2. Profile: Configurations shown on the Drawings.
  - 3. Joint Style: Wet set into sealant.
- T. Recess Flashing Sill:
  - 1. Material: 24 gage prefinished steel.
  - 2. Profile: Configurations shown on the Drawings.
  - 3. Joint Style: Tab ends and rivet to jambs. Wet set into sealant.
- U. Recessed Scupper Flashings (2-Piece):
  - 1. Material: 24 gage stainless steel.
  - 2. Profile: Configurations shown on the Drawings.
  - 3. Joint Style: Tabbed, riveted, and soldered watertight.

V. Removable Counter Flashing:

1. Material: 24 gage prefinished steel.
2. Profile: Configurations shown on the Drawings.
3. Joint Style: Overlapped, hems nested.

W. Sheet Metal Stop:

1. Material: 24 gage metallic-coated steel.
2. Profile: Configurations shown on the Drawings.
3. Joint Style: Butted.

X. Sill Pan:

1. Material: 24 gage stainless steel.
2. Profile: Configurations shown on the Drawings.
3. Joint Style: As indicated in the Drawings.

Y. Skirt Flashing: Fabricate in minimum 96-inch-long, but not exceeding 10-foot-long sections.

1. Material: 24 gage stainless steel.
2. Profile: Configurations shown on the Drawings.
3. Joint Style: Overlapped, 4 inches wide set in two rows of butyl sealant, hems nested.

Z. Soffit Closure Flashing:

1. Material: 24 gage prefinished steel.
2. Profile: Configurations shown on the Drawings, with button punch.
3. Joint Style: Edge profile for backer rod and sealant.

AA. Soffit Fascia Panel:

1. Material: 24 gage prefinished steel.
2. Profile: Configurations shown on the Drawings, with button punch.
3. Joint Style: Edge profile for backer rod and sealant.
4. Joint Style: Tab ends and rivet to jambs.

BB. Underside Head Closure Flashing: Fabricate in minimum 96-inch-long, but not exceeding 10-foot-long sections.

1. Material: 24 gage prefinished steel.
2. Profile: Configurations shown on the Drawings.
3. Joint Style: Overlapped, 4 inches wide set in two rows of butyl sealant, hems nested.

CC. Other Sheet Metal Flashings and Trim:

1. Provide materials, configurations, and joint styles as indicated on the Drawings.

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Examine substrates, areas, and conditions, with installer present, for compliance with requirements for installation tolerances, substrate, and other conditions affecting performance of the Work.

1. Verify compliance with requirements for installation tolerances of substrates.
  2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
  3. Verify that air- or water-resistant barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION OF UNDERLAYMENT

- A. Self-Adhering, High-Temperature Sheet Underlayment:
1. Install self-adhering, high-temperature sheet underlayment; wrinkle free and accurately aligned.
  2. Prime substrate if recommended by underlayment manufacturer.
  3. Comply with temperature restrictions of underlayment manufacturer for installation; use primer for installing underlayment at low temperatures.
  4. Apply in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses.
  5. Overlap side edges not less than 3-1/2 inches. Roll laps and edges with roller.
  6. Roll laps and edges with roller.
  7. Cover underlayment within 14 days.

### 3.3 INSTALLATION, GENERAL

- A. Install sheet metal flashing and trim to comply with details indicated and recommendations of cited sheet metal standard that apply to installation characteristics required unless otherwise indicated on Drawings.
1. Install fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
  2. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder and sealant.
  3. Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement.
  4. Install sheet metal flashing and trim to fit substrates and to result in watertight performance.
  5. Install continuous cleats with fasteners spaced as indicated on the Drawings.
  6. Where provided, space individual clips not more than 12 inches apart. Attach each clip with at least two fasteners. Bend tabs over fasteners.
  7. Install exposed sheet metal flashing and trim with limited oil-canning, and free of buckling and tool marks.
  8. Do not field cut sheet metal flashing and trim by torch.
  9. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.
1. Provide underlayment on cementitious and/or wood substrates.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim.

