



PROJECT MANUAL
FOR

Earle A. Chiles Business Center
Exterior Envelope Repairs

Eugene, OR

OWNER:

The State of Oregon, acting by and through the State Board of Higher Education, on behalf of: University of Oregon

OWNER'S REPRESENTATIVE:

Janet Lobue, Project Manager
Facilities Services, Department of Capital Construction
1276 University of Oregon
Eugene, OR 97403-1276
Phone: 541-346-5259 Fax 541-346-6927
Email: lobue@uoregon.edu

CONSULTANT:

WESTERN ARCHITECTURAL
10200 SW Greenburg Rd., Suite 750
Portland, OR 97223
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W.A. JOB NUMBER:

OR12-182

DATE OF ISSUE:

03/06/2013



PROJECT MANUAL

University of Oregon Earle A. Chiles Business Center

Exterior Envelope Repair

DESIGN TEAM

OWNER

The State of Oregon, acting by and through the State Board of Higher Education, on behalf of:
University of Oregon

OWNER'S REPRESENTATIVE

Janet Lobue, Project Manager
Facilities Services, Department of Capital Construction
1276 University of Oregon
Eugene, OR 97403-1276
Phone: 541-346-5259 Fax 541-346-6927
Email: lobue@uoregon.edu

CONSULTANT

Note: Within this Project Manual, the term *Consultant* and *Architect* shall mean Western Architectural.

WESTERN ARCHITECTURAL
10200 SW Greenburg Rd., Suite 750
Portland, OR 97223
Phone: 503.297.0665 | Fax: 503.297.0757

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OREGON UNIVERSITY SYSTEM

NOTICE OF RETAINER CONTRACT OPPORTUNITY

THIS OPPORTUNITY IS ONLY AVAILABLE TO CONTRACTORS WITH A CURRENT OREGON UNIVERSITY SYSTEM (OUS) RETAINER CONTRACT FOR CONSTRUCTION RELATED SERVICES.

The State of Oregon, acting by and through the State Board of Higher Education on behalf of the University of Oregon (“Owner”) is accepting sealed bids for a public improvement project at The University of Oregon, Capital Construction, 1295 Franklin Boulevard, 1276 University of Oregon, Eugene, OR 97403, until 2:00 PM, Pacific Time, March 21 2013 (“Closing Date and Time”) for the Chiles Center Envelope Repair project located on the campus of the University of Oregon, in Eugene, Oregon (“Project”). The Project is generally described as repair work to the building envelope.

A **mandatory pre-bid conference** will be conducted at 10:00 AM, Pacific Time, March 13, 2013. Bidders shall meet with Owner’s Representative at the front lobby of the Chiles Business Center for that purpose. Attendance will be documented through a sign-in sheet prepared by the Owner’s Representative. Prime bidders who arrive more than 5 minutes after start of time of the meeting (as stated in the solicitation and by the Owner’s Representative’s watch) or after the discussion portion of the meeting (whichever comes first) shall not be permitted to sign in and will not be permitted to submit a bid on the Project.

Bids will be received on a lump-sum basis for all of the work. **Bid packets may be obtained on the OUS Bid and Business Opportunities website (<http://secure.ous.edu/bid/>).**

All bidders must comply with requirements of the prevailing wage law in ORS 279C.800 through ORS 279C.870. All bidders must be registered with the Construction Contractor’s Board at the time of bid submission. No bid will be considered unless fully completed in the manner provided in the “Instructions to Bidders” upon the Bid Form provided and accompanied by Bid Security. OUS encourages bids from Minority, Women, and Emerging Small Businesses.

OREGON STATE BOARD OF HIGHER EDUCATION

By: Jamie Moffitt, Vice President for Finance and Administration

OREGON UNIVERSITY SYSTEM
STANDARD RETAINER CONTRACT
INSTRUCTIONS TO BIDDERS

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INSTRUCTIONS TO BIDDERS

Oregon Administrative Rules (“OAR”) Chapter 580, Divisions 61 and 63 govern this OUS procurement process.

Article 1. Definitions

1.1. Capitalized words used herein but not defined shall have the meaning set forth in the OUS Retainer General Conditions and OAR 580-061-0010. The following terms used herein shall have the meaning set forth below:

“Bid Form”- refers to OUS Contract Form B-5 provided by Owner to be completed by Bidder.

“Project Manual”- The Project Manual includes, but is not necessarily limited to the following: the Advertisement for Bids or Notice of Contracting Opportunity, these Instructions to Bidders, Supplemental Instructions to Bidders, Bid Form, OUS Retainer Contract General Conditions, Supplemental General Conditions (if any), Sample Retainer Contract Supplement, Performance Bond, Payment Bond, and the Plans and Specifications.

Article 2. Scope of Work

2.1 The Work contemplated in this document shall be for the Owner in connection with the Project described in the Project Manual.

Article 3. Examination of Site and Conditions

3.1 Before making a Bid, the Bidder shall examine the Work site to ascertain its physical condition. The Bidder shall be responsible for being fully informed as to the quality, quantity and sources of supply of the materials listed on the Project Manual. Failure to comply with this Section will not release Contractor from entering into the Contract nor excuse Contractor from performing the Work in strict accordance with the terms of the Contract Documents.

3.2 The Owner will not be responsible for any loss or unanticipated costs which may arise as a result of Contractor's failure to be fully informed in advance with regard to all conditions pertaining to the Work and the character of the Work required.

3.3. No statement made by any officer, agent, or employee of the Owner in relation to the physical conditions pertaining to the Work site or quality, quantity, and supply of materials will be binding on the Owner, unless included in writing in the Project Manual or an Addendum.

Article 4. Substitute Materials Approval Process

4.1 Prior to submitting a Bid including a Substitution, the Bidder must first seek approval of the Substitution from the Architect (or Engineer, as appropriate hereafter) by submitting a written request for approval at least three calendar days prior to the Closing Date and Time. The Bidder submitting the request shall be responsible for its timely delivery.

4.2 Substitution approval requests shall be accompanied by samples, records of performance, certified copies of tests by impartial and recognized laboratories, and such other information as the Architect may request.

4.3 Within a reasonable time after receiving such a request the Owner (or Architect if so designated) will consider

whether the Substitution sought by Bidder is of equal value, utility, as the designated product in the Project Manual. If the requested Substitution is approved an Addendum to the Project Manual shall be issued. A copy of each Addendum will be posted on the OUS Bid and Business Opportunities website (<http://secure.ous.edu/bid>) and shall become a part of the Project Manual.

4.4 When the Architect approves a Substitution by Addendum, it is with the understanding that the Contractor guarantees the substituted article or material to be equal or better than the one specified.

Article 5. Interpretation of Project Manual

5.1 A Bidder in doubt as to the meaning of any part of the Project Manual may submit a written request for an interpretation to the Architect at any time prior to three calendar days prior to the Closing Date and Time.

5.2 Any interpretation of the Project Manual will be made only by a duly issued Addendum. The Owner will not be responsible for any other explanation or interpretation of the Project Manual nor for any other approval of a particular manufacturer's process or item.

5.3 To establish a basis of quality, certain processes, types of machinery and equipment or kinds of materials may be specified in the Project Manual either by description of process or by designating a manufacturer by name and referring to a brand or product designation or by specifying a kind of material. Whenever a process is designated or a manufacturer named, brand or item designation given, or whenever a process or material covered by patent is designated or described, it shall be understood that the words "or approved equal" follow such name, designation or description, whether they do so or not.

Article 6. Execution of the Bid Form

6.1 The Bid Form relates to Bids on a specific Project Manual. Only the amounts and information asked for on the Bid Form furnished by the Owner will be considered as the Bid. Each Bidder shall Bid upon the Work exactly as set forth in the Bid Form. The Bidder shall include in the Bid a sum to cover the cost of all items contemplated by the Project Manual. Bids that fail to address alternates set forth on the Bid Form may be considered non-responsive.

6.2 Each Bid Form must: 1) Be completed in accordance with these instructions; 2) Include the appropriate signatures as noted on the Bid Form; 3) Include numbers pertaining to base Bids stated both in writing and in figures; and 4) Include the Bidder's typed or clearly printed address.

6.3 When Bidding on an alternate for which there is no charge, the Bidder shall write the words "No Charge" in the space provided on the Bid Form. If one or more alternates is shown on the Bid Form, the Bidder shall indicate whether each is "add" or "deduct."

Article 7. Prohibition of Alterations to Bid

7.1 Bids which are incomplete, or contain ambiguities or conditions not provided for in the Bid Form, may be rejected.

Article 8. Submission of Bid

8.1 Each Bid shall be sealed in an envelope, properly addressed to the appropriate project representative of the Owner, showing on the outside of the envelope the name of the Bidder and the name of the project. Bids will be received at the time and place stated in the Advertisement for Bids.

Article 9. Bid Closing and Opening of Bids

9.1 All Bids must be received by the Owner before the Closing Date and Time. Any Bids received after the Closing Date and Time will be rejected and returned to the Bidder unopened.

Article 10. Acceptance or Rejection of Bids by Owner

10.1 Unless all Bids are rejected, the Owner will award the Contract based on the lowest responsive Bid from a responsible Bidder. If that Bidder does not execute the Contract, the Contract will be awarded to the next lowest responsible Bidder or Bidders in succession.

10.2 The procedures for Contract awards shall be in compliance with the provisions of OARs adopted by the Owner.

10.3 The Owner reserves the right to reject all Bids and to waive minor informalities.

10.4 In determining the lowest Bidder, the Owner reserves the right to take into consideration any or all authorized base Bids as well as alternates or combinations indicated in the Bid Form.

10.5 If Owner has not accepted a Bid within 30 calendar days after the opening of the Bids, each of the three lowest Bidders may withdraw the Bid submitted.

Article 11. Withdrawal of Bid

11.1 At any time prior to the Closing Date and Time a Bidder may withdraw its Bid. This will not preclude the submission of another Bid by such Bidder prior to the Closing Date and Time.

11.2 After the Closing Date and Time, no Bidder will be permitted to withdraw its Bid within the time period specified in Article 10 for award and execution, except as provided for in that Article.

Article 12. Execution of Contract, Agreement, Performance Bond and Payment Bond

12.1 The Owner will provide the successful Bidder with Contract Documents within 10 calendar days after the award of the Contract. The Bidder shall be required to execute the Contract as provided, including a Performance Bond and a Payment Bond from a surety company licensed to do surety business in the State of Oregon, within 20 calendar days after the award of the Contract. The Contract Documents shall be delivered to the Owner in the manner stated in the Notice of Award.

Article 13. Recyclable Products

13.1 Contractors must use recyclable products to the maximum extent economically feasible in the performance of the Contract.

OREGON UNIVERSITY SYSTEM
STANDARD RETAINER CONTRACT
BID FORM

OUS CAMPUS: UNIVERSITY OF OREGON

PROJECT: CHILES CENTER ENVELOPE REPAIR

BID CLOSING DATE: March 21, 2013 at 2:00 PM, Pacific Time

FROM: _____
Name of Contractor

TO: The State of Oregon, acting by and through the Oregon State Board of Higher Education,
on behalf of the University of Oregon ("Owner")
(campus or office name and address)

Capital Construction
1295 Franklin Boulevard
1276 University of Oregon
Eugene, OR 97403-1276

1. The Undersigned (*check one of the following and insert information as requested*):

___ a. An individual doing business under an assumed name registered under the laws of
the State of _____; or

___ b. A partnership registered under the laws of the State of _____;
or

___ c. A corporation organized under the laws of the State of _____; or

___ d. A limited liability corporation/company organized under the laws
of the State of _____;

hereby proposes to furnish all material and labor and perform all Work hereinafter
indicated for the above project in strict accordance with the Contract Documents for the
Basic Bid as follows:

_____ Dollars (\$_____)

and the Undersigned agrees to be bound by each of the following documents:

- Notice of Retainer Contract Opportunity

- Instructions to Bidders
 - OUS Retainer Contract General Conditions
 - UO Supplemental Retainer Contract General Conditions
 - Sample Retainer Contract Supplement
 - Performance Bond and Payment Bond
 - Plans and Specifications
 - Prevailing Wage Rates
 - Payroll and Certified Statement Form
- (found at http://egov.oregon.gov/BOLI/WHD/PWR/W_PWR_Forms.shtml)

- Any ADDENDA numbered ____ through ____, inclusive (*fill in blanks*).

2. The Undersigned proposes to add to or deduct from the Base Bid indicated above the items or work relating to the following Unit Price(s) as designated in the Specifications, for which any adjustments in the Contract amount will be made in accordance with Section D of the OUS General Conditions:

UNIT PRICE #1 Removal and replacement of steel ledger angle that supports masonry veneer. The Unit Price shall represent the cost to remove a 5 foot section of existing ledger angle and replace it with 5 feet of new ledger angle that matches the size of the existing angle. Price shall include attachment of angle to the structure.

ADD: \$ _____

UNIT PRICE #2 Provide a price to add a new metal stud adjacent to existing corroded metal studs, as required by the specifications. This unit price shall represent the cost that will be either added to or deducted from your base bid based upon the number of studs installed in comparison to the number that have been defined to be included as part of the base bid in specification section 011100.

ADD/DEDUCT: \$ _____

3. The work shall begin on June 18, 2013 and the Work shall reach Substantial Completion by September 13, 2013.

4. The Undersigned certifies that: (1) This Bid has been arrived at independently and is being submitted without collusion with and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid designed to limit independent bidding or competition; and (2) The contents of the Bid have not been communicated by the Undersigned or its employees or agents to any person not an employee or agent of the Undersigned and will not be communicated to such person prior to the official opening of the Bid.

5. The undersigned **HAS, HAS NOT** (*circle applicable status*) paid unemployment or income taxes in Oregon within the past 12 months and **HAS, HAS NOT** (*circle applicable status*) a business address in Oregon.

6. The Undersigned agrees, if awarded a contract, to comply with the provisions of ORS 279C.800 through 279C.870 pertaining to the payment of the prevailing rates of wage.

7. Contractor's CCB registration number is _____. As a condition to submitting a bid, a Contractor must be registered with the Oregon Construction Contractors Board in accordance with ORS 701.035 to 701.055, and disclose the registration number. Failure to register and disclose the number will render the bid unresponsive and it will be rejected, unless contrary to federal law.

8. The successful Bidder hereby certifies that all subcontractors who will perform construction work as described in ORS 701.005(2) were registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time the subcontractor(s) made a bid to work under the Contract.

9. The successful Bidder hereby certifies that, in compliance with the Worker's Compensation Law of the State of Oregon, its Worker's Compensation Insurance provider is _____, Policy No. _____, and that Contractor shall submit Certificates of Insurance as required.

10. Contractor's Project Manager for this project is: _____,
Office Phone: _____ Cell Phone: _____.

11. The Undersigned certifies that it has not discriminated against minority, women, or emerging small businesses in obtaining any subcontracts for this project.

12. The Undersigned agrees, if awarded the Contract, to execute and deliver to Owner, within twenty (20) calendar days after receiving the Contract Documents, an Agreement Form and a satisfactory Performance Bond and Payment Bond, each in an amount equal to one hundred (100) percent of the Contract sum, using forms provided by the Owner. The surety requested to issue the Performance Bond and Payment Bond will be:

(name of surety company - not insurance agency)

The Undersigned hereby authorizes said surety company to disclose any information to the Owner concerning the Undersigned's ability to supply a Performance Bond and Payment Bond each in the amount of the Contract.

13. In determining the lowest Bidder, the Owner reserves the right to take into consideration any or all authorized base Bids as well as alternates or combinations indicated in the Bid Form.

By signature below, Contractor agrees to be bound by this Bid.

NAME OF FIRM _____

ADDRESS _____

FEDERAL TAX ID _____

TELEPHONE NO _____

FAX NO _____

SIGNATURE 1) _____

Sole Individual

or 2) _____

Partner

or 3) _____

Authorized Officer of Corporation

(SEAL)

Attested: Secretary of Corporation

Payment information will be reported to the IRS under the name and taxpayer ID # provided above. Information not matching IRS records could subject Contractor to 31 percent backup withholding.

******* END OF BID *******

OREGON UNIVERSITY SYSTEM
RETAINER SUPPLEMENTAL GENERAL CONDITIONS

To The
GENERAL CONDITIONS
FOR RETAINER CONTRACTS

Supplement No. _____
Project Name _____

The following modify the July 1, 2012 Oregon University System “General Conditions for Retainer Contracts (“OUS Retainer General Conditions”) for the above referenced Retainer Contract Supplement. Where a portion of the OUS Retainer General Conditions is modified by these Supplemental General Conditions, the unaltered portions shall remain in effect.

Section B.4 is hereby deleted and replaced with the following:

Contractor shall obtain and pay for all necessary permits, licenses and fees, except for those specifically excluded in the Retainer Supplemental General Conditions, for the construction of the Work, for temporary obstructions, enclosures, opening of streets for pipes, walls, utilities, environmental Work, etc., as required for the project. Contractor shall be responsible for all violations of the law, in connection with the construction or caused by obstructing streets, sidewalks or otherwise. Contractor shall give all requisite notices to public authorities. Notwithstanding the first sentence of this paragraph, Owner shall pay for the following: Plan check fees and permit fees required for the general building permit, systems development charges, and building department inspection fees. Notwithstanding the foregoing, however, Contractor shall obtain all permits, licenses and fees required for the construction of the Work.

Section K.2 is hereby deleted and replaced with the following:

As part of the Work, Contractor shall submit two completed operation and maintenance manuals ("O & M Manuals") for review by the Owner prior to submission of any pay request for more than 75% of the Work. Owner's receipt of the O & M Manuals shall be a condition precedent to any payment thereafter due. The O & M Manuals shall contain a complete set of all submittals, all product data as required by the specifications, training information, telephone list and contact information for all consultants, manufacturers, installer and suppliers, manufacturer's printed data, record and shop drawings, schematic diagrams of systems, appropriate equipment indices, warranties and bonds. The Owner shall review and return one O & M Manual for any modifications or adjustments

required. Prior to submission of its final pay request, Contractor shall deliver two complete and approved sets of O & M Manuals in paper form and one complete and approved set in electronic form to the Owner and Owner's receipt of the O & M Manuals shall be a condition precedent to Owner's obligation to make final payment.

Section K.4 is hereby deleted and replaced with the following:

As part of the Work, and prior to submission of the final application for payment, the Contractor shall schedule with the Owner and provide training sessions for all equipment and systems as required by the Contract Documents. Contractor shall schedule training sessions at least two weeks in advance of the date of training to allow Owner to provide its personnel with adequate notice. The O & M Manual shall be used as a basis for training. In addition to any off-site training required by the Contract Documents, training shall include a formal session conducted at the Work site after the equipment and/or system is completely installed and operational in its normal operating environment.

OREGON UNIVERSITY SYSTEM

**GENERAL CONDITIONS
FOR RETAINER CONTRACTS**

July 1, 2012

INSTRUCTIONS: The attached **Oregon University System General Conditions for Retainer Contracts ("OUS Retainer General Conditions")** apply to all designated retainer contracts. Changes to the OUS Retainer General Conditions (including any additions, deletions or substitutions) should only be made by attaching Retainer Supplemental General Conditions. The text of these OUS Retainer General Conditions should not otherwise be altered.

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**OREGON UNIVERSITY SYSTEM
GENERAL CONDITIONS FOR RETAINER CONTRACTS
("OUS Retainer General Conditions")**

**SECTION A
GENERAL PROVISIONS**

A.1 DEFINITION OF TERMS

In the Contract Documents the following terms shall be as defined below:

AMENDMENT, means a writing which, when fully executed by the Parties to this Contract, constitutes a change to a Contract Document. Amendments to Supplements (hereinafter a "Supplement Amendment") shall be issued in accordance with the changes provisions of Section D and, if applicable, establish a Contract Price or Contract Time adjustment.

APPLICABLE LAWS, means federal, state and local laws, codes, rules, regulations and ordinances applicable to the Work and to the Contract.

ARCHITECT/ENGINEER, means the Person appointed by the Owner to make drawings and specifications and, to provide contract administration of the Work contemplated by the Contract to the extent provided herein or by supplemental instruction of Owner (under which Owner may delegate responsibilities to the Architect/Engineer), in accordance with ORS Chapter 671 (Architects) or ORS Chapter 672 (Engineers) and administrative rules adopted thereunder.

CHANGE ORDER, means a written order issued by the Owner to be later included as an Amendment. A Change Order shall not be effective until executed as an Amendment.

CLAIM, means a demand by Contractor pursuant to Section D.3 for review of the denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, submitted in accordance with the requirements and within the time limits established for review of Claims in these OUS Retainer General Conditions.

CONSTRUCTION CHANGE DIRECTIVE, means a written order by the Owner to the Contractor requiring a change in the Work within the general scope of the Contract Documents, issued under the changes provisions of Section D.

CONTRACT, means the written agreement between the Owner and the Contractor comprised of the Contract Documents which describe the Work to be done and the obligations between the parties.

CONTRACT DOCUMENTS, means the Solicitation Document and addenda thereto, Instructions to Offerors, Supplemental Instructions to Offerors, the OUS Retainer Contract, OUS Retainer General Conditions, Retainer Supplemental General Conditions, if any, the accepted Offer, Plans, Specifications, Supplements, Amendments, and Construction Change Directives .

CONTRACT PERIOD, as set forth in the Contract Documents, means the total period of time beginning with the full execution of a Supplement and, if applicable, the issuance of a Notice to Proceed and concluding upon Final Completion.

CONTRACT PRICE, means the total of the awarded Offer amount, as increased or decreased by the price of approved alternates, as indicated in the Contract Documents.

CONTRACT TIME, means any incremental period of time allowed under the Contract to complete any portion of the Work as reflected in the project schedule.

CONTRACTOR, means the Person awarded the Contract for the Work contemplated.

DAYS, are calendar days, including weekdays, weekends and holidays, unless otherwise specified.

DIRECT COSTS, means, unless otherwise provided in the Contract Documents, the cost of materials, including sales tax, cost of delivery; cost of labor, including social security, Medicare and unemployment insurance, and fringe benefits required by agreement or custom; worker's compensation insurance; project specific insurance (including, without limitation, Builder's Risk Insurance and Builder's Risk Installation Floater); bond premiums, rental cost of equipment, and machinery required for execution of the Work; and the additional costs of field personnel directly attributable to the Work.

FINAL COMPLETION, means the final completion of all requirements under the Contract, including Contract Closeout as described in Section K but excluding Warranty Work as described in Section I.2, and the final payment and release of all retainage, if any, released.

FORCE MAJEURE, means an act, event or occurrence caused by fire, riot, war, acts of God, nature, sovereign, or public enemy, strikes, freight embargoes or any other act, event or occurrence that is beyond the control of the party to this Contract who is asserting Force Majeure.

MWESB REPORT, means an accurate report by the Contractor to the Owner identifying all Minority, Women and Emerging Small Business (MWESB) enterprises, as those terms are defined in ORS 200.005, receiving contracts throughout the course of the Work. An initial MWESB report is required (see Section E.2.9) and MWESB Reports are required annually (see Section E.2.9) and as a condition of final payment (see Section K.1). The initial report shall be in the form required by OUS and as posted from time to time on the OUS website and shall include the total number of contracts and subcontracts awarded to MWESB enterprises and the dollar value of their respective contracts and subcontracts. The annual reports shall include the total number of contracts and subcontracts awarded to MWESB enterprises, the dollar value of each, and the expenditure toward each contract and subcontract during the previous twelve (12) months. The final report shall include the total number of contracts and subcontracts awarded to MWESB enterprises and the dollar value of their respective contracts and subcontracts including all Supplements and Amendments incorporated during the course of the project. The reports shall only include enterprises certified with the State of Oregon as MWESB enterprises and shall include individual identification of each enterprise as a Minority business enterprise, a Women business enterprise, and/or an Emerging Small Business Enterprise, as applicable.

NOTICE TO PROCEED, means the official written notice from the Owner stating that the Contractor is to proceed with the Work defined in the Contract Documents. Notwithstanding the Notice to Proceed, Contractor shall not be authorized to proceed with the Work until all initial Contract requirements, including the Contract, performance bond and payment bond, and certificates of insurance, have been fully executed and submitted to Owner in a suitable form.

OFFER, means a bid in connection with Instructions to Bidders or a proposal in connection with a Request for Proposals.

OFFEROR, means a bidder in connection with Instructions to Bidders or a proposer in connection with a Request for Proposals.

OVERHEAD, means those items which may be included in the Contractor's markup (general and administrative expense and profit) and that shall not be charged as Direct Cost of the Work, including without limitation such Overhead expenses as wages or salary of personnel above the level of foreman (i.e., superintendents and project managers), expenses of Contractor's offices and supplies at the job site (e.g. job trailer) and at Contractor's principal place of business and including expenses of personnel staffing the job site office and Contractor's principal place of business, and Commercial General Liability Insurance and Automobile Liability Insurance.

OWNER, means the State of Oregon acting by and through the Oregon State Board of Higher Education, in its own right or on behalf of one of its institutions as identified in the Solicitation Document, also known as the Oregon University System (OUS). Owner may elect, by written notice to Contractor, to delegate certain duties to more than one party, including without limitation, to an Architect/Engineer. However, nothing in these OUS Retainer General Conditions is intended to abrogate the separate design professional responsibilities of Architects under ORS Chapter 671 or of Engineers under ORS Chapter 672.

PERSON, means a natural person or entity doing business as a sole proprietorship, a partnership, a joint venture, a corporation, a limited liability company or partnership, or any other entity possessing the legal capacity to contract.

PLANS, means the drawings which show the location, type, dimensions, and details of the Work to be done under the Contract.

PUNCH LIST, means the list of Work yet to be completed or deficiencies which need to be corrected in order to achieve Final Completion of the Contract.

RECORD DOCUMENT, means the as-built Plans, Specifications, testing and inspection records, product data, samples, manufacturer and distributor/supplier warranties evidencing transfer of ownership to Owner, operational and maintenance manuals, shop drawings, Construction Change Directives, MWESB Reports, correspondence, certificate(s) of occupancy, and other documents listed in Subsection B.9.1 of these OUS Retainer General Conditions, recording all Services performed.

SOLICITATION DOCUMENT, means Instructions to Bidders or Offerors or a Request for Proposal or a Request for Quotes.

SPECIFICATION, means any description of the physical or functional characteristics of the Work, or of the nature of a supply, service or construction item. Specifications may include a description of any requirement for inspecting, testing or preparing a supply, service or construction item for delivery and the quantities or qualities of materials to be furnished under the Contract. Specifications generally will state the results or products to be obtained and may, on occasion, describe the method and manner of doing the Work to be performed. Specifications may be incorporated by reference and/or may be attached to the Contract.

SUBCONTRACTOR, means a Person having a direct contract with the Contractor, or another Subcontractor, to perform one or more items of the Work.

SUBSTANTIAL COMPLETION, means the date when the Owner accepts in writing the construction, alteration or repair of the improvement to real property constituting the Work or any designated portion thereof as having reached that state of completion when it may be used or occupied for its intended purpose. Substantial Completion of facilities with operating systems occurs only after thirty (30) continuous Days of successful, trouble-free operation of the operating systems as provided in Section K.4.2.

SUBSTITUTIONS, means items that in function, performance, reliability, quality, and general configuration are the same or better than the product(s) specified. Approval of any substitute item shall be solely determined by the Owner. The decision of the Owner is final.

SUPPLEMENT, means a writing which, when fully executed by the Parties thereto, constitutes written agreement between the Owner and the Contractor comprised of the Contract Documents which describe the Work to be done and the obligations between the parties.

RETAINER SUPPLEMENTAL GENERAL CONDITIONS, means those conditions that remove from, add to, or modify these OUS Retainer General Conditions. Retainer Supplemental General Conditions may be included in the Solicitation Document or may be a separate attachment to the Contract.

WORK, means the furnishing of all materials, equipment, labor, transportation, services and incidentals necessary to successfully complete any individual item or the entire Contract and the carrying out of duties and obligations imposed by the Contract Documents.

A.2 SCOPE OF WORK

The Work contemplated under this Contract includes all labor, materials, transportation, equipment and services for, and incidental to, the completion of all construction work in connection with the project described in the Contract Documents. The Contractor shall perform all Work necessary so that the project can be legally occupied and fully used for the intended use as set forth in the Contract Documents.

A.3 INTERPRETATION OF CONTRACT DOCUMENTS

A.3.1 Unless otherwise specifically defined in the Contract Documents, words which have well-known technical meanings or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Contract Documents are intended to be complementary. Whatever is called for in one, is interpreted to be called for in all. However, in the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following descending order of precedence:

- (a) Contract Supplements, Amendments and Construction Change Directives, with those of later date having precedence over those of an earlier date;
- (b) The Retainer Supplemental General Conditions;
- (c) The OUS Retainer Contract;
- (d) The OUS Retainer General Conditions;
- (e) Division One (General Requirements) of the Specifications;
- (f) Detailed Schedules of finishes, equipment and other items included in the Specifications;
- (g) Plans and Specifications (other than Division One and the Detailed Schedules to the Specifications);
- (h) Large-scale drawings on Plans;
- (i) Small-scale drawings on Plans;
- (j) Dimension numbers written on Plans which shall prevail and take precedence over dimensions scaled from Plans;
- (k) The Solicitation Document, and any addenda thereto;
- (l) The accepted Offer.

A.3.2 In the case of an inconsistency between Plans and Specifications or within either document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Owner's interpretation in writing.

- A.3.3 If the Contractor finds discrepancies in, or omissions from the Contract Documents, or if the Contractor is in doubt as to their meaning, the Contractor shall at once notify the Owner. Matters concerning and interpretation of requirements of the Contract Documents will be decided by the Owner, who may delegate that duty in some instances to the Architect/Engineer. Responses to Contractor's requests for interpretation of Contract Documents will be made in writing by Owner (or the Architect/Engineer) within any time limits agreed upon or otherwise with reasonable promptness. Interpretations and decisions of the Owner (or Architect/Engineer) will be consistent with the intent of and reasonably inferable from the Contract Documents. Contractor shall not proceed without direction in writing from the Owner (or Architect/Engineer).
- A.3.4 References to standard specifications, manuals, codes of any technical society, organization or association, to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, laws or regulations in effect in the jurisdiction where the project is occurring on the first published date of the Solicitation Document, except as may be otherwise specifically stated.

A.4 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE

- A.4.1 It is understood that the Contractor, before submitting an Offer, has made a careful examination of the Contract Documents; has become fully informed as to the quality and quantity of materials and the character of the Work required; and has made a careful examination of the location and conditions of the Work and the sources of supply for materials. The Owner will in no case be responsible for any loss or for any unanticipated costs that may be suffered by the Contractor as a result of the Contractor's failure to acquire full information in advance in regard to all conditions pertaining to the Work. No oral agreement or conversation with any officer, agent, or personnel of the Owner, or with the Architect/Engineer either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.
- A.4.2 Should the Plans or Specifications fail to particularly describe the materials, kind of goods, or details of construction of any aspect of the Work, Contractor shall have the duty to make inquiry of the Owner and Architect/Engineer as to what is required prior to performance of the Work. Absent Specifications to the contrary, the materials or processes that would normally be used to produce first quality finished Work shall be considered a part of the Contract requirements.
- A.4.3 Any design errors or omissions noted by the Contractor shall be reported promptly to the Owner, including without limitation, any nonconformity with Applicable Laws.
- A.4.4 If the Contractor believes that adjustments to cost or Contract Time is involved because of clarifications or instructions issued by the Owner (or Architect/Engineer) in response to the Contractor's notices or requests for information, the Contractor must submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt by Contractor of the clarifications or instructions issued. If the Owner denies Contractor's request for additional compensation, additional Contract Time, or other relief that Contractor believes results from the clarifications or instructions, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process. If the Contractor fails to perform the obligations of Sections A.4.1 to A.4.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations.

A.5 INDEPENDENT CONTRACTOR STATUS

The service or services to be performed under this Contract are those of an independent contractor as defined in ORS 670.600. Contractor represents and warrants that it is not an officer, employee or agent of the Owner as those terms are used in ORS 30.265.

A.6 RETIREMENT SYSTEM STATUS AND TAXES

Contractor represents and warrants that it is not a contributing member of the Public Employees' Retirement System and will be responsible for any federal or state taxes applicable to payment received under this Contract. Contractor will not be eligible for any benefits from these Contract payments of federal Social Security, employment insurance, workers' compensation or the Public Employees' Retirement System, except as a self-employed individual. Unless the Contractor is subject to backup withholding, Owner will not withhold from such payments any amount(s) to cover Contractor's federal or state tax obligations.

A.7 GOVERNMENT EMPLOYMENT STATUS

- A.7.1 If this payment is to be charged against federal funds, Contractor represents and warrants that it is not currently employed by the Federal Government. This does not preclude the Contractor from holding another contract with the Federal Government.
- A.7.2 Contractor represents and warrants that Contractor is not an employee of the State of Oregon for purposes of performing Work under this Contract.

**SECTION B
ADMINISTRATION OF THE CONTRACT**

B.1 OWNER'S ADMINISTRATION OF THE CONTRACT

- B.1.1 The Owner shall administer the Contract as described in the Contract Documents (1) during construction (2) until final payment is due and (3) during the one-year period for correction of Work. The Owner will act as provided in the Contract Documents, unless modified in writing in accordance with other provisions of the Contract. In performing these tasks, the Owner may rely on the Architect/Engineer or other consultants to perform some or all of these tasks.
- B.1.2 The Owner will visit the site at intervals appropriate to the stage of the Contractor's operations (1) to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and deficiencies in the Work, and (3) to determine in general if Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. The Owner will not make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Owner will neither have control over or charge of, nor be responsible for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work.
- B.1.3 Except as otherwise provided in the Contract Documents or when direct communications have been specifically authorized, the Owner and Contractor shall communicate with each other about matters arising out of or relating to the Contract. Communications by and with the Architect/Engineer's consultants shall be through the Architect/Engineer. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.
- B.1.4 Based upon the Architect/Engineer's evaluations of the Contractor's Application for Payment, or unless otherwise stipulated by the Owner, the Architect/Engineer will review and

certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

**B.2 CONTRACTOR'S MEANS AND METHODS;
MITIGATION OF IMPACTS**

- B.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures.
- B.2.2 The Contractor is responsible to protect and maintain the Work during the course of construction and to mitigate any adverse impacts to the project, including those caused by authorized changes, which may affect cost, schedule, or quality.
- B.2.3 The Contractor is responsible for the actions of all its personnel, laborers, suppliers, and Subcontractors on the project. The Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of persons who are unfit or unskilled for the tasks assigned to them.

