

PROJECT MANUAL FOR:

**MUSEUM OF NATURAL & CULTURAL HISTORY
EXHIBIT EXPANSION - PHASE 2**

**UNIVERSITY OF OREGON
EUGENE, OREGON**

24 January 2013



Robertson|Sherwood|Architects PC

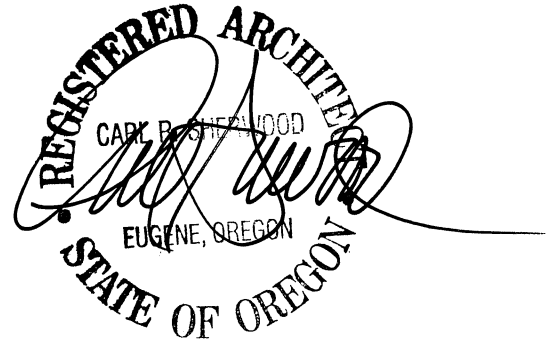
TITLE PAGE

PROJECT MANUAL FOR:

**MUSEUM OF NATURAL & CULTURAL HISTORY
EXHIBIT EXPANSION PROJECT - PHASE 2**
1680 East 15th Avenue
University of Oregon
Eugene, Oregon

OWNER:

**OREGON STATE BOARD OF HIGHER EDUCATION
UNIVERSITY OF OREGON**
Division of Facilities Services
1295 Franklin Boulevard
Eugene, Oregon 97403-1276
Fax (541) 346-2299
Project Manager: George Bleekman, (541) 346-2625



ARCHITECTS: PROJECT NO. 1117-1

ROBERTSON/SHERWOOD/ARCHITECTS pc
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Eugene, Oregon 97401
Tel (541) 342-8077
Fax (541) 345-4302

MECHANICAL ENGINEER:

MOULDS MECHANICAL ENGINEERING
2190 West 11th Ave - Suite 224
Eugene, Oregon 97402
Tel (541) 484-0241
Fax (541) 484-0191

ELECTRICAL ENGINEER:

PARADIGM ENGINEERING
85193 Appletree Drive
Eugene, Oregon 97405
Tel (541) 345-7813

DATE: January 24, 2013

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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 the Museum of Natural and Cultural History Exhibit Expansion Phase 2 project until 4:00 PM, Pacific Time, Thursday, February 21, 2013. The project is located on the campus of the University of Oregon, in Eugene, Oregon. The project includes renovation of a portion of the existing building.

A mandatory pre-bid conference will be conducted at the project site at 1:00 PM, on Wednesday, February 13, 2013. Bidders shall meet with OUS’ Representative at the main lobby of the Museum, 1680 East 15th Avenue, for that purpose. Attendance will be documented through a sign-in sheet prepared by the OUS representative. Prime bidders who arrive more than 5 minutes after start of time of the meeting (as stated in the solicitation and by the OUS 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: James 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: MUSEUM OF NATURAL AND CULTURAL HISTORY
EXHIBIT EXPANSION - PHASE 2

BID CLOSING: THURSDAY, FEBRUARY 21, 2013 AT 4:00 PM

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 Construction
1295 Franklin Blvd.
1276 University of Oregon
Eugene, OR 97403-1276

1. The Undersigned (*check one of the following and insert information 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 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 the following documents:

- Notice of Retainer Contract Opportunity
- Instructions to Bidders
- Supplemental Instructions to Bidders, if any
- OUS Retainer Supplementary General Conditions
- UO Contract General Conditions for Retainer Contracts
- Retainer Contract Supplement
- Retainer Contract Supplement Amendment

- Performance and Payment Bonds
- Plans and Specifications
- Prevailing Wage Rates
- Payroll and Certification Statement Form
(found at http://egov.oregon.gov/BOLI/WHD/PWR/W_PWR_Forms.shtml)

- ADDENDA numbered ____ through ____, inclusive (*fill in blanks*)
2. The work shall be completed within the time stipulated and specified in Section 01 10 00, of the Specifications.
 3. 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.
 4. 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.
 5. 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.
 6. 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.
 7. 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.
 8. 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.
 9. Contractor's Project Manager for this project is: _____,
Office Phone: _____ Cell Phone: _____.
 10. The Undersigned certifies that it has not discriminated against minority, women, or emerging small businesses in obtaining any subcontracts for this project.

11. 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.

12. 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 a 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.

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.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.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.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

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.

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.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.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.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:*	\$ _____
	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 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: _____

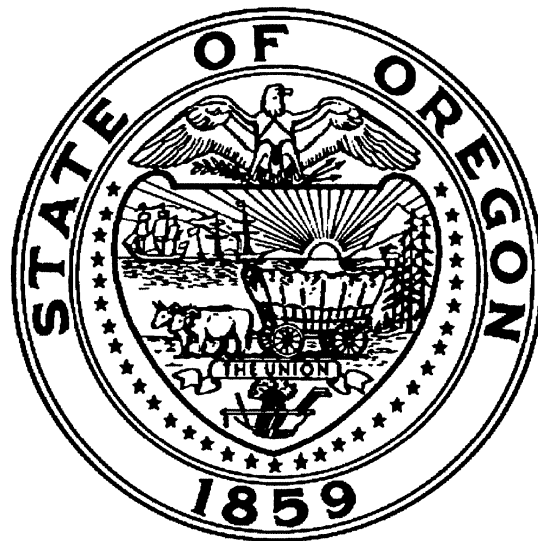
Date: _____

Date: _____

PREVAILING WAGE RATES

for

Public Works Contracts in Oregon



OREGON BUREAU OF LABOR AND INDUSTRIES

**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	

SUMMARY**PART 1 GENERAL****1.01 PROJECT**

- A. Project Name: Museum of Natural & Cultural History Exhibit Expansion - Phase 2.
- B. Owner's Name: University of Oregon.
- C. The Project consists of a renovation in the existing Museum of Natural & Cultural History, University of Oregon, 1680 East 15th Avenue, Eugene, Oregon.

1.02 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price as described in Public Improvement Agreement Form.

1.03 CONTRACT TIME

- A. Do not commence Work until after execution of the Agreement, receipt of Notice to Proceed from Owner, and Owner's approval of Contractor's certificates of insurance.
- B. Perform Work to accommodate Owner's occupancy requirements:
 - 1. Estimated Date of Notice to Proceed: March 1, 2013.
 - 2. Estimated Contractor Access to Site: March 1, 2013.
 - 3. Achieve Substantial Completion by May 1, 2013.
- C. Perform Work to achieve Final Completion of entire project by June 1, 2013.

1.04 PERMITS AND INSPECTIONS

- A. Architect will make City building permit applications. Owner will pay all systems development, plan check, and permit fees directly to the City of Eugene.
- B. Contractor is responsible to pick up approved permits from authorities having jurisdiction.
- C. Contractor is responsible to arrange for and attend required permit inspections and provide evidence that all permit inspections have been made and approved in accordance with Section 01 70 00.

1.05 WORK UNDER SEPARATE CONTRACT

- A. Owner will award separate contracts for the following:
 - 1. Asbestos abatement.
 - 2. Commissioning of HVAC System and Building Automation System.

1.06 OWNER FURNISHED CONTRACTOR INSTALLED ITEMS

- A. Owner will furnish the following for installation by Contractor:
 - 1. Door hardware specified in Section 08 71 00.

1.07 OWNER OCCUPANCY

- A. Owner intends to occupy adjacent portions of the existing building during the entire construction period.
- B. Owner intends to occupy the Project upon Substantial Completion.
- C. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- D. Coordinate Work activities with Owner's scheduled activities, quiet periods and building shut down.
- E. Schedule the Work to accommodate Owner occupancy.

1.08 CONTRACTOR USE OF SITE AND PREMISES

- A. Construction Operations: Limited to areas noted on Drawings.
- B. Arrange use of site and premises to allow:
 - 1. Owner occupancy.
 - 2. Work by Owner.
 - 3. Use of site and premises by the public.
- C. Provide access to and from site as required by law and by Owner:
 - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
 - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.
- D. Parking: Owner will provide two (2) University of Oregon parking hang tags for use in parking lots only (not at parking meters on street) for duration of the project. Additional permits may be obtained at Contractor's expense by contacting Office of Public Safety at (541) 346-5444, if available.
- E. Contractor Staging Areas: As indicated on Drawings. Contractor to limit staging to areas within project area.
- F. Utility Outages and Shutdown:
 - 1. Limit disruption of utility services to hours the building is unoccupied.
 - 2. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
 - 3. Prevent accidental disruption of utility services to other facilities.
- G. Noise Control:
 - 1. Contractor is prohibited from making excessive noise such as that created by jack hammers, compressors, generators, drilling rigs, internal combustion engines, and other similar devices prior to 7:00 AM or after 8:00 PM unless notice is given to Owner at least 72 hours before operation and approval is received from Owner.

1.09 MATERIAL SAFETY DATA

- A. Submit copies of Material Safety Data Sheets (MSDS) for materials and products used on site to Owner's Project Manager. Maintain separate copies of MSDS records at site.

1.10 ASBESTOS CONTAINING MATERIALS WARNING

- A. Asbestos containing materials are known to existing in areas of the Work. Contractor shall not, in any way, disturb materials which are known to contain asbestos, assumed to contain asbestos, or otherwise have not been tested and confirmed to be asbestos free. Where access to concealed spaces is required, or it is necessary to disturb building materials such as for drilling of holes, cutting, etc., notify Owner so that proper investigation and/or material procedures are followed.
- B. The Owner will investigate and test for asbestos containing materials and, if required, remove such materials as required for the Work.
- C. Contractor shall schedule five (5) days of slack or "down" time to allow for removal of asbestos discovered during demolition work without penalty to Owner for delay of the Contract.

PART 2 PRODUCTS - NOT USED**PART 3 EXECUTION - NOT USED****END OF SECTION**

PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.

1.02 RELATED REQUIREMENTS

- A. Document B-7 - Agreement Form: Contract Sum, retainages, payment period.
- B. Document B-8 - General Conditions : Additional requirements for progress payments, final payment, changes in the Work.

1.03 SCHEDULE OF VALUES

- A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- B. Forms filled out by hand will not be accepted.
- C. Submit a printed schedule on AIA Form G703 - Application and Certificate for Payment Continuation Sheet. Contractor's standard form or electronic media printout will be considered.
- D. Submit Schedule of Values in duplicate within 10 days after date of Owner-Contractor Agreement.
- E. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification Section. Identify site mobilization.
- F. Include separately from each line item, a direct proportional amount of Contractor's overhead and profit.
- G. Revise schedule to list approved Change Orders, with each Application For Payment.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Each calendar month ending on the last day of the month or date approved by Owner.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- C. Forms filled out by hand will not be accepted.
- D. Present required information on electronic media printout.
- E. Form: AIA G702 Application and Certificate for Payment and AIA G703 - Continuation Sheet including continuation sheets when required.
- F. For each item, provide a column for listing each of the following:
 - 1. Item Number.
 - 2. Description of work.
 - 3. Scheduled Values.
 - 4. Previous Applications.
 - 5. Work in Place and Stored Materials under this Application.
 - 6. Authorized Change Orders.
 - 7. Total Completed and Stored to Date of Application.
 - 8. Percentage of Completion.
 - 9. Balance to Finish.
 - 10. Retainage.
- G. Execute certification by signature of authorized officer.

- H. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored Products.
- I. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of Work.
- J. Submit four copies of each Application for Payment.
- K. Include the following with the application:
 - 1. Transmittal letter as specified for Submittals in Section 01 30 00.
 - 2. Construction progress schedule, revised and current as specified in Section 01 30 00.
 - 3. Wage Certification: Submit Payroll and Certified Statement Form complying with ORS 279.354 covering Contractor and sub-contractors.
 - 4. Daily Reports: Submit copies of daily reports for the pay period. Reports to include date, number of employees, subcontractors and number of employees, and brief description of work performed.
- L. Owner will not process incomplete payment applications or applications without attachments.
- M. Record Document Monitoring: Architect and Owner's Project Manager will review status of record document preparation under provisions of Section 01 70 00.
- N. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

1.05 APPLICATION FOR FINAL PAYMENT

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

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

ADMINISTRATIVE REQUIREMENTS**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Preconstruction meeting.
- B. Progress meetings.
- C. Submittals for review, information, and project closeout.
- D. Number of copies of submittals.
- E. Submittal procedures.

1.02 RELATED REQUIREMENTS

- A. Section 01 70 00 - Execution and Closeout Requirements: Additional coordination requirements.
- B. Section 01 78 00 - Closeout Submittals: Project record documents.

1.03 PROJECT COORDINATION

- A. Coordinate scheduling, submittals, and Work of the various sections of the Project Manual to assure efficient and orderly sequence of installation of interdependent construction elements.
- B. Coordinate completion and clean up work of separate sections in preparation for Substantial Completion.
- C. During construction, coordinate use of site and facilities through the Owner's Project Manager.
- D. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owners' activities.

PART 2 PRODUCTS - NOT USED**PART 3 EXECUTION****3.01 PRECONSTRUCTION MEETING**

- A. Owner's Project Manager will schedule a meeting after Notice of Award.
- B. Attendance Required:
 - 1. Owner's Project Manager.
 - 2. Architect.
 - 3. Contractor's Project Manager and Superintendent.
- C. Agenda:
 - 1. Distribution of Contract Documents.
 - 2. Submission of list of Subcontractors, schedule of values, and progress schedule.
 - 3. Designation of personnel representing the parties to Contract, Owner and Architect.
 - 4. Designation of personnel representing the parties to Contract, and Architect.
 - 5. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 6. Review use of site and access issues.
 - 7. Scheduling.
 - 8. Owner's environmental health and safety procedures and documentation.
 - 9. Identification of long lead time items of Work.
- D. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

3.02 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at maximum weekly intervals.
- B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Attendance Required: Job superintendent, major Subcontractors and suppliers, Owner's Project Manager, Architect, as appropriate to agenda topics for each meeting.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review status of outstanding items from previous meetings
 - 3. Review of Work progress.
 - 4. report.
 - 5. Review Schedule including work to be performed in next two week period.
 - 6. Identification of problems that impede, or will impede, planned progress.
 - 7. Review of submittals schedule and status of submittals.
 - 8. Architect's Report.
 - 9. Sub-Contractor Reports.
 - 10. Owner's Report.
 - 11. Change Items.
 - 12. Requests for Information.
 - 13. New Items.
 - 14. Other business relating to Work.
- E. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

3.03 SUBMITTAL SCHEDULE

- A. Architect will furnish Contractor a list of submittals required by individual specification sections.
- B. Coordinate schedule with Progress Schedule.
- C. Maintain Submittal Log to track progress of each submittal.
 - 1. Update log daily.
 - 2. Provide copies to Architect and Owner's Project Manager at each Progress Meeting.