1. Space movement joints at maximum of 10 feet with no joints within 24 inches of corner or intersection.
  2. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with sealant concealed within joints.
  3. Use lapped expansion joints only where indicated on Drawings.
- D. Fasteners: Use fastener sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws.
- E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- F. Seal joints as required for watertight construction.
1. Use sealant-filled joints unless otherwise indicated.
    - a. Embed hooked flanges of joint members not less than 1 inch into sealant.
    - b. Form joints to completely conceal sealant.
    - c. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way.
    - d. Adjust setting proportionately for installation at higher ambient temperatures.
      - 1) Do not install sealant-type joints at temperatures below 40 deg F.
- G. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter.
1. Pretin edges of sheets with solder to width of 1-1/2 inches; however, reduce pretinning where pretinned surface would show in completed Work.
  2. Do not solder prefinished steel and metallic-coated sheet.
  3. Do not use torches for soldering.
  4. Heat surfaces to receive solder, and flow solder into joint.
    - a. Fill joint completely.
    - b. Completely remove flux and spatter from exposed surfaces.
  5. Stainless Steel Soldering:
    - a. Tin edges of uncoated sheets, using solder for stainless steel and acid flux.
    - b. Promptly remove acid-flux residue from metal after tinning and soldering.
    - c. Comply with solder manufacturer's recommended methods for cleaning and neutralization.

### 3.4 INSTALLATION, SHEET METAL FABRICATIONS

- A. Install sheet metal flashing and trim to comply with performance requirements and cited sheet metal standard.
1. Provide concealed fasteners where possible, and set units true to line, levels, and slopes.
  2. Install work with laps, joints, and seams that are permanently watertight and weather resistant.
- B. Install sheet metal roof-drainage items to produce complete roof-drainage system in accordance with cited sheet metal standard unless otherwise indicated. Coordinate installation of roof perimeter flashing with installation of roof-drainage system.

C. Downspouts:

1. Join sections with 1-1/2-inch telescoping joints.
2. Provide hangers with fasteners designed to hold downspouts securely to walls.
3. Locate hangers at top and bottom and at approximately 60 inches on center vertically.
4. Where downspout discharges onto lower roof, provide elbow outlet at base, directed to spill into splash block.

D. Recessed Scupper Flashings / Conductor Head Assembly:

1. Install components as necessary to result in configuration indicated on the Drawings in a water tight manner.
2. Interlock outlet edges with conductor head and scupper edges as shown on the Drawings.

E. Copings:

1. Install roof edge flashings in accordance with ANSI/SPRI/FM 4435/ES-1.
2. Install continuous cleat, set to correct elevation, and secure to parapet nailer as indicated on the Drawings.
3. Interlock outboard (fascia) edge with continuous cleat as indicated on the Drawings.
4. Continuously support coping and secure to inboard side of parapet as indicated on the Drawings.

F. Counter Flashing: Coordinate installation of counter flashing with installation of base flashing.

1. Lap counter flashing joints minimum of 4 inches.

3.5 INSTALLATION TOLERANCES

- A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

3.6 CLEANING

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.

3.7 PROTECTION

- A. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.
- B. On completion of sheet metal flashing and trim installation, remove unused materials and clean finished surfaces as recommended in writing by sheet metal flashing and trim manufacturer.
- C. Maintain sheet metal flashing and trim in clean condition during construction.
- D. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures, as determined by Consultant.

**END OF SECTION 076200**

**SECTION 099113**  
**EXTERIOR PAINTING**

**PART 1 - GENERAL**

**1.1 SUMMARY**

**A. Section Includes:**

1. Primers.
2. Finish coatings.

**B. Related Requirements:**

1. Section 074646 "Fiber-Cement Siding" for products used in installation of fiber-cement siding systems.
2. Section 076200 "Sheet Metal Flashing and Trim" for installation of sheet metal flashing and trim integral with wall assemblies.

**1.2 ACTION SUBMITTALS**

**A. Product Data:** For each type of product.

1. Include preparation requirements and application instructions.

**B. Samples:** For each type of topcoat product.

**C. Samples for Initial Selection:** For each type of topcoat product.

**D. Samples for Verification:** For each type of paint system and each color and gloss of topcoat.

1. Submit Samples on rigid backing, 8 inches square.
2. Apply coats on Samples in steps to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

**E. Product Schedule:** Use same designations indicated on Drawings and in the Exterior Painting Schedule to cross-reference paint systems specified in this Section. Include color designations.