B.3 MATERIALS AND WORKMANSHIP

- B.3.1 The intent of the Contract Documents is to provide for the construction and completion in every detail of the Work described. All Work shall be performed in a professional manner and unless the means or methods of performing a task are specified elsewhere in the Contract Documents, Contractor shall employ methods that are generally accepted and used by the industry, in accordance with industry standards.
- B.3.2 The Contractor is responsible to perform the Work as required by the Contract Documents. Defective Work shall be corrected at the Contractor's expense.
- B.3.3 Work done and materials furnished shall be subject to inspection and/or observation and testing by the Owner to determine if they conform to the Contract Documents. Inspection of the Work by the Owner does not relieve the Contractor of responsibility for the Work in accordance with the Contract Documents.
- B.3.4 Contractor shall furnish adequate facilities, as required, for the Owner to have safe access to the Work including without limitation walkways, railings, ladders, tunnels, and platforms. Producers, suppliers, and fabricators shall also provide proper facilities and access to their facilities.
- B.3.5 The Contractor shall furnish Samples of materials for testing by the Owner and include the cost of the Samples in the Contract Price.

B.4 PERMITS

Contractor shall obtain and pay for all necessary permits, licenses and fees, except for those specifically excluded in the Retainer Supplemental General Conditions, for the construction of the Work, for temporary obstructions, enclosures, opening of streets for pipes, walls, utilities, environmental Work, etc., as required for the project. Contractor shall be responsible for all violations of the law, in connection with the construction or caused by obstructing streets, sidewalks or otherwise. Contractor shall give all requisite notices to public authorities.

**B.5 COMPLIANCE WITH GOVERNMENT
REGULATIONS**

- B.5.1 Contractor shall comply with Applicable Laws pertaining to the Work and the Contract. Failure to comply with such requirements shall constitute a breach of Contract and shall be grounds for Contract termination. Without limiting the generality of the foregoing, Contractor expressly agrees to comply with the following, as applicable:
- (i) Title VI and VII of Civil Rights Act of 1964, as amended;
 - (ii) Section 503 and 504 of the Rehabilitation Act of 1973, as amended;
 - (iii) the Health Insurance Portability and Accountability Act of 1996;
 - (iv) the Americans with Disabilities Act of 1990, as amended;
 - (v) ORS Chapter 659A; as amended;
 - (vi) all regulations and administrative rules established pursuant to the foregoing laws; and
 - (vii) all other applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations.
- B.5.2 Contractor shall comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations, and
- (a) Contractor shall not discriminate against Disadvantaged, Minority, Women or Emerging Small Business enterprises, as those terms are defined in ORS 200.005, or a business enterprise that is owned or controlled by or that employs a disabled veteran, as that term is defined in ORS 408.225, in the awarding of subcontracts.
 - (b) Contractor shall maintain, in current and valid form, all licenses and certificates required by Applicable Laws or this Contract when performing the Work.
- B.5.3 Unless contrary to federal law, Contractor shall certify that it shall not accept a bid from Subcontractors to perform Work as described in ORS 701.005 under this Contract unless such Subcontractors are registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time they submit their bids to the Contractor.
- B.5.4 Unless contrary to federal law, Contractor shall certify that each landscape contractor, as defined in ORS 671.520(2), performing Work under this Contract holds a valid landscape contractor's license issued pursuant to ORS 671.560.
- B.5.5 The following notice is applicable to Contractors who perform excavation Work. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center at (503)232-1987.
- B.5.6 Failure to comply with any or all of the requirements of B.5.1 through B.5.5 shall be a breach of Contract and constitute grounds for Contract termination. Damages or costs resulting from such noncompliance shall be the responsibility of Contractor.

B.6 SUPERINTENDENCE

Contractor shall keep on the site, during the progress of the Work, a competent superintendent and any necessary assistants who shall be satisfactory to the Owner and who shall represent the Contractor on the site. Directions given to the superintendent by the Owner shall be confirmed in writing to the Contractor.

B.7 INSPECTION

- B.7.1 Owner shall have access to the Work at all times.
- B.7.2 Inspection of the Work will be made by the Owner at its discretion. The Owner will have authority to reject Work that

does not conform to the Contract Documents. Any Work found to be not in conformance with the Contract Documents, in the discretion of the Owner, shall be removed and replaced at the Contractor's expense.

- B.7.3 Contractor shall make or obtain at the appropriate time all tests, inspections and approvals of portions of the Work required by the Contract Documents or by Applicable Laws or orders of public authorities having jurisdiction. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. The Contractor shall give the Owner timely notice of when and where tests and inspections are to be made so that the Owner may be present for such procedures. Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Owner.
- B.7.4 As required by the Contract Documents, Work done or material used without required inspection or testing and/or without providing timely notice to the Owner may be ordered removed at the Contractor's expense.
- B.7.5 If directed to do so any time before the Work is accepted, the Contractor shall uncover portions of the completed Work for inspection. After inspection, the Contractor shall restore such portions of Work to the standard required by the Contract. If the Work uncovered is unacceptable or was done without required testing or inspection or sufficient notice to the Owner, the uncovering and restoration shall be done at the Contractor's expense. If the Work uncovered is acceptable and was done with sufficient notice to the Owner, the uncovering and restoration will be paid for pursuant to a Supplement Amendment.
- B.7.6 If any testing or inspection reveals failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Owner's and Architect/Engineer's services and expenses, shall be at the Contractor's expense.
- B.7.7 When the United States government participates in the cost of the Work, or the Owner has an agreement with other public or private organizations, or if any portion of the Work is being performed for a third party or in close proximity to third party facilities, representatives of these organizations shall have the right to inspect the Work affecting their interests or property. Their right to inspect shall not make them a party to the Contract and shall not interfere with the rights of the parties of the Contract. Instructions or orders of such parties shall be transmitted to the Contractor, through the Owner.

B.8 SEVERABILITY

If any provision of this Contract is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular provision held to be invalid.

B.9 ACCESS TO RECORDS

- B.9.1 Contractor shall keep, at all times on the Work site, one record copy of the complete Contract Documents, including the Plans, Specifications, Construction Change Directives and addenda, in good order and marked currently to record field changes and selections made during construction, and one record copy of

Shop Drawings, Product Data, Samples and similar submittals, and shall at all times give the Owner access thereto.

- B.9.2 Contractor shall retain and the Owner and its duly authorized representatives shall have access, for a period not less than ten (10) years, to all Record Documents, financial and accounting records, and other books, documents, papers and records of Contractor which are pertinent to the Contract, including records pertaining to Overhead and indirect costs, for the purpose of making audit, examination, excerpts and transcripts. If for any reason, any part of the Work or this Contract shall be subject to litigation, Contractor shall retain all such records until all litigation is resolved and Contractor shall continue to provide Owner and/or its agents with full access to such records until such time as all litigation is complete and all periods for appeal have expired and full and final satisfaction of any judgment, order or decree is recorded and Owner receives a record copy of documentation from Contractor.

B.10 WAIVER

Failure of the Owner to enforce any provision of this Contract shall not constitute a waiver or relinquishment by the Owner of the right to such performance in the future nor of the right to enforce any other provision of this Contract.

B.11 SUBCONTRACTS AND ASSIGNMENT

- B.11.1 Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound by the terms and conditions of these OUS Retainer General Conditions, and to assume toward the Contractor all of the obligations and responsibilities which the Contractor assumes toward the Owner thereunder, unless (1) the same are clearly inapplicable to the subcontract at issue because of legal requirements or industry practices, or (2) specific exceptions are requested by Contractor and approved in writing by Owner. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with sub-subcontractors at any level.
- B.11.2 At Owner's request, Contractor shall submit to Owner prior to their execution either Contractor's form of subcontract, or the subcontract to be executed with any particular Subcontractor. If Owner disapproves such form, Contractor shall not execute the form until the matters disapproved are resolved to Owner's satisfaction. Owner's review, comment upon or approval of any such form shall not relieve Contractor of its obligations under this Agreement or be deemed a waiver of such obligations of Contractor.

- B.11.3 Contractor shall not assign, sell, or transfer its rights, or delegate its responsibilities under this Contract, in whole or in part, without the prior written approval of the Owner. No such written approval shall relieve Contractor of any obligations of this Contract, and any transferee shall be considered the agent of the Contractor and bound to perform in accordance with the Contract Documents. Contractor shall remain liable as between the original parties to the Contract as if no assignment had occurred.

B.12 SUCCESSORS IN INTEREST

The provisions of this Contract shall be binding upon and shall accrue to the benefit of the parties to the Contract and their respective permitted successors and assigns.

B.13 OWNER'S RIGHT TO DO WORK

Owner reserves the right to perform other or additional work at or near the project site with other forces than those of the Contractor. If such work takes place within or next to the project site, Contractor shall coordinate work with the other contractors or forces, cooperate with all

other contractors or forces, carry out the Work in a way that will minimize interference and delay for all forces involved, place and dispose of materials being used so as not to interfere with the operations of another, and join the Work with the work of the others in an acceptable manner and perform it in proper sequence to that of the others. The Owner will resolve any disagreements that may arise between or among Contractor and the other contractors over the method or order of doing all work (including the Work). In case of unavoidable interference, the Owner will establish work priority (including the Work) which generally will be in the sequence that the contracts were awarded.

B.14 OTHER CONTRACTS

In all cases and at any time, the Owner has the right to execute other contracts related to or unrelated to the Work of this Contract. The Contractor of this Contract shall fully cooperate with any and all other contractors without additional cost to the Owner in the manner described in section B.13.

B.15 GOVERNING LAW

This Contract shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflict of laws.

B.16 LITIGATION

Any Claim between Owner and Contractor that arises from or relates to this Contract and that is not resolved through the Claims Review Process in Section D.3 shall be brought and conducted solely and exclusively within the Circuit Court of Marion County for the State of Oregon; provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the State of Oregon of any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. CONTRACTOR, BY EXECUTION OF THIS CONTRACT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF THE COURTS REFERENCED IN THIS SECTION B.16.

B.17 ALLOWANCES

B.17.1 The Contractor shall include in the Contract Price all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct.

B.17.2 Unless otherwise provided in the Contract Documents:

- (a) when finally reconciled, allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- (b) Contractor's costs for unloading and handling at the site, labor, installation costs, Overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Price but not in the allowances;
 - (c) whenever costs are more than or less than allowances, the Contract Price shall be adjusted accordingly by Amendment. The amount of the Amendment shall reflect (i) the difference between actual costs and the allowances under Section B.17.2(a) and (2) changes in Contractor's costs under Section B.17.2(b).
- (d) Unless Owner requests otherwise, Contractor shall provide to Owner a proposed fixed price for any allowance work prior to its performance.

B.18 SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

B.18.1 The Contractor shall prepare and keep current, for the Architect's/Engineer's approval (or for the approval of Owner if approval authority has not been delegated to the Architect/Engineer), a schedule and list of submittals which is coordinated with the Contractor's construction schedule and allows the Architect/Engineer reasonable time to review submittals. Owner reserves the right to finally approve the schedule and list of submittals. Submittals include, without limitation, Shop Drawings, Product Data, and Samples which are described below:

- (a) Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor (including any sub-subcontractor), manufacturer, supplier or distributor to illustrate some portion of the Work.
- (b) Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- (c) Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

B.18.2 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review of submittals by the Architect/Engineer is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, or for approval of safety precautions or, unless otherwise specifically stated by the Architect/Engineer, of any construction means, methods, techniques, sequences or procedures, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect/Engineer's review of the Contractor's submittals shall not relieve the Contractor of its obligations under the Contract Documents. The Architect/Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component. Informational submittals upon which the Architect/Engineer is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Architect/Engineer without action.

B.18.3 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect/Engineer Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect/Engineer without action.

B.18.4 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

B.18.5 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect/Engineer.

B.18.6 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect/Engineer's review or approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect/Engineer in writing of such deviation at the time of submittal and (i) the Architect/Engineer has given written approval to the specific deviation as a minor change in the Work, or (ii) a Supplement Amendment or Construction Change Directive has been executed by Owner authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect/Engineer's review or approval thereof.

B.18.7 In the event that Owner elects not to have the obligations and duties described under this Section B.18 performed by the Architect/Engineer, or in the event no Architect/Engineer is employed by Owner on the project, all obligations and duties assigned to the Architect/Engineer hereunder shall be performed by the Owner.

B.19 SUBSTITUTIONS

The Contractor may make Substitutions only with the consent of the Owner, after evaluation by the Owner and only in accordance with a Supplement Amendment or Construction Change Directive. Substitutions shall be subject to the requirements of the bid documents. By making requests for Substitutions, the Contractor: represents that the Contractor has personally investigated the proposed substitute product; represents that the Contractor will provide the same warranty for the Substitution that the Contractor would for the product originally specified unless approved otherwise; certifies that the cost data presented is complete and includes all related costs under this Contract including redesign costs, and waives all claims for additional costs related to the Substitution which subsequently become apparent; and will coordinate the installation of the accepted Substitution, making such changes as may be required for the Work to be completed in all respects.

B.20 USE OF PLANS AND SPECIFICATIONS

Plans, Specifications and related Contract Documents furnished to Contractor by Owner or Owner's Architect/Engineer shall be used solely for the performance of the Work under this Contract. Contractor and its Subcontractors and suppliers are authorized to use and reproduce applicable portions of such documents appropriate to the execution of the Work, but shall not claim any ownership or other interest in them beyond the scope of this Contract, and no such interest shall attach. Unless otherwise indicated, all common law, statutory and other reserved rights, in addition to copyrights, are retained by Owner.

B.21 FUNDS AVAILABLE AND AUTHORIZED

Owner reasonably believes at the time of entering into this Contract that sufficient funds are available and authorized for expenditure to finance the cost of this Contract within the Owner's appropriation or limitation. Contractor understands and agrees that, to the extent that sufficient funds are not available and authorized for expenditure to finance the cost of this Contract, Owner's payment of amounts under this Contract attributable to Services performed after the last day of the current biennium is contingent on Owner receiving from the Oregon Legislative Assembly appropriations, limitations or other expenditure authority sufficient to allow Owner, in the exercise of its reasonable administrative discretion, to continue to make payments under this Contract.

B.22 NO THIRD PARTY BENEFICIARIES

Owner and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.

SECTION C WAGES AND LABOR

C.1 MINIMUM WAGE RATES ON PUBLIC WORKS

Contractor shall comply fully with the provisions of ORS 279C.800 through 279C.870. Documents establishing those conditions, as determined by the Commissioner of the Bureau of Labor and Industries (BOLI), are included as attachments to or are incorporated by reference in the Contract Documents. Pursuant to ORS 279C.830(1)(d), Contractor shall pay workers at not less than the specified minimum hourly rate of wage, and shall include that requirement in all subcontracts. If the Work is subject to both the state prevailing wage rate law and the federal Davis-Bacon Act, Contractor shall pay the higher of the applicable state or federal prevailing rate of wage. Contractor shall provide written notice to all workers of the number of hours per day and days per week such workers may be required to work.

C.2 PAYROLL CERTIFICATION AND FEE REQUIREMENTS

C.2.1 In accordance with ORS 279C.845, the Contractor and every Subcontractor shall submit written certified statements to the Owner, on the form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of wage paid each worker which the Contractor or the Subcontractor has employed on the project and further certifying that no worker employed on the project has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the Contract, which certificate and statement shall be verified by the oath of the Contractor or the Subcontractor that the Contractor or Subcontractor has read the certified statement, that the Contractor or Subcontractor knows the contents of the certified statement, and, that to the Contractor's or Subcontractor's best knowledge and belief, the certified statement is true. The certified statements shall set out accurately and completely the payroll records for the prior week, including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid. Certified statements for each week during which the Contractor or Subcontractor has employed a worker on the project shall be submitted once a month, by the fifth business day of the following month. The Contractor and Subcontractors shall preserve the certified statements for a period of ten (10) years from the date of completion of the Contract.

C.2.2 Pursuant to ORS 279C.845(7), the Owner shall retain 25 percent of any amount earned by the Contractor on this public works project until the Contractor has filed the certified statements required by section C.2.1. The Owner shall pay to the Contractor the amount retained under this subsection within 14 days after the Contractor files the required certified statements, regardless of whether a Subcontractor has failed to file certified statements.

C.2.3 Pursuant to ORS 279C.845(8), the Contractor shall retain 25 percent of any amount earned by a first-tier Subcontractor on this public works project until the first-tier Subcontractor has

filed with the Owner the certified statements required by C.2.1. Before paying any amount retained under this subsection, the Contractor shall verify that the first-tier Subcontractor has filed the certified statement. Within 14 days after the first-tier Subcontractor files the required certified statement the Contractor shall pay the first-tier Subcontractor any amount retained under this subsection.

- C.2.4 In accordance with statutory requirements and administrative rules promulgated by the Commissioner of the Bureau of Labor and Industries, the fee required by ORS 279C.825(1) will be paid by Owner to the Commissioner.

C.3 PROMPT PAYMENT AND CONTRACT CONDITIONS

- C.3.1 As a condition to Owner's performance hereunder, the Contractor shall:
- C.3.1.1 Make payment promptly, as due, to all persons supplying to Contractor labor or materials for the prosecution of the Work provided for in this Contract.
- C.3.1.2 Pay all contributions or amounts due the State Industrial Accident Fund from such Contractor or Subcontractor incurred in the performance of the Contract.
- C.3.1.3 Not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished. Contractor will not assign any claims that Contractor has against Owner, or assign any sums due by Owner, to Subcontractors, suppliers, or manufacturers, and will not make any agreement or act in any way to give Subcontractors a claim or standing to make a claim against the Owner.
- C.3.1.4 Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.
- C.3.2 As a condition to Owner's performance hereunder, if Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor of a Subcontractor by any person in connection with the project as such claim becomes due, the proper officer(s) representing the Owner may pay the claim and charge the amount of the payment against funds due or to become due Contractor under this Contract. Payment of claims in this manner shall not relieve the Contractor or the Contractor's surety from obligation with respect to any unpaid claims.
- C.3.3 Contractor shall include in each subcontract for property or services entered into by the Contractor and a first-tier subcontractor, including a material supplier, for the purpose of performing a construction contract, a payment clause that obligates the Contractor to pay the first-tier Subcontractor for satisfactory performance under its subcontract within ten (10) Days out of such amounts as are paid to the Contractor by the public contracting agency under such contract.
- C.3.4 All employers, including Contractor, that employ subject workers who work under this contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its Subcontractors complies with these requirements.

C.4 PAYMENT FOR MEDICAL CARE

As a condition to Owner's performance hereunder, Contractor shall promptly, as due, make payment to any person, partnership, association or corporation furnishing medical, surgical, and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Contractor, all sums of which the Contractor

agrees to pay for such services and all moneys and sums which the Contractor has collected or deducted from the wages of personnel pursuant to any law, contract or agreement for the purpose of providing or paying for such services.

C.5 HOURS OF LABOR

As a condition to Owner's performance hereunder, no person shall be employed to perform Work under this Contract for more than ten (10) hours in any one day or forty (40) hours in any one week, except in cases of necessity, emergency or where public policy absolutely requires it. In such instances, Contractor shall pay the employee at least time and a half pay:

- (a) For all overtime in excess of eight (8) hours a day or forty (40) hours in any one week when the work week is five consecutive Days, Monday through Friday; or
- (b) For all overtime in excess of ten (10) hours a day or forty (40) hours in any one week when the work week is four consecutive Days, Monday through Friday; and
- (c) For all Work performed on Saturday and on any legal holiday specified in ORS 279C.540.

This section C.5 will not apply to Contractor's Work under this Contract to the extent Contractor is currently a party to a collective bargaining agreement with any labor organization.

This Section C.5 shall not excuse Contractor from completion of the Work within the time required under this Contract.

SECTION D CHANGES IN THE WORK

D.1 CHANGES IN WORK

- D.1.1 The terms of this Contract shall not be waived, altered, modified, supplemented or amended in any manner whatsoever, without prior written agreement and then only after any necessary approvals have been obtained. A Supplement or Amendment is required, which shall not be effective until its execution by the parties to this Contract and all approvals required by public contracting laws have been obtained.
- D.1.2 It is mutually agreed that changes in Plans, quantities, or details of construction are inherent in the nature of construction and may be necessary or desirable during the course of construction. Within the general scope of this Contract, the Owner may at any time, without notice to the sureties and without impairing the Contract, require changes consistent with this Section D.1. All changes to the Work shall be documented and Amendments shall be executed under the conditions of the Contract Documents. Such changes may include, but are not limited to:
- (a) Modification of specifications and design.
- (b) Increases or decreases in quantities.
- (c) Increases or decreases to the amount of Work.
- (d) Addition or elimination of any Work item.
- (e) Change in the duration of the project.
- (f) Acceleration or delay in performance of Work.
- (g) Deductive changes.

Deductive changes are those that reduce the scope of the Work, and shall be made by mutual agreement whenever feasible. In cases of suspension or partial termination under Section J, Owner reserves the right to unilaterally impose a deductive change and to self perform such Work, for which the provisions of B.13 (Owner's Right to Do Work) shall then apply. Adjustments in compensation shall be made under the provisions of D.1.3, in which costs for deductive changes shall be based upon a Direct Costs adjustment together with the related

percentage markup specified for profit, Overhead and other indirect costs, unless otherwise agreed to by Owner.

D.1.3 The Owner and Contractor agree that adjustments to or deletions from the Work shall be administered and compensated according to the following:

- (a) Unit pricing may be utilized at the Owner's option when unit prices or solicitation alternates were provided that established the cost for adjustments to Work, and a binding obligation exists under the Contract on the parties covering the terms and conditions of the adjustment to Work.
- (b) If the Owner elects not to utilize unit pricing, or in the event that unit pricing is not available or appropriate, fixed pricing may be used for adjustments to or deletions from the Work. In fixed pricing the basis of payments or total price shall be agreed upon in writing between the parties to the Contract, and shall be established before the Work is done whenever feasible. Notwithstanding the foregoing, the mark-ups set forth in D.1.3(c) shall be utilized in establishing fixed pricing, and such mark-ups shall not be exceeded. Cost and price data relating to adjustments to or deletions from the Work shall be supplied by Contractor to Owner upon request, but Owner shall be under no obligation to make such requests.
- (c) In the event that unit pricing and fixed pricing are not utilized, then adjustments to or deletions from the Work shall be performed on a cost reimbursement basis for Direct Costs. Such Work shall be compensated on the basis of the actual, reasonable and allowable cost of labor, equipment, and material furnished on the Work performed. In addition, the following markups shall be added to the Contractor's or Subcontractor's Direct Costs as full compensation for profit, Overhead and other indirect costs for Work directly performed with the Contractor's or Subcontractor's own forces:

On Labor.....	15%
On Equipment.....	10%
On Materials.....	10%

- (d) When adjustments to or deletions from the Work under D.1.3(c) are invoiced by an authorized Subcontractor at any level, each ascending tier Subcontractor or Contractor will be allowed a supplemental mark-up on each piece of subcontract Work covered by an Amendment as follows:

\$0.00 - \$5,000.00	10%, and then
Over \$5,000.00	5%

Payments made to the Contractor shall be complete compensation for Overhead, profit, and all costs that were incurred by the Contractor or by other forces furnished by the Contractor, including Subcontractors, for adjustments to or deletions from the Work pursuant to a Supplement Amendment. Owner may establish a maximum cost for additional Work under this Section D.1.3, which shall not be exceeded for reimbursement without additional written authorization from Owner in the form of a Supplement Amendment. Contractor shall not be required to complete such additional Work without additional authorization.

D.1.4 Any necessary adjustment of Contract Time that may be required as a result of adjustments to or deletions from the Work must be agreed upon by the parties before the start of the revised Work unless Owner authorizes Contractor to start the revised Work before agreement on Contract Time adjustment. Contractor shall submit any request for additional compensation (and additional Contract Time if Contractor was authorized to start Work before an adjustment of Contract Time was

approved) as soon as possible but no later than thirty (30) Days after receipt of Owner's request for additional Work. If Contractor's request for additional compensation or adjustment of Contract Time is not made within the thirty (30) Day time limit, Contractor's requests pertaining to that additional Work shall be barred. The thirty (30) Day time limit for making requests shall not be extended for any reason, including without limitation Contractor's claimed inability to determine the amount of additional compensation or adjustment of Contract Time, unless an extension is granted in writing by Owner. If the Owner denies Contractor's request for additional compensation or adjustment of Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process. No other reimbursement, compensation, or payment will be made, except as provided in Section D.1.5 for impact claims.

D.1.5 If any adjustment to Work under Section D.1.3 causes an increase or decrease in the Contractor's cost of, or the Contract Time required for the performance of any other part of the Work under this Contract, Contractor shall submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt of Owner's request for adjustments to or deletions from the Work by Contractor.

The thirty (30) Day time limit applies to claims of Subcontractors, suppliers, or manufacturers who may be affected by Owner's request for adjustments to or deletions from the Work and who request additional compensation or an extension of Contract Time to perform; Contractor has responsibility for contacting its Subcontractors, suppliers, or manufacturers within the thirty (30) Day time limit, and including their requests with Contractor's requests. If the request involves Work to be completed by Subcontractors, or materials to be furnished by suppliers or manufacturers, such requests shall be submitted to the Contractor in writing with full analysis and justification for the adjustments to compensation and Contract Time requested. The Contractor shall analyze and evaluate the merits of the requests submitted by Subcontractors, suppliers, and manufacturers to Contractor prior to including those requests and Contractor's analysis and evaluation of those requests with Contractor's requests for adjustments to compensation or Contract Time that Contractor submits to the Owner. Failure of Subcontractors, suppliers, manufacturers or others to submit their requests to Contractor for inclusion with Contractor's requests submitted to Owner within the time period and by the means described in this section shall constitute a waiver of these Subcontractor claims. The Owner will not consider direct requests or claims from Subcontractors, suppliers, manufacturers or others not a party to this Contract. The consideration of such requests and claims under this section does not give any Person, not a party to the Contract the right to bring a claim against Owner, whether in this claims process, in litigation, or in any dispute resolution process.

If the Owner denies the Contractor's request for adjustment to compensation or Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

D.1.6 No request or Claim by the Contractor for additional costs or an adjustment of Contract Time shall be allowed if made after receipt of final payment application under this Contract. Final payment application must be made by Contractor within the time required under Section E.6.4.

D.1.7 It is understood that changes in the Work are inherent in construction of this type. The number of changes, the scope of those changes, and the effect they have on the progress of the original Work cannot be defined at this time. The Contractor is notified that numerous changes may be required and that there will be no compensation made, unless and only to the extent otherwise provided in the Contract Documents, to the Contractor

directly related to the number of changes. Each change will be evaluated for extension of Contract Time and increase or decrease in compensation based on its own merit.

D.2 DELAYS

D.2.1 Delays in construction include "Avoidable Delays", which are defined in Section D.2.1.1, and "Unavoidable Delays", which are defined in Section D.2.1.2. The effect of Avoidable Delays is described in Section D.2.2 and the effect of Unavoidable Delays is described in Section D.2.3.

D.2.1.1 Avoidable Delays include any delays other than Unavoidable Delays, and include delays that otherwise would be considered Unavoidable Delays but that:

- (a) Could have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
- (b) Affect only a portion of the Work and do not necessarily prevent or delay the prosecution of neither other parts of the Work nor the completion of the whole Work within the Contract Time.
- (c) Do not impact activities on the accepted critical path schedule.
- (d) Are associated with the reasonable interference of other contractors employed by the Owner that do not necessarily prevent the completion of the whole Work within the Contract Time.

D.2.1.2 Unavoidable Delays include delays other than Avoidable Delays that are:

- (a) To the extent caused by any actions of the Owner, or any other employee or agent of the Owner, or by separate contractor employed by the Owner.
- (b) To the extent caused by any site conditions which differ materially from what was represented in the Contract Documents or from conditions that would normally be expected to exist and be inherent to the construction activities defined in the Contract Documents. The Contractor shall notify the Owner immediately of differing site conditions before the area has been disturbed. The Owner will investigate the area and make a determination as to whether or not the conditions differ materially from either the conditions stated in the Contract Documents or those which could reasonably be expected in execution of this particular Contract. If Contractor and the Owner agree that a differing site condition exists, any adjustment to compensation or Contract Time will be determined based on the process set forth in Section D.1.5 for adjustments to or deletions from Work. If the Owner disagrees that a differing site condition exists and denies Contractor's request for additional compensation or Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process.
- (c) To the extent caused by Force Majeure acts, events or occurrences that could not have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
- (d) To the extent caused by adverse weather conditions. Any adverse weather conditions must be substantiated by documentary evidence that weather conditions were abnormal for the specific time period claimed, could not have been anticipated by the Contractor, and adversely impacted the project in a manner that could not be avoided by rescheduling the Work or by implementing measures to

protect against the weather so that the Work could proceed. A rain, windstorm, high water, or other natural phenomenon for the specific locality of the Work, which might reasonably have been anticipated from the previous 10-year historical records of the general locality of the Work, shall not be construed as abnormal. The parties agree that rainfall greater than the following levels cannot be reasonably anticipated:

- (i) Daily rainfall equal to, or greater than, 0.50 inch during a month when the monthly rainfall exceeds the normal monthly average by twenty-five percent (25 %) or more.
- (ii) daily rainfall equal to, or greater than, 0.75 inch at any time.

The Office of the Environmental Data Service of the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce nearest the project site shall be considered the official agency of record for weather information.

D.2.2 Contractor shall not be entitled to additional compensation or additional Contract Time for Avoidable Delays.

D.2.3 In the event of Unavoidable Delays, based on principles of equitable adjustment, Contractor may be entitled to the following:

- (a) Contractor may be entitled to additional compensation or additional Contract Time, or both, for Unavoidable Delays described in Section D.2.1.2 (a) and (b).
- (b) Contractor may be entitled to additional Contract Time for Unavoidable Delays described in Section D.2.1.2(c) and (d).

In the event of any requests for additional compensation or additional Contract Time, or both, as applicable, arising under this Section D.2.3 for Unavoidable Delays, other than requests for additional compensation or additional Contract Time for differing site conditions for which a review process is established under Section D.2.1.2 (b), Contractor shall submit a written notification of the delay to the Owner within two (2) Days of the occurrence of the cause of the delay. This written notification shall state the cause of the potential delay, the project components impacted by the delay, and the anticipated additional Contract Time extension or the additional compensation, or both, as applicable, resulting from the delay. Within seven (7) Days after the cause of the delay has been mitigated, or in no case more than thirty (30) Days after the initial written notification, the Contractor shall submit to the Owner, a complete and detailed request for additional compensation or additional Contract Time, or both, as applicable, resulting from the delay. If the Owner denies Contractor's request for additional compensation or adjustment of Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

If Contractor does not timely submit the notices required under this Section D.2, then unless otherwise prohibited by law, Contractor's Claim shall be barred.

D.3 CLAIMS REVIEW PROCESS

D.3.1 All Contractor Claims shall be referred to the Owner for review. Contractor's Claims, including Claims for adjustments to compensation or Contract Time, shall be submitted in writing by Contractor to the Owner within five (5) Days after a denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, provided that such initial request has been submitted in accordance with the requirements and within the time limits

established in these OUS Retainer General Conditions. Within thirty (30) Days after the initial Claim, Contractor shall submit to the Owner a complete and detailed description of the Claim (the "Detailed Notice") that includes all information required by Section D.3.2. Unless the Claim is made in accordance with these time requirements, it shall be waived by Contractor.

- D.3.2 The Detailed Notice of the Claim shall be submitted in writing by Contractor and shall include a detailed, factual statement of the basis of the Claim, pertinent dates, Contract provisions which support or allow the Claim, reference to or copies of any documents which support the Claim, the dollar value of the Claim, and the Contract Time adjustment requested for the Claim. If the Claim involves Work to be completed by Subcontractors, the Contractor will analyze and evaluate the merits of the Subcontractor claim prior to forwarding it and that analysis and evaluation to the Owner. The Owner will not consider direct claims from Subcontractors, suppliers, manufacturers, or others not a party to this Contract. Contractor agrees that it will make no agreement, covenant, or assignment, nor will it commit any other act that will permit or assist any Subcontractor, supplier, manufacturer, or other to directly or indirectly make a claim against Owner.
- D.3.3 The Owner will review all Claims and take one or more of the following preliminary actions within ten (10) Days of receipt of the Detailed Notice of a Claim: (1) request additional supporting information from the Contractor; (2) inform the Contractor and Owner in writing of the time required for adequate review and response; (3) reject the Claim in whole or in part and identify the reasons for rejection; (4) based on principles of equitable adjustment, recommend approval of all or part of the Claim; or (5) propose an alternate resolution.
- D.3.4 The Owner's decision shall be final and binding on the Contractor unless appealed by written notice to the Owner within fifteen (15) Days of receipt of the decision. The Contractor must present written documentation supporting the Claim within fifteen (15) Days of the notice of appeal. After receiving the appeal documentation, the Owner shall review the materials and render a decision within thirty (30) Days after receiving the appeal documents.
- D.3.5 The decision of the Owner shall be final and binding unless the Contractor delivers to the Owner its request for mediation, which shall be a non-binding process, within fifteen (15) Days of the date of the Owner's decision. The mediation process will be considered to have commenced as of the date the Contractor delivers the request. Both parties acknowledge and agree that participation in mediation is a prerequisite to commencement of litigation of any disputes relating to the Contract. Both parties further agree to exercise their best efforts in good faith to resolve all disputes within sixty (60) Days of the commencement of the mediation through the mediation process set forth herein.
- In the event that a lawsuit must be filed within this sixty (60) Day period in order to preserve a cause of action, the parties agree that, notwithstanding the filing, they shall proceed diligently with the mediation to its conclusion prior to actively prosecuting the lawsuit, and shall seek from the Court in which the lawsuit is pending such stays or extensions, including the filing of an answer, as may be necessary to facilitate the mediation process. Further, in the event settlements are reached on any issues through mediation, the plaintiff shall promptly cause to be entered by the Court a stipulated general judgment of dismissal with prejudice, or other appropriate order limiting the scope of litigation as provided in the settlement.
- D.3.6 Should the parties arrive at an impasse regarding any Claims or disputed Claims, it is agreed that the parties shall participate in mediation as specified in Section D.3.5. The mediation process will be considered to have been commenced as of the date one

party delivers to the other its request in writing to mediate. The mediator shall be an individual mutually acceptable to both parties, but in the absence of agreement each party shall select a temporary mediator and the temporary mediators shall jointly select the permanent mediator. Each party shall pay its own costs for the time and effort involved in mediation. The cost of the mediator shall be split equally between the two parties. Both parties agree to exercise their best effort in good faith to resolve all disputes in mediation. Participation in mediation is a mandatory requirement of both the Owner and the Contractor. The schedule, time and place for mediation will be mutually acceptable, or, failing mutual agreement, shall be as established by the mediator. The parties agree to comply with Owner's administrative rules governing the confidentiality of mediation, if any, and shall execute all necessary documents to give effect to such confidentiality rules. In any event, the parties shall not subpoena the mediator or otherwise require the mediator to produce records, notes or work product, or to testify in any future proceedings as to information disclosed or representations made in the course of mediation, except to the extent disclosure is required by law.