3.04 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
 - 1. Product Data: Identify applicable products, models, options and other data.
 - 2. Shop Drawings: Prepare by competent drafters.
 - 3. Samples for Selection: Provide manufacturer's complete color and finish line for selection.
 - 4. Samples for Verification: Provide specified color / finish samples.
- B. Submit to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
- C. Samples will be reviewed only for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 78 00 - CLOSEOUT SUBMITTALS.

3.05 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 - 1. Certificates: Certify product conforms to or exceeds specified requirements.
 - 2. Test Reports: Record of test certifying conformance with specified requirements.
 - 3. Inspection Reports.
 - 4. Manufacturer's Installation Instructions: Complete installation instructions.

5. Manufacturer's Field Reports: Reports verifying conformance with specified requirements.
6. Other types indicated.

B. Submit for Architect's knowledge as contract administrator or for Owner. No action will be taken.

3.06 SUBMITTALS FOR PROJECT CLOSEOUT

A. When the following are specified in individual sections, submit them at project closeout:

1. Project record documents.
2. Operation and maintenance data.
3. Warranties.
4. Other types as indicated.

B. Submit for Owner's benefit during and after project completion.

3.07 NUMBER OF COPIES OF SUBMITTALS

A. Documents for Review:

1. Small Size Sheets, Not Larger Than 8-1/2 x 11 inches: Submit the number of copies which the Contractor requires, plus four which will be retained by the Architect, Owner and Consultants.
2. Larger Sheets, Not Larger Than 36 x 48 inches: Submit the number of opaque reproductions which Contractor requires, plus four which will be retained by Architect, Owner, and Consultants.

B. Documents for Information: Submit three copies.

C. Documents for Project Closeout: Make one reproduction of submittal originally reviewed. Submit one extra of submittals for information.

D. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.

1. After review, produce duplicates.
2. Retained samples will not be returned to Contractor unless specifically so stated.

3.08 SUBMITTAL PROCEDURES

A. Transmit each submittal with approved form.

B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.

C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.

D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.

E. Deliver submittals to Architect at business address.

F. Schedule submittals to expedite the Project, and coordinate submission of related items.

G. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.

H. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.

I. Provide space for Contractor and Architect review stamps.

J. When revised for resubmission, identify all changes made since previous submission.

K. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.

- L. Submittals not requested will not be recognized or processed.

END OF SECTION

CONSTRUCTION PROGRESS SCHEDULE**PART 1 GENERAL****1.01 SECTION INCLUDES**

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

1.02 RELATED SECTIONS

- A. Section 01 10 00 - Summary: Work sequence.

1.03 REFERENCES**1.04 SUBMITTALS**

- A. Within 7 days after date of Agreement, submit preliminary schedule .
- B. Submit updated schedule with each Application for Payment.
- C. Submit the number of opaque reproductions that Contractor requires, plus three copies which will be retained by Architect and Owner.
- D. Submit under transmittal letter form.

1.05 SCHEDULE FORMAT

- A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
- B. Diagram Sheet Size: Maximum 11 x 17 inches or width required.
- C. Scale and Spacing: To allow for notations and revisions.

PART 2 PRODUCTS - NOT USED**PART 3 EXECUTION****3.01 PRELIMINARY SCHEDULE**

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

3.02 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- D. Indicate delivery dates for owner-furnished products.
- E. Provide legend for symbols and abbreviations used.

3.03 BAR CHARTS

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

3.04 REVIEW AND EVALUATION OF SCHEDULE

- A. Participate in joint review and evaluation of schedule with Architect at each submittal.

- B. Evaluate project status to determine work behind schedule and work ahead of schedule.
- C. After review, revise as necessary as result of review, and resubmit within 7 days.

3.05 UPDATING SCHEDULE

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

3.06 DISTRIBUTION OF SCHEDULE

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

END OF SECTION

QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. References and standards.
- B. Mock-ups.
- C. Control of installation.
- D. Tolerances.
- E. Testing and inspection services.
- F. Manufacturers' field services.

1.02 RELATED REQUIREMENTS

- A. Section 01 30 00 - Administrative Requirements: Submittal procedures.
- B. Section 01 60 00 - Product Requirements: Requirements for material and product quality.

1.03 REFERENCE STANDARDS

- A. ASTM C1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2008.
- B. ASTM C1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation; 2011c.
- C. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2012a.
- D. ASTM E329 - Standard Specification for Agencies Engaged Construction Inspection and/or Testing; 2011.
- E. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing; 2009.

1.04 SUBMITTALS

- A. Test Reports: After each test/inspection, promptly submit two copies of report to Architect and to Contractor.
 - 1. Include:
 - a. Date issued.
 - b. Project title and number.
 - c. Name of inspector.
 - d. Date and time of sampling or inspection.
 - e. Identification of product and specifications section.
 - f. Location in the Project.
 - g. Type of test/inspection.
 - h. Date of test/inspection.
 - i. Results of test/inspection.
 - j. Conformance with Contract Documents.
 - k. When requested by Architect, provide interpretation of results.
 - 2. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.
- B. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

- C. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
 - 1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.05 REFERENCES AND STANDARDS

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

1.06 TESTING AND INSPECTION AGENCIES

- A. Owner will employ and pay for services of an independent testing agency to perform specified testing.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have Work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 MOCK-UPS

- A. Tests will be performed under provisions identified in this section and identified in the respective product specification sections.

- B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- C. Accepted mock-ups shall be a comparison standard for the remaining Work.
- D. Where mock-up has been accepted by Architect and is specified in product specification sections to be removed, remove mock-up and clear area when directed to do so.

3.03 TOLERANCES

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

3.04 TESTING AND INSPECTION

- A. See individual specification sections for testing required.
- B. Testing Agency Duties:
 1. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.
 2. Perform specified sampling and testing of products in accordance with specified standards.
 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 4. Promptly notify Architect and Contractor of observed irregularities or non-conformance of Work or products.
 5. Perform additional tests and inspections required by Architect.
 6. Submit reports of all tests/inspections specified.
- C. Limits on Testing/Inspection Agency Authority:
 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 2. Agency may not approve or accept any portion of the Work.
 3. Agency may not assume any duties of Contractor.
 4. Agency has no authority to stop the Work.
- D. Contractor Responsibilities:
 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
 4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
 6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- E. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Architect.
- F. Re-testing required because of non-conformance to specified requirements shall be paid for by Contractor.

3.05 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.06 DEFECT ASSESSMENT

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

END OF SECTION

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary utilities.
- B. Temporary telecommunications services.
- C. Temporary telephone service.
- D. Temporary sanitary facilities.
- E. Temporary Controls: Barriers, enclosures, and fencing.
- F. Protection.
- G. Security requirements.
- H. Vehicular access and parking.
- I. Waste removal facilities and services.

1.02 TEMPORARY UTILITIES

- A. Provide and pay for all temporary lighting and ventilation required for construction purposes.
- B. Existing electrical, water, and heating facilities may be used. Do not waste electricity, heat, and water.

1.03 TELECOMMUNICATIONS SERVICES

- A. Provide, maintain, and pay for cellular telephone service to site. Provide at time of project mobilization.
- B. Telecommunications services shall include:

1.04 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.

1.05 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition. Location indicated on Drawings.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.06 INTERIOR ENCLOSURES

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

1.07 PROTECTIONS OF EXISTING SURFACES AND FURNISHINGS

- A. Provide protective coverings at walls, floors, and other existing construction.

1.08 PROTECTIONS OF THE WORK

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings for walls, projections, jambs, and sills of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic from landscape areas.

1.09 DUST CONTROL

- A. Execute Work by methods to minimize raising dust from construction operations.
- B. Provide positive means to prevent air-borne dust from dispersing into atmosphere.

1.10 SECURITY

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

1.11 VEHICULAR ACCESS AND PARKING - See Section 01 10 00.

- A. Coordinate access and haul routes with governing authorities and Owner.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Provide means of removing mud from vehicle wheels before entering streets.
- D. Designated existing on-site roads may be used for construction traffic.

1.12 PROGRESS CLEANING AND WASTE REMOVAL

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site at least weekly.
- C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.
- E. Broom and vacuum clean interior areas prior to start of surface finishing and continue cleaning to eliminate dust.
- F. Remove debris and rubbish from pipe chases, plenums, stud cavities and other closed or remote spaces, prior to enclosing the space.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

- A. Section 01 10 00 - Summary: List of products to be furnished by Owner.
- B. Document 01 60 01 - Substitution Request Form.
- C. Section 02 41 00 - Demolition: Removal of existing items to be re-installed.

1.03 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

- A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by the Contract Documents.
- B. Reused Products: Reused products include materials and equipment previously used in this or other construction, salvaged and refurbished as specified.

2.02 NEW PRODUCTS

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

2.03 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.04 MAINTENANCE MATERIALS

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

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

- A. Instructions to Bidders specify time restrictions for submitting requests for substitutions during the bidding period. Comply with requirements specified in this section.
- B. After date of contract, the Owner may, at its option, consider formal requests from Contractor for substitution of products for those specified. One or more of the following conditions must be documented:
 - 1. Compliance with final interpretation of code requirements or insurance regulations.
 - 2. Unavailability of a specified Product through no fault of the Contractor.
 - 3. Inability of specified Product to perform or fit in designated place.
 - 4. Manufacturer's or fabricator's refusal to certify or guarantee performance of a specified product.
- C. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- D. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
 - 5. Will reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.
- E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- F. Substitution Submittal Procedure:
 - 1. Requests for substitution must be submitted on approved Substitution Request Form - Section 01 60 01.
 - 2. Submit four copies of request for substitution for consideration. Limit each request to one proposed substitution.
 - 3. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
 - 4. The Architect will notify Contractor in writing of decision to accept or reject request.
 - 5. Architect will document approved substitutions during bidding period by addenda.

3.02 OWNER-SUPPLIED PRODUCTS

- A. See Section 01 10 00 - Summary for identification of Owner-furnished products.
- B. Owner's Responsibilities:
 - 1. Arrange for and deliver Owner reviewed shop drawings, product data, and samples, to Contractor.
 - 2. Arrange and pay for product delivery to site.

3. On delivery, inspect products jointly with Contractor.
4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
5. Arrange for manufacturers' warranties, inspections, and service.

C. Contractor's Responsibilities:

1. Review Owner reviewed shop drawings, product data, and samples.
2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
3. Handle, store, install and finish products.
4. Repair or replace items damaged after receipt.

3.03 TRANSPORTATION AND HANDLING

- A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- B. Transport and handle products in accordance with manufacturer's instructions.
- C. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.
- F. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.04 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- G. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- H. Prevent contact with material that may cause corrosion, discoloration, or staining.
- I. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- J. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SUBSTITUTION REQUEST FORM

TO: Robertson/Sherwood/Architect pc
132 East Broadway - Suite 540
Eugene, Oregon 97401

PROJECT: UO Museum of Natural & Cultural History, Exhibit Expansion - Phase 2
University of Oregon
Eugene, Oregon

SPECIFIED ITEM: _____
Section Paragraph Description

The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION: _____

Attached data includes product descriptions, specifications, drawings, photographs, performance and test data adequate for evaluation of request including identification of applicable data portions.

Attached data also includes description of changes to Contract Documents and proposed substitution requires for proper installation.

The undersigned certifies following items, unless modified by attachments, are correct:

- 1. Proposed substitution does not affect dimensions shown on drawings.
- 2. Undersigned pays for changes to building design, including engineering design, detailing, and construction costs caused by proposed substitution.
- 3. Proposed substitution has no adverse effect on other trades, construction schedule, or specified warranty requirements.
- 4. Maintenance and service parts available locally or readily obtainable for proposed substitution.

Undersigned further certifies function, appearance, and quality of proposed substitution are equivalent to or superior to specified item.

Submitted by: _____ Signature: _____ Firm: _____ Address: _____ _____ Date: _____ Tel: _____ Fax: _____ Attachments: _____ _____	For use by Architect: <input type="checkbox"/> Approved <input type="checkbox"/> Approved as noted. <input type="checkbox"/> Not Approved <input type="checkbox"/> Received too late By: _____ Date: _____ _____ For use by University of Oregon Project Manager: <input type="checkbox"/> Approved <input type="checkbox"/> Approved as noted. <input type="checkbox"/> Not Approved <input type="checkbox"/> Received too late By: _____ Date: _____ _____
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EXECUTION AND CLOSEOUT REQUIREMENTS**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition, except removal, disposal, and/or remediation of hazardous materials and toxic substances.
- C. Pre-installation meetings.
- D. Cutting and patching.
- E. Laying out the work.
- F. Cleaning and protection.
- G. Starting of systems and equipment.
- H. Demonstration and instruction of Owner personnel.
- I. Closeout procedures, except payment procedures.

1.02 RELATED REQUIREMENTS

- A. Section 01 10 00 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 01 30 00 - Administrative Requirements: Submittals procedures.
- C. Section 01 50 00 - Temporary Facilities and Controls: Temporary interior partitions.
- D. Section 01 78 00 - Closeout Submittals: Project record documents, operation and maintenance data, warranties and bonds.
- E. Section 02 41 00 - Demolition: Demolition of portions of existing structures; site utility demolition.
- F. Section 07 84 00 - Firestopping.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate Contractor.