**1.3 MAINTENANCE MATERIAL SUBMITTALS**

**A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.**

1. Paint Products: 5 gal. of each material and color applied.



#### 1.4 QUALITY ASSURANCE

- A. Applicator Qualifications: Company specializing in performing the type of work specified with a minimum of 3 years of experience and approved by the manufacturer.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.
  - 1. Maintain containers in clean condition, free of foreign materials and residue.
  - 2. Remove rags and waste from storage areas daily.

#### 1.6 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.
- B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Sherwin-Williams Company (The); products indicated in Exterior Painting Schedule below or comparable product by one of the following:
  - 1. Benjamin Moore & Co.
  - 2. PPG Architectural Coatings.
  - 3. Pratt & Lambert.
  - 4. Valspar Corporation - Architectural (Pro).
- B. Source Limitations: Obtain each paint product from single source from single manufacturer.

#### 2.2 PAINT PRODUCTS, GENERAL

- A. General:
  - 1. Provide factory-mixed paint.
  - 2. Do not reduce, thin, or dilute coatings or add any material to the paint unless approved by the manufacturer in the application instructions.
- B. Colors: As indicated in the color schedule.
- C. Paint Accessories: Provide primers, sealers, cleaners, cleaning cloths, sanding materials and other accessories as required to complete the painting scope of work.
- D. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by topcoat manufacturer for use in paint system and on substrate indicated.

## 2.3 FINISH COATINGS

- A. Exterior Latex Paint, Satin: Water-based, pigmented coating; formulated for alkali, mold, microbial, and water resistance and for use on exterior surfaces, such as portland cement plaster, concrete, and primed wood.
- B. Exterior Alkyd Enamel, Low Sheen: Solvent-based, pigmented, alkyd enamel formulated for mold, microbial, and water resistance and for use on exterior, primed, wood and metal surfaces.
- C. Refer to the Exterior Painting Schedule and the Paint Color Schedule for additional information.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
  1. Fiber-Cement Board: 12 percent.
  2. Masonry (Concrete Masonry Units): 12 percent.
  3. Wood: 15 percent.
- C. Verify suitability of substrates, including surface conditions and compatibility, with finishes and primers.
- D. Proceed with coating application only after unsatisfactory conditions have been corrected.
  1. Application of coating indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
  1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.

- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
  - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems specified in this Section.
- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- E. Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceeds that permitted in manufacturer's written instructions.
- F. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
- G. Wood Substrates:
  - 1. Scrape and clean knots. Before applying primer, apply coat of knot sealer recommended in writing by topcoat manufacturer for exterior use in paint system indicated.
  - 2. Sand surfaces that will be exposed to view, and remove sanding dust.
  - 3. Prime edges, ends, faces, undersides, and backsides of wood.
  - 4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

### 3.3 INSTALLATION

- A. Painting scope shall include all opaque exterior surfaces exposed to view except for roofing, aluminum window frames, stainless steel components, new precoated metal flashings, or where otherwise noted. Components to be painted include the following:
  - 1. CMU block.
  - 2. Existing door panels, hollow metal frames, hollow metal window frames, spandrel panels, & louvers
  - 3. Existing sheet metal flashings.
  - 4. Existing wood fascia, soffits, glulam beam outlooks.
  - 5. New fiber-cement siding, fiber-cement trim, fiber-cement accessories, including extruded aluminum trim.
  - 6. New or existing gutters, downspouts, downspout pipe couplings
- B. Apply paints in accordance with manufacturer's written instructions.
  - 1. Use applicators and techniques suited for paint and substrate indicated.
  - 2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
  - 3. Paint exterior side and edges of exterior doors and entire exposed surface of exterior door frames.
  - 4. Paint entire exposed surface of window frames and sashes.
  - 5. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
  - 6. Primers specified in the Exterior Painting Schedule may be omitted on items that are factory primed or factory finished if compatible with intermediate and topcoat coatings and acceptable to intermediate and topcoat paint manufacturers.

- C. Tint undercoats same color as topcoat, but tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Provide sufficient difference in shade of undercoats to distinguish each separate coat.
- D. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- E. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- F. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:
  - 1. Paint the following work where exposed to view:
    - a. Equipment, including panelboards.
    - b. Uninsulated metal piping.
    - c. Pipe hangers and supports.
    - d. Metal conduit.
    - e. Tanks that do not have factory-applied final finishes.