- D.3.7 Unless otherwise directed by Owner, Contractor shall proceed with the Work while any Claim, or mediation or litigation arising from a Claim, is pending. Regardless of the review period or the final decision of the Owner, the Contractor shall continue to diligently pursue the Work as identified in the Contract Documents. In no case is the Contractor justified or allowed to cease or Delay Work, in whole or in part, without a written stop work order from the Owner.

SECTION E PAYMENTS

E.1 SCHEDULE OF VALUES

The Contractor shall submit, at least ten (10) Days prior to submission of its first application for progress payment, a schedule of values ("Schedule of Values") for the contracted Work. This schedule shall provide a breakdown of values for the contracted Work and will be the basis for progress payments. The breakdown shall demonstrate reasonable, identifiable, and measurable components of the Work. Unless objected to by the Owner, this schedule shall be used as the basis for reviewing Contractor's applications for payment. If objected to by Owner, Contractor shall revise the schedule of values and resubmit the same for approval of Owner.

E.2 APPLICATIONS FOR PAYMENT

E.2.1 Owner shall make progress payments on the Contract monthly as Work progresses, in accordance with the requirements of this Section E.2. Applications for payment shall be based upon estimates of Work completed and the Schedule of Values. As a condition precedent to Owner's obligation to pay, all applications for payment shall be approved by the Owner. A progress payment shall not be considered acceptance or approval of any Work or waiver of any defects therein. Owner shall pay to Contractor interest for overdue invoices at the rate of two-thirds of one percent per month on the progress payment, not including retainage, due the Contractor. Overdue invoices will be those that have not been paid within forty five (45) days from the latest of:

- (a) The date of the receipt of the accurate invoice;
- (b) The date Owner receives the correct application for payment if no invoice is received;
- (c) The date all goods and services have been received; or
- (d) The date a Claim is made certain by agreement of the parties or by operation of law.

Notwithstanding the foregoing, in instances when an application for payment is filled out incorrectly, or when there is any defect or impropriety in any submitted application or when there is a good faith dispute, Owner shall so notify the Contractor within fifteen (15) Days stating the reason or reasons the application for payment is defective or improper or the reasons for the dispute. A defective or improper application for payment, if corrected by the Contractor within seven (7) Days of being notified by the Owner, shall not cause a payment to be made later than specified in this section unless interest is also paid. Payment of interest will be postponed when payment on the principal is delayed because of disagreement between the Owner and the Contractor.

Owner reserves the right, instead of requiring the Contractor to correct or resubmit a defective or improper application for payment, to reject the defective or improper portion of the application for payment and pay the remainder of the application for such amounts which are correct and proper.

Owner, upon written notice to the Contractor, may elect to make payments to the Contractor only by means of Electronic Funds Transfers (EFT) through Automated Clearing House (ACH) payments. If Owner makes this election, the Contractor shall arrange for receipt of the EFT/ACH payments.

E.2.2 Contractor shall submit to the Owner an application for each payment and, if required, receipts or other vouchers showing payments for materials and labor including payments to Subcontractors. Contractor shall include in its application for payment a schedule of the percentages of the various parts of the Work completed, based on the Schedule of Values which shall aggregate to the payment application total, and shall include, on the face of each copy thereof, a certificate in substantially the following form:

"I, the undersigned, hereby certify that the above bill is true and correct, and the payment therefore, has not been received.

Signed: _____
Dated: _____"

E.2.3 Generally, applications for payment will be accepted only for materials that have been installed. Under special conditions, applications for payment for stored materials will be accepted at Owner's sole discretion. Such a payment, if made, will be subject to the following conditions:

(a) The request for stored material shall be submitted at least thirty (30) Days in advance of the application for payment on which it appears. Applications for payment shall be entertained for major equipment, components or expenditures only.

(b) The Contractor shall submit applications for payment showing the quantity and cost of the material stored.

(c) The material shall be stored in a bonded warehouse and Owner shall be granted the right to access the material for the purpose of removal or inspection at any time during the Contract Period.

(d) The Contractor shall name the Owner as co-insured on the insurance policy covering the full value of the property while in the care and custody of the Contractor until it is installed. A certificate noting this coverage shall be issued to the Owner.

(e) Payments shall be made for materials and equipment only. The submitted amount in the application for payment shall be reduced by the cost of transportation from the storage site to the project site and for the cost of an inspector to verify delivery and condition of the goods at the storage site. The cost of storage and inspection shall be borne solely by the Contractor.

(f) Within sixty (60) Days of the application for payment, the Contractor shall submit evidence of payment covering the material and/or equipment stored and of payment for the storage site.

(g) Payment for stored materials and/or equipment shall in no way indicate acceptance of the materials and/or equipment or waive any rights under this Contract for the rejection of the Work or materials and/or equipment not in conformance with the Contract Documents.

(h) All required documentation shall be submitted with the respective application for payment.

E.2.4 The Owner reserves the right to withhold all or part of a payment, or may nullify in whole or part any payment previously made, to such extent as may be necessary in the Owner's opinion to protect the Owner from loss because of:

(a) Work that is defective and not remedied, or that has been demonstrated or identified as failing to conform with Applicable Laws or the Contract Documents,

(b) third party claims filed or evidence reasonably indicating that such claims will likely be filed unless security acceptable to the Owner is provided by the Contractor;

(c) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment (in which case Owner may issue checks made payable jointly to Contractor and such unpaid Persons under this provision, or directly to Subcontractors and suppliers at any level under Section C.3.2.1);

(d) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;

(e) damage to the Work, Owner or another contractor;

(f) reasonable evidence that the Work will not be completed within the Contract Time required by the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;

(g) failure to carry out the Work in accordance with the Contract Documents; or

(h) assessment of liquidated damages, when withholding is made for offset purposes.

E.2.5 Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

(a) Take that portion of the Contract Price properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Price allocated to that portion of the Work in the Schedule of Values, less retainage as provided in Section E.5. Pending final determination of cost to the Owner of changes in the Work, no amounts for changes in the Work can be included in applications for payment until the Contract Price has been adjusted by a Supplement Amendment;

(b) Add that portion of the Contract Price properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner pursuant to Section E.2.3, suitably stored off the site at a location agreed upon in writing), less retainage as provided in Section E.5;

- (c) Subtract the aggregate of previous payments made by the Owner; and
- (d) Subtract any amounts for which the Owner has withheld or nullified payment as provided in the Contract Documents.

- E.2.6 Contractor's applications for payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier.
- E.2.7 The Contractor warrants to Owner that title to all Work covered by an application for payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an application for payment all Work for which payments are received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided financing, labor, materials and equipment relating to the Work.
- E.2.8 If Contractor disputes any determination by Owner with regard to any application for payment, Contractor nevertheless shall continue to expeditiously perform the Work. No payment made hereunder shall be or be construed to be final acceptance or approval of that portion of the Work to which such partial payment relates or shall relieve Contractor of any of its obligations hereunder.
- E.2.9 Contractor shall submit its initial MWESB Report within ten (10) Days of Contractor's execution of the Contract. Contractor shall submit annual MWESB Reports on June 30 of each year the Contract is active. Contracts - first executed by Contractor within ninety (90) Days before June 30 of the year of execution by Contractor may at the discretion of Owner be exempt from submitting the annual MWESB Report otherwise due on that June 30. The final MWESB Report shall be filed with the application for final payment. Timely receipt of MWESB Reports by Owner shall be a condition precedent to Owner's obligation to pay any progress payments or final payment otherwise due.

E.3 PAYROLL CERTIFICATION REQUIREMENT

Owner's receipt of payroll certification pursuant to Section C.2 of this Contract shall be a condition precedent to Owner's obligation to pay any progress payments or final payment otherwise due.

E.4 DUAL PAYMENT SOURCES

Contractor shall not be compensated for Work performed under this Contract from any state agency other than the agency that is a party to this Contract.

E.5 RETAINAGE

- E.5.1 Retainage shall be withheld and released in accordance with the requirements set forth in OAR 580-063-0045.
- E.5.1.1 Owner may reserve as retainage from any progress payment an amount not to exceed five percent of the payment. As Work progresses, Owner may reduce the amount of retainage on or may eliminate retainage on any remaining monthly Contract payments after 50 percent of the Work under the Contract is completed if, in the Owner's discretion, such Work is progressing satisfactorily. Elimination or reduction of retainage shall be allowed only upon written application by the Contractor, which application shall include written approval of Contractor's surety; except that when the Work is 97-1/2 percent completed the Owner may, at its discretion and without application by the Contractor, reduce the retained amount to 100 percent of the value of the Work remaining to be done. Upon receipt of written application by the

Contractor, Owner shall respond in writing within a reasonable time.

E.5.1.2 Contractor may request in writing:

- (a) to be paid amounts which would otherwise have been retained from progress payments where Contractor has deposited acceptable bonds and securities of equal value with Owner or in a custodial account or other mutually-agreed account satisfactory to Owner, with an approved bank or trust company to be held in lieu of the cash retainage for the benefit of Owner;
- (b) for construction projects over \$1,000,000, that retainage be deposited in an interest bearing account, established through the State Treasurer for state agencies, in a bank, savings bank, trust company or savings association for the benefit of Owner, with earnings from such account accruing to the Contractor; or
- (c) that the Owner allow Contractor to deposit a surety bond for the benefit of Owner, in a form acceptable to Owner, in lieu of all or a portion of funds retained, or to be retained. Such bond and any proceeds therefrom shall be made subject to all claims in the manner and priority as set forth for retainage.

When the Owner has accepted the Contractor's election of option (a) or (b), Owner may recover from Contractor any additional costs incurred through such election by reducing Contractor's final payment. Where the Owner has agreed to Contractor's request for option (c), Contractor shall accept like bonds from Subcontractors and suppliers on the project from which Contractor has required retainages.

- E.5.1.3 The retainage held by Owner shall be included in and paid to the Contractor as part of the final payment of the Contract Price. The Owner shall pay to Contractor interest at the rate of two-thirds of one percent per month on the final payment due Contractor, interest to commence forty five (45) Days after the date which Owner receives Contractor's final approved application for payment and Work under the Contract has been completed and accepted and to run until the date when final payment is tendered to Contractor. The Contractor shall notify Owner in writing when the Contractor considers the Work complete and deliver to Owner its final application for payment and Owner shall, within fifteen (15) Days after receiving the written notice and the application for payment, either accept the Work or notify the Contractor of Work yet to be performed on the Contract. If Owner does not within the time allowed notify the Contractor of Work yet to be performed to fulfill contractual obligations, the interest provided by this subsection shall commence to run forty five (45) Days after the end of the 15-Day period.

- E.5.1.4 Owner will reduce the amount of the retainage if the Contractor notifies the Owner that the Contractor has deposited in an escrow account with a bank or trust company, in a manner authorized by the Owner, bonds and securities of equal value of a kind approved by the Owner and such bonds and securities have in fact been deposited.

- E.5.1.5 Contractor agrees that if Contractor elects to reserve a retainage from any progress payment due to any Subcontractor or supplier, such retainage shall not exceed five percent of the payment, and such retainage withheld from Subcontractors and suppliers shall be subject to the same terms and conditions stated in Subsection E.5 as apply to Owner's retainage from any progress payment due to Contractor.

E.6 FINAL PAYMENT

- E.6.1 Upon completion of all the Work under this Contract, the Contractor shall notify the Owner, in writing, that Contractor has completed Contractor's obligations under the Contract and shall prepare its application requesting final payment. Upon receipt of such notice and application for payment, the Owner will inspect the Work, and, if acceptable, submit to Contractor a recommendation as to acceptance of the completed Work and the final estimate of the amount due the Contractor. If the Work is not acceptable, Owner will notify Contractor within fifteen (15) Days of Contractor's request for final payment. Upon approval of this final application for payment by the Owner and compliance by the Contractor with provisions in Section K, and Contractor's satisfaction of other provisions of the Contract Documents as may be applicable, the Owner shall pay to the Contractor all monies due under the provisions of these Contract Documents.
- E.6.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Owner (1) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least thirty (30) Days' prior written notice has been given to the Owner, (2) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (3) consent of surety, if any, to final payment and (4), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.
- E.6.3 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final application for payment.
- E.6.4 Contractor agrees to submit its final payment application within ninety (90) Days after Substantial Completion, unless written extension is granted by Owner. Contractor shall not delay final payment application for any reason, including without limitation nonpayment of Subcontractors, suppliers, manufacturers or others not a party to this Contract, or lack of resolution of a dispute with Owner or any other person of matters arising out of or relating to the Contract. If Contractor fails to submit its final payment application within ninety (90) Days after Substantial Completion, and Contractor has not obtained written extension by Owner, all requests or Claims for additional costs or an extension of Contract Time shall be waived.

SECTION F JOB SITE CONDITIONS

F.1 USE OF PREMISES

Contractor shall confine equipment, storage of materials and operation of Work to the limits indicated by Contract Documents, Applicable Laws, permits or directions of the Owner. Contractor shall follow the Owner's instructions regarding use of premises, if any.

F.2 PROTECTION OF WORKERS, PROPERTY AND THE PUBLIC

- F.2.1 Contractor shall maintain continuous and adequate protection of all of the Work from damage and shall protect the Owner, workers and property from injury or loss arising in connection with this Contract. Contractor shall remedy acceptably to the Owner any damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by authorized representatives or personnel of the Owner. Contractor shall adequately protect adjacent property as provided by law and the Contract Documents.
- F.2.2 Contractor shall take all necessary precautions for the safety of all personnel on the job site or otherwise engaged in the undertaking of the Work and shall comply with the Contract Documents, best practices and all applicable provisions of federal, state and municipal safety laws and building and fire codes to prevent accidents or injury to persons on, about or adjacent to the premises where the Work is being performed. Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for protection of workers and the public against any hazards created by construction. Contractor shall designate a responsible employee or associate on the Work site, whose duty shall be the prevention of accidents. The name and position of the person designated shall be reported to the Owner. The Owner has no responsibility for Work site safety. Work site safety shall be the responsibility of the Contractor.
- F.2.3 Contractor shall not enter upon private property without first obtaining permission from the property owner or its duly authorized representative. Contractor shall be responsible for the preservation of all public and private property along and adjacent to the Work contemplated under the Contract and shall use every precaution necessary to prevent damage thereto. In the event the Contractor damages any property, the Contractor shall at once notify the property owner and make, or arrange to make, full restitution. Contractor shall, immediately and in writing, report to the Owner, all pertinent facts relating to such property damage and the ultimate disposition of the claim for damage.
- F.2.4 Contractor shall be responsible for protection of adjacent work areas including impacts brought about by activities, equipment, labor, utilities, vehicles and materials on the site.
- F.2.5 Contractor shall at all times direct its activities in such a manner as to minimize adverse effects on the environment. Handling of all materials shall be conducted so no release will occur that may pollute or become hazardous.
- F.2.6 In an emergency affecting the safety of life or limb or of the Work or of adjoining property, the Contractor, without special instruction or authorization from the Owner, shall act reasonably to prevent threatened loss or injury, and shall so act, without appeal, if instructed by the Owner. Any compensation claimed by the Contractor on account of emergency work shall be determined in accordance with section D.

F.3 CUTTING AND PATCHING

- F.3.1 Contractor shall be responsible for coordinating all cutting, fitting, or patching of the Work to make its several parts come together properly and fit to receive or be received by work of other contractors or Subcontractors shown upon, or reasonably implied by, the Contract Documents.
- F.3.2 Contractor shall be responsible for restoring all cut, fitted, or patched surfaces to an original condition; provided, however, that if a different condition is specified in the Contract Documents, then Contractor shall be responsible for restoring such surfaces to the condition specified in the Contract Documents.

F.4 CLEANING UP

From time to time as may be prudent or ordered by the Owner and, in any event, immediately after completion of the Work, the Contractor shall, at its own expense, clean up and remove all refuse and unused materials of any kind resulting from the Work. If Contractor fails to do so within twenty-four hours after notification by the Owner the work may be done by others and the cost charged to the Contractor and deducted from payment due the Contractor.

F.5 ENVIRONMENTAL CONTAMINATION

F.5.1. Contractor shall be held responsible for and shall indemnify, defend (with counsel of Owner’s choice), and hold harmless Owner from and against any costs, expenses, damages, claims, and causes of action, (including attorney fees), or any of them, resulting from all spills, releases, discharges, leaks and disposal of environmental pollution, including storage, transportation, and handling during the performance of the Work or Contractor’s obligations under the Contract which occur as a result of, or are contributed by, the negligence or actions of Contractor or its personnel, agents, or Subcontractors or any failure to perform in accordance with the Contract Documents (except to the extent otherwise void under ORS 30.140). Nothing in this section F.5.1 shall limit Contractor’s responsibility for obtaining insurance coverages required under Section G.3 of this Contract, and Contractor shall take no action that would void or impair such coverages.

F.5.1.1 Contractor agrees to promptly dispose of such spills, releases, discharge or leaks to the satisfaction of Owner and regulatory agencies having jurisdiction in a manner that complies with Applicable Laws. Cleanup shall be at no cost to the Owner and shall be performed by properly qualified and, if applicable, licensed personnel.

F.5.1.2 Contractor shall obtain the Owner's written consent prior to bringing onto the Work site any (i) environmental pollutants or (ii) hazardous substances or materials, as the same or reasonably similar terms are used in any Applicable Laws. Notwithstanding such written consent from the Owner, the Contractor, at all times, shall:

- (a) properly handle, use and dispose of all environmental pollutants and hazardous substances or materials brought onto the Work site, in accordance with all Applicable Laws;
- (b) be responsible for any and all spills, releases, discharges, or leaks of (or from) environmental pollutants or hazardous substances or materials which Contractor has brought onto the Work site; and
- (c) promptly clean up and remediate, without cost to the Owner, such spills, releases, discharges, or leaks to the Owner's satisfaction and in compliance with all Applicable Laws.

F.5.2 Contractor shall report all reportable quantity releases, as such releases are defined in Applicable Laws, including but not limited to 40 CFR Part 302, Table 302.4 and in OAR 340-142-0050 , to applicable federal, state, and local regulatory and emergency response agencies. Upon discovery, regardless of quantity, Contractor must telephonically report all releases to the Owner. A written follow-up report shall be submitted to Owner within 48 hours of the telephonic report. Such written report shall contain, as a minimum:

- (a) Description of items released (identity, quantity, manifest numbers, and any and all other documentation required by law.)

- (b) Whether amount of items released is EPA/DEQ reportable, and, if so, when reported.
- (c) Exact time and location of release, including a description of the area involved.
- (d) Containment procedures initiated.
- (e) Summary of communications about the release between Contractor and members of the press or State , local or federal officials other than Owner.
- (f) Description of cleanup procedures employed or to be employed at the site, including disposal location of spill residue.
- (g) Personal injuries, if any, resulting from, or aggravated by, the release.

F.6 ENVIRONMENTAL CLEAN-UP

F.6.1 Unless disposition of environmental pollution is specifically a part of this Contract, or was caused by the Contractor (reference F.5 Environmental Contamination), Contractor shall immediately notify Owner of any hazardous substance(s) which Contractor discovers or encounters during performance of the Work required by this Contract. "Hazardous substance(s)" means any hazardous, toxic and radioactive materials and those substances defined as "hazardous substances," "hazardous materials," "hazardous wastes," "toxic substances," or other similar designations in any federal, state, or local law, regulation, or ordinance, including without limitation asbestos, polychlorinated biphenyl (PCB), or petroleum, and any substances, materials or wastes regulated by 40 CFR, Part 261 and defined as hazardous in 40 CFR S 261.3. In addition to notifying Owner of any hazardous substance(s) discovered or encountered, Contractor shall immediately cease working in any particular area of the project where a hazardous substance(s) has been discovered or encountered if continued work in such area would present a risk or danger to the health or well being of Contractor's or any Subcontractor's work force, property or the environment.

F.6.2 Upon being notified by Contractor of the presence of hazardous substance(s) on the project site, Owner shall arrange for the proper disposition of such hazardous substance(s).

F.7 FORCE MAJEURE

A party to this Contract shall not be held responsible for delay or default due to Force Majeure acts, events or occurrences unless they could have been avoided by the exercise of reasonable care, prudence, foresight, and diligence by that party. The Owner may terminate this Contract upon written notice after determining that delay or default caused by Force Majeure acts, events or occurrences will reasonably prevent successful performance of the Contract.

**SECTION G
*INDEMNITY, BONDING, AND INSURANCE***

G.1 RESPONSIBILITY FOR DAMAGES / INDEMNITY

G.1.1 Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay that may be caused by, or result from, the carrying out of the Work to be done under this Contract, or from any act, omission or neglect of the Contractor, its Subcontractors, employees, guests, visitors, invitees and agents.

G.1.2 To the fullest extent permitted by law, Contractor shall indemnify, defend (with counsel approved by Owner) and hold harmless the Owner, Architect/Engineer, Architect/Engineer’s

consultants, and their respective officers, directors, agents, employees, partners, members, stockholders and affiliated companies (collectively "Indemnitees") from and against all liabilities, damages, losses, claims, expenses (including reasonable attorney fees), demands and actions of any nature whatsoever which arise out of, result from or are related to, (a) any damage, injury, loss, expense, inconvenience or delay described in this Section G.1., (b) any accident or occurrence which happens or is alleged to have happened in or about the project site or any place where the Work is being performed, or in the vicinity of either, at any time prior to the time the Work is fully completed in all respects, (c) any failure of the Contractor to observe or perform any duty or obligation under the Contract Documents which is to be observed or performed by the Contractor, or any breach of any agreement, representation or warranty of the Contractor contained in the Contract Documents or in any subcontract, (d) the negligent acts or omissions of the Contractor, a Subcontractor or anyone directly or indirectly employed by them or any one of them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder (except to the extent otherwise void under ORS 30.140), and (e) any lien filed upon the project or bond claim in connection with the Work. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section G.1.2.

- G.1.3 In claims against any person or entity indemnified under Section G.1.2 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section G.1.2 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

G.2 PERFORMANCE AND PAYMENT SECURITY; PUBLIC WORKS BOND

- G.2.1 When the Contract Price is \$100,000 or more (or \$50,000 or more in the case of Contracts for highways, bridges and other transportation projects), the Contractor shall furnish and maintain in effect at all times during the Contract Period a performance bond in a sum equal to the Contract Price and a separate payment bond also in a sum equal to the Contract Price. Contractor shall furnish such bonds even if the Contract Price is less than the above thresholds if otherwise required by the Contract Documents.
- G.2.2 Bond forms furnished by the Owner and notarized by awarded Contractor's surety company authorized to do business in Oregon are the only acceptable forms of performance and payment security, unless otherwise specified in the Contract Documents.
- G.2.3 Before execution of the Contract the Contractor shall file with the Construction Contractors Board, and maintain in full force and effect, the separate public works bond required by Oregon Laws 2005, Chapter 360, and OAR 839-025-0015, unless otherwise exempt under those provisions. The Contractor shall also include in every subcontract a provision requiring the Subcontractor to have a public works bond filed with the Construction Contractors Board before starting Work, unless otherwise exempt, and shall verify that the Subcontractor has filed a public works bond before permitting any Subcontractor to start Work.

G.3 INSURANCE

- G.3.1 Primary Coverage: Insurance carried by Contractor under this Contract shall be the primary coverage. The coverages indicated are minimums unless otherwise specified in the Contract Documents.
- G.3.2 Workers' Compensation: All employers, including Contractor, that employ subject workers who work under this Contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. This shall include Employer's Liability Insurance with coverage limits of not less than the minimum amount required by statute for each accident. Contractors who perform the Work without the assistance or labor of any employee need not obtain such coverage if the Contractor certifies so in writing. Contractor shall ensure that each of its Subcontractors complies with these requirements. The Contractor shall require proof of such Workers' Compensation coverage by receiving and keeping on file a certificate of insurance from each Subcontractor or anyone else directly employed by either the Contractor or its Subcontractors.
- G.3.3 Builder's Risk Insurance:
- G.3.3.1 Builder's Risk: During the term of this Contract, for new construction the Contractor shall obtain and keep in effect Builder's Risk insurance on an all risk forms, including earthquake and flood, for an amount equal to the full amount of the Contract, plus any changes in values due to modifications, Change Orders and loss of materials added. Such Builder's Risk shall include, in addition to earthquake and flood, theft, vandalism, mischief, collapse, transit, debris removal, and architect's fees ("soft costs") associated with delay of project due to insured peril. Any deductible shall not exceed \$50,000 for each loss, except the earthquake and flood deductible which shall not exceed 2 percent of each loss or \$50,000, whichever is greater. The deductible shall be paid by Contractor if Contractor is negligent. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear.
- G.3.3.2 Builder's Risk Installation Floater: For Work other than new construction, Contractor shall obtain and keep in effect during the term of this Contract, a Builder's Risk Installation Floater for coverage of the Contractor's labor, materials and equipment to be used for completion of the Work performed under this Contract. The minimum amount of coverage to be carried shall be equal to the full amount of the Contract. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear. Owner may waive this requirement at its sole and absolute discretion.
- G.3.3.3 Such insurance shall be maintained until Owner has occupied the facility.
- G.3.3.4 A loss insured under the Builder's Risk insurance shall be adjusted by the Owner and made payable to the Owner as loss payee. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner. The Owner shall have power to adjust and settle a loss with insurers.
- G.3.4 General Liability Insurance:
- G.3.4.1 Commercial General Liability: Upon issuance of a Supplement, Contractor shall obtain, and keep in effect at Contractor's expense for the term of the Supplement, Commercial General Liability Insurance covering bodily injury and property damage in the amount of \$1,000,000 per claim and \$2,000,000 per occurrence in a form satisfactory to Owner. This insurance shall include personal injury liability, products and completed operations, and contractual liability coverage for the

indemnities provided under this Contract (to the extent contractual liability coverage for the indemnity is available in the marketplace), and shall be issued on an occurrence basis.

G.3.4.2 Automobile Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Automobile Liability Insurance covering owned, and/or hired vehicles, as applicable. The coverage may be written in combination with the Commercial General Liability Insurance. Contractor shall provide proof of insurance of not less than \$1,000,000 per claim and \$2,000,000 per occurrence. Contractor and its Subcontractors shall be responsible for ensuring that all non-owned vehicles maintain adequate Automobile Liability insurance while on site.

G.3.4.3 Owner may adjust the insurance amounts required in Section G.3.4.1 and G.3.4.2 based upon institution specific risk assessments through the issuance of Supplemental General Conditions and a Supplement.

G.3.4.4 "Tail" Coverage: If any of the required liability insurance is arranged on a "claims made" basis, "tail" coverage will be required at the completion of this Contract for a duration of 36 months or the maximum time period available in the marketplace if less than 36 months. Contractor shall furnish certification of "tail" coverage as described or continuous "claims made" liability coverage for 36 months following Final Completion. Continuous "claims made" coverage will be acceptable in lieu of "tail" coverage, provided its retroactive date is on or before the effective date of this Contract. Owner's receipt of the policy endorsement evidencing such coverage shall be a condition precedent to Owner's obligation to make final payment and to Owner's final acceptance of Work or services and related warranty (if any).

G.3.4.5: Umbrella Liability (if required by Owner through issuance of Supplemental General Conditions): Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Umbrella liability Insurance over and above the general liability, automobile liability and workers' compensation coverage if required by Owner in specified limits at time of requirement.

G.3.4.6 Pollution Liability (if required by Owner through issuance of Supplemental General Conditions): Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Pollution liability Insurance in minimum amounts of \$3,000,000 naming Owner as "additional insured," as noted in the "additional insured section below.

G.3.5 Additional Insured: The general liability insurance coverage, professional liability, umbrella, and pollution liability if required, shall include the Owner as additional insureds but only with respect to the Contractor's activities to be performed under this Contract.

If Contractor cannot obtain an insurer to name the Owner as additional insureds, Contractor shall obtain at Contractor's expense, and keep in effect during the term of this Contract, Owners and Contractors Protective Liability Insurance, naming the Owner as additional insureds with not less than a \$2,000,000 limit per occurrence. This policy must be kept in effect for 36 months following Final Completion. As evidence of coverage, Contractor shall furnish the actual policy to Owner prior to execution of the Contract.

G.3.6 Notice of Cancellation or Change: If the Contractor receives a non-renewal or cancellation notice from an insurance carrier affording coverage required herein, or receives notice that coverage no longer complies with the insurance requirements herein, Contractor agrees to notify Owner by fax within five (5) business days with a copy of the non-renewal or cancellation notice, or written specifics as to which coverage is

no longer in compliance. When notified by Owner, the Contractor agrees to stop Work pursuant to this Contract, unless all required insurance remains in effect. Any failure to comply with the reporting provisions of this insurance, except for the potential exhaustion of aggregate limits, shall not affect the coverages provided to the Owner and its institutions, divisions, officers, and employees.

Owner shall have the right, but not the obligation, of prohibiting Contractor from entering the Work site until a new certificate(s) of insurance is provided to Owner evidencing the replacement coverage. The Contractor acknowledges and agrees that Owner reserves the right to withhold payment to Contractor until evidence of reinstated or replacement coverage is provided to Owner.

G.3.7 Certificate(s) of Insurance: As evidence of the insurance coverage required by this Contract, the Contractor shall furnish certificate(s) of insurance to the Owner prior to execution of the Contract. The certificate(s) will specify all of the parties who are additional insureds or loss payees for this contract. Insurance coverage required under this Contract shall be obtained from insurance companies or entities acceptable to the Owner and that are eligible to provide such insurance under Oregon law. Eligible insurers include admitted insurers that have been issued a certificate of authority from the Oregon Department of Consumer and Business Services authorizing them to conduct an insurance business and issue policies of insurance in the state of Oregon, and certain non-admitted surplus lines insurers that satisfy the requirements of applicable Oregon law and which are subject to approval by the Owner. The Contractor shall be financially responsible for all deductibles, self-insured retentions and/or self-insurance included hereunder. Any deductible, self-insured retention and/or self-insurance in excess of \$50,000 shall be subject to approval by the Owner in writing and shall be a condition precedent to the effectiveness of any Supplement.

G.3.8 Retainer Contract Program: For the OUS Retainer Contract Program the term "Contract" as used in this Section G in the phrases "keep in effect during the term of this Contract" and "prior to execution of the Contract" shall mean each Retainer Contract Supplement issued under the Retainer Contract.

SECTION H SCHEDULE OF WORK

H.1 CONTRACT PERIOD

H.1.1 Time is of the essence. The Contractor shall at all times carry on the Work diligently, without delay and punctually fulfill all requirements herein. If required by the Contract Documents, Contractor shall commence Work on the site within fifteen (15) Days of Notice to Proceed, unless directed otherwise.

H.1.2 Unless specifically extended by Supplement Amendment, all Work shall be complete by the date contained in the Contract Documents. The Owner shall have the right to accelerate the completion date of the Work, which may require the use of overtime. Such accelerated Work schedule shall be an acceleration in performance of Work under Section D.1.2 (f) and shall be subject to the provisions of Section D.1.

H.1.3 The Owner shall not waive any rights under the Contract by permitting the Contractor to continue or complete in whole or in part the Work after the date described in Section H.1.2 above.

H.2 SCHEDULE

H.2.1 Contractor shall provide, by or before the pre-construction conference, the initial as-planned schedule for review and acceptance by the Owner. The submitted schedule must illustrate Work by project components, with labor trades, and long lead items broken down by

building and/or floor where applicable. If Owner shall so elect, Contractor shall provide the schedule in CPM format showing the graphical network of planned activities, including i) a reasonably detailed list of all activities required to complete the Work; ii) the time and duration that each activity will take to completion; and iii) the dependencies between the activities. Schedules lacking adequate detail, or unreasonably detailed, will be rejected. The schedule shall include the following: Notice to Proceed or the date the Work commences, if no Notice to Proceed is issued by Owner, Substantial Completion, and Final Completion. Schedules shall be updated monthly, unless otherwise required by the Contract Documents, and submitted with the monthly application for payment. Acceptance of the Schedule by the Owner does not constitute agreement by the Owner as to the Contractor's sequencing, means, methods, or durations. Any positive difference between the Contractor's scheduled completion and the Contract completion date is float owned by the Owner. Owner reserves the right to negotiate the float if it is deemed to be in Owner's best interest to do so. In no case shall the Contractor make a claim for delays if the Work is completed within the Contract Time but after Contractor's scheduled completion. **H.3 PARTIAL OCCUPANCY OR USE**

H.3.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage, provided such occupancy or use is consented to by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have reasonably accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, insurance or self-insurance, maintenance, heat, utilities, and damage to the Work, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents with respect to such portion of the Work. Approval by the Contractor to partial occupancy or use shall not be unreasonably withheld. Immediately prior to such partial occupancy or use, the Owner and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work. Partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

SECTION I CORRECTION OF WORK

I.1 CORRECTION OF WORK BEFORE FINAL PAYMENT

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects, and that the Work will conform to the requirements of the Contract Documents. Work failing to conform to these requirements shall be deemed defective. Contractor shall promptly remove from the premises and replace all defective materials and equipment as determined by the Owner, whether incorporated in the Work or not. Removal and replacement shall be without loss or expense to the Owner, and Contractor shall bear the cost of repairing all Work destroyed or damaged by such removal or replacement. Contractor shall be allowed a period of no longer than thirty (30) Days after Substantial Completion for completion of defective (Punch List) work. At the end of the thirty-day period, or earlier if requested by the Contractor, Owner shall arrange for inspection of the Work by the Architect/Engineer. Should the work not be complete, and all corrections made, the costs for all subsequent reinspections shall be borne by the Contractor. If Contractor fails to complete the Punch List work within the thirty (30) Day period, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand without affecting Contractor's obligations.