1.04 PROJECT CONDITIONS

- A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- B. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
 - 1. Provide dust-proof barriers between construction areas and areas continuing to be occupied by Owner.
- C. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.

1. At All Times: Excessively noisy tools and operations will not be tolerated inside the building at any time of day; excessively noisy includes jackhammers.
 2. Indoors: Limit conduct of especially noisy interior work to the hours of 6 pm to 7 am.
- D. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 60 00.

PART 3 EXECUTION

3.01 EXAMINATION

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

3.02 PREPARATION

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

3.03 PREINSTALLATION MEETINGS

- A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
 1. Review conditions of examination, preparation and installation procedures.
 2. Review coordination with related work.

- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 LAYING OUT THE WORK

- A. Verify layout prior to starting work.
- B. Promptly notify Architect of any discrepancies discovered.
- C. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- D. Periodically verify layouts.

3.05 GENERAL INSTALLATION REQUIREMENTS

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

3.06 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 1. Verify that construction and utility arrangements are as shown.
 2. Report discrepancies to Architect before disturbing existing installation.
 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 50 00 in locations indicated on Drawings.
- C. Remove existing work as indicated and as required to accomplish new work.
 1. Remove items indicated on Drawings.
 2. Relocate items indicated on Drawings.
 3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
 4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- D. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.

- a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
 - b. See Section 01 10 00 for other limitations on outages and required notifications.
 - c. Provide temporary connections as required to maintain existing systems in service.
 - 4. Verify that abandoned services serve only abandoned facilities.
 - 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- E. Protect existing work to remain.
- 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
 - 4. Patch as specified for patching new work.
- F. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
- G. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- H. Refinish existing surfaces as indicated:
- 1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
 - 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
 - 3. Patch as specified for patching new work.
- I. Clean existing systems and equipment.
- J. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- K. Do not begin new construction in alterations areas before demolition is complete.
- L. Comply with all other applicable requirements of this section.

3.07 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Alterations article above for additional requirements.
- C. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work.
 - 2. Fit products together to integrate with other work.
 - 3. Provide openings for penetration of mechanical, electrical, and other services.
 - 4. Match work that has been cut to adjacent work.
 - 5. Repair areas adjacent to cuts to required condition.
 - 6. Repair new work damaged by subsequent work.
 - 7. Remove samples of installed work for testing when requested.
 - 8. Remove and replace defective and non-conforming work.
- D. Execute cutting and patching to complete the work, to uncover work in order to install improperly sequenced work, to remove and replace defective or non-conforming work, to remove samples of installed work for testing when requested, to provide openings in the work for penetration of mechanical and electrical work, to execute patching to complement adjacent work, and to fit products together to integrate with other work.
- E. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.

- F. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- G. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- H. Restore work with new products in accordance with requirements of Contract Documents.
- I. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- J. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 84 00, to full thickness of the penetrated element.
- K. Patching:
 - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 - 2. Match color, texture, and appearance.
 - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.
- L. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
- M. Make neat transitions. Patch work to match adjacent work in texture and appearance. Where new work abuts or aligns with existing, perform a smooth and even transition.

3.08 PROGRESS CLEANING

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

3.09 PROTECTION OF INSTALLED WORK

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

3.10 SYSTEM STARTUP

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Architect and owner seven days prior to start-up of each item.

- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.
- G. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.11 DEMONSTRATION AND INSTRUCTION

- A. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of Substantial Completion.
- B. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.
- C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- D. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of owner personnel.
- E. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

3.12 ADJUSTING

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

3.13 FINAL CLEANING

- A. Use cleaning materials that are nonhazardous.
- B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- E. Clean filters of operating equipment.
- F. Clean debris from roofs, gutters, downspouts, and drainage systems.
- G. Clean site; sweep paved areas, rake clean landscaped surfaces.
- H. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.14 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
 1. Provide copies to Architect and Owner.

- B. Notify Architect when work is considered ready for Substantial Completion.
- C. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's review.
- D. Owner will occupy all of the building as specified in Section 01 10 00.
- E. Correct items of work listed in executed Certificates of Substantial Completion and comply with requirements for access to Owner-occupied areas.
- F. Notify Architect when work is considered finally complete.
- G. Complete items of work determined by Architect's final inspection.

END OF SECTION

CLOSEOUT SUBMITTALS**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Operation and Maintenance Data.
- B. Warranties and bonds.
- C. Spare parts and maintenance materials.

1.02 RELATED REQUIREMENTS

- A. Section 01 30 00 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- B. Section 01 70 00 - Execution and Closeout Requirements: Contract closeout procedures.
- C. Individual Product Sections: Specific requirements for operation and maintenance data.
- D. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

- A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
- B. Operation and Maintenance Data:
 1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
 2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
 3. Submit 1 copy of completed documents at 75 percent completion. This copy will be reviewed and returned, with Architect comments. Revise content of all document sets as required prior to final submission.
 4. Submit three sets of revised final documents in final form within 10 days prior to submission of final application for payment.
 5. Note: Per General Conditions, Form B-8, Owner will not make payments beyond 75 percent of the contract amount until Operation and Maintenance Manual have been submitted.
- C. Warranties and Bonds:
 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED**PART 3 EXECUTION****3.01 OPERATION AND MAINTENANCE DATA**

- A. For Each Product or System: List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.02 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

- A. For Each Product, Applied Material, and Finish:
 1. Product data, with catalog number, size, composition, and color and texture designations.
 2. Information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Additional information as specified in individual product specification sections.
- D. Provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

3.03 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

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

3.04 OPERATION AND MAINTENANCE MANUALS

- A. Prepare instructions and data by personnel experienced in maintenance and operation of described products.
- B. Prepare data in the form of an instructional manual.
- C. Binders: Commercial quality, 8-1/2 by 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.

- D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- E. Provide tabbed dividers for each separate product and system, with typed description of product and major component parts of equipment.
- F. Text: Manufacturer's printed data, or typewritten data on 24 pound paper.
- G. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- H. Arrange content by systems under section numbers and sequence of Table of Contents of this Project Manual.
- I. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, in three parts as follows:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - 3. Part 3: Project documents and certificates, including the following:
 - a. Shop drawings and product data.
 - b. Air and water balance reports.
 - c. Certificates.
- J. Provide a listing in Table of Contents for design data, with tabbed dividers and space for insertion of data.
- K. Table of Contents: Provide title of Project; names, addresses, and telephone numbers of Architect, Consultants, and Contractor with name of responsible parties; schedule of products and systems, indexed to content of the volume.

3.05 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.
- E. Include originals of each in operation and maintenance manuals, indexed separately on Table of Contents.

3.06 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide spare parts, maintenance, and extra products in quantities specified in individual specification sections.

- B. Deliver to Project site and place in location directed by Owner's Project Manager; obtain receipt and submit to Architect prior to application for final payment.

END OF SECTION

DEMOLITION**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Selective demolition of building elements for alteration purposes.
- B. Removal and replacement of miscellaneous items and devices to facilitate Work.
- C. Other demolition as required to complete the Work.

1.02 RELATED REQUIREMENTS

- A. Section 01 10 00 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 10 00 - Summary: Description of items to be salvaged or removed for re-use by Contractor.
- C. Section 01 50 00 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- D. Section 01 60 00 - Product Requirements: Handling and storage of items removed for salvage and relocation.
- E. Section 01 70 00 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.

1.03 PROJECT CONDITIONS

- A. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- B. Comply with other requirements specified in Section 01 70 00.

PART 2 PRODUCTS -- NOT USED**PART 3 EXECUTION****3.01 SCOPE**

- A. Remove items indicated, for salvage, relocation, and reuse.

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Provide, erect, and maintain temporary barriers and security devices.
 - 2. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 - 3. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 4. Do not close or obstruct roadways or sidewalks without permit.
 - 5. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Do not begin removal until built elements to be salvaged or relocated have been removed.
- D. Protect existing structures and other elements that are not to be removed.
 - 1. Provide bracing and shoring.
 - 2. Prevent movement or settlement of adjacent structures.

3. Stop work immediately if adjacent structures appear to be in danger.
- E. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- F. Perform demolition in a manner that maximizes salvage and recycling of materials.
 1. Dismantle existing construction and separate materials.
 2. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.

3.03 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 1. Verify that construction and utility arrangements are as shown.
 2. Report discrepancies to Architect before disturbing existing installation.
 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Separate areas in which demolition is being conducted from other areas that are still occupied.
 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 50 00 in locations indicated on drawings.
- C. Remove existing work as indicated and as required to accomplish new work.
 1. Remove items indicated on drawings.
- D. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.
 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 3. See Section 01 10 00 for other limitations on outages and required notifications.
 4. Verify that abandoned services serve only abandoned facilities before removal.
 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- E. Protect existing work to remain.
 1. Prevent movement of structure; provide shoring and bracing if necessary.
 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 3. Repair adjacent construction and finishes damaged during removal work.
 4. Patch as specified for patching new work.

3.04 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

MAINTENANCE OF CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Repair of exposed structural, shrinkage, and settlement cracks.
- B. Repair of internal concrete reinforcement.

1.02 REFERENCE STANDARDS

- A. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2011a.
- B. ASTM C404 - Standard Specification for Aggregates for Masonry Grout; 2011.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Indicate product standards, physical and chemical characteristics, technical specifications, limitations, maintenance instructions, and general recommendations regarding each material.

1.04 MOCK-UP

- A. Horizontal Crack: Prepare one sample for review and approval.
- B. Locate mock-up where directed.
- C. Satisfactory mock-up may remain as part of the work.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Comply with manufacturers' instructions for storage, shelf life limitations, and handling of products.

PART 2 PRODUCTS

2.01 EPOXY PATCHING AND REPAIR MATERIALS

- A. Epoxy Repair Mortar: Epoxy resin mixed with aggregate and other materials in accordance with manufacturer's instructions for purpose intended; conform to pot life and workability limits.
 - 1. Products:
 - a. Rezi-Weld LV by W.R. Meadows, Inc: www.wrmeadows.com.
 - b. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 ANCILLARY MATERIALS

- A. Sand: ASTM C33 or ASTM C404; uniformly graded, clean.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work.
- B. Beginning of installation means acceptance of substrate.

3.02 CONCRETE REPAIR

- A. See the drawings for specific areas to be repaired.
- B. Remove broken and soft concrete at least 1/4 inch deep.
- C. Work epoxy mortar into broken surface and build up patch to match original.

- D. Feather edges of repairs flush to sound surface and trowel surface to match surrounding area.

END OF SECTION

METAL FABRICATIONS**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Shop fabricated steel items.

1.02 RELATED REQUIREMENTS

- A. Section 06 10 00 - Rough Carpentry: Wood framing.
- B. Section 09 90 00 - Painting and Coating: Paint finish.

1.03 REFERENCE STANDARDS

- A. ASTM A 167/A 167M - Standard Specification for Stainless and Heat-Resisting, Chromium-Nickel Steel Plate.
- B. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates; 2012.
- C. SSPC-Paint 15 - Steel Joist Shop Primer; Society for Protective Coatings; 1999 (Ed. 2004).
- D. SSPC-SP 2 - Hand Tool Cleaning; Society for Protective Coatings; 1982 (Ed. 2004).

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.

PART 2 PRODUCTS**2.01 MATERIALS**

- A. Steel Plate: ASTM A283.
- B. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.
- C. Epoxy: Two part, epoxy based adhesive, non-shrink anchor grouting material.
 - 1. SET22 by Simpson Strong Tie: www.strongtie.com.
 - 2. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 FABRICATION

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.
- C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- D. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.03 FABRICATED ITEMS

- A. Wall Brace: Steel bar; 2-1/2 inch wide x 1/4 inch thick; welded connections; provide holes for screws and epoxy anchoring.

2.04 FINISHES - STEEL

- A. Prime paint all steel items.

- B. Prepare surfaces to be primed in accordance with SSPC-SP2.
- C. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
- D. Prime Painting: One coat.

2.05 FABRICATION TOLERANCES

- A. Squareness: 1/8 inch maximum difference in diagonal measurements.
- B. Maximum Offset Between Faces: 1/16 inch.
- C. Maximum Misalignment of Adjacent Members: 1/16 inch.
- D. Maximum Bow: 1/8 inch in 48 inches.
- E. Maximum Deviation From Plane: 1/16 inch in 48 inches.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.

3.02 INSTALLATION

- A. Coordinate installation with wall framing specified in Section 06 10 00 - Rough Carpentry.
- B. Install items plumb and level, accurately fitted, free from distortion or defects.
- C. Obtain approval prior to site cutting or making adjustments not scheduled.
- D. Set base plate in recess in concrete and secure with epoxy.

3.03 TOLERANCES

- A. Maximum Variation From Plumb: 1/8 inch per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/8 inch.
- C. Maximum Out-of-Position: 1/8 inch.

END OF SECTION

ROUGH CARPENTRY**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Structural dimension lumber framing.
- B. Non-structural dimension lumber framing.
- C. Sheathing.
- D. Concealed wood blocking, nailers, and supports.

1.02 RELATED REQUIREMENTS

- A. Section 09 21 16 - Gypsum Board Assemblies: Gypsum wallboard.

1.03 REFERENCE STANDARDS

- A. AFPA (WFCM) - Wood Frame Construction Manual for One- and Two-Family Dwellings; American Forest and Paper Association; 2012.
- B. PS 1 - Structural Plywood; 2009.
- C. PS 20 - American Softwood Lumber Standard; National Institute of Standards and Technology (Department of Commerce); 2005.
- D. WCLIB (GR) - Standard Grading Rules for West Coast Lumber No. 17; West Coast Lumber Inspection Bureau; 2004, and supplements.