### 3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
  - 1. Contractor shall touch up and restore painted surfaces damaged by testing.
  - 2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written instructions, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written instructions.

### 3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
  - 1. Do not clean equipment with free-draining water and prevent solvents, thinners, cleaners, and other contaminants from entering into waterways, sanitary and storm drain systems, and ground.
  - 2. Dispose of contaminants in accordance with requirements of authorities having jurisdiction.
  - 3. Allow empty paint cans to dry before disposal.
  - 4. Collect waste paint by type and deliver to recycling or collection facility.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

### 3.6 PAINT COLOR SCHEDULE

- A. Exterior Paint Color Selection: Provide the following colors and apply where indicated by the Owner.
  - 1. Color 1: Darker Crimson / Maroon
    - a. CMYK Code: C0 M99 Y73 K67
  - 2. Color 2: Dark Grey
    - a. CMYK Code: C73 M67 Y65 K40
  - 3. Color 3: Mountain Peak White (custom)
    - a. Sherwin Williams Color Code: #2148-70

### 3.7 EXTERIOR PAINTING SCHEDULE

- A. Concrete Masonry Unit Substrates:
  - 1. Latex System:
    - a. Prime Coat: Acrylic masonry primer-sealer.
      - 1) 5.3 to 8 wet mils, 2.1 to 3.2 dry mils.
      - 2) Product: Loxon Concrete and Masonry Primer-Sealer, by Sherwin-Williams.
    - b. Intermediate Coat: Matching topcoat.
    - c. Topcoat: Exterior latex paint, satin finish.
      - 1) Thickness: 4 wet mils, 1.5 dry mils per coat.
      - 2) Product: A-100 Exterior Latex Satin, A82 Series, by Sherwin-Williams.
- B. Metal Substrates (non-extruded aluminum): Existing hollow metal door frames, hollow metal door panels, hollow metal spandrel panels, hollow metal window frames, louvers, sheet metal flashings, gutters, downspouts, and downspout pipe couplings.
  - 1. Alkyl System:
    - a. Prime Coat: Water-based, metal primer.
      - 1) Thickness: 5 wet mils, 2 dry mils.
      - 2) Product: Pro Industrial Pro-Cryl Universal Acrylic Primer, by Sherwin-Williams.
    - b. Intermediate Coat: Matching topcoat.
    - c. Topcoat: Alkyd urethane enamel, low sheen.
      - 1) Thickness: 4 to 5 wet mils, 1.4 – 1.7 dry mils.
      - 2) Product: Pro Industrial Waterbased Alkyd Urethane, by Sherwin-Williams.
- C. Wood Substrates: Fascia, glulam beams, soffits, and other wood surfaces and trim.
  - 1. Latex over Latex Primer System:
    - a. Prime Coat: Exterior, latex wood primer.
      - 1) Thickness: 4 wet mils, 1.4 dry mils.
      - 2) Product: Exterior Latex Wood Primer, by Sherwin-Williams.
    - b. Intermediate Coat: Matching topcoat.
    - c. Topcoat: Exterior latex paint, satin finish.
      - 1) Thickness: 4 wet mils, 1.5 dry mils per coat.

- 2) Product: A-100 Exterior Latex Satin, A82 Series, by Sherwin-Williams.

D. Fiber-Cement Substrates: Siding, trim & accessories.

1. Latex System:

- a. Prime Coat: NA products are pre-primed.
- b. Intermediate Coat: Matching topcoat.
- c. Topcoat: Exterior latex paint, satin finish.
  - 1) Thickness: 4 wet mils, 1.5 dry mils per coat.
  - 2) Product: A-100 Exterior Latex Satin, A82 Series, by Sherwin-Williams.

E. Extruded Aluminum Substrates:

1. Latex System:

- a. Prime Coat: NA products are pre-primed.
- b. Intermediate Coat: Matching topcoat.
- c. Topcoat: Exterior latex paint, satin finish.
  - 1) Thickness: 4 wet mils, 1.5 dry mils per coat.
  - 2) Product: A-100 Exterior Latex Satin, A82 Series, by Sherwin-Williams.

**END OF SECTION 099113**

## **SECTION 230500**

### **BASIC MECHANICAL MATERIALS AND METHODS**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General Requirements and Summary of Work and Division 1 Specification Sections, apply to this Section.