I.2 WARRANTY WORK

I.2.1 Neither the final certificate of payment nor any provision of the Contract Documents shall relieve the Contractor from responsibility for defective Work and, unless a longer period is specified, Contractor shall correct all defects that appear in the Work within a period of one year from the date of issuance of the written notice of Substantial Completion by the Owner except for latent defects which will be remedied by the Contractor at any time they become apparent. The Owner shall give Contractor notice of defects with reasonable promptness. Contractor shall perform such warranty work within a reasonable time after Owner's demand. If Contractor fails to complete the warranty work within such period as Owner determines reasonable, or at any time in the event of warranty work consisting of emergency repairs, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand, without affecting Contractor's obligations. The Contractor shall perform the warranty Work by correcting defects within twenty-four (24) hours of notification by Owner, unless otherwise specified in the Contract Documents. Should the Contractor fail to respond within the specified response time, the Owner may, at its option, complete the necessary repairs using another contractor or its own forces. If Owner completes the repairs using Owner's own forces, Contractor shall pay Owner at the rate of one and one-half (1½) times the standard hourly rate of Owner's forces, plus related overhead and any direct non-salary costs. If Owner completes the repairs using another contractor, Contractor shall pay Owner the amount of Owner's direct costs billed by the other contractor for the work, plus the direct salary costs and related overhead and direct non-salary expenses of Owner's forces who are required to monitor that contractor's work. Work performed by Owner using Owner's own forces or those of another contractor shall not affect the Contractor's contractual duties under these provisions, including warranty provisions.

I.2.2 Nothing in this Section I.2 shall negate guarantees or warranties for periods longer than one year including, without limitation, such guarantees or warranties required by other sections of the Contract Documents for specific installations, materials, processes, equipment or fixtures.

I.2.3 In addition to Contractor's warranty, manufacturer's warranties shall pass to the Owner and shall not take effect until such portion of the Work covered by the applicable warranty has been accepted in writing by the Owner.

I.2.4 The one-year period for correction of Work shall be extended with respect to portions of Work performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work, and shall be extended by corrective Work performed by the Contractor pursuant to this Section, as to the Work corrected. The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

I.2.5 Nothing contained in this Section I.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the period for correction of Work as described in this Section I.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

I.2.6 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Price will be reduced as appropriate and

equitable. Such adjustment shall be effected whether or not final payment has been made.

estate fails to assume the Contract within a reasonable time;

- (b) If Contractor should make a general assignment for the benefit of Contractor's creditors;
- (c) If a receiver should be appointed on account of Contractor's insolvency;
- (d) If Contractor should repeatedly refuse or fail to supply an adequate number of skilled workers or proper materials to carry on the Work as required by the Contract Documents, or otherwise fail to perform the Work in a timely manner;
- (e) If Contractor should repeatedly fail to make prompt payment to Subcontractors or for material or labor, or should disregard laws, ordinances or the instructions of the Owner; or
- (f) If Contractor is otherwise in breach of any part of the Contract.
- (g) If Contractor is in violation of Applicable Laws, either in the conduct of its business or in its performance of the Work.

SECTION J

SUSPENSION AND/OR TERMINATION OF THE WORK

J.1 OWNER'S RIGHT TO SUSPEND THE WORK

- J.1.1 The Owner has the authority to suspend portions or all of the Work due to the following causes:
- (a) Failure of the Contractor to correct unsafe conditions;
 - (b) Failure of the Contractor to carry out any provision of the Contract;
 - (c) Failure of the Contractor to carry out orders;
 - (d) Conditions, in the opinion of the Owner, which are unsuitable for performing the Work;
 - (e) Time required to investigate differing site conditions;
 - (f) Any reason considered to be in the public interest.
- J.1.2 The Owner shall notify Contractor and the Contractor's Surety in writing of the effective date and time of the suspension, and Owner shall notify Contractor and Contractor's surety in writing to resume Work.

J.4.2 At any time that any of the above occurs, Owner may exercise all rights and remedies available to Owner at law or in equity, and, in addition, Owner may take possession of the premises and of all materials and appliances and finish the Work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive further payment until the Work is completed. If the Owner's cost of finishing the Work exceeds the unpaid balance of the Contract Price, Contractor shall pay the difference to the Owner.

J.2 CONTRACTOR'S RESPONSIBILITIES

- J.2.1 During the period of the suspension, Contractor is responsible to continue maintenance at the project just as if the Work were in progress. This includes, but is not limited to, protection of completed Work, maintenance of access, protection of stored materials, temporary facilities, and clean-up.
- J.2.2 When the Work is recommenced after the suspension, the Contractor shall replace or renew any Work damaged during the suspension, remove any materials or facilities used as part of temporary maintenance, and complete the Work in every respect as though its prosecution had been continuous and without suspension.

J.5 TERMINATION FOR CONVENIENCE

- J.5.1 Owner may terminate the Contract in whole or in part whenever Owner determines that termination of the Contract is in the best interest of Owner or the public.
- J.5.2 The Owner shall provide the Contractor with seven (7) Days prior written notice of a termination for Owner's or for public convenience. After such notice, the Contractor shall provide the Owner with immediate and peaceful possession of the premises and materials located on and off the premises for which the Contractor received progress payment under Section E. Compensation for Work terminated by the Owner under this provision will be according to Section E. In no circumstance shall Contractor be entitled to lost profits for Work not performed due to termination.

J.3 COMPENSATION FOR SUSPENSION

- J.3.1 Depending on the reason for suspension of the Work, the Contractor or the Owner may be due compensation by the other party. If the suspension was required due to acts or omissions of Contractor, the Owner may assess the Contractor actual costs of the suspension in terms of administration, remedial work by the Owner's forces or another contractor to correct the problem associated with the suspension, rent of temporary facilities, and other actual costs related to the suspension. If the suspension was caused by acts or omissions of the Owner, the Contractor may be due compensation which shall be defined using Section D, Changes in Work. If the suspension was required through no fault of the Contractor or the Owner, neither party shall owe the other for the impact.

J.6 ACTION UPON TERMINATION

- J.6.1 Upon receiving a notice of termination, and except as directed otherwise by the Owner, Contractor shall immediately cease placing further subcontracts or orders for materials, services, or facilities. In addition, Contractor shall terminate all subcontracts or orders to the extent they relate to the Work terminated and, with the prior written approval of the Owner, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts and orders.
- J.6.2 As directed by the Owner, Contractor shall, upon termination, transfer title and deliver to the Owner all Record Documents, information, and other property that, if the Contract had been completed, would have been required to be furnished to the Owner.

J.4 OWNER'S RIGHT TO TERMINATE CONTRACT

- J.4.1 The Owner may, without prejudice to any other right or remedy, and after giving Contractor seven (7) Days' written notice and an opportunity to cure, terminate the Contract in whole or in part under the following conditions:
- (a) If Contractor should, voluntarily or involuntarily, seek protection under the United States Bankruptcy Code and Contractor as debtor-in-possession or the Trustee for the

I.6.3 Upon Owner's notice of termination pursuant to either Section J.4 or J.5, if Owner shall so elect, Contractor shall assign to the Owner such subcontracts and orders as Owner shall specify. In

the event Owner elects to take assignment of any such subcontract or order, Contractor shall take such action and shall execute such documents as Owner shall reasonably require for the effectiveness of such assignment and Contractor shall ensure that no contractual arrangement between it and its subcontractors or suppliers of any tier or sub-tier shall prevent such assignment.

SECTION K CONTRACT CLOSE OUT

K.1 RECORD DOCUMENTS

As a condition of final payment (and subject to the provisions of section E.6), Contractor shall comply with the following: Contractor shall provide Record Documents for the entire project to Owner. Record Documents shall depict the project as constructed and shall reflect each and every change, modification, and deletion made during the construction. Record Documents are part of the Work and shall be provided prior to the Owner's issuance of final payment. Record Documents include all modifications to the Contract Documents, unless otherwise directed, and accurate MWESB Reports.

K.2 OPERATION AND MAINTENANCE MANUALS

As part of the Work, Contractor shall submit two completed operation and maintenance manuals ("O & M Manuals") for review by the Owner prior to submission of any pay request for more than 75% of the Work. Owner's receipt of the O & M Manuals shall be a condition precedent to any payment thereafter due. The O & M Manuals shall contain a complete set of all submittals, all product data as required by the specifications, training information, telephone list and contact information for all consultants, manufacturers, installer and suppliers, manufacturer's printed data, record and shop drawings, schematic diagrams of systems, appropriate equipment indices, warranties and bonds. The Owner shall review and return one O & M Manual for any modifications or adjustments required. Prior to submission of its final pay request, Contractor shall deliver three (3) complete and approved sets of O & M Manuals to the Owner and Owner's receipt of the O & M Manuals shall be a condition precedent to Owner's obligation to make final payment.

K.3 COMPLETION NOTICES

K.3.1 Contractor shall provide Owner written notice of both Substantial and Final Completion. The certificate of Substantial Completion shall state the date of Substantial Completion, the responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and the time within which the Contractor shall finish all items on the Punch List accompanying the Certificate. Both completion notices must be signed by the Contractor and the Owner to be valid. The Owner shall provide the final signature on the approved notices. The notices shall take effect on the date they are signed by the Owner.

K.3.2 Substantial Completion of a facility with operating systems (e.g., mechanical, electrical, HVAC) shall be that degree of completion that has provided a minimum of thirty (30) continuous Days of successful, trouble-free operation, which period shall begin after all performance and acceptance testing has been successfully demonstrated to the Owner. All equipment contained in the Work, plus all other components necessary to enable the Owner to operate the facility in the manner that was intended, shall be complete on the Substantial Completion date. The Contractor may request that a Punch List be prepared by the Owner with submission of the request for the Substantial Completion notice.

K.4 TRAINING

As part of the Work, and prior to submission of the final application for payment, the Contractor shall schedule with the Owner training sessions for all equipment and systems as required by the

Contract Documents. Contractor shall schedule training sessions at least two weeks in advance of the date of training to allow Owner to provide its personnel with adequate notice. The O & M Manual shall be used as a basis for training. Training shall be a formal session conducted at the Work site after the equipment and/or system is completely installed and operational in its normal operating environment.

K.5 EXTRA MATERIALS

As part of the Work, Contractor shall provide spare parts, extra maintenance materials, and other materials or products in the quantities specified in the Contract Documents prior to final payment. Delivery point for extra materials shall be designated by the Owner.

K.6 ENVIRONMENTAL CLEAN-UP

As part of the Final Completion notice, or as a separate written notice submitted with or before the notice of Final Completion, the Contractor shall notify the Owner that all environmental and pollution clean-up, remediation and closure have been completed in accordance with all Applicable Laws and pursuant to the authority of all agencies having jurisdiction, and Contractor shall provide Owner with any and all documentation related to the same, including but not limited to directives, orders, letters, certificates and permits related to or arising from such environmental pollution. The notice shall reaffirm the indemnification given under Section F.5.1 above. Contractor's completion of its obligations under this Section K.6 and Owner's receipt of documents evidencing such completion shall be a condition precedent to Owner's obligation to make final payment.

K.7 CERTIFICATE OF OCCUPANCY

Owner's receipt of an unconditioned certificate of occupancy from the appropriate state and/or local building officials shall be a condition precedent to Owner's obligation to make final payment, except to the extent failure to obtain an unconditional certificate of occupancy is due to the fault or neglect of Owner.

K.8 OTHER CONTRACTOR RESPONSIBILITIES

The Contractor shall be responsible for returning to the Owner all property of Owner issued to Contractor during construction such as keys, security passes, site admittance badges, and all other pertinent items. Upon notice from Owner, Contractor shall be responsible for notifying the appropriate utility companies to transfer utility charges from the Contractor to the Owner. The utility transfer date shall not be before Substantial Completion and may not be until Final Completion, if the Owner does not take beneficial use of the facility and the Contractor's forces continue with the Work.

K.9 SURVIVAL

All warranty and indemnification provisions of this Contract, and all of Contractor's other obligations under this Contract that are not fully performed by the time of Final Completion or termination, shall survive Final Completion or any termination of the Contract.

OREGON UNIVERSITY SYSTEM
STANDARD PUBLIC IMPROVEMENT CONTRACT
PERFORMANCE BOND

Bond No. _____
Solicitation _____
Project Name _____

_____ (Surety #1)	Bond Amount No. 1:	\$ _____
_____ (Surety #2)*	Bond Amount No. 2:*	\$ _____
	Total Penal Sum of Bond:	\$ _____

** If using multiple sureties*

We, _____ as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto the State of Oregon, acting by and through the State Board of Higher Education, on behalf of the OUS (OUS), the sum of (Total Penal Sum of Bond)

_____ (Provided, that we the Sureties bind ourselves in such sum “jointly and severally” as well as “severally” only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety), and

WHEREAS, the Principal has entered into a contract with the OUS, the plans, specifications, terms and conditions of which are contained in the above-referenced Solicitation;

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Performance Bond by reference, whether or not attached to the contract (all hereafter called “Contract”); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and all authorized modifications of the Contract which increase the amount of the work, the amount of the Contract, or constitute an authorized extension of the time for performance, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal herein shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things undertaken by Contractor to be performed under the Contract, upon the terms set forth therein,

and within the time prescribed therein, or as extended as provided in the Contract, with or without notice to the Sureties, and shall indemnify and save harmless the OUS, and _____ (name of institution and any other Owner agency), and members thereof, its officers, employees and agents, against any direct or indirect damages or claim of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Principal or its subcontractors, and shall in all respects perform said contract according to law, then this obligation is to be void; otherwise, it shall remain in full force and effect.

Nonpayment of the bond premium will not invalidate this bond, nor shall the State of Oregon or the OUS, be obligated for the payment of any premiums.

This bond is given and received under authority of ORS Chapters 279C and 351, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES.

Dated this _____ day of _____, 20__.

PRINCIPAL: _____

By _____
Signature

Official Capacity

Attest: _____
Corporation Secretary

SURETY: _____
[Add signatures for each surety if using multiple bonds]

BY ATTORNEY-IN-FACT:
[Power-of-Attorney must accompany each surety bond]

Name

Signature

Address

City State Zip

Phone Fax

OREGON UNIVERSITY SYSTEM
STANDARD PUBLIC IMPROVEMENT CONTRACT
PAYMENT BOND

Bond No. _____
Solicitation _____
Project Name _____

_____ (Surety #1)	Bond Amount No. 1:	\$ _____
_____ (Surety #2)*	Bond Amount No. 2:*	\$ _____
<i>* If using multiple sureties</i>	Total Penal Sum of Bond:	\$ _____

We, _____, as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto the State of Oregon, acting by and through the State Board of Higher education, on behalf of the Oregon University System (OUS), the sum of (Total Penal Sum of Bond) _____ (Provided, that we the Sureties bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety), and

WHEREAS, the Principal has entered into a contract with the OUS, the plans, specifications, terms and conditions of which are contained in above-referenced Solicitation;

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Payment Bond by reference, whether or not attached to the contract (all hereafter called "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and schedule of contract prices which are set forth in the Contract and any attachments, and all authorized modifications of the Contract which increase the amount of the work, or the cost of the Contract, or constitute authorized extensions of time for performance of the Contract, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things by it undertaken to be performed under said Contract and any duly authorized modifications that are made, upon the terms set forth therein, and within the time prescribed therein, or as extended therein as provided in the Contract, with or without notice to the Sureties, and shall indemnify and save harmless the OUS and _____ (name of institution and any other Owner agency), and members thereof, its officers, employees and agents, against any claim for direct or indirect damages of every kind and description that shall be suffered or

claimed to be suffered in connection with or arising out of the performance of the Contract by the Contractor or its subcontractors, and shall promptly pay all persons supplying labor, materials or both to the Principal or its subcontractors for prosecution of the work provided in the Contract; and shall promptly pay all contributions due the State Industrial Accident Fund and the State Unemployment Compensation Fund from the Principal or its subcontractors in connection with the performance of the Contract; and shall pay over to the Oregon Department of Revenue all sums required to be deducted and retained from the wages of employees of the Principal and its subcontractors pursuant to ORS 316.167, and shall permit no lien nor claim to be filed or prosecuted against the State on account of any labor or materials furnished; and shall do all things required of the Principal by the laws of this State, then this obligation shall be void; otherwise, it shall remain in full force and effect.

Nonpayment of the bond premium will not invalidate this bond, nor shall the State of Oregon, or the OUS be obligated for the payment of any premiums.

This bond is given and received under authority of ORS Chapters 279C and 351, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES:

Dated this _____ day of _____, 20__.

PRINCIPAL: _____

By _____
Signature

Official Capacity

Attest: _____
Corporation Secretary

SURETY: _____

[Add signatures for each if using multiple bonds]

BY ATTORNEY-IN-FACT:

[Power-of-Attorney must accompany each bond]

Name

Signature

Address

City State Zip

Phone Fax

**RETAINER CONTRACT SUPPLEMENT
OUS RETAINER CONTRACT FOR CONSTRUCTION
RELATED SERVICES**

Supplement No.
Project Name
Owner's Project
Manager

This Retainer Contract Supplement dated _____ (the "Supplement") is entered into between:

"Contractor":

Federal Tax ID No.

and "Owner":

The State of Oregon, acting by and through the State
Board of Higher Education, on behalf of:

(collectively, the "Parties") pursuant to the Retainer Contract for Construction Related Services between the Parties terminating June 30, 2014 (the "Retainer Contract"). Capitalized terms have the meaning defined in the OUS Retainer General Conditions unless otherwise defined in the Retainer Contract or herein.

- 1. DESCRIPTION OF THE PROJECT.** The project to which this Supplement pertains is described as follows: _____ (the "Project").
- 2. WORK TO BE PERFORMED.** Contractor shall perform the following work on the Project : _____ (the "Work"). Contractor will perform the Work according to the terms and conditions of this Supplement and the Contract Documents, which are incorporated herein by this reference.
- 3. SCHEDULE.** Contractor shall perform the Work according to the following schedule: _____ (the "Schedule").
- 4. COMPENSATION.** Owner shall compensate Contractor for Work (a) in the firm, fixed-price amount of \$ _____; or (b) on a time and materials basis subject to a maximum not-to-exceed price of \$ _____; in accordance with the requirements of the OUS Retainer General Conditions. If the Work is performed on a time and materials basis, Contractor's listing of wage rates, material unit costs and overhead charges for the Work is attached to this Supplement.

The cost of the Work under this Supplement, even if this Supplement is later amended to include additional work, must not exceed the greater of \$1,000,000 or the maximum allowable under

OAR 580-063-0030.

5. TERM. This Supplement is effective on the date it has been signed by every Party hereto and all approvals required by Applicable Law have been obtained (the "Effective Date"). No Work shall be performed or payment made prior to the Effective Date. Contractor shall perform its obligations in accordance with the Contract Documents, unless this Supplement is earlier terminated or suspended.

6. PERFORMANCE AND PAYMENT BONDS. The performance and payment bond requirements for this Project are as follows (check one of the following):

As a condition precedent to the effectiveness of this Supplement and to Owner's obligation to make payment for the Work, Contractor shall provide the Owner with a performance bond and a separate payment bond in a sum equal to the Contract Price stated in Section 4 of this Supplement.

This Project has a Contract price of \$100,000 or less, and Owner has determined that performance and payment bonds will not be required for this Project.

7. MINIMUM WAGE RATES.

Prevailing Wage Rates requirements do not apply to this Project because the maximum compensation for all Owner-contracted Work does not exceed \$50,000.

Prevailing Wage Rates requirements apply to this Project because the maximum compensation for all Owner-contracted Work is more than \$50,000. Contractor and all subcontractors shall comply with the provisions of ORS 279C.800 through 279C.870, relative to Prevailing Wage Rates and the required public works bond, as outlined in Sections C.1, C.2 and G.2.3 of the OUS Retainer General Conditions. The Bureau of Labor and Industries (BOLI) wage rates and requirements set forth in the following BOLI booklet (and any listed amendments to that booklet), which are incorporated herein by reference, apply to the Work authorized under this Supplement:

PREVAILING WAGE RATES for Public Works Contracts in Oregon, ____, 20__, as amended ____, 20__ [~~delete "as amended ____, 20__" if there have been no amendments since last rate change~~], which can be downloaded at the following web address:

[http://www.boli.state.or.us/BOLI/WHD/PWR/pwr_book.shtml]

The Work will take place in _____ County, Oregon.

8. TAX COMPLIANCE CERTIFICATION. Contractor hereby certifies and affirms, under penalty of perjury as provided in ORS 305.385(6), that, to the best of Contractor's knowledge, Contractor is not in violation of any of the tax laws described in ORS 305.380(4). For purposes of this certification, "tax laws" means a state tax imposed by ORS 320.005 to 320.150 and 403.200 to 403.250, ORS Chapters 118, 314, 316, 317, 318, 321 and 323; the elderly rental assistance program under ORS 310.630 to 310.706; and local taxes administered by the Oregon Department of Revenue under ORS 305.620.

9. INSURANCE REQUIREMENTS.

Contractor shall comply with and obtain the insurance coverage amounts stated in the OUS Retainer General Conditions.

The Owner has determined that the Contractor shall obtain insurance in the amount described in the Retainer Supplemental General Conditions, attached hereto.

10. KEY PERSONS. If checked here, the following provision is incorporated into this Supplement:

The Parties agree that certain Contractor personnel are specifically valuable to the Project (“Key Persons”). Key Persons shall not be replaced during the Project without the written consent of Owner, which shall not be unreasonably withheld. If Contractor intends to substitute personnel, Owner shall receive the request at least 15 days prior to the effective date of substitution. When replacements have been approved by Owner, Contractor shall provide a transition period of at least 10 working days during which the original and replacement personnel shall be working on the Project concurrently. Upon authorization for the replacement of a Key Person, all subsequent substitutions of that Key Person shall require Owner’s written consent in accordance with this Section. The Key Persons for this Project are the following:

Project Executive: _____ shall be Contractor’s Project Executive, and will provide oversight and guidance throughout the Project term.

Project Manager: _____ shall be Contractor’s Project Manager and will participate in all meetings throughout the Project term.

Job Superintendent: _____ shall be Contractor’s on-site Job Superintendent throughout the Project term.

Project Engineer: _____ shall be Contractor’s Project Engineer, providing assistance to the Project Manager, and subcontractor and supplier coordination throughout the Project term.

11. OTHER TERMS. Except as specifically modified by this Supplement, all terms of the Retainer Contract remain unchanged.

12. EXECUTION AND COUNTERPARTS. This Supplement may be executed in several counterparts, each of which shall be an original, all of which shall constitute but one and the same instrument.

Contractor hereby confirms and certifies that the representations, warranties, and certifications contained in the Retainer Contract remain true and correct as of the Effective Date of this Supplement.

IN WITNESS HEREOF, the Parties have duly executed this Supplement as of the dates indicated below.

_____, Contractor

The State of Oregon, acting by and through

the State Board of Higher Education, on
behalf of _____, Owner

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____

**RETAINER CONTRACT SUPPLEMENT AMENDMENT
OUS RETAINER CONTRACT FOR CONSTRUCTION
RELATED SERVICES**

Supplement No.:
Amendment No.:
Project Name:

This Amendment dated _____ to the Retainer Contract Supplement is entered into between:

“Contractor”:

Federal Tax ID No.

and “Owner”:
The State of Oregon, acting by and through the State
Board of Higher Education, on behalf of:

(collectively the “Parties”) pursuant to the Retainer Contract for Construction Related Services between the Parties expiring June 30, 2014 (the “Retainer Contract”). Capitalized terms have the meaning defined in the OUS Retainer General Conditions unless otherwise defined in the Contract Documents.

1. SERVICES: The Work described in the Retainer Contract Supplement is being amended as follows: _____.

2. SCHEDULE. The schedule contained in Section 3 of the Retainer Contract Supplement is hereby replaced in its entirety with the following schedule: _____.

3. COMPENSATION. Section 4 of the Retainer Contract Supplement, is hereby replaced in its entirety with the following:

“Owner will compensate Contractor for Work (a) in the firm, fixed-price amount of \$ _____ ; or (b) on a time and materials basis subject to a maximum not-to-exceed price of \$ _____ ; in accordance with the requirements of the OUS Retainer General Conditions. If the Project is done on a time and materials basis, Contractor’s listing of wage rates, material unit costs and overhead charges for the Work is attached to this Supplement.

The total cost of Work including the original amount contemplated in the Supplement and the additional amount contemplated in this Amendment, must not exceed the greater of \$1,000,000 or the maximum allowable under OAR 580-063-0030.”

4. TERM. This Amendment is effective on the date it has been executed by the Parties and all required approvals have been obtained (the "Effective Date"). No Work will be performed or payment made prior to the Effective Date.

5. TAX COMPLIANCE CERTIFICATION. Contractor hereby certifies and affirms, under penalty of perjury as provided in ORS 305.385(6), that, to the best of Contractor's knowledge, Contractor is not in violation of any of the tax laws described in ORS 305.380(4). For purposes of this certification, "tax laws" means a state tax imposed by ORS 320.005 to 320.150 and 403.200 to 403.250, ORS Chapters 118, 314, 316, 317, 318, 321 and 323; the elderly rental assistance program under ORS 310.630 to 310.706; and local taxes administered by the Oregon Department of Revenue under ORS 305.620.

6. EXECUTION AND COUNTERPARTS. This Amendment may be executed in several counterparts, each of which shall be an original, all of which shall constitute but one and the same instrument.

Contractor hereby confirms and certifies that the representations, warranties and certifications contained in the Retainer Contract and the Retainer Contract Supplement remain true and correct as of the Effective Date of this Amendment.

IN WITNESS HEREOF, the Parties have duly executed this Amendment as of the dates indicated below.

_____, Contractor

The State of Oregon, acting by and through
the State Board of Higher Education, on
behalf of _____, Owner

By: _____

By: _____

Title: _____

Title: _____

Date: _____

Date: _____

PREVAILING WAGE RATES
for
Public Works Contracts in Oregon



Brad Avakian
Commissioner
Bureau of Labor and Industries

Effective: January 1, 2013
http://www.oregon.gov/boli/WHD/PWR/Pages/January_2013_Index.aspx

Created: September 15, 2011/Updated 4/3/12

Purpose of File:

Each Fiscal year, the OUS campuses are required to report data to the State Legislature on Minority, Women and Emerging Small Business Contractors and Sub-Contractors who provide goods and services. Various statistics are calculated, based on the data input being provided by the contractors. This file is for the collection of the data for each project by contract. Each University will compile statistics associated with all of their contracts during each fiscal year. Once consolidated at the University level, the information is sent to OUS who in turn consolidates all of the information from the seven institutions and reports it to the Legislature.

General Information on how to use the file:

You will fill this form out at least twice for your project. Small projects that do NOT span over the end of a fiscal year (June 30 – July 1) will require two submittals (An Initial and a Final). Any project spanning over the end of a fiscal year will require three submittals (Initial, Year-End and Final). For larger projects that span over multiple fiscal years, the Year-End report will need to be submitted multiple times.

The first Submittal will always be the “Initial” report which is due within 10 days of the execution of the contract or in the case of a CM/GC contract, the establishment of an Early Work Amendment or Guaranteed Maximum Price Amendment.

At the end of every fiscal year, you are required to submit a “Year-End” report.

At the completion of the project you are required to submit a “Final” report.

- 2) The areas shaded in gray in the OVERALL PROJECT DATA section are for input by the Contractor. The gray portion of the “Individual Contractor/Sub-Contractor Data Entry Matrix” is also an area intended for Contractor input.
- 3) For some items, a drop-down box is provided. This is to maintain the consistency of data used to sort information.
- 4) For other items, simply type in the information. If the type of information typed in is incorrect, you will get an error message or your results may look incorrect. For example, when you enter a date, simply type it: 8/17/11. You do not need to spell out the month.

Saving your file:

- 1) FILE NAMING CONVENTION – All files submitted to the campus shall be named as defined by the following naming convention: (filename = FYXX_ContractNumber_SubmissionStatus)

FYXX = XX refers to the two digit extension of the year. Example “FY12” for Fiscal Year 2012.

Include an underscore between the FYXX and the Contract Number. There should be no blanks in the filename.

ContractNumber = Insert the number that is established on the front of your contract with the campus.

Include an underscore between the Contract Number and the Submission Status. There should be no blanks in the filename.2)

SubmissionStatus = “I” for Initial; “Y” for Year end; “F” for Final. This should correspond with what you select at the top of the report as explained in item 1 of “Filling Out the Form” below.

Filling Out the Form:

- 1) Use the drop-down box adjacent to the REPORT BEING SUBMITTED heading to pick the corresponding report you are submitting for your project. This will establish highlighted headings (in light green) in the “Individual C/S-C Data Entry Matrix” & OPERALL PROJECT DATA sections that define for you which columns or rows should be completely filled out prior to submission.

- 2) Next, fill in the information in the OVERALL PROJECT DATA section. Again, rows highlighted in green will tell you which cells to fill in based upon the type of report being submitted. Only fill in the cells that are highlighted. The top 5 cells should remain the same for the duration of the reporting on the project. Cell B-11 should also remain unchanged after the initial submittal. Cells B-14 thru B-16 may change over the life of the project if you add additional sub-contractors as the project progresses.
- 3) Once you have completed the OVERALL PROJECT DATA section, begin entering each sub-contractor in the "Individual C/S-C Data Entry Matrix table. Columns F, J, K & L are drop-down selections in the table area. Just pick the appropriate response for these columns. There are "notes" that pop up as you select cells in the columns that helps explain what information is needed for each column.
- 4) **IMPORTANT:** Use the tab key to move across the columns. This is necessary in order to avoid generating false information in the cells so that calculations occur appropriately.
- 5) The first two rows of the Matrix are formatted to receive information. They will be identified in bright red when you make the selection of the type of form you are submitting (Cell B-1). To add another row that is properly formatted (like the rows above it), simply press the tab key when you get to the last column in the row you just filled in.
- 6) To change information in a cell, simply type over it or press the Delete key on your keyboard. Using other methods to change data can cause unwanted results. For example, copy and paste can add unwanted data. Using the spacebar to delete information actually leaves behind a space—which is a character—which will cause math errors.
- 7) You must have a State of Oregon Certification Number OR indicate that a contractor is self-identifying as a MWESB. If you have not filled in one of these, then the Name of the Contractor will remain bright red (which is an error symbol).
- 8) All cells in the CALCULATED REPORTING DATA section are automatically generated formulas and cannot be changed.
- 9) Columns to be completed are as follows:
 - Name of MWESB General/ Subcontractor:** List each MWESB used on the project (all tiers). If you as the General, are an MWESB contractor, submit your information in the first row.
 - State of Oregon MWESB Certification Number:** This is the number provided when a contractor or subcontractor applies for and receives this certification. Enter this number.
 - Self-Identified or Other Certified:** If a sub-contractor indicates that they are a women, minority or emerging small business, but doesn't have certification, indicate here by identifying with a "Yes" by picking it from the drop-down box.
 - Initial Sub-Contract Value:** This is the value of the subcontract-with the specific contractor listed, not to be confused with the value of the overall construction contract between the Contractor and the Owner. Once this number is entered, it should not change on subsequent submittals of the form.
 - Sub-Contract value billed within the fiscal year (July 1-June 30):** This is the value for work performed during the year being reported. If your reporting requirements span multiple years due to the size of your project, this information may be replaced by new information for subsequent years.
 - Final Sub-Contract Value:** This is the final value of the sub-contract, including any additions or deductions that occur over the course of the project.

MORE THAN ONE OF THE FOLLOWING CATEGORIES CAN BE SELECTED:

 - Minority-Owned:** Certified by the State of Oregon or self-identifying; select Yes from the drop-down if it applies or leave blank if it does not.
 - Women-Owned:** Certified by the State of Oregon or self-identifying; select Yes from the drop-down if it applies or leave blank if it does not.
 - Emerging Small Business:** Certified by the State of Oregon or self-identifying; select Yes from the drop-down if it applies or leave blank if it does not apply.
- 10) Check your work prior to submitting the document to make sure that all cells in (light green) highlighted rows or columns are completed. If you do not have light green highlights showing up on your document, please return to #1 in this section and follow the directions given. REMEMBER TO SAVE YOUR FILE AGAIN NOW.

Submitting your Form:

Follow the directions as provided by the campus you are contracted with to submit this document. Typically you should be given an E-mail address within your contract transmittal or cover letter for which to submit the file.