1.04 DELIVERY, STORAGE, AND HANDLING

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

PART 2 PRODUCTS**2.01 GENERAL REQUIREMENTS**

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. Species: Douglas Fir-Larch, unless otherwise indicated.
 - 2. If no species is specified, provide any species graded by the agency specified; if no grading agency is specified, provide lumber graded by any grading agency meeting the specified requirements.
 - 3. Grading Agency: Any grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org) and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
- B. Lumber fabricated from old growth timber is not permitted.

2.02 DIMENSION LUMBER

- A. Grading Agency: West Coast Lumber Inspection Bureau (WCLIB).
- B. Sizes: Nominal sizes as indicated on drawings, S4S.
- C. Moisture Content: S-dry or MC19.
- D. Stud Framing (2 by 2 through 2 by 6):
 - 1. Grade: No. 1.
- E. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2.
 - 2. Boards: No. 2.

2.03 CONSTRUCTION PANELS

- A. Wall Sheathing: Plywood, PS 1, Grade C-D, Exposure I.

2.04 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Drywall Screws: Bugle head, hardened steel, power driven type, length three times thickness of sheathing.

PART 3 EXECUTION**3.01 INSTALLATION - GENERAL**

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.

3.02 FRAMING INSTALLATION

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.
- C. Install structural members full length without splices unless otherwise specifically detailed.
- D. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AFPA Wood Frame Construction Manual.
- E. Install horizontal spanning members with crown edge up and not less than 1-1/2 inches of bearing at each end.
- F. Construct double joist headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joists; use metal joist hangers unless otherwise detailed.
- G. Frame wall openings with two or more studs at each jamb; support headers on cripple studs.

3.03 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.

3.04 INSTALLATION OF CONSTRUCTION PANELS

- A. Wall Sheathing: Secure with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails or screws.

3.05 TOLERANCES

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

END OF SECTION

FINISH CARPENTRY**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Finish carpentry items.
- B. Wood casings and moldings.
- C. Hardware and attachment accessories.

1.02 RELATED REQUIREMENTS

- A. Section 08 14 16 - Flush Wood Doors.
- B. Section 09 90 00 - Painting and Coating: Painting and finishing of finish carpentry items.

1.03 REFERENCE STANDARDS**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, accessories, to a minimum scale of 1-1/2 inch to 1 ft.

1.05 QUALITY ASSURANCE

- A. Perform work in accordance with AWI Architectural Woodwork Quality Standards Illustrated, Custom grade.
- B. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect work from moisture damage.

1.07 PROJECT CONDITIONS

- A. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.

PART 2 PRODUCTS**2.01 LUMBER MATERIALS**

- A. Interior Trim: Douglas fir species, smooth sawn, maximum moisture content of 6 percent; with vertical grain, 1 and 2 Clear grade.

2.02 FASTENINGS

- A. Fasteners: Of size and type to suit application; galvanized finish in concealed locations and galvanized finish in exposed locations.
- B. Concealed Joint Fasteners: Threaded steel.

2.03 FABRICATION

- A. Shop assemble work for delivery to site, permitting passage through building openings.
- B. Plow back on trim; ease exposed edges.
- C. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify adequacy of backing and support framing.

3.02 INSTALLATION

- A. Set and secure materials and components in place, plumb and level.
- B. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim to conceal larger gaps.

3.03 PREPARATION FOR SITE FINISHING

- A. Set exposed fasteners. Sand work smooth.
- B. Site Finishing: See Section 09 90 00.

3.04 TOLERANCES

- A. Maximum Variation from True Position: 1/16 inch.
- B. Maximum Offset from True Alignment with Abutting Materials: 1/32 inch.

END OF SECTION

FLUSH WOOD DOORS**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Flush wood doors; flush configuration; non-rated.

1.02 RELATED REQUIREMENTS

- A. Section 08 71 00 - Door Hardware.
- B. Section 09 90 00 - Painting and Coating: Site finishing of doors.

1.03 REFERENCE STANDARDS

- A. AWI/AWMAC (QSI) - Architectural Woodwork Quality Standards Illustrated; Architectural Woodwork Institute and Architectural Woodwork Manufacturers Association of Canada; 2005, 8th Ed., Version 2.0.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.
- C. Specimen warranty.
- D. Shop Drawings: Illustrate door opening criteria, elevations, sizes, types, swings, undercuts required, special beveling, special blocking for hardware, factory machining criteria.
- E. Manufacturer's Installation Instructions: Indicate special installation instructions.
- F. Warranty, executed in Owner's name.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum five years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Package, deliver and store doors in accordance with specified quality standard.
- B. Accept doors on site in manufacturer's packaging. Inspect for damage.
- C. Protect doors with resilient packaging sealed with heat shrunk plastic. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer if stored more than one week. Break seal on site to permit ventilation.

1.07 PROJECT CONDITIONS

- A. Coordinate the work with door opening construction, door frame and door hardware installation.

1.08 WARRANTY

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

PART 2 PRODUCTS**2.01 MANUFACTURERS**

- A. Wood Veneer Faced Doors:
 1. Eggers Industries: www.eggersindustries.com.
 2. Marshfield DoorSystems, Inc: www.marshfielddoors.com.
 3. Algoma Hardwoods, Inc: www.algomahardwoods.com.
 4. Sauder Door Corp.
 5. VT Industries.
 6. Vancouver Door, Inc.: www.vancouverdoorco.com.
 7. Western Oregon Door LLC.
 8. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 DOORS

- A. All Doors: See drawings for locations and additional requirements.
 1. Quality Level: Premium Grade, in accordance with AWI/AWMAC Architectural Woodwork Quality Standards Illustrated, Section 1300.
 2. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.
- B. Interior Doors: 1-3/4 inches thick unless otherwise indicated; flush construction.
 1. Provide solid core doors at all locations .
 2. Wood veneer facing for field opaque finish .

2.03 DOOR AND PANEL CORES

- A. Non-Rated Solid Core and 20 Minute Rated Doors: Type structural composite lumber core (SCLC), plies and faces as indicated above.

2.04 DOOR FACINGS

- A. Veneer Facing for Opaque Finish: Medium density overlaid plywood.

2.05 DOOR CONSTRUCTION

- A. Fabricate doors in accordance with door quality standard specified.
- B. Cores Constructed with Stiles and Rails.
- C. Provide solid blocks at lock edge and top of door for closer for hardware reinforcement.
 1. Provide solid blocking for other throughbolted hardware.
- D. Fit door edge trim to edge of stiles after applying veneer facing.
- E. Veneer glued to core in hot press; minimum 1/50 inch thick face veneer.
- F. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.
- G. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.
- H. Provide edge clearances in accordance with the quality standard specified.

PART 3 EXECUTION**3.01 EXAMINATION**

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

3.02 INSTALLATION

- A. Install doors in accordance with manufacturer's instructions and specified quality standard.
- B. Use machine tools to cut or drill for hardware.
- C. Coordinate installation of doors with installation of frames and hardware.
- D. Coordinate installation of glazing.

3.03 TOLERANCES

- A. Conform to specified quality standard for fit and clearance tolerances.
- B. Conform to specified quality standard for telegraphing, warp, and squareness.
- C. Maximum Vertical Distortion (Bow): 1/8 inch measured with straight edge or taut string, top to bottom, over an imaginary 36 by 84 inches surface area.
- D. Maximum Width Distortion (Cup): 1/8 inch measured with straight edge or taut string, edge to edge, over an imaginary 36 by 84 inches surface area.

3.04 ADJUSTING

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

END OF SECTION

DOOR HARDWARE**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Installation of Owner furnished hardware.
- B. Hardware for wood doors.

1.02 RELATED REQUIREMENTS

- A. Section 01 10 00 - Summary of Work: Description of Owner furnished hardware.
- B. Section 08 14 16 - Flush Wood Doors.

1.03 REFERENCE STANDARDS

- A. DHI (LOCS) - Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames; Door and Hardware Institute; 2004.
- B. DHI WDHS.3 - Recommended Locations for Architectural Hardware for Flush Wood Doors; Door and Hardware Institute; 1993; also in WDHS-1/WDHS-5 Series, 1996.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the manufacture, fabrication, and installation of products onto which door hardware will be installed.

1.05 QUALITY ASSURANCE

- A. Installer: Company specializing in installation of commercial door hardware with five years of experience.

1.06 COORDINATION

- A. Coordinate the work with other directly affected sections involving manufacture or fabrication of internal reinforcement for door hardware.
- B. Coordinate Owner's keying requirements during the course of the Work.

PART 2 PRODUCTS**2.01 DOOR HARDWARE - GENERAL**

- A. Provide all hardware specified or required to make doors fully functional, compliant with applicable codes, and secure to the extent indicated.
- B. Provide all items of a single type of the same model by the same manufacturer.

2.02 PRODUCTS

- A. Owner Furnished Contractor Installed.

2.03 KEYING

- A. By Owner.

PART 3 EXECUTION**3.01 INSTALLATION**

- A. Install hardware in accordance with manufacturer's instructions and applicable codes.
- B. Use templates provided by hardware item manufacturer.
- C. Mounting heights for hardware from finished floor to center line of hardware item:

1. For steel doors and frames: Comply with DHI "Recommended Locations for Architectural Hardware for Steel Doors and Frames."
2. For wood doors: Comply with DHI "Recommended Locations for Architectural Hardware for Wood Flush Doors."

3.02 ADJUSTING

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

3.03 SCHEDULE

A.	Hardware Group 1: Interior Wood Sliding Pocket Door					
	1	Ea	Panel Pocket Door Frame	PDFC250N	N/A	Stanley
	1	Set	Pocket Door Kit	PD150N-00-48	N/A	Stanley
	1	Ea	Pull	PD250-05	612	Stanley

END OF SECTION

GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Gypsum wallboard.
- B. Joint treatment and accessories.
- C. Textured finish system.

1.02 RELATED REQUIREMENTS

- A. Section 06 10 00 - Rough Carpentry: Building framing, blocking .

1.03 REFERENCE STANDARDS

- A. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2002 (Reapproved 2007).
- B. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2011.
- C. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2010a.
- D. GA-216 - Application and Finishing of Gypsum Board; Gypsum Association; 2010.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate special details associated with fireproofing.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing gypsum board application and finishing, with minimum five years of documented experience.

PART 2 PRODUCTS

2.01 GYPSUM BOARD ASSEMBLIES

- A. Provide completed assemblies complying with ASTM C840 and GA-216.

2.02 BOARD MATERIALS

- A. Gypsum Wallboard: ASTM C 1396/C 1396M. Sizes to minimize joints in place; ends square cut.
 - 1. Fire Resistant Type: Complying with Type X requirements; UL or WH rated.
 - a. Thickness: 5/8 inch.
 - b. Edges: Tapered.

2.03 ACCESSORIES

- A. Finishing Accessories: ASTM C1047, galvanized steel or rolled zinc, unless otherwise indicated.
 - 1. Types: As detailed or required for finished appearance.
- B. Joint Materials: ASTM C475 and as recommended by gypsum board manufacturer for project conditions.
 - 1. Tape: 2 inch wide, coated glass fiber tape for joints and corners, except as otherwise indicated.
 - 2. Ready-mixed vinyl-based joint compound.
- C. Textured Finish Materials: Latex-based compound; plain.

- D. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that project conditions are appropriate for work of this section to commence.

3.02 BOARD INSTALLATION

- A. Comply with ASTM C 840 and manufacturer's instructions.
- B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.

3.03 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.
- B. Corner Beads: Install at external corners, using longest practical lengths.

3.04 JOINT TREATMENT

- A. Finish gypsum board in scheduled areas in accordance with levels defined in ASTM C 840 and as scheduled below.
 1. Above Finished Ceilings Concealed From View: Level 1.
 2. Utility Areas and Areas Behind Cabinetry: Level 2.
 3. Walls and Ceilings to Receive Texture, Flat or Eggshell Paint Finish: Level 4.
- B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 1. Feather coats of joint compound so that camber is maximum 1/32 inch.

3.05 TEXTURE FINISH

- A. Apply finish texture coating by means of spraying apparatus in accordance with manufacturer's instructions to match existing wall finish.
- B. Texture Required: Match existing.

3.06 TOLERANCES

- A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

END OF SECTION

RESILIENT FLOORING**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Resilient sheet flooring.
- B. Resilient base.
- C. Installation accessories.

1.02 RELATED REQUIREMENTS

- A. Section 02 41 00 - Demolition: Removal of existing floor finishes.

1.03 REFERENCE STANDARDS

- A. ASTM F1861 - Standard Specification for Resilient Wall Base; 2008.
- B. ASTM F2034 - Standard Specification for Sheet Linoleum Floor Covering; 2008.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- C. Shop Drawings: Indicate seaming plan.
- D. Verification Samples: Submit two samples, 6 x 6 inch in size illustrating color and pattern for each resilient flooring product specified.
- E. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect roll materials from damage by storing on end.

1.06 FIELD CONDITIONS

- A. Maintain temperature in storage area between 55 degrees F and 90 degrees F.
- B. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F.

1.07 EXTRA MATERIALS

- A. See Section 01 60 00 - Product Requirements, for additional provisions.
- B. Provide 10 square feet of flooring, 10 linear feet of base, of each type and color specified.

PART 2 PRODUCTS**2.01 SHEET FLOORING**

- A. Linoleum Sheet Flooring: Homogeneous wear layer bonded to backing, with color and pattern through wear layer thickness:
 1. Minimum Requirements: Comply with ASTM F2034, Type corresponding to type specified.
 2. Backing: Jute fabric.
 3. Wear Layer Thickness: 0.098 inch, minimum, excluding backing.
 4. Sheet Width: 79 inch, minimum.
 5. Pattern: Marbleized.

6. Color: To be selected by Architect from manufacturer's full range.
7. Seams: Heat welded.
8. Product:
 - a. Artoleum by Forbo Linoleum: www.forbolinoleumNA.com.
 - b. Substitutions: See Section 01 60 00 - Product Requirements.