##### **1.2 SUMMARY**

- A. This Section includes the following:
  - 1. Temporary disconnection and removal/displacement of existing rooftop mechanical equipment, as required for new roof Work.
  - 2. Temporary disconnection, displacement, and modification of existing associated over-roof service distribution systems (including but not limited to ductwork and piping) and replacement of defective and/or non-code-compliant components.
  - 3. Reconnection and reinstallation of existing equipment and service distribution systems.
- B. Related Sections include the following:
  - 1. Section 061000 "Rough Carpentry" for installation of wood curbs, nailers, and sheathing, as applicable.
  - 2. Section 072500 "Weather Barriers" for products used in installation of weather barrier systems.
  - 3. Section 074646 "Fiber-Cement Siding" for products used in installation of fiber-cement siding systems.
  - 4. Section 076200 "Sheet Metal Flashing and Trim" for installation of sheet metal flashing and trim integral with wall assemblies.
  - 5. Section 260500 "Basic Electrical Materials and Methods" for electrical disconnections, modifications, and reconnections.

##### **1.3 QUALITY ASSURANCE**

- A. Comply with all applicable governing Federal, State, and local codes.
- B. Use personnel with appropriate experience to perform work on mechanical equipment.
- C. All materials shall be installed according to manufacturer's published instructions and Contract Documents.

##### **1.4 COORDINATION**

- A. Coordinate installation of required supporting devices and other structural components with reroofing operations.

## **PART 2 - PRODUCTS**

### **2.1 SHEET METAL**

- A. Zinc-Coated (Galvanized) Steel Sheet ASTM A 653/A 653M, G90 (Z275) coating designation; structural quality, 22 gauge galvanized core steel.

### **2.2 RELATED MATERIALS**

- A. Provide accessories, components, and materials required for a complete and proper installation.
- B. Provide duct insulation and heavy-duty aluminum-faced insulation jacketing, complete with accessories, for replacement of existing where applicable.
- C. Provide pipe insulation, heavy-duty aluminum-faced insulation jacketing, complete with accessories, for replacement of existing where applicable.

## **PART 3 - EXECUTION**

### **3.1 MATERIALS STORAGE AND HANDLING**

- A. Deliver materials to the Project site with Manufacturer's labels intact and legible. Handle materials with care to avoid damage. Store materials inside, protected from weather, dirt, and construction dust.

### **3.2 DISCONNECTION AND RECONNECTION**

- A. Disconnect units as required for lifting.
- B. Install supports under units as shown on the Drawings.
- C. Reconnect units after completion of roof system installation.
- D. Install duct and/or pipe insulation and heavy-duty insulation jacketing to replace existing where applicable.

### **3.3 PROTECTION**

- A. Protect all Work and materials against loss and damage. Close all pipe openings with caps or plugs. At final completion, thoroughly clean and deliver all Work and equipment in an unblemished new condition.
- B. Protect existing wiring, circuits, piping, conduits, etc., from damage during course of Work.
- C. Contractor shall be responsible for damage to adjacent and/or related components of Work, including control systems, due to improper disconnection/reconnection.



3.4 FINAL ADJUSTMENTS

- A. Following completion of roofing and sheet metal trade work, survey all equipment and service distribution system components affected by the Work. Adjust couplings, support stands, and other components as necessary to result in permanently stable, secure, and watertight performance.

3.5 CLEANING

- A. General: Clean all dirt and construction dust and debris from all mechanical facilities and equipment. Touch up paint where finish has been damaged by this Work.

3.6 OPERATION TEST

- A. Prior to acceptance of completed project, operate all mechanical systems modified for a period of at least five days of eight hours each to demonstrate fulfillment of the requirements of the contract.

**END OF SECTION 230500**

## **SECTION 260500**

### **BASIC ELECTRICAL MATERIALS AND METHODS**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General Requirements and Summary of Work and Division 1 Specification Sections, apply to this Section.