CapCon MWESB Subcontractor Report

REPORT BEING SUBMITTED	
-------------------------------	--

OVERALL PROJECT DATA

Reporting Period	2011
Campus	
General Contractor's Name	
Contract Number	
Project Name	
Contract Execution Date (Date Contract was Signed by the Owner)	
Date of Final Payment Application	
Initial Total Contract Value	
Total Contract Value billed within the fiscal year (July 1 - June 30)	
Final Total Contract Value	
Total Number of Subcontractors Used on Project	
Total Number of First-Tier Subcontractors Used on Project	
Number of First-Tier MWESB Subcontractors	

CALCULATED REPORTING DATA (Self Calculating - No Data Entry)

Number of MWESB Subcontractors	0
% MWESB Subcontractors	
% First-Tier MWESB Subcontractors	
CERTIFIED MWESB TOTALS	
Value Awarded to MWESB Contractors	\$0.00
% Value Awarded to MWESB Contractors	
Value - minority-owned MWESB subcontractors	\$0.00
% - minority-owned MWESB subcontractors	
Value - women-owned MWESB subcontractors	\$0.00
% - women-owned MWESB subcontractors	
Value - emerging small business MWESB subcontractors	\$0.00
% - emerging small business MWESB subcontractors	
SELF-IDENTIFIED or OTHER CERTIFIED MWESB TOTALS	
Value - self-identified or other certified subcontractors	\$0.00
% - self-identified or other certified subcontractors	
OVERALL PROJECT CONTRACT HISTORY	
% Value Awarded to MWESB Contractors at Initial Contract	#DIV/0!
% Value Awarded to MWESB Contractors at Final Contract	#DIV/0!
FOR OFFICIAL USE ONLY:	
Date Received by the Campus	
Initials of Campus staff who checked the document	

PART 1 – GENERAL

1.1 SUMMARY OF WORK

A. **Owner:**

The State of Oregon, acting by and through the State Board of Higher Education, on behalf of: University of Oregon

B. **Owners Representative:**

Janet Lobue, Project Manager
Facilities Services, Department of Capital Construction
1276 University of Oregon
Eugene, OR 97403-1276
Phone: 541-346-5259 Fax 541-346-6927
Email: lobue@uoregon.edu

C. **Architect:** Western Architectural, 10200 SW Greenburg Road, Suite 750, Portland OR 97223.

D. The Work consists of:

1. General Construction and Staging:
 - a. General Contractor is expected to visit the site of proposed construction prior to submittal of bid. Verify and inspect the existing site to inform themselves of all observable conditions and to determine dimensions, conditions and general scope of work. Failure to do so does not relieve the successful bidder from the responsibility of completion of the project in accord with the Contract Documents. Starting work constitutes acceptance of existing conditions.
 - b. General Contractor shall provide competent supervision of the work. A superintendent shall represent the Contractor continuously throughout the project and all communication with superintendent shall be binding upon the Contractor.
 - c. All construction shall be in compliance with the 2010 Oregon Structural Specialty Code, local government codes, ordinances and manufacturer specifications.
 - d. Provide scaffolding and weather protection as necessary for a safe and dry workspace.
 - e. Provide protective measures for landscaping, trees, concrete flatwork, building surfaces, roofing membrane, flashings, and stored materials from damage.
 - f. Provide temporary power or use generators.
 - g. Provide dumpster and toilet facilities for the duration of the construction.
 - h. Provide all required permits.
 - i. Provide general construction insurance.
2. Exterior brick veneer wall assembly:
 - a. Remove and dispose of/recycle the existing brick veneer, weather resistive barrier, flashing, exterior gypsum sheathing, and batt insulation at locations indicated in the construction documents.

- b. Remove and store all exterior fixtures, reinstall at the end of project. Allowing for a 20% replacement budget for damage due to necessary work.
 - c. Remove scuppers and downspouts as required in order to allow for rehabilitation work. Provide a 20% replacement budget for scuppers and downspouts damaged during necessary rehabilitation work.
 - d. Locate water damaged metal studs and brace/abut water damaged stud or track with new metal stud or metal track. Provide a 20% replacement budget for stud replacement.
 - d. Replace gypsum sheathing with new fiberglass-mat faced, mold and moisture resistant gypsum sheathing.
 - e. Install new liquid applied weather resistive barrier according to manufacturer's written instructions. Ensure a monolithic pinhole free installation
 - f. Install new brick veneer cladding to match existing brick veneer coursing, sizes and colors.
 - g. Install brick ties as required to comply with current building code requirements.
3. Roofing:
 - a. Remove and reinstall parapet cap flashing only as required for installation of brick veneer and weather resistive barrier.
 - b. Patch existing roof at locations where new flashing installation requires modification of existing roof membrane. Existing roof is under warranty and any patching is to be done by Umpqua Roofing. Contact information:

Umpqua Roofing
1010 S. Danebo Ave.
Eugene, OR 97402
(541) 302-6850
4. Windows and Doors:
 - a. Remove windows as noted in construction documents.
 - b. Remove, protect and store windows to be reinstalled. Refer to construction documents for locations of windows to be reinstalled.
 - c. Existing curtain wall assembly on south wall to remain. Replace one failed insulating glass unit and match adjacent glazing. Protect curtain wall assembly from damage during construction.
 - d. Existing wood entrance doors and sidelite assembly to be refinished in place. Protect from damage during construction.
5. Interior Repairs:
 - a. Repair interior window surrounds and construction related damages resulting from rehabilitation activities.
6. Landscape and Exterior Fixtures:

- a. Protect trees during construction. Coordinate tree protection with University representative.
- b. University staff will identify and remove any plantings that are to be retained and replanted. Coordinate removal of plants with University representative.

END OF SECTION

PART 1 – GENERAL

1.1 ALLOWANCES (NA)

1.2 UNIT PRICES

- A. A unit price is an amount proposed by bidders and stated on the Bid Form as a price per unit of measurement for 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. Bidders shall indicate on the Bid Form unit prices for the following items of work:

Unit Prices (See Bid Form):

UNIT PRICE #1 Removal and replacement of steel ledger angle that supports masonry veneer. The Unit Price shall represent the cost to remove a 5 foot section of existing ledger angle and replace it with 5 feet of new ledger angle that matches the size of the existing angle. Price shall include attachment of angle to the structure.

UNIT PRICE #2 Provide a price to add new metal studs adjacent to existing corroded metal studs, as required. The Unit Price shall represent a per stud installation cost. Existing stud is to be left in place. New stud to be installed adjacent to existing stud.

1.3 CONTRACT MODIFICATION PROCEDURES

- A. Per Division 00 - Bidding and Contracting Requirements.

1.4 PAYMENT PROCEDURES

- A. Submit a Schedule of Values at least 10 days before the initial Application for Payment. Break down the Contract Sum into at least one line item for each Specification Section in the Project Manual table of contents. Coordinate the Schedule of Values with Contractor's Construction Schedule.
1. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 2. Provide separate line items in the Schedule of Values for initial cost of materials and for total installed value of that part of the Work.
- B. Submit 3 copies of each application for payment on AIA Document G702/703, according to the schedule established in Owner/Contractor Agreement.
1. With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
 2. Submit final Application for Payment after completion of Project closeout procedures with release of liens and supporting documentation.
 - a. Include consent of surety to final payment on AIA Document G707 and insurance certificates.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes procedures for the following:
 - 1. Contractor's responsibilities concerning substitutions.
 - 2. Substitutions requests during the bidding period.
 - 3. Substitutions requests after award of Contract.
 - 4. Substitutions not permitted.
- B. Related Sections:
 - 1. Section 016000: Product Requirements, for requirements governing Contractor's selection of products and product options.

1.2 DEFINITIONS

- A. Substitutions: Contractor proposals for changes in products, materials, equipment, and methods of construction required by the Contract Documents made during bidding and after award of Contract are considered to be requests for substitution.
 - 1. The following are not considered to be requests for substitution:
 - a. Revisions to the Contract Documents requested by Owner or Architect.
 - b. Specified options of products and construction methods included in the Contract Documents.
 - c. Contractor's determination of and compliance with regulations and orders issued by governing authorities.
- B. Substitutions accepted during the bidding period are accepted by Addendum prior to award of Contract, and thereafter are included in the Contract Documents.
- C. Substitutions requested and accepted after award of contract are accepted only by Change Order, and thereafter are included in the Contract Documents.

1.3 CONTRACTOR'S RESPONSIBILITIES

- A. Contractor's responsibilities for substitution requests made after award of Contract are as follows:
 - 1. Investigate proposed products and determine they are equal or superior in all respects to products specified.
 - 2. Provide same guarantee for accepted substitutions as for products specified.
 - 3. Make changes in, and coordinate, the Work as may be required to incorporate and install accepted substitutions.
 - 4. Waive all claims for additional costs that subsequently become apparent which are related to substitutions.

1.4 SUBSTITUTION SUBMITTAL PROCEDURES

- A. Acceptability of different materials or products shall be determined by methods set forth in this Section.
- B. Architect and owner will be sole judge of acceptability of any proposed substitution, and decision of Architect will be final.

PART 2 – PRODUCTS

2.1 SUBSTITUTION REQUIREMENTS DURING THE BIDDING PERIOD

- A. Submit request for approval of a substitution on Western Architectural Substitution Request Form; Copy included at the end of this Section.
- B. All substitution requests must be received in the Architect's office no less than **10 working days prior to Bid Date**, unless otherwise stipulated in the Instructions to Bidders.

2.2 SUBSTITUTIONS REQUESTED AFTER AWARD OF CONTRACT

- A. Substitutions will normally not be considered after award of Contract, except due to unforeseen circumstances.
- B. Architect will receive and consider Contractor's request for substitution after award of Contract when one or more of the following conditions are satisfied, as determined by the Architect. If the following conditions are not met, Architect will return the requests without action except to record noncompliance with these requirements.
 - 1. The specified product cannot be provided within the Contract time.
 - a. Architect will not consider the request if the product cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.
 - 2. The specified product cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
 - 3. The specified product cannot be coordinated with other materials and the Contractor certifies that the proposed substitution can be coordinated.
 - 4. The specified product cannot provide the required warranty and the Contractor certifies that the proposed substitution provides the warranty.
 - 5. The requested substitution offers the Owner a substantial advantage in cost, time, or other considerations after deducting additional Owner's cost of compensation to the Architect for redesign and evaluation services, increased cost of other construction, and similar considerations.
- C. Contractor's submittal and Architect's acceptance of Shop Drawings, Product Data, or Samples for construction activities not complying with the Contract Documents do not constitute an acceptable or valid request for substitution, nor do they constitute approval.

2.3 SUBSTITUTIONS NOT PERMITTED

- A. Substitutions indicated or implied on submitted Shop Drawings or Product Data without first requesting approval in accordance with requirements of this Section.
- B. Where manufacturers, products, or systems listed in the Specifications are not followed with "or approved" or "Substitutions: Provide in accordance with requirements of Section 012500," it is intended that substitutions are not permitted.

PART 3 – EXECUTION (Not Applicable)

END OF SECTION



Contractor Substitution Form

Date:

Project:

To:

From:

Substitution No. _____

Type of Substitution:

Description of Substitution:

Additional Information:

Accepted: _____

Rejected: _____

Reason for Rejection:

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General Project coordination procedures.
 - 2. Project meetings.
 - 3. Construction schedule.
 - 4. Submittal schedule.
 - 5. Field Engineering.
- B. Related Sections:
 - 1. Section 016000: Product Requirements, for coordinating selection of products.
 - 2. Section 017000: Execution and Closeout Procedures, for coordinating Contract closeout requirements.
 - 3. Section 017400: Cleaning, for coordinating progress and final cleaning.

1.2 COORDINATION

- A. Coordinate construction operations included in various Specification Sections to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, which depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - 3. Coordinate storage or staging areas for all trades.
- B. If necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate Contractors if coordination of their Work is required.
- C. Administrative Procedures:
 - 1. Coordinate scheduling and timing of required administrative procedures with other construction activities, activities of the Owner, and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - a. Preparation of Contractor's construction Schedule.
 - b. Preparation of the Schedule of Values.
 - c. Installation and removal of temporary facilities and controls.
 - d. Delivery and processing of submittals.
 - e. Progress meetings.
 - f. Preinstallation conferences.
 - g. Startup and adjustment of systems.
 - h. Project closeout activities.
- D. Conservation: Coordinate construction operations to assure that operations are carried out with consideration given to conservation of energy, water, and materials.

- E. Coordination of Key Personnel: Within 15 days of commencement of construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site.
 - 1. Identify individuals, their duties and responsibilities.
 - 2. List addresses and telephone numbers, including home and office telephone numbers.
 - 3. Post copies of list in Project meeting room, and temporary field office. Keep list current at all times.

1.3 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
 - 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 - 2. Agenda: Prepare the meeting agenda. Distribute agenda to all invited attendees.
 - 3. Minutes: Record significant discussions, and agreements achieved. Distribute meeting minutes to everyone concerned, including Owner and Architect, within 72 hours after each meeting.
- B. Preconstruction Conference:
 - 1. Schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but not later than 15 days after execution of Agreement.
 - a. Hold conference at Project site or other location agreeable to Owner and Architect.
 - b. Conduct meeting to review responsibilities and personnel assignments.
 - 2. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties deemed necessary.
 - 3. All participants shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 4. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Routing of correspondence.
 - f. Distribution of Contract Documents.
 - g. Procedures for processing field decisions and Change Orders.
 - h. Procedures for Requests for Interpretation (RFIs).
 - i. Submittal procedures and mockups.
 - j. Procedures for testing and inspection.
 - k. Procedures for processing Applications for Payment.
 - l. Procedures for substitutions.
 - m. Responsibility for temporary facilities and controls.
 - n. Use of premises and Owner's Utilities.
 - o. Work restrictions.
 - p. Site access, traffic, and parking availability and rules.
 - q. Office, work, and storage areas.
 - r. Security.
 - s. Progress cleaning.

- t. Construction waste management and recycling.
 - u. Owner's occupancy requirements.
 - v. Closeout Procedures.
5. Minutes: Contractor will record and distribute meeting minutes.
- C. Pre-installation Conferences:
- 1. Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
 - 2. Attendees: Contractor and its superintendent, installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow. Include code enforcement personnel if required by local codes.
 - 3. Advise Architect and owner of scheduled meeting dates.
 - 4. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. The Contract Documents.
 - b. Related Change Orders.
 - c. Related RFIs.
 - d. Submittals.
 - e. Review of mockups.
 - f. Possible conflicts or compatibility problems.
 - g. Time schedules.
 - h. Weather limitations.
 - i. Manufacturer's written recommendations.
 - j. Warranty requirements.
 - k. Acceptability of substrates.
 - l. Temporary Facilities and Controls.
 - m. Regulations of authorities having jurisdiction.
 - n. Testing and inspecting requirements.
 - o. Installation procedures.
 - p. Coordination with other work.
 - q. Protection of adjacent work.
 - 5. Record significant conference discussions, agreements, disagreements, and required corrective measures and actions.
 - 6. Do not proceed with installation if conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of Work and reconvene conference at earliest feasible date.
 - 7. Minutes: Contractor will record and distribute meeting minutes to each party present and to parties who should have been present.
- D. Progress Meetings:
- 1. Conduct progress meetings at Project site at regular scheduled intervals.
 - a. Coordinate meeting dates with preparation of payment request.
 - 2. Attendees: Authorized representatives of Owner, Architect, Contractor, and each subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of immediate future activities.
 - a. Participants 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 affect progress, including 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. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

- b. Review schedule for next period.
- c. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Progress cleaning.
 - 5) Quality and Work standards.
 - 6) Status of correction of deficient items.
 - 7) Field observations.
 - 8) RFI status.
 - 9) Status of Proposal Requests.
 - 10) Status of Change Orders.
 - 11) Project administration issues.
- 4. Minutes: Contractor will record and distribute meeting minutes only to Owner and Architect. Contractor shall be responsible for distribution to subcontractors, suppliers, or other entities concerned with current progress.
- 5. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

1.4 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Submit a comprehensive, fully developed, horizontal bar-chart type Contractor's Construction Schedule within 30 days after date established for commencement of Work.
- B. Indicate each significant construction activity separately. Identify first working day of each week with a continuous vertical line.
 - 1. Include start-up, finish, duration, slack time, approval dates, material ordering, delivery dates, anticipated shutdowns, partial occupancy and Owner use, Completion Date and other such information required to allow Owner's monitoring of progress of project and identifying critical path of events required to meet Completion Date.
 - 2. Use same breakdown of units of Work as indicated in Schedule of Values.
- C. Distribution: Following response to initial submittal, print and distribute copies to Architect, Owner, subcontractors, and other parties required to comply with scheduled dates.
- D. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized.
 - 1. Bring significant deviations from Schedule immediately to Owner's and Architect's attention.

1.5 FIELD ENGINEERING

- A. Engineering Services:
 - 1. Provide field engineering services as required for construction.
- B. Verification and Coordination:
 - 1. Verify dimensions of new and existing Work.

- a. If field measurements differ slightly from Drawings, modify to accommodate.
If field measurements differ significantly, notify Architect prior to commencing Work.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals.
- B. Related Sections include the following:
 - 1. Division 1 Section “Price and Payment Procedures” for submitting Applications for Payment.
 - 2. Division 1 Section “Construction Progress Documentation” for submitting schedules and reports, including Contractor’s Construction Schedule and the Submittals Schedule.
 - 3. Division 1 Section “Quality Requirements” for submitting test and inspection reports and Delegated-Design Submittals and for erecting mockups.
 - 4. Division 1 Section “Closeout Procedures” for submitting warranties Project Record Documents.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Architect’s responsive action.
- B. Informational Submittals: Written information that does not require Architect’s approval. Submittals may be rejected for not complying with requirements.

1.4 SUBMITTAL PROCEDURES

- A. Important Note: The submittal process is not a means to change the requirements of the Contract Documents. Approval of a submittal does not constitute a change order, change directive or acceptance of a substitution. Every submittal is assumed to and required to comply fully with the Contract Documents (including prior modifications). Installed work found later not to be in compliance with Contract Documents must be removed and replaced with work that is in compliance. If deviations are required due to field conditions, product availability, coordination limitations, etc., obtain Architect’s approval through Contract Modification procedures prior to preparing and submitting submittal.
- B. Prior to transmission of a submittal to the Architect, review the submittal for completeness, accuracy, compliance with the Contract Documents, and coordination with other construction. Note corrections and field dimensions. Clearly note any items that require clarification by the Architect. Mark with Contractor’s approval stamp before submitting to Architect.
- C. 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. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - 3. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received. Architect’s withholding of

- action for purposes of coordination with other submittals will not constitute a delay to the project.
- D. Submittals Schedule: Comply with requirements in Division 1 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
 - E. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal.
 - 1. Initial Review: Allow 15 calendar days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 - 2. Allow 15 calendar days for processing each resubmittal.
 - 3. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.
 - F. Identification: Place a permanent label or title block on each submittal for identification.
 - 1. Indicate name of firm or entity that prepared each submittal on label or title block.
 - 2. Provide a space approximately 4 by 5 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 - 3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Unique identifier, including revision number.
 - d. Number and title of appropriate Specification Section.
 - e. Drawing number and detail references, as appropriate.
 - f. Other necessary identification.
 - G. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions of the Contract Documents, initial submittal may serve as final submittal.
 - H. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
 - I. 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.
 - J. Use for Construction: Use only final submittals with mark indicating action taken by Architect in connection with construction.

PART 2 – PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
 - 1. Number of Copies: Submit four copies of each submittal, unless otherwise indicated. Architect will return two copies.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - 1. If information must be specially prepared for submittal because standard printed data

- are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Manufacturer's catalog cuts.
 - e. Compliance with recognized trade association standards.
 - f. Compliance with recognized testing agency standards.
 - g. Application of testing agency labels and seals.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation: Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Roughing-in and setting diagrams.
 - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - f. Design calculations.
 - g. Compliance with specified standards.
 - h. Notation of coordination requirements.
 - i. Notation of dimensions established by field measurement.
 2. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 3. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 24 by 36 inches.
- D. Samples: Prepare physical units of materials or products, including the following:
1. Comply with requirements in Division 1 Section "Quality Requirements" for mockups.
 2. 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.
 3. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from the same material to be used for the Work, cured and finished in manner specified, and physically identical with the product proposed for use, and that show full range of color and texture variations expected.
 4. Preparation: Mount, display, or package Samples in manner specified to facilitate review of qualities indicated. Attach label on unexposed side that includes the following:
 - a. Generic description of Sample.
 - b. Product name or name of manufacturer.
 - c. Sample source.
 5. Number of Samples for Initial Selection: Submit full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return one submittal with options selected.

6. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
- E. Contractor's Construction Schedule: Comply with requirements in Division 1 Section "Construction Progress Documentation" for Construction Manager's action.
- F. Submittals Schedule: Comply with requirements in Division 1 Section "Construction Progress Documentation."
- G. Application for Payment: Comply with requirements in Division 1 Section "Payment Procedures."
- H. Schedule of Values: Comply with requirements in Division 1 Section "Payment Procedures."
- I. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 1. Name, address, and telephone number of entity performing subcontract or supplying products.
 2. Number and title of related Specification Section(s) covered by subcontract.
 3. Drawing number and detail references, as appropriate, covered by subcontract.

2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
 1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Architect will not return copies.
 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 3. Test and Inspection Reports: Comply with requirements in Division 1 Section "Quality Requirements."
- B. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- C. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.
- D. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- E. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.
- F. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.
- G. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements.
- H. Design Data: Prepare written and graphic information, including, but not limited to,

performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

- I. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
 1. Preparation of substrates.
 2. Required substrate tolerances.
 3. Sequence of installation or erection.
 4. Required installation tolerances.
 5. Required adjustments.
 6. Recommendations for cleaning and protection.

PART 3 – EXECUTION

3.1 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect and owner will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 1. "No Exception Taken": That part of the Work covered by the submittal may proceed provided that it complies with requirements of the Contract Documents; final acceptance will depend upon compliance.
 2. "Make Corrections Noted": That part of the Work covered by the submittal may proceed provided it complies with the notations or correction on the submittal and requirements of the Contract Documents; final acceptance will depend upon corrections and compliance.
 3. "Revise and Resubmit": Do not proceed with that part of the Work covered by the submittal. Revise or prepare a new submittal in accordance with the notations; resubmit for re-review without delay.
 4. "Rejected": Do not proceed with that part of the Work covered by the submittal. Revise or prepare a new submittal in accordance with Contract Documents; resubmit for re-review without delay.
 5. "Submit Specified Item": Do not proceed with that part of the Work covered by the submittal. This mark indicates that a non-specified item was submitted without proper approval of a substitution request. Prepare a new submittal that utilizes specified item or an approved substitution.
- C. Do not permit submittals marked with any of the latter three actions to be used at the Project site, or elsewhere in connection with the Work.
- D. Informational Submittals: Architect and owner will review each submittal and will not return it, or will reject and return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- E. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

END OF SECTION

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Products and installation for patching and extending Work.
 - 2. Transition and adjustments.
 - 3. Repair of damaged surfaces, finishes, and cleaning.
- B. Related Sections:
 - 1. Section 011100: Summary of Work, for Owner occupancy during construction.
 - 2. Section 017329: Cutting and Patching.
 - 3. Section 017400: Cleaning, for cleaning during construction.

PART 2 – PRODUCTS

2.1 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. New Materials: As specified in product Sections; match existing Products and Work for patching and extending work.
 - 1. Where new materials are indicated in the Drawings and product Section for material is not included in the Project Manual, provide new materials specified in the Drawings.
- B. Type and Quality of Existing Products: Determine by inspection and testing Products where necessary, referring to existing Work as a standard.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify that demolition is complete, and areas are ready for installation of new Work.

3.2 PREPARATION

- A. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.
- B. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- C. Remove debris and abandoned items from area and from concealed spaces.
- D. Prepare surface and remove surface finishes to provide for proper installation of new work and finishes.
- E. Close openings in exterior surfaces to protect existing work and salvage items from weather and extremes of temperature and humidity.

3.3 INSTALLATION

- A. Coordinate work of alterations and renovations to expedite completion sequentially and to accommodate Owner occupancy.
- B. Project Finishes: Complete in all respects including operational, mechanical and electrical work.
- C. Remove, cut, and patch Work in a manner to minimize damage and to provide a means of restoring Products and finishes to specified condition.

- D. Refinish visible existing surfaces to remain in renovated rooms and spaces to specified condition for each material, with a neat transition to adjacent finishes.
- E. In addition to specified replacement of equipment and fixtures, restore existing plumbing and electrical lights to full operational condition.
- F. Install Products as specified in individual Sections.

3.4 TRANSITIONS

- A. Where new work abuts or aligns with existing, perform a smooth and even transition. Patched work to match existing adjacent work in texture and appearance.
- B. When finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.

3.5 ADJUSTMENTS

- A. Where a change of plane of 1/4" or more occurs, submit to Architect a recommendation for providing a smooth transition.
- B. Fit work at penetrations of surfaces as specified in Section 017329, "Cutting and Patching".

3.6 REPAIR OF DAMAGED SURFACES

- A. Patch or replace portions of existing surfaces that are damaged, lifted, discolored, or showing other imperfections.
- B. Repair substrate prior to patching finish.

3.7 FINISHES

- A. Finish surfaces as specified in individual Product Sections.
- B. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.

3.8 CLEANING

- A. In addition to cleaning specified in Division 01 Sections, clean Owner occupied areas affected by Work of this Project.

END OF SECTION

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes requirements for mockups of replacement exterior flashing assemblies, installed as permanent construction when approved by Architect.
- B. Related Sections:
 - 1. Sections in Divisions 04 through 09 related to required construction and finish materials associated with exterior flashing assemblies, WRB, sealants and deck coatings.

1.2 MOCKUP DEFINITION

- A. Mockups: Mockups are full-size, physical representations of each type of exterior flashing assembly, constructed on-site, and used to illustrate flashing assembly construction on an existing building. A Mockup is not a sample.

1.3 DESCRIPTION

- A. Construct a permanent mockup of each of the following flashing assemblies, complete with finishes, as proposed or otherwise indicated in the Drawings.
 - 1. WRB/AB on new wall sheathing.
 - 2. Flashing and WRB treatment at windows.
 - 3. Flashing and WRB treatment at doors.
 - 4. Roof-to-wall flashing and WRB treatment.
 - 5. Base of wall flashing and flashing at ledger angles.

1.4 QUALITY ASSURANCE

- A. Submittals:
 - 1. Prior to start of construction of Mockups, submit and obtain approval of product data, shop drawings, samples, and other certifications, test reports, and the like, as required in each Specification Section for materials and systems incorporated in the Mockup.
 - 2. Provide reports of field quality control testing, where required, as a condition to acceptance of material and system installation.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Provide products as specified for each of the materials and systems required to complete each Mockup.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install complete products and systems as specified for each of the materials required to complete the Mockup for occupancy.
- B. Approved mockups may remain a part of the permanent work.
 - 1. If not approved, remove mockup construction and repeat until Architect's approval is obtained.

- C. Exceptions: Any mechanical and electrical systems incorporated in the Mockup are not required to be operational for approval of Mockup as defined in Article "Mockup Definition."

END OF SECTION

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, security and protection facilities.

1.2 USE CHARGES

- A. General: Include cost or use charges for temporary facilities in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's operational forces, Architect, testing agencies, and authorities having jurisdiction.

1.3 QUALITY ASSURANCE

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to:
 - 1. Building code requirements.
 - 2. Health and safety regulations.
 - 3. Utility company regulations.
 - 4. Police and fire department rules.
 - 5. Environmental protection regulations.
- B. Standards: Comply with the following:
 - 1. NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations."
 - 2. ANSI A10 Series standards for "Safety Requirements for Construction and Demolition."
 - 3. NECA Electrical Design Library "Temporary Electrical Facilities."
- C. Electric Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70 "National Electric Code."
- D. Tests and Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.4 PROJECT CONDITIONS

- A. Keep temporary services and facilities clean and neat in appearance.
- B. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.
- C. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Provide new materials or use undamaged, used materials in serviceable conditions, suitable for use intended.

2.2 TEMPORARY FACILITIES

- A. Temporary Offices, if Contractor chooses: Provide prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows, and serviceable finishes, of sufficient size and furnished to accommodate needs of construction personnel.
 - 1. Provide enclosed space within field office adequate for project meetings.
- B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL-rated, with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid propane gas or fuel oil heaters with individual space thermostatic control.
 - 1. Use of gasoline burning space heaters, or open flame is prohibited.
 - 2. Heating Units: Listed and labeled for type of fuel being consumed, by UL, FM, or another testing agency acceptable to authorities having jurisdiction, and marked for intended use.

PART 3 – EXECUTION

3.1 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
 - 1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
- C. Water Service: Use of Owner's existing water service facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
- D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel.
 - 1. Comply with authorities having jurisdiction for type, number, location, operation, and maintenance of the fixtures and facilities.
- E. Electric Power Service: Contractor to provide temporary electric power service.
- F. Lighting: Provide temporary lighting with local switching that will provide adequate illumination for construction operations, observations, and inspections.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- G. Heating: Provide temporary heat required by construction activities for curing or drying of completed installations or for protection of installed construction from adverse effects of low temperatures or high humidity.
- H. Telephone: Provide temporary telephone service in common use facilities for use by all personnel engaged in construction activities.
 - 1. Provide one telephone line in each field office.
 - 2. Provide a dedicated telephone line for a facsimile machine in each field office.

3. Make telephone and facsimile service available to use by the Owner and Architect.
4. At each telephone, post a list of important telephone numbers, including the following:
 - a. Police and fire departments.
 - b. Ambulance service.
 - c. Contractor's home office.
 - d. Architect's office.
 - e. Engineer's office.
 - f. Owner's office.
 - g. Principal subcontractor's field and home offices.
- I. Electronic Communication Service: Provide temporary electronic communication service including electronic mail, in primary field office.

3.2 SUPPORT FACILITIES

- A. Traffic Controls: Comply with requirements of authorities having jurisdiction.
- B. Parking: Contractor responsible for street or offsite parking for personnel.
- C. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
- D. Project Identification Signs: Provide Project identification and other signs.
 1. Provide temporary, directional signs for construction personnel and visitors.
 2. Do not permit installation of unauthorized signs.
- E. Water Disposal Facilities: Comply with requirements specified in Section 017419, Construction Waste Management.
- F. Lifts and Hoists: Provide facilities for hoisting materials and employees.
 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.3 SECURITY AND PROTECTION FACILITIES

- A. Environmental Protection:
 1. Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 2. Restrict use of noise making tools and equipment to hours that will minimize complaints from persons or firms near the site.
- B. Construction Enclosure Fence: Provide enclosure fence in manner that will prevent people and animals from easily entering construction area.
- C. Security Enclosure and Lockup: Install substantial temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, or similar violations of security.
- D. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structural adequate barricades, including warning signs and lighting.
 1. Provide appropriate warning signs to inform personnel and the public of hazards being protected against.
- E. 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 weather tight enclosure for building exterior.

- F. Temporary Fire Protection: Install and maintain temporary fire protection facilities of types needed to protect against reasonably predictable and controllable fire losses.
 - 1. Comply with NFPA 10 and NFPA 241.
 - 2. Store combustible materials in containers in fire safe locations.
 - 3. Maintain unobstructed access to fire protection equipment.
 - 4. Supervise welding operations, combustion type temporary heating units, and similar sources of fire ignition.
 - 5. Develop and post information for overall fire prevention and protection program for personnel at Project site.

3.4 TERMINATION AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities to minimize waste and abuse.
- B. Maintenance: Maintain facilities in good operating condition until removal.
- C. Termination and Removal: Remove each temporary facility when the need for its service has ended no later than Substantial Completion.
- D. Repair or replace street paving, curbs, and sidewalks damaged by construction operations, as required by the governing authority.
- E. At Substantial Completion, clean and renovate permanent facilities used during the construction period.

END OF SECTION

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements governing the Contractor's selection of products for use in Project; product delivery, storage, and handling; manufacturer's standard warranties on products; and special warranties.
- B. Related Sections:
 - 1. Section 017000: Execution and Closeout Procedures, for submittal of warranties.

1.2 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by the manufacturer's product name, including make or model number or other designation shown or listed in the manufacturer's published product literature, that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed. Products salvaged or recycled from other products are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through substitution submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - 1. Refer to Section 012500 for product substitution procedures.
- C. Basis of Design, or Standard of Design, Product Specification: Where the manufacturer's product is named and accompanied by the words "basis of design" or "standard of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.3 SUBMITTALS

- A. Product List: Before Contractor's first request for payment, submit a complete list of major products proposed for use in the Project.
 - 1. Include proprietary product names, manufacturer's name, and installing Subcontractor's name.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Provide products of the same kind from a single source to the fullest extent possible.
- B. Compatibility of Products: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
 - 1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods for other contractors.
 - 2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at the site.
 - 2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, or other losses.
 - 3. Deliver products to the site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
- C. Storage:
 - 1. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
 - 2. Store materials in a manner that will not endanger Project structure.
 - 3. Store products subject to damage by weather under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 - 4. Comply with manufacturer's written instructions for temperature, humidity, ventilation, and weather protection requirements for storage.

1.6 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitation on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 - 1. **Manufacturer's Warranty:** Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 - 2. **Special Warranty:** Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.
- B. **Special Warranties:** Prepare a written document specifically endorsed by manufacturer to Owner that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
 - 1. **Manufacturer's Standard Form:** Modified to include Project specific information and properly executed.
 - 2. **Specified Form:** When specified forms are included in the Specifications, prepare a written document using appropriate form properly executed.
 - 3. Refer to Divisions 02 through 32 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. **Submittal Time:** Comply with requirements in Section 017000, "Execution and Closeout Procedures".

PART 2 – PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 - 1. Where products are accompanied by the term "as selected," Architect will make selection.
 - 2. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
 - 3. Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," submit product for Architect approval according to requirements of Section 012500, "Substitution Procedures" to obtain approval of an unnamed product.
- B. Proprietary Specification Requirements: Where a single product or manufacturer is named, provide the product that complies with requirements. No substitutions are permitted.
- C. Manufacturer/Source: Where a single manufacturer or source is named, provide a product by the named manufacturer or source that complies with requirements.
- D. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
- E. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements. Comply with provisions of Section 012500 for consideration of an unnamed product.
- F. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed that complies with requirements. Comply with provisions of Section 012500 for consideration of an unnamed product.
- G. Descriptive Specification Requirements: Where a product or assembly listing exact characteristics is required, provide a product or assembly that provides those characteristics and otherwise complies with requirements.
- H. Performance Specification Requirements: Where compliance with performance requirements is specified, provide products that comply with those requirements and are recommended by the manufacturer for the application indicated.
- I. Specified Standards, Codes, and Regulations: Where compliance with an imposed code, standard, or regulation is specified, provide a product that complies with that code, standard, or regulation.
- J. Basis of Design, or Standard of Design, Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions of Section 012500 for consideration of an unnamed product by the other named manufacturers.
- K. Visual Matching Specification: Where Contract Documents require matching an established sample, select a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
 - 1. If no product available within specified category matches and complies with other specified requirements, comply with provisions of Section 012500 for proposal of product.
- L. Visual Selection Specification: Where Contract Documents include the phrase "as selected from manufacturer's standard colors, patterns, textures" or a similar phrase, select a product that complies with other requirements.
 - 1. Standard Range: Where Contract Documents include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.

2. Full Range: Where Contract Documents include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.
- M. Inappropriate Product Selections: If Contractor believes specified product, method, or system is inappropriate for use, Contractor shall notify the Architect before performing Work in question.
1. If notice of objection is not received prior to delivery to site, it will be assumed by Owner that Contractor agrees specified products, methods, and systems are appropriate for use in the Project.