- B. Linoleum Welding Rod: Solid color linoleum produced by flooring manufacturer for heat welding seams, in color in color matching predominant flooring color.

2.02 RESILIENT BASE

- A. Resilient Base: ASTM F1861, Type TS rubber, vulcanized thermoset; top set Style B, Cove, and as follows:
 1. Height: 4 inch to match existing.
 2. Thickness: 0.125 inch thick.
 3. Finish: Satin.
 4. Length: Roll.
 5. Color: As selected.
 6. Products:
 - a. Burke Flooring: www.burkemercer.com.
 - b. Johnsonite, Inc: www.johnsonite.com.
 - c. Roppe Corp: www.roppe.com.
 - d. Substitutions: See Section 01 60 00 - Product Requirements.

2.03 ACCESSORIES

- A. Subfloor and Wall Filler: White premix latex; type recommended by adhesive material manufacturer.
- B. Primers, Adhesives, and Seaming Materials: Waterproof; types recommended by flooring manufacturer.
- C. Moldings, Transition and Edge Strips: Vinyl, 1/8 inch under slung resilient floor reducer; color as selected.
 1. VT8 by Armstrong World Industries, Inc: www.armstrong.com.
 2. Substitutions: See Section 01 60 00 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.
- B. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive resilient flooring.
- C. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.
- D. Cementitious Sub-floor Surfaces: Verify that substrates are dry enough and ready for resilient flooring installation by testing for moisture and pH.
 1. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.
- E. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to sub-floor surfaces.
- F. Verify that concrete sub-floor surfaces are dry enough and ready for resilient flooring installation by testing for moisture emission rate and alkalinity in accordance with ASTM F710; obtain instructions

if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.

3.02 PREPARATION

- A. Remove sub-floor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with sub-floor filler to achieve smooth, flat, hard surface.
- B. Fill voids in wall surfaces to provide smooth surface to receive base.
- C. Prohibit traffic until filler is cured.
- D. Clean substrate.
- E. Apply primer as required to prevent "bleed-through" or interference with adhesion by substances that cannot be removed.

3.03 INSTALLATION

- A. Starting installation constitutes acceptance of sub-floor conditions.
- B. Install in accordance with manufacturer's instructions.
- C. Spread only enough adhesive to permit installation of materials before initial set.
- D. Fit joints tightly.
- E. Set flooring in place, press with heavy roller to attain full adhesion.
- F. Where type of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.
- G. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.
- H. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

3.04 SHEET FLOORING

- A. Lay flooring with joints and seams parallel to longer room dimensions, to produce minimum number of seams. Lay out seams to avoid widths less than 1/3 of roll width; match patterns carefully at seams.
- B. Double cut sheet at seams.
- C. Lay flooring with tightly butted seams, without any seam sealer unless otherwise indicated.
- D. Finish seams in linoleum by heat welding.

3.05 RESILIENT BASE

- A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.
- B. Miter internal corners. At external corners, use premolded units. At exposed ends, use premolded units.
- C. Install base on solid backing. Bond tightly to wall and floor surfaces.

3.06 CLEANING

- A. Remove excess adhesive from floor, base, and wall surfaces without damage.
- B. Clean in accordance with manufacturer's instructions.
- C. Clean and seal resilient flooring products in accordance with manufacturer's instructions.

3.07 PROTECTION

- A. Prohibit traffic on resilient flooring for 48 hours after installation.

END OF SECTION

PAINTING AND COATING**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Surface preparation.
- B. Field application of paints, stains, varnishes, and other coatings.
- C. Scope: Finish all interior and exterior surfaces exposed to view, unless fully factory-finished
- D. Do Not Paint or Finish the Following Items:
 - 1. Items fully factory-finished unless specifically so indicated; materials and products having factory-applied primers are not considered factory finished.
 - 2. Items indicated to receive other finishes.
 - 3. Items indicated to remain unfinished.
 - 4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
 - 5. Glass.
 - 6. Concealed pipes, ducts, and conduits.
- E. See Schedule - Surfaces to be Finished, at end of Section.

1.02 REFERENCE STANDARDS

- A. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials; 2007.

1.03 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on all finishing products, including VOC content.
- C. Samples: Submit two paper chip samples, 8-1/2 x 11 inch in size illustrating range of colors available for each surface finishing product scheduled.
- D. Manufacturer's Instructions: Indicate special surface preparation procedures.
- E. Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum five years experience.

1.05 MOCK-UP

- A. See Section 01 40 00 - Quality Requirements, for general requirements for mock-up.
- B. Provide panel, 10 feet long by 10 feet wide, illustrating special coating color, texture, and finish.
- C. Locate where directed.
- D. Mock-up may remain as part of the work.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.07 FIELD CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

1.08 EXTRA MATERIALS

- A. See Section 01 60 00 - Product Requirements, for additional provisions.
- B. Supply 1 gallon of each color; store where directed.
- C. Label each container with color in addition to the manufacturer's label.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Provide all paint and coating products used in any individual system from the same manufacturer; no exceptions.
- B. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 PAINTS AND COATINGS - GENERAL

- A. Paints and Coatings: Ready mixed, unless intended to be a field-catalyzed coating.
 1. Provide paints and coatings of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
 2. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color.
 3. Supply each coating material in quantity required to complete entire project's work from a single production run.
 4. Do not reduce, thin, or dilute coatings or add materials to coatings unless such procedure is specifically described in manufacturer's product instructions.
- B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.
- C. Colors: To be selected from manufacturer's full range of available colors.
 1. Selection to be made by Architect after award of contract.

2.03 PAINTS AND COATINGS

- A. Interior Metal Primer:
 1. Super Spec HP Acrylic Metal Primer P04 by Benjamin Moore.
 2. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Interior Gypsum Board Primer:
 1. Fresh Start Multi-Purpose Primer 023 by Benjamin Moore.
 2. Substitutions: See Section 01 60 00 - Product Requirements.
- C. Interior Acrylic Latex Enamel:

1. Regal Classic Premium Interior Paint 216 by Benjamin Moore.
2. Substitutions: See Section 01 60 00 - Product Requirements.

2.04 ACCESSORY MATERIALS

- A. Accessory Materials: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required to achieve the finishes specified whether specifically indicated or not; commercial quality.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin application of coatings until substrates have been properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- D. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- E. Test shop-applied primer for compatibility with subsequent cover materials.
- F. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
 1. Gypsum Wallboard: 12 percent.
 2. Interior Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

- A. Clean surfaces thoroughly and correct defects prior to coating application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- D. Surfaces: Correct defects and clean surfaces which affect work of this section. Remove or repair existing coatings that exhibit surface defects.
- E. Seal surfaces that might cause bleed through or staining of topcoat.
- F. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- G. Un corroded Uncoated Steel and Iron Surfaces to be Painted: Remove grease, mill scale, weld splatter, dirt, and rust. Where heavy coatings of scale are evident, remove by hand wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Prime paint entire surface; spot prime after repairs.
- H. Shop-Primed Steel Surfaces to be Finish Painted: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
- I. Interior Wood Surfaces to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.

- J. Wood Doors to be Field-Finished: Seal wood door top and bottom edge surfaces with clear sealer.

3.03 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- C. Apply each coat to uniform appearance.
- D. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply as many coats as necessary for complete hide.
- E. Sand wood and metal surfaces lightly between coats to achieve required finish.
- F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- G. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.05 SCHEDULE - SURFACES TO BE FINISHED

- A. Do Not Paint or Finish the Following Items:
 1. Items fully factory-finished unless specifically noted.
 2. Fire rating labels, equipment serial number and capacity labels.
 3. Stainless steel items.
- B. Paint the surfaces described below under Schedule - Paint Systems.
- C. Mechanical and Electrical: Use paint systems defined for the substrates to be finished.
 1. Paint all insulated and exposed pipes occurring in finished areas to match background surfaces, unless otherwise indicated.
 2. Paint shop-primed items occurring in finished areas.
 3. Paint interior surfaces of air ducts that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.
 4. Paint dampers exposed behind louvers, grilles, to match face panels.

3.06 SCHEDULE - INTERIOR

- A. Exposed Metal:
 1. Prepare surfaces in accordance with coating manufacturer's recommendations.
 2. Touch-up shop primer as necessary; field prime non shop-primed metal.
 3. Two coats of interior acrylic latex enamel, egg-shell gloss.
 4. Colors: As selected.
- B. Gypsum Board Walls:
 1. Prepare surfaces in accordance with coating manufacturer's recommendations.
 2. One coat interior primer.
 3. Two coats of interior acrylic latex enamel, egg-shell gloss.
 4. Colors: As selected.
- C. Wood Doors and Trim:
 1. Prepare surfaces in accordance with coating manufacturer's recommendations.
 2. One coat interior primer.
 3. Two coats of interior acrylic latex enamel, egg-shell gloss.
 4. Colors: As selected.

- D. Existing Surfaces:
1. Prepare surfaces in accordance with coating manufacturer's recommendations.
 2. Touch-up shop primer as necessary.
 3. Two coats of interior acrylic latex enamel, gloss to match existing.
 4. Colors: As selected.

END OF SECTION

COMMON WORK RESULTS FOR FIRE SUPPRESSION

PART 1 - GENERAL

1.01 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.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Refer to Division 33 for related utility work and Division 26 related electrical work.

1.03 WORK INCLUDED

- A. Provide all materials, labor, equipment together with all incidental items not shown or specified, which are required by code and good practice to provide complete systems. Refer to Division 1, Summary of Work.

1.04 COORDINATION

- A. Coordinate all work in Division 21 with work specified in other Divisions to provide a complete installation. Expense of changes required because of lack of supervision or coordination shall be borne by the Contractor. Such changes shall be to the satisfaction of and directly supervised by the Architect.

1.05 CONTRACT DRAWINGS

- A. Location of ductwork, piping, and equipment on Drawings is approximate. Plan exact location with respect to measurements on the job and work of other trades prior to work. If measurements differ slightly, modify work. If measurements differ substantially, notify Architect prior to fabrication.

1.06 SITE VISIT

- A. Examine site of proposed work and become familiar with job conditions affecting work. No additional allowance will be granted due to lack of information of existing conditions.

1.07 SUBSTITUTIONS

- A. Manufacturer's and catalog numbers indicate quality of equipment or materials. Manufacturers not listed require prior approval. Substitution requests must be made in writing to the Architect prior to bid in accordance with Division 1, Product Requirements. Provide sufficient information indicating compliance with these Specifications.

1.08 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- A. Provide shop drawings in accordance with Division 1, Submittal Procedures. Submittals shall include all information necessary as required for complete check including any changes or modifications to the drawings necessary.

1.09 RECORD DRAWINGS

- A. Provide record "as-built" drawings in accordance with Division 1, Project Record Drawings. Show all deviations from Contract Drawings, including addenda and change order items. Transfer all information to reproducible drawings as required at the completion of the project.

1.10 PERMITS, CODES, AND INSPECTIONS

- A. Permits: Obtain all permits and pay fees required by governing agencies having jurisdiction over this work.
- B. Codes, Standards: Applicable codes and standards contained therein shall determine minimum requirements for materials, methods, and labor practices not otherwise stated herein.
- C. Inspections: Arrange and pay for inspections and tests required by codes or ordinances.

1.11 CUTTING AND PATCHING

- A. In accordance with Division 1, Cutting and Patching.

1.12 COMPLETION

- A. General: When installation is complete, cleaned and adjustments specified herein made, operate system to demonstrate to Architect that system is complete and operating in conformance with these Specifications.
- B. Final Inspection: Work hereunder will not be inspected for Substantial Completion until operating and maintenance data, record drawings and directories specified herein have been approved.
- C. Final Completion: Entire installation turned over to the Owner in finished and satisfactory working condition.

1.13 WARRANTY

- A. Provide a written warranty covering Work of the Division for a period of one year in accordance with Division 1. Include manufacturer's written warranties for material and equipment.

PART 2 - PRODUCTS

2.01 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle materials and equipment in a manner to prevent damage and deterioration. Store in original container. Indoor units, if stored outside, must be covered.

2.02 MATERIALS

- A. All materials employed in permanent construction shall be new, full weight, in first class condition and suitable for space provided. All similar materials shall be of one manufacturer.

2.03 PIPING SPECIALTIES

- A. Escutcheons: Cast brass, nickel or chrome, split ring type, plated, size sufficient to cover pipe sleeve or opening.

PART 3 - EXECUTION

3.01 CLEANING SYSTEMS

- A. After all fixtures and piping systems are installed, system shall be thoroughly cleaned per Division 1. Remove all stickers and tags. Clean all piping systems prior to installation of insulation or painting. Repair or replace any discoloration or damage to system, building finish, or furnishing resulting from failure to properly clean systems.

3.02 ACCESS TO EQUIPMENT AND ACCESSORIES

- A. Install piping and equipment with adequate access for service.

3.03 SEISMIC REQUIREMENTS

- A. All piping, equipment, and fixtures shall be provided with hangers, transverse bracing, longitudinal bracing, bolts, and connection types per OSSC. Seismic calculations shall be provided by the Contractor. Coordinate with Structural Engineer.

3.04 PIPES

- A. Route piping in general locations indicated. Coordinate with other piping, ducts, conduits and equipment making necessary offsets. Install to conserve headroom and interfere as little as possible with use of available space. Group piping at common elevations wherever possible.
- B. Provide clearance for access to other pipes, valves, and equipment as required.
- C. Install horizontal lines parallel with walls and partitions, vertical risers plumb and straight. Conceal piping above ceiling and within furring and walls unless otherwise indicated. Piping shall not be installed on the floor without prior approval.

3.05 PIPING SPECIALTIES

- A. Escutcheons: Install on exposed pipes passing through walls, floors, or ceilings where pipes are exposed in finished areas and within cabinets. Escutcheons not required in Mechanical Rooms.