##### **1.2 SUMMARY**

- A. This Section includes the following:
  - 1. Temporary disconnection, displacement, and modification/relocation of existing rooftop electrical equipment and associated service distribution systems, as required for new roof Work.
  - 2. Replacement of defective and/or non-code-compliant components affected by the Work.
  - 3. Reconnection and reinstallation of existing equipment and service distribution systems.
- B. Related Sections include the following:
  - 1. Section 061000 "Rough Carpentry" for installation of wood blocking, furring, nailers, and sheathing, as applicable.
  - 2. Section 072500 "Weather Barriers" for installation of weather barrier systems.
  - 3. Section 074646 "Fiber-Cement Siding" for installation of fiber-cement siding systems.
  - 4. Section 076200 "Sheet Metal Flashing and Trim" for installation of sheet metal flashing and trim.
  - 5. Section 230500 "Basic Mechanical Materials and Methods" for mechanical equipment disconnections and reconnections.

##### **1.3 QUALITY ASSURANCE**

- A. Comply with all applicable governing Federal, State, and local codes.
- B. Qualifications:
  - 1. Use personnel with appropriate experience to perform work on energized equipment and circuits.
  - 2. All materials shall be installed according to manufacturer's published instructions and Contract Documents.

##### **1.4 WIRING METHODS**

- A. Wiring methods shall match existing electrical installation method and be installed to local codes.

## **PART 2 - PRODUCTS**

### **2.1 CONDUIT AND FITTINGS**

- A. Zinc coated steel EMT may be employed in all dry, protected locations. Rigid conduits shall be used at all through roof penetrations. Assemble conduits and secure to boxes, panels, etc., with appropriate fittings to maintain electrical continuity. Size conduit for the quantity of type THW conductors installed, per code requirements. All conduits shall be securely supported and fastened.
- B. Galvanized steel conduits and like fittings utilized at exterior applications.

### **2.2 BOXES**

- A. Outlet and junction boxes shall be code gauge galvanized steel of code-required size to accommodate all wire, fittings and devices.

### **2.3 WIRE AND CONNECTORS**

- A. Feeder and branch circuit wire shall be soft drawn copper, number 12 minimum size, with 600-volt type THW, THWN or THHN insulation. Wire shall conform to the latest specifications. Wire shall be suitably protected from weather and damage during storage and handling and in first class condition when installed. Splices shall be made using wire nut connections.

### **2.4 DEVICES**

- A. Wiring devices shall match existing electrical installation or approved, prior to installation, unless existing devices do not comply with current code requirements. Notify Owner in the event that non-compliant devices are present that require upgrade.

## **PART 3 - EXECUTION**

### **3.1 PREPARATION**

- A. Inspect condition of existing fixtures, wiring, and conduit. Notify Owner of any damaged or unsatisfactory materials. Upgrade materials to conform to local codes as instructed by Owner.
- B. Locate all electrical services and disconnect prior to work performed in accordance with this section.

### **3.2 OUTAGES**

- A. Keep outages to occupied areas to a minimum and pre-arrange all outages with Owner. Requests for outages shall state the specific dates and hours and the maximum duration, with the outages kept to these specific times. The Contractor will be liable for any damages resulting from unscheduled outages or for those not confined to the pre-approved times.
- B. Temporary wiring and facilities, if used, shall be removed and the site left clean before final acceptance.

3.3 SUPPORT

- A. Properly and adequately support all electrical equipment, fixtures, panels, outlets, etc. Each fastening device and support shall be capable of supporting not less than four times the ultimate weight of the object or objects fastened to or suspended from the building structure. Supports shall provide proper alignment and leveling of fixtures and equipment.

3.4 INSTALLATION

- A. Disconnect existing power supply and extend conduits as required for appropriate height and proper flashing installation.
- B. Mount all conduits and junction boxes to solid surfaces, using proper fasteners and clamping devices that have been approved. Junction boxes shall be in accessible locations.
- C. Install materials per manufacturer's instructions. Connect to existing electric wiring as required. All components exposed to weather shall be weatherproof.

3.5 FINAL ADJUSTMENTS

- A. Following completion of roofing and sheet metal trade work, survey all equipment and service distribution system components affected by the Work. Adjust couplings, support stands, and other components as necessary to result in permanently stable, secure, and watertight performance.

3.6 CLEANING

- A. General: Clean all dirt and construction dust and debris from all electrical facilities and equipment. Touch up paint where finish has been damaged by this work.

3.7 OPERATION TEST

- A. Prior to acceptance of completed project, operate all electrical systems for a period of at least five days of eight hours each to demonstrate fulfillment of the requirements of the contract.

**END OF SECTION 260500**