PART 3 – EXECUTION

3.1 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated.
1. Anchor each product securely in place, accurately located and aligned with other Work.
 2. Clean exposed surfaces and protect as necessary from damage and deterioration.
- B. Should job conditions or specified requirements conflict with Manufacturers' instructions, consult Architect for further instructions.

END OF SECTION

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes requirements for cutting, fitting, and patching of Work required to:
 - 1. Make several parts fit properly.
 - 2. Uncover work to provide for installing or inspecting (or both) of ill-timed work.
 - 3. Remove and replace work not conforming to requirements of Contract Documents.
 - 4. Remove and replace defective work.
- B. Related Sections:
 - 1. Section 013100: Project Management and Coordination, for coordinating cutting and patching with other construction activities.
 - 2. Section 013516: Alteration Project Procedures, for building alterations.
 - 3. Section 024119: Selective Demolition, for demolition of selected portions of the building for alterations.
 - 4. Refer to individual Sections for specific requirements and limitations applicable to cutting and patching.

1.2 SUBMITTALS

- A. Proposal for Cutting and Patching: Where cutting and patching involves structural elements, submit for approval a proposal describing procedures. Include the following information in the proposal:
 - 1. Describe extent of cutting and patching required, how it will be performed, and why it cannot be avoided.
 - 2. Indicate changes to structural elements, and changes in appearance of visual elements. Include structural calculations.
 - 3. List products proposed for use and entities that will perform the Work.
 - 4. Indicate dates that work will be performed, duration of the Work, and when work will be uncovered for Architect's observation.
 - 5. List utilities that cutting and patching work will affect.
 - 6. Submit cost estimate and secure Architect's approval of cost estimate and type of reimbursement before proceeding with cutting and patching.

1.3 QUALITY ASSURANCE

- A. Structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.
 - 1. Obtain approval before cutting and patching structural elements.
- B. Do not cut and patch operating elements in a manner that would reduce their capacity to perform as intended, cause increased maintenance, or decrease operational life or safety.
- C. Do not cut and patch exposed elements of construction that in the Architect's opinion would reduce the visual aesthetic qualities, or result in visual evidence of cutting and patching.
 - 1. Remove and replace construction cut and patched in a visually unacceptable manner.

1.4 WARRANTY

- A. Cut and patch construction using methods and with materials in such a manner as to not void any warranties required or existing.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Use new materials identical to existing materials.
- B. For exposed surfaces where identical materials are not available, use materials that visually match existing adjacent surfaces as nearly as possible.
- C. Use materials whose installed performance is equal or better to that of existing materials.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Inspect existing conditions, including elements subject to movement or damage during cutting, excavating, patching, and backfilling.
- B. After uncovering Work, inspect conditions affecting installation of new Work.
- C. Discrepancies: If uncovered conditions are not as anticipated, immediately notify Architect and secure direction before proceeding further.
 - 1. Do not proceed until unsatisfactory conditions are corrected.

3.2 PREPARATION

- A. Provide temporary support of work to be cut, including shoring and bracing as required to maintain structural integrity of Work.
- B. Protect existing construction during cutting and patching to prevent damage.

3.3 GENERAL PERFORMANCE

- A. Use skilled workers trained and experienced in necessary crafts and familiar with requirements and methods required to restore surfaces to their original condition.
- B. Provide dust-proof barriers where necessary to protect existing surfaces.

3.4 CUTTING

- A. Perform cutting and demolition by methods that will provide the least damage to other portions of Work.
- B. Prior to cutting existing work, locate concealed utilities to eliminate possibility of service interruption or damage.
- C. Cut through concrete or masonry with a carborundum masonry saw or diamond-core drill.
- D. When masonry construction must be pierced, furnish and install a steel pipe sleeve in opening and grout in place neatly.
 - 1. Leave grout surface to match existing finish.
 - 2. Fabricate sleeve 1" in diameter larger than pipe or insulation.
 - 3. Pack between sleeve and pipe with waterproof sealant.
 - 4. At penetrations of fire-resistant rated walls, partitions, ceilings, or floor construction, completely seal voids with fire-resistant rated materials as required to maintain assembly of fire-resistant rating of penetrated element, or as required by Building Code.

3.5 PATCHING

- A. Perform fitting and adjusting of products to provide a finished installation complying with tolerances and finishes specified for type of construction involved.

- B. Where replacement of equipment and fixtures is required, restore existing plumbing, heating, ventilation, air-conditioning, electrical, and similar systems to full operational condition.
 - C. Refinish surfaces to match existing adjacent finishes, patching with seams that are durable and as invisible as possible.
 - 1. Where possible, inspect and test patched area to demonstrate integrity of seam.
 - 2. For continuous surfaces, refinish to nearest intersection or natural break.
 - 3. For assembly, refinish entire unit.
 - 4. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining work in manner that will eliminate evidence of patching and refinishing.
 - D. When finished surfaces are cut so that smooth transition with existing or new work is not possible, submit for Architect's approval a recommendation for terminating surface along straight line at natural line of division.
 - 1. Where change of plane of 1/4" or more occurs, submit for Architect's approval a recommendation for providing smooth transition.
- 3.6 CLEANING
- A. Clean areas and spaces where cutting and patching work is performed.

END OF SECTION

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes requirements for maintaining Project buildings and site in a standard of cleanliness during construction period.
- B. Related Sections:
 - 1. Section 015000: Temporary Facilities and Controls, for removal of temporary facilities.
 - 2. Section 017419: Construction Waste Management.
 - 3. Section 017000: Execution and Closeout Procedures.

1.2 QUALITY ASSURANCE

- A. In addition to standards described in this Section, comply with applicable requirements of governmental agencies having jurisdiction.

PART 2 – PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Provide personnel, equipment, and materials as needed to maintain specified standard of cleanliness.

2.2 COMPATIBILITY

- A. Use only cleaning materials and equipment that are compatible with surfaces being cleaned, as recommended by manufacturer of material. All products must be biodegradable/environmentally safe.
- B. All products to be approved by owner before use.

PART 3 – EXECUTION

3.1 PROGRESS CLEANING

- A. General: Do not allow accumulation of scrap, debris, waste material, and other items not required for construction of this Work.
 - 1. Completely remove all scrap, debris, and waste material from job site and dispose of in a legal manner.
 - 2. Provide adequate storage for items and waste to be removed from job site, observing requirements for fire and environmental protection.
- B. Storage Areas: Maintain stored items in an orderly arrangement allowing maximum access, which does not impede traffic or drainage.
 - 1. Inspect arrangement of stored materials weekly. Restack, tidy, or otherwise service all arrangements.
- C. Site and Structures:
 - 1. Inspect site and structures weekly, and more often if necessary, and pick up all scrap, debris, and waste material.
 - a. Remove such items to a place designated for their storage. Maintain site in a neat and orderly condition.

2. Sweep area of construction clean, including interior areas if affected, as often as necessary to maintain a clean environment.
 - a. "Clean," for purpose of this subparagraph, shall be interpreted as meaning free from dust and other material capable of being removed by use of reasonable effort and a hand-held broom.
3. As required prior to installation of succeeding materials, clean structures or applicable portions thereof to degree of cleanliness recommended by manufacturer of succeeding material.

3.2 FINAL CLEANING

- A. "Final Cleaning," for purpose of this Section, and except as may be specifically provided elsewhere, shall be interpreted as meaning level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials.
- B. Prior to Substantial Completion, remove all tools, surplus materials, equipment, scrap, debris, and waste from Project site.
- C. Broom-clean paved areas on site and public paved areas at approaches to site.
- D. Exterior Surfaces:
 1. Visually inspect exterior surfaces and remove all traces of soil, waste materials, smudges, and other foreign matter.
 2. Hose down entire exterior surfaces of structure if necessary to achieve a uniform degree of cleanliness.
- E. Interior Surfaces:
 1. Visually inspect interior surfaces affected by construction and remove all traces of soil, waste materials, smudges, and other foreign matter.
 2. Remove paint droppings, spots, and stains.
 3. Clean both sides of glass surfaces.

END OF SECTION

PART 1 – GENERAL

1.1 WASTE MANAGEMENT GOALS

- A. Waste materials produced as a result of this project shall be reused or recycled to minimize impact of construction waste on landfills and to minimize expenditure of energy and cost in fabricating new materials.

1.2 WASTE MANAGEMENT PLAN

- A. Reuse or recycle debris generated as a result of work performed on project when practicable and cost effective.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 ON-SITE MATERIALS SORTING AND STORAGE DURING CONSTRUCTION

- A. Verify recycling facilities or waste processor requirements for preparation of materials to be accepted and to what degree materials can be contaminated.
- B. Recycle the following waste materials:
 - 1. Metals (ferrous and non-ferrous)
 - 2. Cardboard
 - 3. Gypsum Sheathing
 - 4. Masonry
 - 5. Office paper
- C. Coordinate with local hauler to provide separate containers for recycled materials listed above.
 - 1. Subcontractors shall follow source separation requirements for each type of waste, and use appropriate on-site container for each type of waste material.
 - 2. Provide separate containers for non-recyclable materials.
- D. Rebates: Paid or credited by hauler/recycler to Contractor.
- E. Inform field personnel and subcontractors about recycling program, and continuously monitor program to verify proper source separation and to avoid contamination of recyclable materials.
- F. Recycling Processors and Facilities:
 - 1. Comprehensive list of recycling facilities in Eugene Oregon area can be obtained from the Planning and Development Department of the City of Eugene at (541) 682-5541.

END OF SECTION

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for Contract closeout including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Project record documents.
 - 3. Warranties.
- B. Closeout requirements for specific construction activities are included in the appropriate Sections.
- C. Related Sections:
 - 1. Section 012000: Price and Payment, for requirements for Applications for Payment for Substantial and Final Completion.
 - 2. Section 015000: Temporary Facilities and Controls, for removal of temporary facilities.
 - 3. Section 017400: Cleaning, for final cleaning requirements.

1.2 SUBSTANTIAL COMPLETION

- A. Prior to requesting construction observation for determining date of Substantial Completion, complete the following.
 - 1. Prepare a list of items to be completed and corrected (Contractor's Punch List), the value of items on the list, and reasons why the Work is not complete.
 - 2. Advise the 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, construction photographs, damage or settlement surveys, property surveys, and similar final record information.
 - 6. Deliver tools, spare parts, extra stock, and similar items.
 - 7. Make final changeover of permanent locks and transmit keys to Owner. Advise Owner's personnel of changeover in security provisions.
 - 8. Complete startup testing of systems and instruction to Owner's personnel.
 - 9. Submit test/adjust/balance records.
 - 10. Terminate and remove temporary facilities from the site, along with mockups, construction tools, and similar elements.
 - 11. Complete final cleanup requirements required in Section 017400.
 - 12. Touch up and otherwise repair and restore marred, exposed finishes, including touchup painting.
- B. Construction Observation: Submit a written request for Architect's observation of the Work for completion of Construction Contract requirements to establish date of Substantial Completion.
 - 1. On receipt of request, the Architect will either proceed with observation of the Work, or without completing process of observation, advise Contractor that based on limited observation, the Work is not sufficiently complete for Substantial Completion.

2. Architect will prepare the Certificate of Substantial Completion after completion of observation of the Work, or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate can be issued.
 - a. Architect and owner will perform a final observation of the Work when assured by Contractor that deficiencies identified in previous observation have been completed or corrected.
 - b. If additional observation(s) of the Work is required to establish Substantial Completion, the Owner will charge the Contractor to reimburse Architect for time and expenses.
 - c. Results of the completed construction observation will form the basis of requirements for final acceptance.
3. Owner will allow Contractor no longer than 30 calendar days from Date of Substantial Completion to remedy deficiencies.

1.3 FINAL COMPLETION

- A. Prior to requesting construction observation for determining date of Final Completion, complete the following.
 1. Submit a final Application for Payment, according to requirements of Section 012900.
 2. Submit certified copy of Architect's Substantial Completion list of deficient items to be completed or corrected, endorsed and dated by Architect, that states that each item has been completed, corrected, or otherwise resolved for acceptance.
 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Construction Observation: Submit a written request for Architect's observation of the Work for completion of Construction Contract requirements for final acceptance.
 1. On receipt of request, the Architect will either proceed with observation of the Work and specifically the Substantial Completion list of deficient items to be completed or corrected, or advise the Contractor of unfulfilled requirements.
 2. Architect will prepare the final Certificate for Payment after completion of observation of the Work, or will notify Contractor of Contract requirements that must be completed or corrected before certificate can be issued.
 - a. Architect and owner will perform a final observation of the Work when assured by Contractor that deficiencies identified in previous observation(s) have been completed or corrected.
 - b. If additional observation(s) of the Work is required to establish Final Completion, the Owner will charge the Contractor to reimburse Architect for time and expenses.

1.4 LIST OF DEFICIENT ITEMS (PUNCH LIST)

- A. 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 applicable, areas disturbed by Contractor that are outside the limits of construction.
 1. Organize list of spaces in sequential address order, starting at front elevation moving around building in a counter-clockwise direction.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:

- a. Project name.
- b. Date.
- c. Name of Architect.
- d. Name of Contractor.
- e. Page number.

1.5 PROJECT RECORD DOCUMENTS

- A. General: Do not use Project Record Documents for construction purposes; protect from deterioration and loss.
- B. Record Drawings: Maintain and submit one set of black line white prints of Contract Documents or Record CAD Drawings required.
 1. Mark the Record Drawings to show the actual installation and construction where installation or construction varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is installer, subcontractor, or similar entity, to prepare the marked-up Record Drawings.
 - a. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 2. Mark record sets with erasable red-colored pencil, clearly describing change by graphic line and note. Use other colors to distinguish between changes for different categories of the Work at the same location.
 - a. Call attention to entries by a "cloud" drawn around areas affected.
 3. Mark important additional information that was either shown schematically or omitted from original Drawings.
 - a. Conversion of Schematic Layouts: Show on Record Drawings, by dimension accurate to within one inch, centerline of each run of items shown schematically on Drawings. Clearly identify item by accurate note such as "cast iron drain", "galv. water", and the like. Show, by symbol or note, vertical location of item ("under slab", "in ceiling plenum", "exposed", and the like). Relate by identification descriptive to Specifications.
 - b. Show final location of electrical fixtures.
 4. Note Construction Change Directive numbers, Change Order numbers, alternate numbers, and similar identification where applicable.
 5. Identify and date each Record Drawings; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets with identification.
- C. Record Specifications: Submit one complete copy of Project Specifications, including addenda and contract modifications.
 1. Mark copy to indicate the actual product installation where installation or from that indicated in Specifications, addenda, and contract modifications.
 2. Mark copy with proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Note related Change Orders and other modifications, where applicable.
- D. Miscellaneous Record Submittals: Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind miscellaneous records and identify each in same format as specified for Operation and Maintenance Manuals, ready for continued use and reference.
 1. One set of evidence of compliance with requirements of governmental agencies having jurisdiction including, but not necessarily limited to:
 - a. Certificates of Inspection.

- b. Certificates of Occupancy.
 - 2. One set of certificates of insurance for products and completed operations.
 - 3. One set of evidence of payment and release of liens.
 - 4. One copy of list of Subcontractors, service organizations, and principal vendors, including names, addresses, and telephone numbers where they can be reached for emergency service at all times including nights, weekends, and holidays.
- 1.6 WARRANTIES
- A. Submit one set of warranties, organized into an orderly sequence based on the table of contents of the Project Manual, in same format as specified for Operation and Maintenance Manuals.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION (Not Applicable)

END OF SECTION

PART 1 – GENERAL

1.1 SECTION REQUIREMENTS

- A. Items indicated to be removed and salvaged remain Owner's property. Remove, clean, and deliver to Owner's designated storage area.
- B. Comply with EPA regulations and hauling and disposal regulations of authorities having jurisdiction.
- C. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's occupancy will not be disrupted.
- D. It is not expected that hazardous materials will be encountered in the Work. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Consultant and Owner. Owner will remove hazardous materials under a separate contract.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.1 DEMOLITION

- A. Maintain services/systems indicated to remain and protect them against damage during selective demolition operations. Before proceeding with demolition, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of the building.
- B. Locate, identify, shut off, disconnect, and cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
- C. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- D. 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 or construction being demolished.
- E. Provide temporary weather protection to prevent water leakage and damage to structure and interior areas.
- F. Protect walls, ceilings, floors, and other existing finish work that are to remain. Erect and maintain dustproof partitions.
- G. 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.
- H. Promptly remove demolished materials from Owner's property and legally dispose of them. Do not burn demolished materials.

END OF SECTION

PART 1 – GENERAL

1.1 SUMMARY

A. Scope of Work:

1. Remove and replace brick veneer to match existing in locations indicated in construction documents. Ensure that removal of brick does not disturb adjacent areas of brick that is integral with the exterior walls of Lillis Hall, or other existing brick to remain in place as outlined in the Contract Documents.
2. Replacement cavity wall construction for veneer:
 - a. Face brick.
 - b. Mortar and grout.
 - c. Masonry ties and anchors.
 - d. Embedded flashing.
 - e. Miscellaneous masonry accessories.

B. Related Sections:

1. Section 071900: Water Repellents
2. Section 076200: Flashing and Sheet Metal.
3. Section 079200: Joint Sealants.
4. Section 079203: Silicone Sealant.

1.2 SUBMITTALS

A. Product Data, for each type of product indicated.

B. Shop Drawings, for the following:

1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.
2. Fabricated Flashing: Detail corner units, end-dam units, and other special applications.

C. Samples: Two clay masonry units of each size, color, design and texture specified.

D. Material Certificates: Include statements of material properties indicating compliance with requirements including compliance with standards and type designations within standards. Provide for each type and size of the following:

1. Masonry units.
 - a. Include size-variation data verifying that actual range of sizes falls within specified tolerance.
 - b. Include material test report for efflorescence according to ASTM C 67.
2. Cementitious materials. Include brand, type and name of manufacturer.
3. Pre-blended, dry mortar mixes. Include description of type and proportions of ingredients.

E. Mix Designs: For each type of mortar and grout, including description of type and proportions of ingredients.

1.3 QUALITY ASSURANCE

A. Use skilled masons trained and experienced in necessary crafts and familiar with requirements and methods needed for proper performance of work of this Section.

B. Source Limitations for Masonry Materials: Obtain exposed masonry units of a uniform texture and color, or a uniform blend with the ranges accepted for these characteristics, through from one source from a single manufacturer for each product required.

- C. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from a single manufacturer for each cementitious component and from one source or producer for each aggregate.
- D. Comply with recommendations of Brick Institute of America (BIA) Technical Notes.

1.4 REGULATORY REQUIREMENTS

- A. Comply with requirements of Chapter 21 of the Oregon Structural Specialty Code (OSSC).
 - 1. Comply with seismic design requirements of OSSC Section 2106 for Seismic Design Category D.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units above ground on level platforms in a dry location.
- B. If not stored in an enclosed location, cover tops and sides with waterproof sheeting to protect against wetting prior to use. If units become wet, do not install until they are dry.
- C. Protect from damage.
- D. Store cementitious materials above ground, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- E. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- F. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress. Work under cover during rainy weather.
 - 1. Prevent grout, mortar, and soil from staining face of exposed masonry. Immediately remove grout, mortar, and soil that come in contact with such masonry.
- B. Cold-Weather Requirements: Comply with cold-weather construction requirements contained in ACI 530.1, in Section 2104.3, and the following:
 - 1. Do not place unit masonry when air temperature is below 40 degrees F, unless using special procedures approved by Architect.
 - 2. Do not use frozen materials or materials mixed or coated with ice or frost.
 - 3. Do not build on frozen substrates.
 - 4. Remove and replace unit masonry damaged by frost or by freezing conditions.
- C. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1.
- D. Protect masonry construction from direct exposure to wind and sun when erected in ambient air temperatures exceeding 90 degrees F in shade, with relative humidity less than 50 percent.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Brick: Subject to compliance with requirements, provide unit masonry products from one of the following:
 - 1. Mutual Materials Co.

2. Interspace.
 3. Interstate Brick.
 4. Owner and Architect approved equal.
- B. Joint Ties and Anchors:
1. Dayton Superior Corporation, Dur-O-Wall Division.
 2. Hohmann & Barnard, Inc.
 3. Owner and Architect approved equal.
- C. Brick Sealer: Acceptable manufacturers:
1. BASF.
 2. Fabrikem.
 3. Prosoco.
 4. Diedrich Technologies, Inc.
 5. Tamms
 7. Owner and Architect approved equal.
- D. Substitutions: Submit according to requirements of Section 012500.

2.2 BRICK

- A. Face Brick: Comply with ASTM C 216, Grade SW, Type FBS.
1. Unit Compressive Strength: ASTM C 216; Minimum average net-area compressive strength of 3000 psi at 28 days.
 2. Initial Rate of Absorption: Less than 30 g/30 sq. in. per minute when tested in accordance with ASTM C 67.
 3. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated: "not effloresced".
- B. Size: 2-1/2 by 3-1/2 by 7-1/2 inches Standard; verify to match existing.
1. Provide special shapes for applications where stretcher units cannot accommodate special conditions, and where special shapes for applications produced by sawing would result in sawed surfaces being exposed to view.
 2. Soldier course: 2-1/2 by 3-1/2 by 11-1/2 inches, Norman; verify to match existing
- C. Face Texture and Color: Smooth, Inca. Darker accent brick: Smooth, Mauna Loa.

2.3 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C 150, Type I, except Type III may be used for cold-weather construction. Provide natural color.
- B. Hydrated Lime: ASTM C 207; Type S.
- C. Portland Cement-Lime Mix: Packaged blend of portland cement complying with ASTM C 150, Type I or Type III, and hydrated lime complying with ASTM C 207, Type S.
- D. Aggregate for Mortar: ASTM C 144. For mortar exposed to view, use washed aggregate consisting of natural sand or crushed stone.
- E. Aggregate for Grout: ASTM C 404.
- F. Admixtures: Integral Liquid Water Repellent for Exterior Walls; "Dry-Block Mortar Admixture" by W.R. Grace, or approved.
1. Do not use other admixtures unless specifically approved in advance by Architect.
 2. Do not use calcium chloride in mortar or grout.
- G. Water: Potable.
- H. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides.

1. Custom.
2. Davis Colors; True Tone Mortar Colors.
3. Solomon Grind-Chem Services, Inc.; SGS Mortar Colors.
4. Sonneborn Sonobrite.

2.4 REINFORCING TIES AND ANCHORS

- A. Masonry Joint Reinforcing, General: ASTM A 951; hot-dip galvanized steel wire.
- B. Masonry Joint Reinforcement for Veneers Anchored with Seismic Veneer Anchors: Single 0.188 inch diameter, hot-dip galvanized steel continuous wire.
- C. Seismic Veneer Anchors:
 1. Dayton Superior Corporation, Dur-O-Wall Division; D/A 213S.
 - a. Fasteners: (2) D/A 808.
 2. Hohmann & Barnard, Inc.; DW-10 Anchor and TeXroseal with Byna-Tie and Seismicclip.
 - a. Fasteners: (2) Self-Drilling Self-Tapping Screws; #10 – 16 x 1-1/2 inch Hex Washer Head, zinc plated.

2.5 MASONRY ACCESSORIES

- A. Preformed Control Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805, or PVC, complying with ASTM D 2287, Type PVC-65406.
- B. Cavity Wall Flashing/Drainage System, the following, or approved: 40 mil membrane compatible with fluid applied water resistive barrier materials, 16 ga. Stainless steel termination bar, 26 ga 304 stainless steel drip edge, polyester woven mesh mortar collection/weep.
 1. Mortar Net USA, Ltd.; "TotalFlash."
- C. Sheet Metal Flashing: Provide metal flashing as follows complying with SMACNA's "Architectural Sheet Metal Manual" and as specified in Section 076000.
 1. Stainless Steel: ASTM A 240, Type 304, minimum 0.019 inch thick.
 2. Minimum 24-gauge or 26-gauge sheet metal; location dependent, see Summary of Work and Drawings for locations.
- D. Veneer Cavity Fill Material: 10 inches high by thickness applicable to cavity width.
 1. Mortar Net USA, Ltd.; "Mortar Net."
- E. Preformed Weeps: Free-draining mesh made from polyethylene strands with integral insect screen, full height and width of head joint and depth 1/8 inch less than depth of outer wythe; color as selected to match masonry color.
 1. Mortar Net USA, Ltd.; "Mortar Net Weep Vents."
- F. Sealant: As specified in Section 079203; color as selected by Architect.

2.6 MASONRY CLEANER

- A. Proprietary acidic cleaner for new masonry; refer to University of Oregon Brick Wash Guidelines attached at the end of this document.

2.7 MORTAR AND GROUT MIXES

- A. Mortar:
1. Type S, in accordance with ASTM C 270, BIA Technical Notes 8A, and IBC Table 2103.7(1), Proportion Specification.
 2. Minimum Compressive Strength f_m at 28 Days: 1,800 psi when tested in accordance with ASTM C 270.
 - a. Use Type M with minimum compressive strength of f_m of 2,500 psi at 28 days for masonry at and below grade in contact with earth.
 3. Proportions:
 - a. 1 part portland cement to 1/4 part hydrated lime and 3 parts sand by volume.
 - b. For exterior walls add 2 lbs. minimum of waterproofing admixture per bag of cement, or as recommended by manufacturer.
 - c. Accurately measure; shovel measurement not allowed.
 - d. For mineral oxide pigments, do not use more than 10 percent.
 4. Mechanically mix in a batch mixer for not less than 3 minutes, using only sufficient water to produce a mortar that is spreadable and of a workable consistency.
 5. Retemper mortar with water as required to maintain high plasticity.
 - a. Discard and do not use mortar that is unused after 2-1/2 hours following initial mixing.
 6. Pigmented Mortar: Pigments shall not exceed 10 percent of portland cement by weight.
- B. Grout:
1. Fine or coarse grout in accordance with ASTM C 476 and IBC Table 2103.10.
 2. Minimum Compressive Strength f_m at 28 Days: 2,000 psi. when tested in accordance with ASTM C 1019.
 3. Provide "fine grout" or "coarse grout" as required by job conditions for dimensions of grout spaces and pour height.
 4. Proportions:
 - a. For "fine grout", one part portland cement to 2-1/4 parts minimum to 3 parts maximum of damp loose sand, with sufficient water to achieve fluid consistency. Provide water-reducing admixture.
 - b. "Fluid consistency" is interpreted as meaning as fluid as possible for pouring in place without segregation.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify conditions comply with requirements for installation tolerances and other conditions affecting performance of work.
1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 COORDINATION

- A. Coordinate with other trades as required to assure proper and adequate provision in work of those trades for interface with work of this Section.

3.3 INSTALLATION

- A. Install work of this Section in accordance with construction documents and manufacturer's or referenced standard's recommended installation procedures.
- B. General:
1. Lay only dry masonry units. Wet brick before laying if initial rate of absorption exceeds 30 g/30sq. in. per minute when tested per ASTM C 67.
 2. Use masonry saws to cut and fit masonry units.
 3. Set units plumb, true to line, and with level courses accurately spaced and joints uniform.
 4. Clean top surface of foundation free from dirt, debris, and laitance.
 5. Accurately fit units to plumbing, ducts, openings, and other interfaces, neatly patching holes.
 6. Keep walls continually clean, preventing grout and mortar stains.
 7. Provide expansion joints where shown, or where not shown, at 32 feet o.c. maximum where no change occurs in wall plane. Do not exceed isolated masonry panel's length to height (aspect) ratio of 1-1/2 maximum.
 - a. Install sealant at control joints.
- C. Bond: Unless otherwise shown, provide running bond with vertical joints located at center of masonry units in alternate course below and above.
- D. Do not use chipped, cracked, or broken units. If such units are discovered in finished work, Architect will require their immediate removal and replacement with new units at no additional cost to Owner.
- E. Laying Up:
1. Place units in mortar with full shoved bed and head joints.
 2. Provide uniform joints approximately 1/2 inch wide; verify to match existing.
 3. Align vertical cells of hollow units to maintain a clear and unobstructed system of flues.
 4. Temporarily stop work and rack back each course. Tothing is not permitted. Hold racking to an absolute minimum.
 5. Butter heads of both units where adjacent, to make wall watertight.
 6. Units to be firm when in place. If loose or crooked, completely remove unit and mortar and replace.
- F. Anchoring Masonry Veneers:
1. Anchor masonry veneer to metal studs.
 2. Fasten each anchor section through sheathing to studs with 2 metal fasteners of type indicated.
 3. Embed tie section in masonry joints.
 4. Locate anchor section relative to course to allow maximum vertical differential movement of tie up and down.
 5. Install one wall tie for each 1.67 square feet of wall area spaced as follows, unless otherwise required by building code for wind and seismic loads.
 - a. Space anchors not more than 24 inches on center vertically and 16 inches on center horizontally, unless evidence is otherwise submitted to show compliance with building code.
 6. Install additional anchors within 12 inches of openings spaced at intervals around perimeter not exceeding 36 inches.
- G. Tooling:
1. Tool joints to a dense, smooth surface.

2. Unless otherwise noted, provide joints of "concave" profile.
 3. Tool joints to make weathertight.
- H. Pointing:
1. Pointing: Remove mortar fins and loose mortar.
 2. Fill cracks and bee holes.
- I. Sealant Joints:
1. Provide ½ inch wide minimum by ¼ inch deep continuous bead of sealant with backer rod around openings and at expansion joints in masonry, unless otherwise noted.
 2. Sand sealant joints to match adjacent mortar color.
- J. Flashing:
1. Install flexible thru-wall sheet flashing starting 1/2 inch inside of exterior face of masonry, through veneer, and up face of sheathing minimum of 8 inches and behind weather barrier.
 2. Install flexible thru-wall sheet flashing at lintel and shelf angles a minimum of 4 inches into masonry at each end. Install preformed end dams where available from membrane manufacturer of product selected for flexible flashing.
 3. Install metal flashing where indicated in drawings and Summary of Work.
- K. Install preformed veneer cavity fill material on top of thru-wall flashing to spatter mortar droppings and to maintain drainage according to manufacturer's instructions.
- L. Weeps and Vents:
1. Install preformed weeps vents in head joints of first course of masonry immediately above embedded flashing spaced at 24 inches o.c., full-height and full-width of joint.
 2. Install preformed weep vents in vertical head joints at top of each continuous cavity spaced at 24 inches o.c., full-height and full-width of joint.
- 3.4 CLEANING, ADJUSTMENT AND PROTECTION
- A. Inspection and adjustment:
1. Upon completion of work of this Section, make a thorough inspection of installed masonry and verify that units have been installed in accordance with provisions of this Section.
 2. Make necessary adjustments.
- B. Protect against dislodgement until mortar has set.
- C. Protect work of others from damage.
- D. Clean, without damaging, masonry surfaces.
1. Mask to protect materials that could be damaged by cleaning agents.
 2. Follow cleaning solution manufacturer's instructions.
 3. Rinse cleaning solution with low-pressure water (120 psi maximum).
 4. Do not use muriatic acid cleaning solutions.

University of Oregon Construction Project Sanitary Sewer Line Flushing Guidelines

All construction related discharges to the sanitary sewer must be preapproved by the City of Eugene.

At least five (5) working days prior to the anticipated discharge, the following information must be provided to the EHS office to obtain approval from the City.

1. Point of discharge into the sanitary sewer – Manhole # and Street Address
2. The date(s) and time(s) of proposed discharge(s)
3. The volume and duration of each discharge (*possible fees involved*)
4. Flow rate in gallons per minute
5. MSDSs for all know chemicals and know concentrations (e.g. line conditioner - *1 gal line conditioner per 1,000 gal water*)
6. List of pollutants known to be present due to the nature of discharge (pipe cutting oil, adhesives, etc)

Provide this information by email to:

Doug Brooke (dougb@uoregon.edu) 541 346-8385
Jeremy Chambers (jchamber@oregon.edu) 541 346-2865
Craig Biersdorff (craigb@uoregon.edu) 541 346-2348

EHS will obtain approval for the discharge from the City and notify the PM and the contractor when the request has been approved.

Plan ahead, the City may:

- Require sampling prior to discharge
- Require that the discharge be metered to the sewer over multiple days (molybdate)
- Need to verify the discharge point

Line Flushing:

- The City requires that the pH of the discharge is sampled at least three times there be a means to collect samples of the discharge
- There must be a means to collect water samples during the flushing activities.
- The pH of the discharge must be monitored with a 2-point calibrated pH meter.
 - EHS may be able to provide assistance on collecting pH data.
- pH meter must be calibrated prior each flushing activity

END OF SECTION

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Section includes requirements for cold-formed metal framing systems.

1.2 SUBMITTALS

- A. Product data: Submit manufacturer's product information and installation instructions for each item.
- B. Shop drawings: Stamped by a Registered Structural Engineer in the state of Oregon.
- C. Samples: Two sets of materials and manufactured products used in Work of this Section.
- D. Comply with AISC's "Specification for Structural Steel Buildings - Allowable Stress Design and Plastic Design," RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts," and AWS D1.1/D1.1M, "Structural Welding Code - Steel."

1.3 QUALITY ASSURANCE

- A. Manufacturer: Member of Steel Stud Manufacturers' Association and producing ICC-ES certified structural components.

PART 2 - PRODUCTS

2.1 STRUCTURAL STEEL

- A. Provide manufacturer's steel runners, clip angles, blocking lintels, reinforcements, shoes, fasteners and accessories as recommended by the manufacturer for applications indicated, as needed to provide a complete metal framing system for each type of framing required.
- B. Metal framing components: cold formed, not less than 16 gauge; provide heavier gauges where required. ASTM A 1008 structural quality steel sheet with ASTM A 653 G90 galvanized coating.
 - 1. Studs: ASTM C 955 Manufacturer's standard load-bearing "C"-shaped 14-gauge and 16-gauge steel studs of with 1.625" flange and flange return lip unless otherwise indicated; stud size and interval to match existing.
 - 2. Tracks: Manufacturer's standard C-shape sections of size to match existing, 14-gauge and 16-gauge components.