3.06 PAINTING

- A. Prepare all mechanical equipment and piping for painting if painting is required in Division 1, Painting.

3.07 PIPE PENETRATION

- A. Where pipes pass through walls, ceilings, or floors, seal off void between opening and duct, or pipe and sleeve. Provide escutcheon in exposed locations.
- B. Where pipes or other material pass through or penetrate any fire-resistant wall, ceiling, or floor use approved fire resistant materials and completely seal voids the full thickness of material being penetrated. USG Firestop Firecode System, Pro Set, or equal.

END OF SECTION

FIRE PROTECTION SYSTEMS**PART 1 - GENERAL****1.01 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.

1.02 SHOP DRAWINGS

- A. Upon award of contract Contractor shall prepare a complete set of 1/4" scale working drawings showing modifications to existing systems. Submit to Architect and Fire Marshal for review and final approval prior to Work.

1.03 DESCRIPTION OF SYSTEM

- A. The existing building is fully sprinklered. The system serving the remodel areas including New Exhibit 130, Small Gallery 131, and Secure Vault 001 shall be modified as needed for the new work. The extent of the fire protection system includes all fire protection interior pipe, fittings, connections, and sprinkler heads.
- B. The fire suppression system shall be designed by a registered professional engineer with experience in fire protection systems and as required by the authority having jurisdiction.

1.04 CODES & CERTIFICATION

- A. System shall meet the requirements of OSSC, NFPA 13, NFPA 24, the Fire Code, and the requirements of the State Fire Marshal's Office.

PART 2 - PRODUCTS**2.01 PIPE AND FITTINGS**

- A. Interior Pipe and Fittings: Conform to NFPA 13. Match existing.

2.02 SPRINKLER HEADS

- A. Exposed heads in areas without finished ceilings: Match existing upright, standard brass with wire guards. Tyco, Reliable, or equal.

PART 3 - EXECUTION**3.01 SURFACE CONDITIONS**

- A. Prior to all work of this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.
- B. Verify that the work of this Section may be installed in accordance with all pertinent codes and regulations and the approved Shop Drawings.
- C. In the event of discrepancy, immediately notify the Architect. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.02 INSTALLATION

- A. All pipe ends and interiors shall be thoroughly cleaned of all foreign matter and shall be kept clean during installation.
- B. Cutting of pipe for closure or other reasons shall be done in a neat, workmanlike manner by methods of which will not damage the pipe, and as recommended by the manufacturer.
- C. Install all piping as high as possible, parallel and plumb to building lines with piping pitched to drain to existing drain valve as required to empty entire system of water. Coordinate all piping and head locations with structure, access, piping, duct work and electrical.
- D. Install hangers at all branch line connections to cross mains and all other points as required by NFPA 13.

3.03 INSPECTION AND TESTS

- A. All inspection and tests required by the authorities and/or agencies shall be warranted and paid for by the contractor as necessary to obtain complete and final acceptance of the system.

3.04 CLOSING IN UNINSPECTED WORK

- A. Do not cover up or enclose work until it has been properly and completely inspected and approved.
- B. Should any of the work be covered up or enclosed prior to all required inspections and approvals; uncover the work as required and, after it has been completely inspected and approved, make all repairs and replacements with such materials as are necessary to the approval of the Architect and at no additional cost to the Owner.

3.05 CLEANING UP

- A. Prior to acceptance of the Work, thoroughly clean all exposed portions of the installation. Remove all labels and all traces of foreign substance, using only a cleaning solution approved by the manufacturer of the equipment and being careful to avoid all damage to finished spaces. Remove all debris accumulated by this Work.

END OF SECTION

COMMON WORK RESULTS FOR HVAC

PART 1 - GENERAL

1.01 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.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Refer to Division 26 related electrical work.

1.03 WORK INCLUDED

- A. Provide all materials, labor, equipment together with all incidental items not shown or specified, which are required by code and good practice to provide complete systems. Refer to Division 1, Summary of Work.

1.04 COORDINATION

- A. Coordinate all work in Division 23 with work specified in other Divisions to provide a complete installation. Expense of changes required because of lack of supervision or coordination shall be borne by the Contractor. Such changes shall be to the satisfaction of and directly supervised by the Architect.

1.05 CONTRACT DRAWINGS

- A. Location of lighting, ductwork, piping, and equipment on Drawings is approximate. Plan exact location with respect to measurements on the job and work of other trades prior to work. If measurements differ slightly, modify work. If measurements differ substantially, notify Contractor prior to fabrication.

1.06 SITE VISIT

- A. Examine site of proposed work and become familiar with job conditions affecting work. No additional allowance will be granted due to lack of information of existing conditions.

1.07 SUBSTITUTIONS

- A. Manufacturer's names and model numbers shown on drawings or in specifications form the basis of design and indicate quality of equipment or materials. Manufacturers not listed require prior approval. Substitution requests must be made in writing to the Architect prior to bid in accordance with Division 1, Product Requirements.

1.08 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- A. Provide shop drawings in accordance with Section 01 3000. Submittals shall include all information necessary as required for complete check including any changes or modifications to the drawings necessary. Include fan curves.

1.09 RECORD DRAWINGS

- A. Provide record "as-built" drawings in accordance with Division 1, Project Record Drawings. Show all deviations from Contract Drawings, including addenda and change order items.

1.10 PERMITS, CODES, AND INSPECTIONS

- A. Permits: Obtain all permits and pay fees required by governing agencies having jurisdiction over this work.
- B. Codes, Standards: Applicable codes and standards contained therein shall determine minimum requirements for materials, methods, and labor practices not otherwise stated herein.
- C. Inspections: Arrange and pay for inspections and tests required by codes or ordinances.

1.11 CUTTING AND PATCHING

- A. Not permitted unless shown on the drawings or approved by the Architect.

1.12 TEMPORARY SERVICES

- A. Provide in accordance with Section Division 1, Temporary Facilities and Controls as required for completion of Work. Permanent heating system shall not be used for heating during construction without prior approval by the Architect. Provide separate portable heaters as required.

1.13 SYSTEM OPERATION

- A. The Mechanical Contractor shall be responsible for proper operation of all systems and shall coordinate calibration and system checkup of existing system with subcontractors present. System operational problems shall be diagnosed and corrected as required for system operation.

1.14 COMPLETION

- A. General: When installation is complete, cleaned and adjustments specified herein made, operate system to demonstrate to Architect that system is complete and operating in conformance with these Specifications.
- B. Substantial Completion: Work hereunder will not be reviewed for Substantial Completion until operating and maintenance data, record drawings and directories specified herein have been approved.
- C. Final Completion: Entire installation turned over to the Owner in finished and satisfactory working condition.

1.15 WARRANTY

- A. Provide a written warranty covering Work of the Division for a period of one year in accordance with Division 1.

PART 2 - PRODUCTS

2.01 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle materials and equipment in a manner to prevent damage and deterioration. Store in original container. Indoor units, if stored outside, must be covered.

2.02 MATERIALS

- A. All materials employed in permanent construction shall be new, full weight, in first class condition and suitable for space provided. All similar materials shall be of one manufacturer.

2.03 ELECTRICAL EQUIPMENT

- A. All electrical equipment UL and NEMA labeled or acceptable to electrical inspection authorities having jurisdiction.
- B. Provide any interlocking devices as required for automatic control. All wiring (and electrical Work pertaining to mechanical system) by Mechanical Contractor unless specified in Division 26.

PART 3 - EXECUTION

3.01 CLEANING SYSTEMS

- A. After all equipment, pipes, and duct systems are installed, system shall be thoroughly cleaned per Division 1. Remove all stickers and tags from system. Clean all systems prior to installation of insulation or painting. Repair or replace any discoloration or damage to system, building finish, or furnishing resulting from failure to properly clean systems.

3.02 SEISMIC REQUIREMENTS

- A. All ductwork equipment shall be provided with hangers, transverse bracing, longitudinal bracing, bolts, and connection types per OSSC and SMACNA Seismic Restraint Manual Guidelines for Mechanical Systems. Seismic calculations shall be provided by the Contractor.

3.03 PAINTING

- A. Inside ducts visible through face of grilles or diffusers, paint one coat flat black.
- B. All hangers, ferrous piping, and supports where exposed building shall be painted flat black.
- C. Except as noted herein, prepare all ductwork for painting if painting as shown in finish schedule.

3.04 PIPE AND DUCTWORK PENETRATION

- A. Where ducts pass through walls, ceilings, or floors, seal off void between opening and duct, or pipe and sleeve. Provide escutcheon in exposed locations.
- B. Where ducts or other material passes through or penetrates any fire-resistant wall, ceiling, or floor use UL listed fire stop systems meeting the requirements of the Authority having Jurisdiction. Provide packing materials, sealants, angles, and accessories. Completely seal voids the full thickness of material being penetrated. STI, Metacaulk, 3M, or equal.

END OF SECTION

TESTING, ADJUSTING, AND BALANCING

PART 1 - GENERAL

1.01 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.

1.02 DESCRIPTION

- A. The work performed by the Testing, Adjusting, and Balancing Contractor under this Section shall be performed by a firm experienced in this work and as approved by the Architect. The work includes testing, adjusting, and balancing of the installed mechanical systems. The Mechanical Contractor shall be responsible for the coordination of the work of the Balancing Contractor and other Contractors involved in the installation of the systems being balanced.
- B. The Balancing Contractor shall be a current member of AABC and/or NEBB, have at least three years experience in projects similar to this project, and maintain an office within 100 miles of the job site. The Balancing Contractor shall be independent of the installer of the systems being tested.
- C. Balancing Contractors: Air Balance Specialties, Neudorfer Engineers, Southern Oregon Air Balance, AIR Incorporated, Northwest Engineering, or approved.

1.03 SUBMITTALS

- A. System Performance Report: All test results shall be recorded on forms which have been approved by the Architect. Reference to system points shall be designated by Architectural Room No. and points per room. Include in report drawings which relate all reference points in report to Contract Drawings. Report shall be bound in a 3-ring binder completely indexed. Submit 3 copies to Architect at completion of the work.

PART 2 - PRODUCTS

2.01 BALANCING EQUIPMENT

- A. The Balancing firm shall supply all instruments, tools, and equipment necessary to perform the work specified herein. All instruments shall have been calibrated within the preceding six months. Provide proof of calibration to the Engineer. Mechanical Contractor shall make changes in motor sheaves where required and provide any scaffolding, ceiling tile removal and replacement necessary to provide access to balancing dampers or to take required readings.

PART 3 - EXECUTION

3.01 FINISHED SURFACES

- A. Protection: Use all means necessary to protect the installed work and materials of all other trades and existing surfaces.
- B. Replacements: In the event of damage, immediately make all repairs and replacement necessary to the approval of the Architect at no additional cost to the Owner.

3.02 ADJUSTMENT AND BALANCING OF AIR SYSTEMS

- A. Make the following observations and make corrections where necessary to report to Mechanical Contractor:
 - 1. Check for drafts, noise and vibration.
 - 2. Check building pressure under normal operating conditions.
 - 3. Establish equal pressure within the building from one room to another except special areas requiring positive or negative conditions.

- B. Make the following measurements and adjustments to AHU-1 system. Record results in System Performance Report.
 - 1. Identify and list size, type and manufacturer of all air terminals, fans, and heat transfer equipment.
 - 2. Record nameplate data for all motors, and record the actual running amperes for each fan motor.
 - 3. Test, adjust, and record supply, return, and exhaust fan rpm to deliver not less than 90% nor more than 110% of total volume specified.
 - 4. Test and record initial velocities and cfm at all supply, return and exhaust air terminals.
 - 5. Test and record initial velocities and cfm at all supply, return and exhaust air terminals. Adjust and record until volumes are within 10% of air quantity specified. Adjust air flow pattern to minimize drafts to the extent design and equipment permits.
 - 6. Test and record entering and leaving dry bulb and wet bulb temperature for the heating and cooling cycle of each supply fan.
 - 7. Test and record static pressure at the inlet and outlet of all supply and exhaust air fans.
 - 8. After all air flow adjustments have been made, mark final position of balancing dampers.
 - 9. Check and record room thermostat settings and room temperature after all air flow adjustments have been made. Check operation of all controls.

3.03 CLEANING UP

- A. Prior to acceptance of the Work, thoroughly clean all exposed portions of the installation. Remove all labels and all traces of foreign substance, using only a cleaning solution approved by the manufacturer of the equipment and being careful to avoid all damage to finished spaces. Remove all debris accumulated by this Work.

END OF SECTION

HVAC INSULATION

PART 1 - GENERAL

1.01 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.

1.02 SUBMITTALS

- A. Provide Shop Drawings for all insulation products to be used on this project.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. All glass fiber coverings and liners shall have a composite fire and smoke hazard rating as tested by procedure ASTM-E-84, NFPA 255 and UL-723, not exceeding 25 flame spread, 50 smoke developed. All insulation products shall be PBDE free per State of Oregon requirements. All accessories, such as adhesive, mastic cements, tape, and fabric cloths for fitting shall have the same component ratings as listed above. Materials and insulating characteristics shall meet OMSC and OEESC, latest edition.

2.02 DUCT INSULATION

- A. Inside Duct Liner: Flexible duct liner with acrylic coating, edge seals, thermal conductance of 0.24 BTU per inch per square foot per deg. F. per hour at a mean temperature of 75F, 1-1/2 pound per cubic foot density. Liner shall be a fire, mildew, and damage resistant surface., Casco Coated Circliner II, CertainTeed, Johns Manville, Owens Corning, Knauf, or equal.

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

- A. Inspection:
 - 1. Prior to all Work of this section, carefully inspect the installed Work of other trades and verify that all such Work is complete to the point where installation may properly commence.
 - 2. Verify that the Work of this section may be installed in accordance with all pertinent codes and regulations and the approved Shop Drawings.
- B. Discrepancies:
 - 1. In the event of discrepancy, immediately notify the Architect.
 - 2. Do not proceed with installation in the areas of discrepancy until all such discrepancies have been fully resolved.

3.02 APPLICATION

- A. Duct Insulation:
 - 1. Provide duct insulation as required by code. See Section 23 3100 for additional requirements.
 - 2. Use internal liner to meet insulation requirements.

3.03 INSTALLATION

- A. General:
 - 1. Insulation shall be applied on clean, dry surfaces, after inspection and release for insulation.
 - 2. All insulation shall be continuous through wall and ceiling openings and sleeves.
 - 3. Insulate and cover all fittings, valve bodies, etc., as specified herein.
- B. Duct Insulation - Inside Duct Liner, Attenuation:
 - 1. Round ducts: Install in spiral metal ducts with impact driven or weld-secured mechanical fasteners per Manufacturer's recommendations. Insulation shall be compressed no more than 10% of its design thickness. Butt joints tight and seal all transverse edges and duct cut-ins with adhesive or mastic. All rips and tears on the air stream surface shall be repaired by Manufacturer's coating material.
 - 2. Rectangular ducts: Apply to flat sheet metal before fabrication with minimum 90% adhesive coverage using a water based adhesive, DuroDyne SSG or equal. On ducts over 16" in height or width, the liner shall be additionally secured with impact driven or weld secured fasteners on 15" centers. All joints shall be tightly butted together and sealed with mastic. All exposed edges, leading edge of all cross joints, and shop fabrication cuts of the liner shall be coated with Manufacturer's coating material. All rips and tears on the air stream surface shall be repaired by Manufacturer's coating material.

3.04 CLOSING IN UNINSPECTED WORK

- A. Do not cover up or enclose work until it is complete and has passed all required inspections.
- B. Should any of the Work be covered up or enclosed prior to all required inspections and approvals, uncover the Work as required; and, after it has been completely inspected and approved, make all repairs and replacements with such materials as are necessary to the approval of the Architect and at no additional cost to the Owner.

3.05 CLEANING UP

- A. Prior to acceptance of the Work, thoroughly clean all exposed portions of the insulation installation, removing all labels and all traces of foreign substance. Remove all debris accumulated by this Work.

END OF SECTION

INSTRUMENTATION AND CONTROL FOR HVAC

PART 1 - GENERAL

1.01 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.

1.02 DESCRIPTION

- A. Work shall include all materials, equipment, and accessories necessary for the installation of a complete control system to provide the results specified.

1.03 SHOP DRAWINGS

- A. Provide for all equipment to be used on the project. Include cut sheets and descriptions of the function of all control components. Provide wiring diagrams.

PART 2 - PRODUCTS

2.01 EQUIPMENT

- A. Provide equipment as specified and all other materials and equipment as required to provide the specified sequence of operations including relays, transformers, sensors, etc.
- B. Provide labels at each control point to identify it in relation to the entire control sequence. Provide labels for all thermostats, controllers, switches, relays, etc. with nameplate securely attached to the device or adjacent to it. Nameplate shall be attached on the inside face of thermostats. Phenolic labels or approved.
- C. Mount all control devices per ADA requirements.

2.02 WIRING

- A. All wiring including low voltage installed in conformance with Division 16. Low voltage wiring shall be installed in conduit except above fully accessible ceilings. All wiring by Control Contractor except as shown on electrical plans. Coordinate with Electrical.

2.03 AIR HANDLING UNIT, AHU-1

- A. Provide wall mounted carbon dioxide controller to modulate existing outside air damper located on AHU-1 return air duct to provide between 250 and 845 CFM of outside air based on carbon dioxide level. Outside air damper to close during unoccupied periods. Siemens 2200/2300 or approved equal.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Verify location of controllers and sensors with Drawings and room details before installation. Mount controls as high as possible, between 48 and 54 inches above finished floor per ADA.

- B. Install all controls devices, wiring, and incidental items to provide complete system per Manufacturer's recommendations. Coordinate and intertie with related equipment.
- C. Conduit and wiring shall be installed in parallel lines to the building structure, corridors, and hallways in conformance with Manufacturer's requirements and Division 26. All wiring in conduit except above fully accessible ceilings.
- D. Install labels and nameplates to identify control components to match UO Standards.

3.02 CLOSING IN UNINSPECTED WORK

- A. Do not cover up or enclose work until it is complete and has passed all required inspections.
- B. Should any of the work be covered up or enclosed prior to all required inspections and approvals, uncover the work as required and, after it has been completely inspected and approved, make all repairs and replacements with such materials as are necessary to the approval of the Architect and at no additional cost to Owner.

3.03 CLEANING UP

- A. Prior to acceptance of Work building, thoroughly clean all exposed portions of the installation, removing all labels and all traces of foreign substances, using only a cleaning solution approved by the manufacturer of the plumbing item and being careful to avoid all damage to finished surfaces.

END OF SECTION

HVAC DUCTS AND ACCESSORIES

PART 1 GENERAL

1.01 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.

PART 2 PRODUCTS

2.01 GENERAL

- A. All ductwork and accessories shall have a composite fire and smoke hazard rating as tested by procedure ASTM-E-84, NFPA 255 and UL-723, not exceeding 25 flame spread, 50 smoke developed ratings.

2.01 SHOP DRAWINGS

- A. Provide Shop Drawings for the following:
 1. Air System Specialties
 2. Diffuser, Grilles, Louvers

2.02 DUCTWORK

- A. Metal ducts and plenums: Low pressure duct work (not exceeding 2000 FPM) – G60 galvanized steel ductwork per ASTM A653 complying with Oregon Mechanical Specialty Code, ASHRAE Equipment Volume and SMACNA Low Velocity Duct Construction Manual, latest editions.
 1. Supply ducts - 2" WG positive pressure.

2.03 AIR SYSTEMS SPECIALTIES

- A. Volume Dampers: Smaller than 14 x 14 use butterfly type with locking quadrants, adjustable handle. Two gauges heavier than duct, minimum of 18 gauge galvanized sheet metal. Larger than 12 x 12 use manually adjustable opposed blade type with maximum 48" sections, controlled by an outside lockable arm. DuroDyne Stampline/Quadline. In non-accessible areas, use DuroDyne AD-38 rod and gear assembly with 8009 concealed regulator. DuroDyne, Young, Ventfabrics, or equal.

2.04 DIFFUSERS, GRILLES

- A. Grilles shall have factory applied flat white enamel prime coat on steel or clear anodized aluminum unless otherwise noted. Maximum NC of 25.
- B. Manufactured by Carnes, NCA, Ruskin, Cesco, Titus, Price, Krueger, Nailor, Pottorf, Anemostat, or approved. See Schedule on Drawings.

PART 3 EXECUTION

3.01 DUCT CONSTRUCTION

- A. Construct all ductwork of internally lined round spiral lock duct/fittings with joints caulked internally.

3.02 INSTALLATION

- A. Ducts constructed and installed in accordance with Oregon Mechanical Specialty Code, ASHRAE Equipment Volume, SMACNA Duct Construction manual, and NFPA 90A, latest editions. Duct supports shall be strap, trapeze, or rod hangers, galvanized steel sheet, or threaded steel rod. Wire supports are prohibited. Refer to Section 23 05 00 for seismic requirements.
- B. Install ductwork level and plumb. Allow for access to equipment and accessories. All ducts plugged during construction; kept clean.
- C. Provide supports within 24 inches of elbows and 48 inches of branch tees. Locate supports to prevent stresses at duct fittings. Provide appropriate attachments to structure. Coordinate locations with other piping, conduit, and equipment.
- D. Provide turn vanes in all rectangular elbows, tees and bends.
- E. All duct dimensions shown are inside dimensions. Where inside duct insulation is required, duct dimensions are to inside face of insulation. See Insulation Specifications.
- F. Provide escutcheons or collars at duct penetrations through exposed surfaces.
- G. Provide balancing damper in ductwork serving each diffuser and grille. Locate damper as far as possible from diffuser or grille. If there is no access to damper, provide concealed regulator. Opposed blade damper as part of diffuser or register may be used with prior approval.

3.03 DIFFUSER, GRILLE, INSTALLATION

- A. Provide full size sheet metal boot at diffuser for connection to ductwork.

3.04 CLOSING IN UNINSPECTED WORK

- A. Do not cover up or enclose work until it has been properly and completely inspected and approved.
- B. Should any of the work be covered up or enclosed prior to all required inspections and approvals; uncover the work as required and, after it has been completely inspected and approved, make all repairs and replacements with such materials as are necessary to the approval of the Architect and at no additional cost to the Owner.

3.05 CLEANING UP

- A. Prior to acceptance of the Work, thoroughly clean all exposed portions of the installation. Remove all labels and all traces of foreign substance, using only a cleaning solution approved by the manufacturer of the equipment and being careful to avoid all damage to finished spaces. Remove all debris accumulated by this Work.

END OF SECTION

GENERAL ELECTRICAL PROVISIONS**Part 1 - GENERAL****1.01 CONTRACT CONDITIONS**

- A. Work of this Section is bound by General Conditions, Supplementary Conditions, and Division 1 bound herewith in addition to this Specification and accompanying Drawings.
- B. The Drawings and Specifications are complimentary and what is called for by one shall be as binding as if called for by both.
- C. The Contractor shall inspect the job site prior to bidding and become familiarized with existing conditions which will affect the work.
- D. Prior to start of work, obtain "As built," "Record," or other Drawings showing existing conditions or underground utilities.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Comply with requirements herein where other Divisions call for Work under this Division of Specifications. Electrical Work required by other Divisions not shown on Electrical Drawings or specified in this Division of Specification shall be provided by trade or sub-trade requiring Electrical Work.

1.03 DESCRIPTION OF SYSTEM

- A. Electrical Drawings are diagrammatic and do not necessarily show all raceways, wiring, number and types of fittings required.
- B. Provide all related Electrical Work specified herein and diagrammed or scheduled on Electrical Drawings. All work shall conform to applicable national, state, and local codes. Contractor is responsible for installation of complete and operating electrical systems.

1.04 QUALITY ASSURANCE

- A. Qualifications of Installers:
 - 1. For actual fabrication, installation and testing of Work of this Section, use only thoroughly trained and experienced personnel familiar with requirements for this Work and with installation recommendations of Manufacturers of specified items.
- B. Design Criteria:
 - 1. Conform Work with conditions shown and specified.
 - 2. Where adjustments or modifications of Work are necessary for fabrication and installation of items, or for resolution of conflicts between items, make such adjustments at no added expense to Owner.
 - 3. Submit adjustments or modifications of Work affecting functional or aesthetic design of Work to Architect for review.
 - 4. Pay for equipment relocations or modifications necessitated by failure to advise Architect of conflicts or coordinate work.
- C. Select equipment to meet design conditions stated. Contractor is responsible for meeting technical data and performance requirements of system.
- D. Satisfy requirements of regulatory agencies or codes having jurisdiction over project. Provide U.L. labels for all equipment falling under testing capabilities of U.L.

- E. Procure licenses and permits, and pay fees, deposits, assessments and tax charges required for Electrical Work.
- F. Arrange for and pay for inspections and tests required by codes and ordinances during construction.

1.05 REFERENCE STANDARDS

- A. The following specifications and standards, except as hereinafter modified, are incorporated herein by reference and from a part of this specification to the extent indicated by the references thereto. Except where a specific date is given, the issue in effect (including amendments, addenda, revisions, supplements, and errata) on the date of Invitation for Bids shall be applicable. In text such specifications and standards are referred to by basic designation only.
 - 1. Underwriters Laboratories (UL).
 - 2. National Fire Protection Association (NFPA), Specifically:
 - a. NFPA 70 - National Electric Code.
 - b. NFPA 72 - National Fire Alarm Code.
 - c. NFPA 101 - Life Safety Code.
 - d. NFPA 90A - Installation of Air Conditioning and Ventilating Systems.
 - 3. National Electrical Safety Code.
 - 4. International Mechanical Code (IMC) with State of Oregon Amendments.
 - 5. International Building Code (IBC) with State of Oregon Amendments.
 - 6. International Fire Code (IFC) with State of Oregon Amendments.
 - 7. National Electrical Manufacturer's Association (NEMA).
 - 8. American National Standards Institute (ANSI).
 - 9. National Electrical Testing Associations (NETA).
 - 10. Occupational Safety and Health Administration (OSHA).
 - 11. City, County, and State Codes and Ordinances.
- B. Provide shop drawings and product data in accordance with Division 1.
- C. Submittal material sent by facsimile machine will not be accepted.
- D. Post Contract Award:
 - 1. Prepare and submit as follows:
 - a. Provide complete drawings, diagrams, illustrations, performance charts, brochures, and/or other data which adequately describes product to enable thorough evaluation.
 - b. Number of copies, method of distribution, format and schedule for submission; per Supplementary Conditions or Division 1.
- E. Provide product data for materials and equipment as required by individual sections.
- F. Provide Shop Drawings for materials and equipment as required by individual sections.

1.06 SUBSTITUTIONS

- A. Substitution requests will not be considered unless they are submitted in writing, in accordance with Instructions to Bidders, Supplementary Instructions to Bidders, and Division 1.
- B. Products specified herein are so specified to establish a minimum level of product quality. Except where indicated that no substitutions are allowable, equivalent quality products may be submitted to the Architect for approval.
- C. Substitution requests will not be considered unless they include the following:
 - 1. Model numbers of proposed substitutions.
 - 2. Options which are required to make the proposed substitution comply with Specifications.

3. Summary of modifications of the Work which are required to accommodate the proposed substitution.

1.07 RECORD DRAWINGS

- A. Provide in accordance with Division 1.

1.08 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Make inspection of equipment for possible damage at time of delivery to avoid future delays in construction due to replacement or repair.
- B. Protect against damage, theft and deterioration.
 1. Store in original factory containers.
 2. Do not expose equipment to dust, powder, abrasive, wetness, excessive dampness or temperature extremes, unless equipment approved for that use.
- C. In event of damage, immediately make all repairs and/or replacements necessary to approval of Architect, at no additional expense to Owner.