2.2 ACCESSORIES

- A. High-Strength Bolts, Nuts, and Washers: To match existing., Type 1, heavy hex steel structural bolts, heavy hex carbon-steel nuts; and hardened carbon-steel washers.
- B. Track Gasket: Compressible, closed-cell strip of polyethylene or polystyrene to isolate metal track from concrete slab.
- C. Anchor Rods: ASTM F 1554, Grade 36.
 - 1. Nuts: hex carbon steel.
 - 2. Plate Washers: carbon steel.
 - 3. Washers: hardened carbon steel.
- D. Primer: Fabricator's standard lead- and chromate-free, nonasphaltic, rust-inhibiting primer..
- E. Grout: ASTM C 1107, nonmetallic, shrinkage resistant, factory packaged.

2.3 FABRICATION

- A. Fabricate and assemble structural steel in shop to greatest extent possible. Fabricate according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and its "Specification for Structural Steel Buildings - Allowable Stress Design and Plastic Design."
- B. Shop Priming: Prepare surfaces according to SSPC-SP 2, "Hand Tool Cleaning" or SSPC-SP 3, "Power Tool Cleaning." Shop prime steel to a dry film thickness of at least 1.5 mils. Do not prime surfaces to be embedded in concrete or mortar or to be field welded.
- C. Fastenings: weld similar components; mechanically fasten or weld dissimilar components as standard with fabricator.

PART 3 - EXECUTION

3.1 ERECTION

- A. Set structural steel accurately in locations and to elevations indicated and according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and its "Specification for Structural Steel Buildings - Allowable Stress Design and Plastic Design."
- B. Base and Bearing Plates: Clean bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.
 - 1. Set base and bearing plates for structural members on wedges, shims, or setting nuts.
 - 2. Weld plate washers to top of base plate.
 - 3. Snug-tighten anchor rods after supported members have been positioned and plumbed. Cut off protruding wedges or shims flush with edge of plate before packing with grout.
 - 4. Promptly pack grout solidly between bearing surfaces so no voids remain. Neatly finish exposed surfaces; protect grout and allow it to cure.
- C. Align and adjust various members forming part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be

in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.

- D. Do not use thermal cutting during erection unless approved by Architect.
- E. Supplementary Framing, Blocking and Bracing: Provide where walls are indicated to support fixtures, equipment, services, casework, heavy trim and/or furnishings or similar work requiring attachment to the wall or partition.
- F. Deflection Heads and Movement Joints: provide as necessary for normal movement of structure in accordance with manufacturer's recommendations.
- G. High-Strength Bolts: Install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 - 1. Joint Type: To match existing.
- H. Weld Connections: Comply with AWS D1.1/D1.1M for welding procedure specifications, tolerances, appearance, and quality of welds and for methods used in correcting welding work.

END OF SECTION

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fiberglass-mat faced, moisture and mold resistant gypsum sheathing.

B. Related Sections:

1. Section 051200 Structural Steel Framing.
2. Section 072700: Weather Resistant Barriers.
3. Section 076000: Flashing and Sheet Metal.

1.2 SUBMITTALS

- A. Product Data:** Manufacturer's specifications and installation instructions for each product specified.

1.3 WARRANTY

- A. Provide products that offer twelve months of coverage against in-place exposure damage (delaminating, deterioration and decay).**
- B. Manufacturer's Warranty:**
1. Five years against manufacturing defects.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Stack panels flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.**

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Georgia –Pacific Gypsum LLC or owner approved equal.**
1. Fiberglass-Mat Faced Gypsum Sheathing: DensGlass Sheathing.
 2. Owner and Architect approved equal.

2.2 ACCESSORIES

- A. Screws: ASTM C1002, corrosion resistant treated.**

PART 3 – EXECUTION

3.1 EXAMINATION

A. Verification of Conditions:

1. Inspection: Verify that project conditions and substrates are acceptable, to the installer, to begin installation of work of this section.

3.2 INSTALLATION

- A. General: In accordance with GA253, ASTM C1280 and the manufacturer's recommendations.
 - 1. Manufacturer's Recommendations:
 - a. Current "Product Catalog", Georgia-Pacific Gypsum.
 - b. Approved substitution manufacturer installation instructions.
- 3.3 PROTECTION
- A. Protect gypsum board installations from damage and deterioration until date of Substantial Completion.

END OF SECTION

PART 1 – GENERAL

1.1 SUMMARY

- A. Section includes water-repellents for the following vertical surfaces:
 - 1. Brick masonry.
- B. Related Sections:
 - 1. Section 016000: Product Requirements.
 - 2. Section 042113: Brick Masonry
 - 3. Section 079200: Joint Sealants.
 - 4. Section 079203: Silicone Sealants

1.2 SUBMITTALS

- A. Product Data: Include manufacturer's specifications, surface preparation and application instructions, recommendations for water repellents for each surface to be treated, protection and cleaning instructions, and chemical properties including percentage of solids and volatile organic compound (VOC) content.
 - 1. Include data substantiating that materials are recommended by manufacturer for applications indicated and comply with requirements.
- B. Manufacturer Certificates: Signed by manufacturer certifying that water repellents comply with requirements, including regulatory requirements.
- C. Field Quality Control Test Reports.
- D. Evidence that Applicator has been trained and currently approved by manufacturer for application of manufacturer's products.
- E. Warranty: Copy of special warranty specified in this Section.

1.3 QUALITY ASSURANCE

- A. Use skilled workers trained and experienced in necessary crafts and familiar with requirements and methods needed for proper performance of Work of this Section.
 - 1. Applicator (actual person applying water repellent) shall have been trained and currently approved by manufacturer for application of manufacturer's products.

1.4 REGULATORY REQUIREMENTS

- A. Comply with regulations of governmental authorities having jurisdiction concerning use of materials with VOCs.
 - 1. Products containing 1,1,1 trichloroethane are not allowed.

1.5 PRE-INSTALLATION CONFERENCE

- A. Schedule meeting minimum one week prior to start of application. Include manufacturer's technical representative in meeting. Comply with requirements of Section 013100.
- B. Agenda: Schedule, site conditions, dilution ratios for concentrates, and rate of application determined by water take-up test.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver the materials to the job site in the manufacturer's unopened containers with all labels intact and legible at time of use.

- B. Protect liquids from freezing.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Limitations: Proceed with application only when the following existing and forecasted weather and substrate conditions permit water repellents to be applied according to manufacturer's written instructions and warranty requirements:
 1. Ambient temperature is above 40 degrees F during and 24 hours after installation.
 2. Rain or snow is not predicted within 24 hours.
 3. Application proceeds more than 24 hours after surfaces have been wet.
 4. Substrate is not frozen.
 5. Ambient surface temperature is not above 100 degrees F.
 6. Masonry mortar joints have cured for more than 28 days.

1.8 WARRANTY

- A. Special Warranty: Provide a written warranty covering materials and labor in which manufacturer and applicator agree to repair or replace materials that fail to maintain water repellency as follows within a 10 year period from date of Substantial Completion:
 1. 1.0 mil/20 minutes or greater (60 mph wind-driven rain equivalent) using a water uptake tube meeting the requirements of RILEM Method II.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Water Repellents for Brick: Subject to compliance with specification requirements; provide one of the following:
 1. Diedrich Technologies, Inc.; 303-S.
 2. BASF Building Systems; Enviroseal 20.
 3. Fabrikem; Fabrishield 761.
 4. ProSoCo, Inc; Weather Seal Siloxane WB Concentrate.
 5. Tamms; Chemstop WB Heavy Duty.
- B. Substitutions: Under provisions of Section 012500.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify substrates are acceptable to receive water repellent treatment.
 1. Do not proceed until unsatisfactory conditions have been corrected.
- B. Verify masonry mortar substrates have cured a minimum of 28 days.
- C. Verify sealants in joints adjacent to surfaces to receive water repellent treatment have been installed and cured.
 1. Application of water repellent may precede sealant application only if sealant adhesion and compatibility have been tested and verified using substrate, water repellent, and sealant materials identical to those used in the work.

3.2 PREPARATION

- A. Clean substrate of substances that might interfere with penetration or performance of water repellents. Test for moisture content, according to repellent manufacturer's written instructions, to ensure that surface is dry enough.
 1. Clay Brick Masonry: Clean per ASTM D 5703.

2. Formed Concrete: Remove oil, curing compounds, laitance, and other substances that could prevent adhesion or penetration of water repellents.
- B. Verify cracks that exceed 1/64 inch wide have been filled with pointing mortar.
- C. Test for pH level, according to water repellent manufacturer's written instructions, to ensure chemical bond to silicate materials.
- D. Protect adjoining work from spillage, over-spraying or blow-over of water repellent.
 1. Cover adjoining and nearby surfaces of aluminum and glass if there is a possibility of water repellent being deposited on surfaces.
 2. Cover live plants and grass.
 3. Cover vehicles.
- E. Test Application:
 1. Before performing water repellent work, including bulk purchase and delivery of products, prepare a 3 foot square area on an unobtrusive location, or separate sample, of each substrate in a manner acceptable to Architect, to demonstrate the final visual, physical, and chemical effect of planned installation.
 2. Run a RILEM uptake test, according to RILEM Test Method No. 11.4, on the treated area after sample has cured for five days. Test both brick surface and mortar joint.
 3. Verify that application of water repellent coatings will produce no surface stains or discoloration. If surface stains or discoloration are noted, proceed only as directed by Architect.
 4. If test is acceptable, coverage rate used in test area must be used on entire project.
 5. Accepted test application will be used as a standard for judging completed work.

3.3 APPLICATION

- A. Apply coating in accordance with manufacturer's written instructions.
- B. Apply to exposed exterior masonry unit surfaces in two continuous, uniform coats.
 1. Apply uniformly at rate recommended by manufacturer for warranty period specified for substrate receiving water repellent.
 2. Keep a wet edge at all times until complete surface plane has been sprayed.
 3. Comply with manufacturer's instructions for limitations on drying time between coats.

3.4 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory authorized service representative to inspect the substrate before application of water repellent and to instruct applicator on the product and application method to be used.
 1. Furnish a written certification that surface preparation method and final condition comply with the warranty.
 2. Furnish results of test area absorption on each type of substrate. Test results shall determine application rate.
- B. Spray Test: After water repellent has cured, spray coated surfaces with water.
 1. After surfaces have adequately dried, recoat surfaces that show water absorption.
 2. Run random RILEM tests, according to RILEM Test Method No. 11.4, on each elevation of structure.
 3. Continue application of water repellent treatment until absorption rate meets requirements of special warranty.

3.5 CLEANING

- A. Remove protective coverings from adjacent surfaces and other protected areas.
- B. Immediately clean water repellent from adjoining surfaces and surfaces soiled or damaged by water repellent application as work progresses.
 - 1. Comply with manufacturer's written cleaning instructions.
- C. Repair damage caused by water repellent application.

END OF SECTION

2.2 BLANKET INSULATION MATERIALS

A. Unfaced Blanket Insulation:

1. Manufacturers:

- a. Design Standard: Johns Manville UnFaced Formaldehyde-free Thermal Insulation."
- b. Other Acceptable Manufacturers, subject to compliance with formaldehyde-free requirement for insulation products:

- 1) CertainTeed Corporation.
- 2) Owens Corning.

2. ASTM C 665, Type I.
3. Type: Glass-fiber.
4. Surface Burning Characteristics: Class A, Flame spread 25 and smoke development 50 per ASTM E 84; rated as noncombustible per ASTM E 136.
5. Thickness: As required to achieve insulation-only R-Value indicated in the Drawings.
6. Acceptable Products:

- a. CertainTeed
- b. Owens Corning

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that substrates and conditions for compliance with requirements of Sections in which substrates and related work are specified and for other conditions affecting performance.

1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrates of substances harmful to insulation or vapor retarders, including removing projections capable of puncturing vapor retarders or of interfering with insulation attachment.
- B. Coordinate as required with other trades to assure proper and adequate provision in Work of this Section.

3.3 INSTALLATION, GENERAL

- A. Comply with insulation manufacturer's written instructions applicable to products and application indicated.
- B. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed at any time to ice, rain, and snow.
- C. Extend insulation in thickness indicated to envelope entire area to be insulated. Cut and fit around obstructions and fill voids with insulation. Remove projections that interfere with placement.
- D. Water-Piping Coordination: If water piping is located within insulated exterior walls, coordinate location of piping to ensure that it is placed on warm side of insulation and insulation encapsulates piping.

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes the following:
 - 1. Blanket insulation.
- B. Related Sections:
 - 1. Section 05 4000: Cold-Formed Metal Framing, for exterior wall framing to receive blanket insulation.

1.2 PERFORMANCE REQUIREMENTS

- A. Provide with materials of this Section a continuity of thermal and vapor barrier at building enclosure elements.

1.3 SUBMITTALS

- A. Product Data: For each type of building insulation and vapor retarder specified.

1.4 QUALITY ASSURANCE

- A. Engage a company using workers who are trained and experienced in necessary crafts and familiar with requirements and methods needed for proper performance of Work of this section.
- B. Fire-Test-Response Characteristics: Provide insulation and related materials with the fire-test-response characteristics indicated, as determined per test method indicated below:
 - 1. Surface-Burning Characteristics: ASTM E 84.
 - 2. Fire-Resistive Ratings: ASTM E 119.
 - 3. Combustion Characteristics: ASTM E 136.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Protect insulation materials from physical damage and from deterioration by moisture, soiling, and other sources.
- B. Store inside and in a dry location.
- C. Comply with manufacturer's instructions for handling, storing, and protecting during installation.
- D. Do not expose plastic insulation to sunlight, except to extent necessary for period of installation and concealment. Complete installation and concealment of plastic materials as rapidly as possible.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with requirements, provide products by one of the manufacturers specified in Part 2 articles
- B. Substitutions: Submit according to requirements of Section 01 2500.

3.4 PROTECTION

- A. Protect installed insulation and existing vapor retarders from damage, both from weather exposure or construction operations.
- B. Repair damaged insulation and vapor retarders.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY:

- A. Work of this section includes window and louver flashing, air and water-resistive barrier membrane system, and accessory materials for application to exterior building envelope substrates as indicated on the drawings.
- B. Related work:
 - 1. Masonry.
 - 2. Sheathing.
 - 3. Flashings.
 - 4. Joint sealants.
 - 5. Storefronts.

1.2 PERFORMANCE REQUIREMENTS:

- A. Performance requirements: Comply with the specified performance requirements and characteristics as herein specified.
- B. Performance description:
 - 1. The building envelope shall be constructed with a continuous, air and water-resistive barrier to control water and air leakage into and out of the conditioned space.
 - 2. Joints, penetrations and paths of water and air infiltration shall be made watertight and airtight.
 - 3. System shall be capable of withstanding positive and negative combined wind, stack and HVAC pressures on the envelope without damage or displacement.
 - 4. System shall be installed in an airtight and flexible manner, allowing for the relative movement of systems due to thermal and moisture variations.

1.3 SUBMITTALS:

- A. Product data: Submit manufacturer's product data including membrane and accessory material types, technical and test data, composition, descriptions and properties, installation instructions and substrate preparation requirements.
- B. Shop Drawings: Provide Installation Guideline Illustrations.

1.4 QUALITY ASSURANCE:

- A. Applicable standards, as referenced herein: ASTM International (ASTM).
- B. Manufacturer's qualifications: Air and water-resistive barrier systems shall be manufactured and marketed by a firm with a minimum of five (5) years experience in the production and sales of air and water-resistive barrier system. Manufacturers proposed for use, but not named in these specifications, shall submit evidence of ability to meet all requirements specified, and include a list of projects of similar design and complexity completed within the past five years.
- C. Installer's qualifications: The installer shall demonstrate qualifications to perform the work of this section by submitting the following:
 - 1. Verification that installer has been trained by and is approved to perform work as herein specified by air and water-resistive barrier system manufacturer.
 - 2. A firm experienced in applying similar materials on similar size and scoped projects.
 - 3. Evidence of proper equipment and trained field personnel to successfully complete the project.

- D. Inspection and testing: Cooperate and coordinate with the Owner’s inspection and testing agency. Do not cover installed products or assemblies until they have been inspected, tested and approved.
- E. Sole source: Obtain materials from a single manufacturer.
- F. Regulations: Provide products which comply with all state and local regulations controlling use of volatile organic compounds (VOC).
- G. Pre-installation conference: Prior to beginning installation of air and water-resistive barrier system, hold a pre-installation conference to review work to be accomplished.
 - 1. Contractor, Architect, installing subcontractor, membrane system manufacturer's representative, and all subcontractors who have materials penetrating membrane system or finishes covering membrane system shall be present.
 - 2. Contractor shall notify Architect at least seven days prior to time for conference.
 - 3. Contractor shall record minutes of meeting and distribute to attending parties.
 - 4. Agenda: As a minimum discuss:
 - a. Surface preparation.
 - b. Substrate condition and pretreatment.
 - c. Minimum curing period.
 - d. Special details and sheet flashing.
 - e. Sequence of construction, responsibilities, and schedule for subsequent operations.
 - f. Installation procedures.
 - g. Inspection procedures.
 - h. Protection and repair procedures.
 - i. Review and approval of all glazing applications.
 - j.

1.5 DELIVERY, STORAGE, AND HANDLING:

- A. Deliver materials and products in labeled packages. Store and handle in strict compliance with manufacturer’s instructions and recommendations. Protect from damage, weather, excessive temperatures and construction operations. Remove damaged material from site and dispose of in accordance with applicable regulations.
- B. Protect air and water-resistive barrier components from freezing and extreme heat.
- C. Sequence deliveries to avoid delays, and to minimize on-site storage.

1.6 PROJECT CONDITIONS:

- A. Weather conditions: Perform work only when existing and forecasted weather conditions are within the limits established by the manufacturer of the materials used.
 - 1. Apply at surface and ambient temperatures recommended by the manufacturer. See manufacturer’s product data sheets for best practices.
 - 2. Proceed with installation only when the substrate construction and preparation work are complete and in condition to receive the membrane system.
 - 3. Exposure limitations: Schedule work to ensure that air and water-resistive barrier system is covered and protected from UV exposure within 180 days of installation. If air and water-resistive barrier membrane system cannot be covered within 180 days after installation, apply temporary UV protection as recommended by membrane manufacturer.

1.7 WARRANTY:

- A. Manufacturer's warranty requirements: Submit manufacturer's written warranty stating that installed air and water-resistive barrier materials are watertight, free from defects in material and workmanship, and agreeing to replace defective materials and components.
- B. Warranty period: Five years from Date of Substantial Completion.

PART 2 – PRODUCTS

2.1 MANUFACTURER:

- A. PROSOCO, Inc, 3741 Greenway Circle, Lawrence, KS 66046. Phone (800) 255-4255; Fax: (800) 877-2700. E-mail: CustomerCare@prosoco.com

2.2 R-GUARD GYPPRIME WATER BASED PRIMER FOR RAW GYPSUM BOARD EDGES:

- A. Acceptable product: PROSOCO R-GUARD® GypPrime
- B. Description: GypPrime consolidates and seals the cut edges of gypsum wall boards where they are exposed in rough openings for windows and doors. The sealed edge makes a compatible surface for easy application of R-GUARD Joint & Seam Filler fiber-reinforced fill coat and seam treatment for through-wall components. GypPrime brushes or sprays on easily and is usually dry in 30 minutes.
- C. Characteristics:
 - 1. Form: milky blue liquid, mild odor
 - 2. Specific Gravity: 1.01
 - 3. pH: 8.5
 - 4. Weight per Gallon: 8.41 pounds
 - 5. Active Content: 18 percent
 - 6. Total Solids: 18 percent ASTM-D-2369
 - 7. Volatile Organic Content (VOC): less than 100 grams per Liter
 - 8. Flash point: greater than 212 degrees Fahrenheit (greater than 100 degrees Celsius) ASTM-D-3278
 - 9. Freeze Point: 32 degrees Fahrenheit (0 degrees Celsius)
 - 10. Shelf Life: 1 year in tightly sealed, unopened container

2.3 R-GUARD JOINT & SEAM FILLER FIBER REINFORCED FILL COAT AND SEAM FILLER:

- A. Acceptable product: PROSOCO R-GUARD® Joint & Seam Filler
- B. Description: Joint & Seam Filler is a high modulus, gun-grade, crack and joint filler, adhesive and detailing compound that combines the best silicone and polyurethane properties. This single-component, 99% solids, fiber-reinforced, Silyl-Terminated-Poly-Ether (STPE) is easy to gun, spread and tool.
- C. Characteristics:
 - 1. Thickness: Apply according to manufacturer's instructions. See product data sheet.
 - 2. Hardness: Shore A, 45-50 when tested in accordance with ASTM C661.
 - 3. Water vapor permeability: Minimum 14 perms when tested in accordance with ASTM E-96.
 - 4. Tensile strength: 225 psi when tested in accordance with ASTM D412.
 - 5. Lap shear strength: 275 psi when tested in accordance with ASTM D1002.
 - 6. Elongation at break: 275% when tested in accordance with ASTM D412.
 - 7. Peel strength: 30 pli when tested in accordance with ASTM D1781.
 - 8. Shrinkage: None.

9. Form: pale red, gun-grade sealant
10. Specific gravity: 1.40 to 1.50
11. pH: not applicable
12. Weight per gallon: 11.8 pounds
13. Active content: 99 percent
14. Total solids: 99 percent
15. Volatile organic content (VOC): 30 grams per Liter, maximum
16. Flash point: no data
17. Freeze point: no date
18. Shelf life: 1 year in tightly sealed, unopened container

2.4 R-GUARD FASTFLASH® LIQUID-APPLIED FLASHING MEMBRANE

- A. Acceptable product: PROSOCO R-GUARD® FastFlash®
- B. Description: FastFlash® is a gun-grade waterproofing, adhesive and detailing compound that combines the best of silicone and polyurethane properties. This single component, 99% solids, Silyl-Terminated-Poly-Ether (STPE) is easy to gun, spread and tool to produce a highly durable, seamless, elastomeric flashing membrane in rough openings of structural walls.
- C. Characteristics:
 1. Thickness: Apply according to manufacturer's instructions.
 2. Water vapor permeability: Minimum 14 perms when tested in accordance with ASTM E96.
 3. Water penetration (cyclical static air pressure difference): No uncontrolled water penetration when tested in accordance with ASTM E547.
 4. Hardness: Shore A, 40-45 when tested in accordance with ASTM C661.
 5. Tensile strength: 180 psi when tested in accordance with ASTM D412.
 6. Elongation at break: 400% when tested in accordance with ASTM D412.
 7. Peel strength: 25 pli when tested in accordance with ASTM D1781.
 8. Form: Brick Red, Gun Grade Sealant.
 9. Specific gravity: 1.45 to 1.60
 10. pH: not applicable
 11. Weight per gallon: 12.5 pounds
 12. Active content: 99 percent
 13. Total solids: 99 percent
 14. Volatile organic content (VOC): 30 grams per Liter, maximum
 15. Flash point: no data
 16. Freeze point: no data
 17. Shelf life: 1 year in tightly sealed, unopened container

2.5 R-GUARD CAT 5® EXTREME WEATHER AIR AND WATER-RESISTIVE BARRIER:

- A. Acceptable product: PROSOCO R-GUARD® Cat 5®
- B. Description: Cat 5® Air & Water-Resistive Barrier is a fluid applied, waterproofing and air barrier that combines the best of silicone and polyurethane properties. This single component, 98% solids Silyl-Terminated-Poly-Ether (STPE) is roller applied to produce a highly durable, seamless, elastomeric weatherproofing membrane on structural sheathing and back-up CMU walls. Cat 5® is proven to prevent water and air penetration of the building envelope in conditions ranging from everyday weather to the drenching rains and 155 mph winds of a Category 5 hurricane.
- C. Characteristics:
 1. Thickness: Apply in accordance with manufacturer's instructions. See product data sheet.

2. Air infiltration: Less than 0.004 cfm per square foot (0.02 L/s/sq m) when tested in accordance with ASTM E2178 or ASTM E283.
3. Water vapor permeability: Minimum 23 perms when tested in accordance with ASTM E96.
4. Structural performance: Air and water-resistive barrier system shall withstand positive and negative wind pressure loading when tested in accordance with ASTM E330.
5. Water penetration (static pressure): No uncontrolled water penetration when tested in accordance with ASTM E331, with differential static pressure not less than 6.24 psf.
6. Water penetration (cyclical static air pressure difference): No uncontrolled water penetration when tested in accordance with ASTM D547.
7. Hardness: Shore A, 20-25 when tested in accordance with ASTM C661.
8. Tensile strength: 110 psi when tested in accordance with ASTM D412.
9. Elongation at break: 300% when tested in accordance with ASTM D412.
10. Peel strength: 30 pli when tested in accordance with ASTM D1781 or C794.
11. Shrinkage: None.
12. Form: adobe brown heavy liquid
13. Specific gravity: 1.5 to 1.7
14. pH: not applicable
15. Weight per gallon: 13.312 pounds
16. Active content: 98 percent
17. Total solids: 98 percent
18. Volatile organic content (VOC): 30 grams per Liter, maximum
19. Flash point: greater than 200 degrees Fahrenheit (greater than 93 degrees Celsius)
20. Freeze point: not applicable
21. Shelf life: 1 year in tightly sealed, unopened container

2.6 R-GUARD AIRDAM® AIR AND WATERPROOF SEALANT FOR WINDOWS AND DOORS:

- A. Acceptable product: PROSOCO R-GUARD® AirDam®
- B. Description: AirDam® is a medium modulus sealant that combines the best silicone and polyurethane properties. This single component, 98% solids Silyl-Terminated-Poly-Ether (STPE) is easy to gun and tool in all weather conditions. AirDam® cures quickly to produce a durable, high performance, high movement elastomeric interior air sealant
- C. Characteristics:
 1. Hardness: Shore A, 20-25 when tested in accordance with ASTM C661.
 2. Tensile strength: 110 psi when tested in accordance with ASTM D412.
 3. Elongation at break: 1300% when tested in accordance with ASTM D412.
 4. Peel strength: 30 pli when tested in accordance with ASTM D1781.
 5. Type: Type S, Grade NS, Class 50 when tested in accordance with ASTM C920.
 6. Shrinkage: None.
 7. Form: heavy white paste, mild odor
 8. Specific gravity: 1.3 to 1.4
 9. pH: not applicable
 10. Weight per gallon: 11.648 pounds
 11. Active content: 98 percent
 12. Total solids: 98 percent
 13. Volatile organic content (VOC): 30 grams per Liter, maximum
 14. Flash point: greater than 200 degrees Fahrenheit (greater than 93 degrees Celsius)
 15. Freeze point: not applicable
 16. Shelf life: 1 year in tightly sealed, unopened container
- D. Backer rod: Compressible, closed cell rod stock as recommended by manufacturer for compatibility with sealant. Provide size and shape of rod to control joint depth.

PART 3 - EXECUTION

3.1 EXAMINATION:

- A. Verify that surfaces and conditions are ready to accept the Work of this section. Notify design professionals in writing of any discrepancies. Commencement of the Work or any parts thereof shall mean acceptance of the prepared substrates.
- B. All surfaces must be sound, clean and free of grease, dirt, excess mortar or other contaminants. Fill or bridge damaged surfaces, voids or gaps larger than one-half (1/2) inch with mortar, wood, metal, sheathing or other suitable material, as necessary. Fill voids and gaps measuring one-half (1/2) inch or less with R-GUARD Joint & Seam Filler as necessary to ensure continuity.
 - 1. Surfaces to receive R-GUARD Cat 5[®], FastFlash[®], Joint & Seam Filler, and AirDam[®] may be dry, damp or wet to the touch. Brush away any standing water which may be present before application. The products will tolerate rain immediately after application
- C. Where curing materials are used they must be clear resin based without oil, wax or pigments
- D. Condition materials to room temperature prior to application to facilitate extrusion and handling.

3.2 SURFACE PREPARATION:

- A. Air, water-resistive and waterproofing membrane and accessories may be applied to green concrete 16 hours after removal of forms.
- B. Refer to manufacturer's product data sheets for requirements for condition of and preparation of substrates.
 - 1. Surfaces shall be sound and free of voids, spalled areas, loose aggregate and sharp protrusions.
 - 2. Remove contaminants such as grease, oil and wax from exposed surfaces.
 - 3. Remove dust, dirt, loose stone and debris.
 - 4. Use repair materials and methods that are acceptable to manufacturer of the air and water-resistive barrier system.
 - 5. The PROSOCO R-GUARD[®] product line includes several options for preparing structural walls to receive the primary air and water resistive barrier. Refer to manufacturer's product data sheets and R-GUARD Installation Guidelines for additional information.
- C. Exterior sheathing:
 - 1. Ensure that sheathing is properly installed with ends, corners and edges properly fastened.
 - 2. Mechanical fasteners used to secure sheathing boards or penetrate sheathing boards shall be set flush with sheathing, fastened and spotted with R-GUARD Joint & Seam Filler and fastened into solid backing.
 - 3. Consolidate and seal the cut edges of gypsum wall boards exposed in rough openings for windows and doors at corners. The treated edge provides a suitable surface for application of R-GUARD Joint & Seam Filler fiber-reinforced coat and seam treatment.
- D. Masonry and concrete substrates:
 - 1. Masonry head and bed joints should be fully filled and tooled.
 - 2. Mechanically remove loose mortar fins, mortar accumulations and protrusions, and debris.

3.3 INSTALLATION OF JOINT TREATMENT(PREPARE):

- A. Apply R-GUARD Joint & Seam Filler for seams, joints, cracks, gaps, primed rough gypsum edges at sheathing, rough openings:
 1. Fill or repair cracks larger than one-half inch.
 2. Fill surface defects and over driven fasteners with R-GUARD Joint & Seam Filler.
 3. Using a dry knife, trowel or spatula, tool and spread the product. Spread one inch beyond seam at each side to manufacturer's recommended thickness. See product data sheet.
 4. Allow to skin before installing other waterproofing or air barrier components.
 5. Apply in accordance with manufacturer's Application Guideline illustrations.

3.4 R-GUARD FASTFLASH® FLASHING AT WINDOWS, DOORS, OPENINGS AND PENETRATIONS (PREPARE):

- A. Apply R-GUARD FastFlash® over surfaces prepared with R-GUARD Joint & Seam Filler to seal and waterproof rough openings:
 1. Apply a thick bead of R-GUARD FastFlash® over any visible gaps in the prepared rough opening.
 2. Immediately press and spread the wet product into gaps.
 3. Allow treated surface to skin.
 4. Starting at the top, apply a thick bead of R-GUARD FastFlash® in a zigzag pattern to the structural wall surrounding the rough opening.
 5. Spread the wet product to create an opaque, monolithic flashing membrane which surrounds the rough opening and extends 4 to 6 inches over the face of the structural wall. Apply and spread additional product as needed to create an opaque, monolithic flashing membrane free of voids and pin holes.
 6. Apply additional product in a zigzag pattern over a structural framing inside the rough opening.
 7. Apply R-GUARD FastFlash® within temperature and weather limitations as required by manufacturer.
 8. Apply R-GUARD FastFlash® to perimeters, sills and adjacent sheathing and building face, in accordance with manufacturer's product data sheet and R-GUARD Installation Guidelines illustrations.
 9. Extend flashing onto building face 4 to 6 inches.
 10. Install preparation products in accordance with manufacturer's Application Guideline illustrations.

3.5 R-GUARD AIR & WATER-RESISTIVE BARRIER INSTALLATION (PROTECT)

- A. Apply appropriate R-GUARD air and water-resistive barrier to a clean, dry substrate (clean, dry, and/or damp substrates – R-GUARD Cat 5® waterproofing air-barrier membrane), within temperature and weather limitations as required by manufacturer.
 1. Apply to recommended thickness. Proper thickness is achieved when coating is opaque.
 2. Allow product to cure and dry.
 3. Inspect membrane before covering. Repair any punctures, translucent or damaged areas by applying additional material.
 4. Specifier Note: If air or surface temperature exceed 95 degrees Fahrenheit (35 degrees Celsius), apply to shaded surfaces and before daytime air and surface temperatures reach their peak.
 5. On CMU wall construction back roll as necessary to ensure there are no pinholes, voids or gaps in the membrane. R-GUARD Cat 5® is roller applied.

3.6 R-GUARD FLASHING TRANSITIONS (TRANSITION)

- A. Apply R-GUARD Joint & Seam Filler and R-GUARD FastFlash® as a liquid flashing membrane to waterproof the transitions in rough opening and between dissimilar materials.
 - 1. Fill any voids between the top of the flashing leg and the vertical wall with R-GUARD Joint & Seam Filler. Tool to direct water from the vertical wall to the flashing.
 - 2. Apply a generous bead of FastFlash® to the top edge of the flashing leg.
 - 3. Spread the wet products to create a monolithic “cap-flash” flashing membrane extending 2 inches up the vertical face of the structural wall and 1 inch over the flashing membrane extending. Apply additional product as needed to achieve a void and pinhole free surface. This “liquid termination bar” helps secure the flashing and ensures positive drainage from the wall surface to the flashing.
 - 4. Allow treated surfaces to skin before installing other wall assembly, waterproofing or air barrier components.

3.7 R-GUARD AIRDAM® AIR AND WEATHER BARRIER SEALANT FOR WINDOWS AND DOORS INSTALLATION

- A. install R-GUARD AirDam® with professional grade caulking gun in continuous beads without air gaps or air pockets.
 - 1. Apply R-GUARD AirDam® to a clean, dry or damp surface
 - 2. Install Backer rod: Compressible, closed cell rod stock as recommended by manufacturer for compatibility with sealant. Provide size and shape of rod to control joint depth
 - 3. Install AirDam® to provide uniform, continuous ribbons without gaps or air pockets, with complete wetting of the joint bond surfaces.
 - 4. Tool sealant immediately to ensure complete wetting of joint bond surface and to produce a smooth, concave joint profile flush with the edges of the adjacent surfaces. Where horizontal and vertical surfaces meet, tool sealant to create a slight cove so as to not trap moisture or debris.
 - 5. Do not allow materials to overflow onto adjacent surfaces. Prevent staining of adjacent surfaces.
 - 6. Remove excess and misplaced materials as work progresses. Clean the adjoining surfaces to remove misplaced materials, without damage to adjacent surfaces or finishes.

End of Section

PART 1 – GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data, Shop Drawings, and Samples.
- B. Comply with Sheet Metal and Air Conditioning Contractors' National Association, Inc. (SMACNA) "Architectural Sheet Metal Manual". Conform to dimensions and profiles shown unless more stringent requirements are indicated.
- C. Coordinate installation of sheet metal flashing and trim with interfacing and adjoining construction to provide a leakproof, secure, and noncorrosive installation.

PART 2 – PRODUCTS

2.1 SHEET METAL

- A. Stainless-Steel Sheet: ASTM A 240/A 240M, Type 304, with No. 2D finish; not less than 0.016 inch thick.

2.2 FLASHING AND TRIM

- A. Fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of the item indicated.
- B. Items required: Through wall flashings, ledger flashings, side wall flashings, window pan flashings, transition flashing.

2.3 ACCESSORIES

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation.
- B. Solder for Stainless Steel: ASTM B 32, Grade Sn60; with acid flux of type recommended by stainless-steel sheet manufacturer.
- C. Butyl Sealant: ASTM C 1311; solvent-release type, for expansion joints with limited movement.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Comply with SMACNA's "Architectural Sheet Metal Manual". Allow for thermal expansion; set true to line and level. Install Work with laps, joints, and seams permanently watertight and weatherproof; conceal fasteners where possible.
 - 1. Roof-Edge Flashings: Secure metal flashings at roof edges according to FM Global (FMG) Loss Prevention Data Sheet 1-49 for specified wind zone.
- B. Sealed Joints: Form nonexpansion (but movable) joints in metal to accommodate elastomeric sealant to comply with SMACNA standards.
- C. Fabricate nonmoving seams in sheet metal with flat-lock seams. For stainless steel form seams, and solder.

1. Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches, unless pre-tinned surface would show in finished Work.
- D. Separation: Separate noncompatible metals or corrosive substrates with a coating of asphalt mastic or other permanent separation.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes one-component, ultra-low modulus, neutral-cure silicone rubber sealant for above-grade expansion and control joints.

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 1. ASTM C661 - Standard Test Method for Indentation Hardness of Elastomeric Type Sealants by Means of a Durometer.
 2. ASTM C679 - Standard Test Method for Tack-Free Time of Elastomeric Sealants.
 3. ASTM C719 - Standard Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cyclic Movement (Hockman Cycle).
 4. ASTM C794 - Standard Test Method for Tack-Free Time of Elastomeric Sealants.
 5. ASTM C920 - Elastomeric Joint Sealants.
 6. ASTM C1135 - Standard Test Method for Determining Tensile Adhesion Properties of Structural Sealants.
 7. ASTM C1193 - Standard Guide for Use of Joint Sealants.
 8. ASTM C1248 - Standard Test Method for Staining Porous Substrate by Joint Sealants.
 9. ASTM C1330 - Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants.
 10. ASTM D412 - Standard Test Method for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers - Tension.
 11. ASTM D2202 - Standard Test Method for Slump of Sealants.
 12. ASTM E119 (UL 263) - Standard Test Method for Fire Tests of Building Construction and Materials.

1.3 SUBMITTALS

- A. Provide in accordance with Section 01 33 00 - Submittal Procedures:
 1. Product data for silicone sealant, primer, joint backing, and other accessories. Include material safety data sheets (MSDSs) and certifications showing compliance with specified standards.
 2. Shop drawings detailing sealant joints and indicating joint dimensions, materials, sealant profile, and size limitations.
 3. Manufacturer's color chart for selection by Architect.

4. Manufacturer's instructions for installation and field quality control testing.
5. Copy of warranties specified in Paragraph 1.5 for review by Architect.

1.4 PROJECT CONDITIONS

- A. Do not install silicone sealant during inclement weather or when such conditions are expected. Allow wet surfaces to dry.
- B. Do not install sealant when temperature is less than 5 degrees F below dew point.

1.5 WARRANTY

- A. Provide under provisions of Section 01 78 00 - Closeout Submittals:
 1. Installer's 5 year workmanship warranty.
 2. Manufacturer's 20-year material warranty for properly installed silicone sealant.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Dow Corning Corporation, P.O. Box 994, Midland, MI 48686-0994; (800) 248-2481; www.dowcorning.com/construction.
- B. Requests to use equivalent products of other manufacturers shall be submitted in accordance with Section 01 63 00 - Product Substitution Procedures.

2.2 SEALANT

- A. Type: One-component, ultra-low modulus, neutral-cure silicone rubber sealant; Dow Corning® 790 Silicone Building Sealant, as manufactured by Dow Corning Corporation.
- B. Compliance: Sealant shall meet or exceed requirements of these standards:
 1. ASTM C920, Type S, Grade NS, Class 100/50, Use T, NT, G, M, A, and O
- C. Color: Standard color as selected by Architect. Provide standard color samples for selection by Architect.
- D. Shelf life: 12 months.
- E. Application temperature range: Minus 20 to plus 120 degrees F.
- F. Tack-free time: 1 hour at 50 percent relative humidity, tested in accordance with ASTM C679.
- G. Working time: 10 to 20 minutes.
- H. Curing time at 3/8-inch depth: 7 to 14 days at 77 degrees F and 50 percent relative humidity.
- I. Flow, sag, or slump in 3 inches wide joint: None, when tested in accordance with ASTM D2202.
- J. Volatile organic compound (VOC) content: 43 grams/liter maximum.

- K. Cured sealant properties after 21 days at 77 degrees F and 50 percent relative humidity.
 - 1. Joint movement capability: Plus 100 percent extension and 50 percent compression, tested in accordance with ASTM C719.
 - 2. Hardness: 15-durometer hardness, Shore A, tested in accordance with ASTM C661.
 - 3. Properties tested in accordance with ASTM D412:
 - a. Ultimate tensile strength: 100 psi.
 - b. Ultimate elongation: 1,600 percent.
 - 4. Minimum peel strength: 15 ppi, tested in accordance with ASTM C794.
 - 5. Properties, tested in accordance with ASTM C1135:
 - a. Adhesion at 25 percent extension: 15 psi.
 - b. Adhesion at 50 percent extension: 20 psi.
 - 6. Weathering after 22,400 hours, tested in accordance with ASTM C1135 using QUV Weatherometer:
 - a. At 25 percent extension: 30 psi.
 - b. At 50 percent extension: 40 psi.
 - 7. Staining after 14 days at 50 percent compression, 158 degrees F: None on concrete, granite, limestone, and brick, when tested in accordance with ASTM C1248.

2.3 ACCESSORIES

- A. Substrate primer: As recommended for project conditions and provided by silicone sealant manufacturer.
- B. Sealant backing: Provide backing complying with ASTM C1330 Type B non-absorbent, bi-cellular material with surface skin.
 - 1. Size: Greater than joint opening by 25 percent minimum.
- C. Bond breaker tape: Provide tape to prevent adhesion to joint fillers or joint surfaces at back of joint and allow sealant movement.
 - 1. Type: Polyethylene or other plastic tape recommended by sealant manufacturer.
- D. Masking tape: Non-staining, non-absorbent type compatible with silicone sealant and adjacent surfaces.

PART 3 - EXECUTION

3.1 GENERAL

- A. Prepare substrates and apply silicone sealant in accordance with manufacturer's instructions.
- B. Handle, store, and apply materials in compliance with applicable regulations and material safety data sheets (MSDSs).
- C. Do not use silicone sealant for:
 - 1. Below-grade applications.
 - 2. Surfaces to be immersed in water for prolonged time.
 - 3. Brass and copper surfaces.
 - 4. Materials bleeding oils, plasticizers, and solvents.
 - 5. Structural glazing and adhesive.
 - 6. Surfaces to be painted.
- D. Do not apply in totally confined spaces without ventilation for curing.

3.2 PREPARATION

- A. Inspect existing joints to be repaired and new substrates to receive silicone sealant. Ensure surfaces are clean, dry, and free of frost, dust, dirt, grease, oil, curing compounds, form release agents, laitance, efflorescence, mildew, and previous films and coatings.
- B. Remove existing joint sealant materials. Clean joints and remove joint sealant residue. Repair deteriorated or damaged substrates as recommended by silicone sealant manufacturer to provide suitable substrate. Allow patching materials to cure.
- C. Clean substrates to receive silicone sealant.
 - 1. Porous surfaces: Abrasive-clean followed by blasting with oil-free compressed air.
 - 2. Nonporous surfaces: Use two-cloth solvent wipe in accordance with ASTM C1193.
 - 3. High-pressure water cleaning: Exercise care that water does not enter through failed joints.
- D. Adhesion test: Apply silicone sealant to small area and perform adhesion test in accordance with ASTM C1193, Method A, to determine if primer is required to achieve adequate adhesion. If necessary, apply primer at rate and in accordance with manufacturer's instructions. Allow primer to dry.
- E. Masking: Apply masking tape as required to protect adjacent surfaces and to ensure straight bead line and facilitate cleaning.

3.3APPLICATION

- A. Sealant backing: Install without gaps, twisting, stretching, or puncturing backing material. Use gage to ensure uniform depth to achieve correct profile, coverage, and performance.
- B. Bond breaker: Install on backside of joint where backing is not feasible.
- C. Sealant:
 - 1. Use sealant-dispensing equipment to push sealant bead into opening. Fill joint opening to full and proper configuration. Apply in continuous operation.
 - 2. Before skinning or curing begins, tool sealant with metal spatula. Provide concave, smooth, uniform, sealant finish. Eliminate air pockets and ensure complete contact on both sides of joint opening. Tool joints in one continuous stroke.
- D. Complete horizontal joints prior to vertical joints. Lap vertical sealant over horizontal joints.
- E. Cleaning: Remove masking tape and excess sealant.

3.4FIELD QUALITY CONTROL

- A. Perform adhesion tests in accordance with manufacturer's instructions and ASTM C1193, Method A, Field-Applied Sealant Joint Hand-Pull Tab.
 - 1. Perform 5 tests for first 1,000 linear feet of applied silicone sealant and 1 test for each 1,000 feet seal thereafter or perform 1 test per floor per building elevation minimum.
 - 2. For sealants applied between dissimilar materials, test both sides of joint.
- B. Sealants failing adhesion test shall be removed, substrates cleaned, sealants re-installed, and re-testing performed.
- C. Maintain test log and submit report to Architect indicating tests, locations, dates, results, and remedial actions.

END OF SECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes: Kawneer Architectural Aluminum Storefront Systems, including perimeter trims, stools, accessories, shims and anchors, and perimeter sealing of storefront units.

- 1. Types of Kawneer Aluminum Storefront Systems include:

- a. Trifab® VG 451T Storefront System – 2" x 4-1/2" (50.8 mm x 114.3 mm) nominal dimension; Thermal; Front Set; HP Thermal Sill Flashing; Screw Spline Opening Fabrication, .

- B. Related Sections:

- 1. Section 076000 – Flashing and Sheet Metal
- 2. Section 079200 - Joint Sealants
- 3. Section 079204 – Silicone Sealant

1.3 SYSTEM DESCRIPTION

- A. Design Requirements: final design of this assembly for resistance of imposed loads, and attachment to the building structure is the responsibility of the contractor. Component profiles, appearance and qualities shall match the first and second story windows in the existing building. Design is based on aluminum systems of one manufacturer, but may include modifications to standard components to comply with Project requirements. As determined by the Architect, aluminum systems of other manufacturer's may be acceptable.

- 1. The contractor shall provide final design and engineering of reinforcing, external supports and anchors for storefront assemblies to resist imposed loads. Reinforcing, supports and anchors shall comply with this section.

1.4 DEFINITIONS

- A. Definitions: For fenestration industry standard terminology and definitions refer to American Architectural Manufacturers Association (AAMA) – AAMA Glossary (AAMA AG).

1.5 PERFORMANCE REQUIREMENTS

- A. General Performance: Aluminum-framed storefront system shall withstand the effects of the following performance requirements without exceeding performance criteria or failure due to defective manufacture, fabrication, installation, or other defects in construction:

1. Design Wind Loads: Determine design wind loads applicable to the Project from basic wind speed indicated in miles per hour, according to ASCE 7, Section 6.5, "Method 2-Analytical Procedure," based on mean roof heights above grade.
 - a. Basic Wind Speed
 - b. Importance Factor
 - c. Exposure Category
- B. Storefront System Performance Requirements: Accommodate dimensional tolerances for adjacent and supporting construction, thermal movement over temperature range of 120 degrees F; 20 psf wind load inward and outward and structural criteria.
 1. Fixed Frame: Air infiltration at 6.24 psi of 0.10 CFM/square foot; No uncontrolled water penetration at inward pressure of 12 psf.; condensation resistance factor (CRF) of 51, and a U-value of 0.65.
 2. Structural Performance: Maximum deflection of 0.0057 of span under a dynamic design load of 50 psf positive and negative. No deformation nor permanent set in excess of 0.2 percent of span at 35 psf live load, and to comply with glass breakage criteria.
 3. Seismic Design Data: Comply with OSSC Section 1603.1.5 for the Project location, specific site conditions, use group and general building design.

1.6 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, hardware, finishes, and installation instructions for each type of aluminum frame storefront system indicated.
- B. Shop Drawings: Include plans, elevations, sections, details, hardware, and attachments to other work, operational clearances and installation details.
- C. Samples for Initial Selection: For units with factory-applied color finishes including samples of hardware and accessories involving color selection.
- D. Samples for Verification: For aluminum framed storefront system and components required.
- E. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency for each type of aluminum-framed storefront.
- F. Fabrication Sample: Of each vertical-to-horizontal intersection of aluminum-framed systems, made from 12" (300 mm) lengths of full-size components and showing details of the following:
 1. Joinery, including concealed welds.
 2. Anchorage.
 3. Expansion provisions.
 4. Glazing.
 5. Flashing and drainage.

1.7 QUALITY ASSURANCE

- A. **Installer Qualifications:** An installer which has had successful experience with installation of the same or similar units required for the project and other projects of similar size and scope.
- B. **Manufacturer Qualifications:** A manufacturer capable of providing aluminum framed storefront system that meet or exceed performance requirements indicated and of documenting this performance by inclusion of test reports, and calculations.
- C. **Source Limitations:** Obtain aluminum framed storefront system through one source from a single manufacturer.
- D. **Product Options:** Drawings indicate size, profiles, and dimensional requirements of aluminum framed storefront system and are based on the specific system indicated. Refer to Division 01 Section "Product Requirements." Do not modify size and dimensional requirements.
 - 1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.
- E. **Mockups:** Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Build mockup for type(s) of storefront elevation(s) indicated, in location(s) shown on Drawings.
- F. **Pre-installation Conference:** Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."
- G. **Structural-Sealant Glazing:** Comply with ASTM C 1401, "Guide for Structural Sealant Glazing" for design and installation of structural-sealant-glazed systems.
- H. **Structural-Sealant Joints:** Design reviewed and approved by structural-sealant manufacturer.

1.8 PROJECT CONDITIONS

- A. **Field Measurements:** Verify actual dimensions of aluminum framed storefront openings by field measurements before fabrication and indicate field measurements on Shop Drawings. Coordinate fabrication to avoid delay of work.

1.9 WARRANTY

- A. **Manufactures Warranty:** Submit, for Owner's acceptance, manufacturer's standard warranty.
 - 1. **Warranty Period:** Two (2) years from Date of Substantial Completion of the project provided however that the Limited Warranty shall begin in no event later than six months from date of shipment by manufacturer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product:
 - 1. Kawneer Company Inc.
 - 2. Trifab® VG 451T (thermal) Storefront System
 - 3. 2" x 4-1/2" (50.8 mm x 114.3 mm) System Dimensions
 - 4. Glass: Exterior

- B. Substitutions: Refer to Substitutions Section 012500 for procedures and submission requirements
 - 1. Product Literature and Drawings: Submit product literature and drawings modified to suit specific project requirements and job conditions.
 - 2. Certificates: Submit certificate(s) certifying substitute manufacturer (1) attesting to adherence to specification requirements for storefront system performance criteria, and (2) has been engaged in the design, manufacturer and fabrication of aluminum storefronts for a period of not less than ten (10) years. (Company Name)
 - 3. Test Reports: Submit test reports verifying compliance with each test requirement required by the project.
 - 4. Samples: Provide samples of typical product sections and finish samples in manufacturer's standard sizes.

- C. Substitution Acceptance: Acceptance will be in written form, either as an addendum or modification, and documented by a formal change order signed by the Owner and Contractor.

2.2 MATERIALS

- A. Aluminum Extrusions: Alloy and temper recommended by aluminum storefront manufacturer for strength, corrosion resistance, and application of required finish and not less than 0.070" wall thickness at any location for the main frame and complying with ASTM B 221: 6063-T6 alloy and temper.

- B. Fasteners: Aluminum, nonmagnetic stainless steel or other materials to be non-corrosive and compatible with aluminum window members, trim hardware, anchors, and other components.

- C. Anchors, Clips, and Accessories: Aluminum, nonmagnetic stainless steel, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions or other suitable zinc coating; provide sufficient strength to withstand design pressure indicated.

- D. Reinforcing Members: Aluminum, nonmagnetic stainless steel, or nickel/chrome-plated steel complying with ASTM B 456 for Type SC 3 severe service conditions, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions or other suitable zinc coating; provide sufficient strength to withstand design pressure indicated.

- E. Sealant: For sealants required within fabricated storefront system, provide permanently elastic, non-shrinking, and non-migrating type recommended by sealant manufacturer for joint size and movement.

- F. Tolerances: Reference to tolerances for wall thickness and other cross-sectional dimensions of storefront members are nominal and in compliance with AA Aluminum Standards and Data.

2.3 STOREFRONT FRAMING SYSTEM

- A. Thermal Barrier (Trifab® VG 451T):
 - 1. Kawneer IsoLock® Thermal Break with a 1/4" (6.4 mm) separation consisting of a two-part chemically curing, high-density polyurethane, which is mechanically and adhesively joined to aluminum storefront sections.
 - a. Thermal Break shall be designed in accordance with AAMA TIR-A8 and tested in accordance with AAMA 505.
- B. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.
- C. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials. Where exposed shall be stainless steel.
- D. Perimeter Anchors: When steel anchors are used, provide insulation between steel material and aluminum material to prevent galvanic action
- E. Packing, Shipping, Handling and Unloading: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- F. Storage and Protection: Store materials protected from exposure to harmful weather conditions. Handle storefront material and components to avoid damage. Protect storefront material against damage from elements, construction activities, and other hazards before, during and after storefront installation.

2.4 GLAZING SYSTEMS

- A. Glazing Gaskets: Manufacturer's standard compression types; replaceable, extruded EPDM rubber.
- B. Spacers and Setting Blocks: Manufacturer's standard elastomeric type.
- C. Bond-Breaker Tape: Manufacturer's standard TFE-fluorocarbon or polyethylene material to which sealants will not develop adhesion.
- D. Glazing Sealants: For structural-sealant-glazed systems, as recommended by manufacturer for joint type, and as follows:
 - 1. Structural Sealant: ASTM C 1184, single-component neutral-curing silicone formulation that is compatible with system components with which it comes in contact, specifically formulated and tested for use as structural sealant and approved by a structural-sealant manufacturer for use in aluminum-framed systems indicated.
 - a. Color: Black
 - 2. Weatherseal Sealant: ASTM C 920 for Type S, Grade NS, Class 25, Uses NT, G, A, and O; single-component neutral-curing formulation that is compatible with structural sealant and other system components with which it comes in contact; recommended by structural-sealant, weatherseal-sealant, and aluminum-framed-system manufacturers for this use.
 - a. Color: Matching structural sealant.

2.5 ACCESSORY MATERIALS

- A. Joint Sealants: For installation at perimeter of aluminum-framed systems, as specified in Division 07 Section "Joint Sealants."
- B. Bituminous Paint: Cold-applied, asphalt-mastic paint complying with SSPC-Paint 12 requirements except containing no asbestos; formulated for 30 mil (0.762 mm) thickness per coat.

2.6 FABRICATION

- A. Framing Members, General: Fabricate components that, when assembled, have the following characteristics:
 - 1. Profiles that are sharp, straight, and free of defects or deformations.
 - 2. Accurately fit joints; make joints flush, hairline and weatherproof.
 - 3. Means to drain water passing joints, condensation within framing members, and moisture migrating within the system to exterior.
 - 4. Physical and thermal isolation of glazing from framing members.
 - 5. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
 - 6. Provisions for field replacement of glazing.
 - 7. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.
- B. Mechanically Glazed Framing Members: Fabricate for flush glazing without projecting stops.
- C. Structural-Sealant-Glazed Framing Members: Include accommodations for using temporary support device to retain glazing in place while structural sealant cures.
- D. Storefront Framing: Fabricate components for assembly using manufactures standard installation instructions.
- E. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

2.7 ALUMINUM FINISHES

- A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
- B. Factory Finishing:
 - 1. To Match existing.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work. Verify rough opening dimensions, levelness of sill plate and

operational clearances. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure a coordinated, weather tight framed aluminum storefront system installation.

1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
2. Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.
3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing aluminum framed storefront system, accessories, and other components.
- B. Install aluminum framed storefront system level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction.
- C. Set sill members in bed of sealant or with gaskets, as indicated, for weather tight construction.
- D. Install aluminum framed storefront system and components to drain condensation, water penetrating joints, and moisture migrating within sliding door to the exterior.
- E. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

3.3 FIELD QUALITY CONTROL

- A. Field Tests: Architect shall select storefront units to be tested as soon as a representative portion of the project has been installed, glazed, perimeter caulked and cured. Conduct tests for air infiltration and water penetration with manufacturer's representative present. Tests not meeting specified performance requirements and units having deficiencies shall be corrected as part of the contract amount.
 1. Testing: Testing shall be performed by a qualified independent testing agency. Refer to Testing Section for payment of testing and testing requirements. Testing Standard per AAMA 503, including reference to ASTM E 783 for Air Infiltration Test and ASTM E 1105 Water Infiltration Test.
 - a. Air Infiltration Tests: Conduct tests in accordance with ASTM E 783. Allowable air infiltration shall not exceed 1.5 times the amount indicated in the performance requirements or 0.09 cfm/ft², whichever is greater.
 - b. Water Infiltration Tests: Conduct tests in accordance with ASTM E 1105. No uncontrolled water leakage is permitted when tested at a static test pressure of two-thirds the specified water penetration pressure but not less than 6.24 psf (300 Pa).
- B. Manufacturer's Field Services: Upon Owner's written request, provide periodic site visit by manufacturer's field service representative.

3.4 ADJUSTING, CLEANING, AND PROTECTION

- A. Clean aluminum surfaces immediately after installing aluminum framed storefronts. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.
- B. Clean glass immediately after installation. Comply with glass manufacturer's written recommendations for final cleaning and maintenance. Remove nonpermanent labels, and clean surfaces.
- C. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. High performance architectural insulating glass.

1.2 RELATED SECTIONS

- A. Section 084113- Aluminum Framed Storefronts
- B. Section 08900 - Glazed Curtainwall: Exterior Curtainwall.

1.3 REFERENCES

- A. ANSI Z97.1 - American National Standard for Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.
- B. ASCE 7 - "Minimum Design Loads for Buildings and Other Structures".
- C. ASTM International (ASTM):
 - 1. ASTM C 162 - Standard Terminology of Glass and Glass Products.
 - 2. ASTM C 1036 - Standard Specification for Flat Glass.
 - 3. ASTM C 1048 - Standard Specification for Heat-Treated Flat Glass -- Kind HS, Kind FT Coated and Uncoated Glass.
 - 4. ASTM C 1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass.
 - 5. ASTM E 2188 - Standard Test Method for Insulating Glass Unit Performance.
 - 6. ASTM E 2189 - Standard Test Method for Testing Resistance to Fogging in Insulating Glass Units.
 - 7. ASTM E 2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation.

1.4 DEFINITIONS

- A. Manufacturers of Glass Products: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.
- B. Glass Thicknesses: Indicated by thickness designations in millimeters according to ASTM C 1036.
- C. Interspace: Space between lites of an insulating-glass unit that contains dehydrated air or other specified gas.
- D. Sealed Insulating Glass Unit Surface Designations:
 - 1. Surface 1 - Exterior surface of the outer glass lite.
 - 2. Surface 2 - Interspace surface of the outer glass lite.
 - 3. Surface 3 - Interspace surface of the inner glass lite.
 - 4. Surface 4 - Interior surface of the inner glass lite.

1.5 PERFORMANCE REQUIREMENTS

- A. General: Provide glass capable of withstanding thermal movement and wind and impact loads (where applicable) as specified in paragraph B following.
- B. Glass Design: Glass thickness designations indicated are minimums and are for detailing only. Confirm glass thicknesses by analyzing Project loads and in-service conditions. Provide glass lites in the thickness designations indicated for various

size openings, but not less than thicknesses and in strengths (annealed or heat treated) required to meet or exceed the following criteria:

1. Glass Thicknesses: Select minimum glass thicknesses to comply with ASTM E 1300, according to the following requirements:
 2. Design Wind Loads: Determine design wind loads applicable to the Project according to ASCE 7, "Minimum Design Loads for Buildings and Other Structures": Section 6.5, "Method 2-Analytical Procedure," based on mean roof heights above grade indicated on Drawings.
- C. Thermal Movements: Provide glazing that allows for thermal movements resulting from ambient and surface temperatures changes acting on glass framing members and glazing components.
- D. Thermal and Optical Performance Properties: Provide glass with performance properties specified based on manufacturer's published test data, as determined according to procedures indicated below:
1. For monolithic-glass lites, properties are based on units with lites 1/4 inch (6.0 mm) thick.
 2. For insulating-glass units, properties are based on units of thickness indicated for overall unit and for each lite.
 3. Center-of-Glass Values: Based on using LBL-44789 WINDOW 5.0 computer program for the following methodologies:
 4. U-Factors: NFRC 100 expressed as Btu/ sq. ft. per h per degree F.
 5. Solar Heat Gain Coefficient: NFRC 200.
 6. Solar Optical Properties: NFRC 300.

1.6 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: For each glass product and glazing material indicated.
- C. Verification Samples: For the following products, in the form of 12 inch (305 mm) square samples for insulating glass units.
- D. Glazing Schedule: Use same designations indicated on Drawings for glazed openings in preparing a schedule listing glass types and thicknesses for each size opening and location.
- E. Product Certificates: Signed by manufacturers of glass and glazing products certifying that products furnished comply with requirements.
1. For solar-control low-e-coated glass, provide documentation demonstrating that manufacturer of coated glass is certified by coating manufacturer.
- F. Qualification Data: For installers.
- G. Product Test Reports: For each of the following types of glazing products:
1. Tinted float glass.
 2. Coated float glass.
 3. Insulating glass.
- H. Warranties: Special warranties specified in this Section.

1.7 QUALITY ASSURANCE

- A. Fabricator Qualifications: PPG Certified Fabricator Network, as acceptable to the manufacturer.

- B. Installer Qualifications: An experienced installer who has completed glazing similar in material, design, and extent to that indicated for this Project; whose work has resulted in glass installations with a record of successful in-service performance; and who employs glass installers for this Project who are certified under the National Glass Association Glazier Certification Program as Level 2 (Senior Glaziers) or Level 3 (Master Glaziers).
- C. Source Limitations for Glass: Obtain the following through one source from a single manufacturer for each glass type: clear float glass, coated float glass and insulating glass.
- D. Glass Product Testing: Obtain glass test results for product test reports in "Submittals" Article from a qualified independent testing agency accredited according to the NFRC CAP 1 Certification Agency Program.
- E. Glazing Publications: Comply with published recommendations of glass product manufacturers and industry organizations, including but not limited to those below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.
 - 1. IGMA Publication for Insulating Glass: SIGMA TM-3000, "Glazing Guidelines for Sealed Insulating Glass Units."
- F. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of the following testing and inspecting agency:
 - 1. Insulating Glass Certification Council.
 - 2. Associated Laboratories, Inc.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Protect glazing materials according to manufacturer's written instructions and as needed to prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.
- B. For insulating-glass units that will be exposed to substantial altitude changes, comply with insulating-glass manufacturer's written recommendations for venting and sealing to avoid hermetic seal ruptures.

1.9 WARRANTY

- A. Manufacturer's Warranty for Coated-Glass Products: Manufacturer's standard form, made out to the glass fabricator in which the coated glass manufacturer agrees to replace coated glass units that deteriorates during normal use within the specified warranty period. Deterioration of the coated glass is defined as peeling and/or cracking, or discoloration that is not attributed to glass breakage, seal failure, improper installation, or cleaning and maintenance that is contrary to the manufacturer's written instructions.
 - 1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: PPG Industries, Inc., Glass Group, which is located at: Glass Business and Discovery Center 400 Guys Run Rd. ; Pittsburgh, PA 15024;

Toll Free Tel: 800-377-5267; Email: [request info \(ideascapes@ppg.com\)](mailto:request info (ideascapes@ppg.com)); Web:
www.ppgideascapes.com

- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 GLASS PRODUCTS

- A. Annealed Float Glass: ASTM C 1036, Type I (transparent flat glass), Quality-Q3; of class indicated.
- B. Heat-Treated Float Glass: ASTM C 1048; Type I (transparent flat glass); Quality-Q3; of class, kind, and condition indicated.
 - 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed, unless otherwise indicated.
 - 2. Provide Kind HS (heat-strengthened) float glass in place of annealed float glass where needed to resist thermal stresses induced by differential shading of individual glass lites and to comply with glass design requirements specified in Part 1 "Performance Requirements" Article.
 - 3. For uncoated glass, comply with requirements for Condition A.
 - 4. For coated vision glass, comply with requirements for Condition C (other uncoated glass).
 - 5. Provide Kind FT (fully tempered) float glass in place of annealed or Kind HS (heat-strengthened) float glass where safety glass is indicated or required.
- C. Sputter-Coated Float Glass: ASTM C 1376, float glass with metallic-oxide or -nitride coating deposited by vacuum deposition process after manufacture and heat treatment (if any), and complying with other requirements specified.
- D. Insulating-Glass Units, General: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, and complying with ASTM E 774 for Class CBA units and with requirements specified in this Article and in Part 2 "Insulating-Glass Units" Article.
 - 1. Provide Kind HS (heat-strengthened) float glass in place of annealed glass where needed to resist thermal stresses induced by differential shading of individual glass lites and to comply with glass design requirements specified in Part 1 "Performance Requirements" Article.
 - 2. Provide Kind FT (fully tempered) glass lites where safety glass is indicated or required.
 - 3. Overall Unit Thickness and Thickness of Each Lite: Dimensions indicated for insulating-glass units are nominal and the overall thicknesses of units are measured perpendicularly from outer surfaces of glass lites at unit's edge.
 - 4. Sealing System: Comply with requirements in Section 07920 - Joint Sealants. Dual seal, with primary and secondary sealants of polyisobutylene and silicone.
 - 5. Spacer Specifications: Manufacturer's standard spacer material and construction complying with the following requirements:
 - 6. Spacer Material: Aluminum with mill or clear anodic finish.
 - 7. Desiccant: Molecular sieve or silica gel, or blend of both.
 - 8. Corner Construction: Manufacturer's standard corner construction.

2.3 FABRICATION OF GLAZING UNITS

- A. Fabricate glazing units in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to

comply with system performance requirements.

2.4 LOW-E INSULATING GLASS

- A. Type: Low-E Clear Insulating Glass. Clear color, low-reflective glass outdoor appearance. Design Intent is to match the insulating glass that will be reused. Verify that glass provided matches existing insulating glass units on the first floor of the West building elevation.
1. Product: "Solarban" 60 (2) Clear + Clear by PPG Industries, Inc.
 2. Insulating Unit Construction: 1/4 inch (6mm) Clear Glass, "Solarban" 60 Solar Control Sputtered on second surface (2), + 1/2 inch (13mm) air space + 1/4 inch (6mm) Clear (transparent) Float Glass.
 3. Performance Values: Visible Light Transmission - 70 percent; SHGC - 0.38; Shading Coefficient - 0.44; Outdoor Visible Light Reflectance - 11 percent.
 4. Heat Transfer Coefficient: U-Value Winter - 0.29, U-Value Summer - 0.27.

PART 3EXECUTION

3.1 INSTALLATION

- A. Refer to Section 08800 - Glazing for installation requirements.

END OF SECTION

PART 1 – GENERAL

1.1 SECTION REQUIREMENTS

A. Summary:

1. Paint exposed interior surfaces at all repaired areas unless otherwise indicated.
 - a. Apply two coats of high-quality interior paint to match existing color on all areas of repair.
2. Refinish south wood entrance assembly.
 - a. Clean, prepare, sand and refinish wood entrance assembly doors to match existing. Refinishing shall be done prior to reinstallation of wood entrance assembly doors.

B. Submittals:

1. Product Data: Include printout of "MPI Approved Products List" with product highlighted.
2. Samples: Submit draw downs of each existing color/finish and obtain approval prior to start of painting

C. MPI Standards:

1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.

D. Mockups: Full-coat finish sample of each type of coating, color, and substrate, applied where directed.

E. Extra Materials: Deliver to Owner 5 gallons of each color and type of finish coat paint used on project, in containers, properly labeled and sealed.

PART 2 – PRODUCTS

2.1 PAINT

A. Products:

1. *Sherwin Williams* Duration Home Interior Acrylic Latex.
2. Substitute: Upon approval

B. Material Compatibility: Provide materials that are compatible with one another and with substrates.

1. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

C. Colors: to match existing colors.

2.2 FINISHES

A. Products:

1. To match existing; contractor to submit samples for owner approval.

B. Colors: to match existing wood entrance assembly finish.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Remove hardware, lighting fixtures, and similar items that are not to be painted. Mask items that cannot be removed. Reinstall items in each area after painting is complete.
- B. Clean and prepare new or existing surfaces in an area before beginning painting/finishing in that area. Schedule painting so cleaning operations will not damage newly painted surfaces.
- C. Caulk all sealant joints and remove sealant at joints that are required to be opened as required by the drawings and specifications.
- D. Wood entrance assembly system to be cleaned, prepared, sanded and finished. Prepare according to manufacturer's instructions.

3.2 APPLICATION

- A. Apply paints according to manufacturer's written instructions.
 - 1. Use rollers for finish coat on interior walls and ceilings for touch up work required by indirect damage from the exterior work.
- B. 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.
 - 1. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- C. Apply finish to wood entrance assembly in accordance with manufacturer instructions and specifications.

END OF SECTION