1.09 PROTECTION

- A. Suitably protect any unfinished Work from potential physical damage.
- B. Do not leave unfinished Work unattended, which would pose life safety hazard.
- C. Protect other Work against damage and discoloration caused by Work of this Section.

1.10 COORDINATION

- A. Provide coordination for the Work of this Division in accordance with Division 1.
- B. Report any discrepancies discovered between existing job conditions and Work to be installed. Fully resolve such discrepancies prior to continuation of work.
- C. Coordinate sequencing of equipment installation and energizing with other trades.
- D. Consult Architect prior to installing equipment in area which obviously exceeds, or will exceed, ambient operating requirements such as for temperature and humidity.

1.11 ALTERNATIVES AND ALLOWANCES

- A. Refer to Division 1 for possible effect upon Work of this Section.

1.12 WARRANTY

- A. Warrant all Work included in this Specification for period of one year from date of substantial completion, under provisions of Division 1.
- B. During warranty period, remedy without delay or expense to Owner any defects providing, in judgment of Engineer, that such defects are not result of misuse or abuse on part of Owner.
- C. Warrant that all equipment and installations are in compliance with OSHA regulations.

Part 2 - PRODUCTS

2.01 MATERIAL

- A. Provide new material and equipment items that are standard products of Manufacturers regularly engaged in production of such materials and equipment. Architect reserves right to reject items not in accordance with Specifications.
- B. For each type of equipment, use same manufacturer throughout.
- C. Provide corrosion protection for ferrous metalwork exposed to weather by hot dip galvanizing, or factory painted finish suitable for outdoor installations.
- D. Verify all materials are acceptable to Authority having jurisdiction, as suitable for the use intended.

Part 3 - EXECUTION

3.01 COMPLETION

- A. Complete each system as shown or specified herein and place in operation, except where only roughing-in or partial systems are called for.
- B. Outlets or equipment shown on the plans, with no supply conduit or conductors indicated, shall be completed in the same methods and manner as similar or like outlets or equipment shown on the drawings.

3.02 SCHEDULING OF WORK

- A. Schedule Work with all other Contractors to maintain job progress schedule, and avoid conflicts in installation of Work by various trades.
- B. Coordinate with General Contractor to provide adequate access for installing large equipment.

3.03 SLEEVES AND OPENINGS

- A. Provide through floors and walls for Electrical Work.
- B. Coordinate with General Contractor and other trades involved.
- C. Patch and seal around all openings, both sides of material penetrated where possible.

3.04 CUTTING AND PATCHING

- A. Inform General Contractor of all openings required in building construction for installation of Work.
- B. Where access within or behind existing surfaces is required by the work of this Section, remove, cut, patch reinstall, and refinish surfaces and assemblies as required to restore them to their previous and/or scheduled finish condition.

3.05 PAINTING

- A. Painting of Electrical Work shall be performed by General Contractor.
- B. Painting of Electrical Work not included in Electrical Work, unless otherwise noted on Drawings or specified herein.
- C. Coordinate with General Contractor.

3.06 MANUFACTURER'S INSTALLATION DETAILS

- A. Follow exactly, where available.

3.07 ACCESSIBILITY OF EQUIPMENT

- A. Install equipment accessible for operation, maintenance or repair as required by NEC.
- B. Inaccessible Equipment:
 - 1. Where the Owner's representative determines that the Contractor has installed equipment not conveniently accessible for operation and maintenance, equipment shall be removed and reinstalled as directed, at no additional cost to the Owner.
 - 2. "Conveniently accessible" is defined as being capable of being reached without the use of ladders, or without climbing or crawling under or over obstacles such as motors, pumps, belt guards, transformers, piping and ductwork.

3.08 COORDINATION

- A. Coordinate all light fixture and device locations with other trades to avoid possible conflicts with ducts, sprinkler piping, and other obstacles affecting installation.
- B. Coordinate conduit, junction boxes, supporting equipment, etc. Affecting normal operating and maintenance activities related to mechanical equipment, piping, valves, accessories, etc.

3.09 TESTS

- A. Fully test and adjust equipment installed under this specifications prior to Owner's personnel instruction. Each system shall be left in proper operation free of faults, shorts or unintentional grounds.
- B. Do not test or operate for any other purpose, such as checking motor rotation, any item of equipment until fully checked in accordance with Manufacturer's instructions.

3.10 CLEANING OF ELECTRICAL INSTALLATION

- A. Prior to acceptance of building, thoroughly clean all exposed portions of electrical installation.
- B. Remove all nonessential labels and traces of foreign substances.
- C. Use only cleaning solution approved by Manufacturer.
- D. Avoid any damage to finished surfaces.

END OF SECTION

WIRE AND CABLE

Part 1 - GENERAL

1.01 SECTION INCLUDES

- A. Building wire.
- B. Cable.
- C. Wiring connections and terminations.

1.02 SUBMITTALS

- A. Submit shop drawings and product data under the provisions of Section 26 01 00.
- B. Submit manufacturer's instructions.

Part 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS - WIRE

- A. Rome
- B. General Cable
- C. Anaconda-Erickson
- D. Southwire
- E. General Electric
- F. Excell
- G. Substitutions: Under provisions of Section 260100.

2.02 BUILDING WIRE

- A. Feeders and Branch Circuits 4 AWG and Smaller:
 - 1. Copper conductor.
 - 2. 600 volt insulation.
 - 3. THHN/THWN Not less than 98% conductivity.
 - 4. Stranded conductor.
- B. Color Coding:
 - 1. 120/208 Volt System:
 - a. A phase - black.
 - b. B phase - red.
 - c. C phase - blue.
 - d. Neutral - white.
 - e. Travelers - lavender.
 - f. Switch leg - orange.
 - g. Ground - green.
 - 2. Maintain color coding from beginning of run to end.

Part 3 - EXECUTION**3.01 GENERAL WIRING METHODS**

- A. Use no wire smaller than 12 AWG for power and lighting circuits, and no smaller than 16 AWG for control wiring.
- B. Use 10 AWG conductor for 20 ampere, 120 volt branch circuit home runs longer than 75 feet.
- C. Place an equal number of conductors for each phase of a circuit in same raceway or cable.
- D. No shared neutrals. Provide one neutral for each phase conductor in branch circuits.
- E. Splice only in junction or outlet boxes.
- F. Neatly train and lace wiring inside boxes, equipment, and panelboards using cable ties.
 - 1. Manufacturer: T&B Ty-Rap, or approved.

3.02 WIRING INSTALLATION IN RACEWAYS

- A. Pull all conductors into a raceway at the same time.
- B. Install wire in raceway after interior of building has been physically protected from the weather and all mechanical work likely to injure conductors has been completed.
- C. Pull wiring in a manner that will avoid kinking or abrasion of the insulation.
- D. Use only approved lubricants when pulling conductors.
- E. Do not exceed pulling tension or bending radius recommended by wire manufacturer.
- F. Equipment Grounding Conductors:
 - 1. Provide a separate, insulated equipment grounding conductor in lighting and receptacle branch circuits.
 - 2. Terminate each end on a grounding lug, bus, or bushing.
 - 3. Provide individual ground wire in flexible conduit and non-metallic raceways.

3.03 CABLE INSTALLATION

- A. Provide protection for exposed cables where subject to damage.
- B. Support cables 12" minimum above accessible ceilings.
- C. Use spring metal clips or plastic cable ties to support cables from structure or ceiling suspension system.
- D. Include bridle rings or drive rings.
- E. Use suitable cable fittings and connectors.
- F. Install cables in conduits where installed in walls or other inaccessible spaces.

3.04 WIRING CONNECTIONS AND TERMINATIONS

- A. Splice only in accessible junction boxes.

- B. #8 Copper Wire and Smaller:
 - 1. Use solderless spring connectors with insulating covers.
 - 2. Manufacturer: Buchanan, Ideal, Scotch, or approved.
 - 3. Connection by means of wire binding screws or studs and nuts having upturned lugs or equivalent shall be permitted for No. 10 solid or smaller conductors only.
- C. Thoroughly clean wires before installing lugs and connectors.
- D. Make splices, taps, and terminations to carry full ampacity of conductors without perceptible temperature rise.
- E. Terminate spare conductors with electrical tape.

3.05 FIELD QUALITY CONTROL

- A. Inspect wire and cable for physical damage and proper connection.
- B. Torque test conductor connections and terminations to manufacturer's recommended values.
- C. Perform continuity test on all power and equipment branch circuit conductors. Verify proper phasing connections.

3.06 WIRE AND CABLE INSTALLATION SCHEDULE

- A. Interior Locations: Building wire in continuous metallic raceways, as shown on Drawings.
- B. Cross marks for power and lighting branch circuits installed in raceways indicate quantity of number 12 copper branch circuit conductors unless otherwise noted. Where no cross marks appear on power or lighting circuits it shall be understood to provide two (2) number 12 conductors for lighting and three number 12 conductors for receptacle circuits.
- C. Conductor sizes indicated, such as home run annotations, shall be maintained through out entire circuit length.

END OF SECTION

CONDUIT

Part 1 - GENERAL

1.01 SECTION INCLUDES

- A. Electrical metallic tubing and fittings.
- B. Flexible metal conduit and fittings.

Part 2 - PRODUCTS

2.01 ELECTRIC METALLIC TUBING (EMT)

- A. Zinc coated by hot dip galvanizing or sherardizing.
- B. Manufacturer: Allied Tube and Conduit, Triangle PWC Inc., or approved.

2.02 FLEXIBLE CONDUIT

- A. Galvanized steel or aluminum, abrasion resistant.
- B. Manufacturer: Anamet (Type DE-710), Triangle PWC, Inc. (Type 710), or approved.

2.03 CONNECTIONS AND FITTINGS

- A. Especially for purpose used.
- B. Same material and finish as raceway.

2.04 COUPLINGS AND CONNECTORS FOR ELECTRICAL METALLIC TUBING (EMT)

- A. Exterior / Interior: Raintight compression type, employing split corrugated ring and tightening nut.
- B. Interior: Set-screw type shall be permitted:
 - 1. Screws must be visible and accessible after installation.
- C. Manufacturer: Appleton, Raco, Thomas & Betts, or approved.
- D. Cast connectors and couplings are not allowed.

2.05 CONDUIT HANGERS AND SUPPORTS

- A. One-hole or two-hole push-on straps or one-hole clamps.
 - 1. Manufacturer: Appleton, Raco, Thomas & Betts, or approved.
- B. Fastener designed for the purpose may be used in wood or metal stud construction or for support from ceiling tees, ceiling support wires, channel, or beams.
 - 1. Manufacturer: Caddy, B-Line, or approved.
- C. No Drive-nail type anchors in concrete or masonry. Use plastic anchors with screws or para-bolts (sleeve anchor studs).

Part 3 - EXECUTION**3.01 CONDUIT SIZING AND ARRANGEMENT**

- A. Size conduit for Type THW conductors. Minimum conduit size for home runs to panelboards is 3/4 inch. Individual branch circuits to device or fixture locations may be run in 1/2 inch conduit.
- B. Arrange conduit to maintain headroom and present a neat appearance.
- C. Route exposed conduit and conduit above accessible ceilings parallel and perpendicular to walls and adjacent piping.
- D. Maintain minimum 6 inch clearance between conduit and mechanical piping if practical. Coordinate installation with other trades. Maintain 12 inch clearance between conduit and heat sources such as flues, steam pipes, and heating appliances.
- E. Maintain 12 inch clearance above removable ceiling tiles.
- F. At third floor run minimum 3/4" conduit from each network faceplate location to existing attic space. At first floor run conduit for network faceplates at basement ceiling. On second floor run wiremold on existing ceiling from existing wiremold channel at hallway ceiling.

3.02 CONDUIT SUPPORT

- A. Arrange conduit supports to prevent distortion of alignment by wire pulling operations.
- B. Fasten conduit using galvanized straps, lay-in adjustable hangers, clevis hangers, or bolted split stamped galvanized hangers.
- C. Group conduit in parallel runs where practical and use conduit rack constructed of steel channel with conduit straps or clamps.
 - 1. Provide space for 25 percent additional conduit on conduit racks.
- D. Do not fasten conduit with wire or perforated pipe straps.
- E. Exposed conduit and tubing attached directly to building surface, use one hole galvanized steel pipe clamps.
- F. Conduit and tubing in metal stud walls shall be supported by fasteners approved for the purpose.
- G. Conduits rising vertically between studs shall be supported by approved fasteners attached to supports horizontally secured between studs for multiple runs and shall be offset and attached to vertical stud, by an approved fastener, for single runs.
- H. Hanger Spacing:
 - 1. Do not exceed 8 foot 0 inches on center.
 - 2. Provide one hanger adjacent to each outlet box, and one hanger within 12 inches on each side of a change in direction.
- I. Conduits not permitted to be supported from ducts, pipes or other systems foreign to electrical installation.
- J. Support conduit as close to ceiling structure as practical. Coordinate conduit location with other trades.
- K. Attachment of one hole straps on horizontal runs shall be from above.

3.03 CONDUIT INSTALLATION

- A. Cut conduit square using a saw; de-burr cut ends.
- B. Bring conduit to the shoulder of fittings and couplings and fasten securely.
- C. Use conduit hubs or sealing locknuts for fastening conduit to cast boxes, and for fastening conduit to sheet metal boxes in damp or wet locations.
- D. Install no more than the equivalent of four 90 degree bends between boxes.
- E. Use conduit bodies to make sharp changes in direction, as around beams.
- F. Avoid moisture traps where possible; where unavoidable, provide junction box with drain fitting at conduit low point.
- G. Avoid condensation between moist warm locations and cool locations by blocking air flow in conduit with "Duct Seal" or similar material.
- H. Thoroughly clean interior of conduits.
- I. Use suitable conduit caps to protect installed conduit against entrance of dirt and moisture.
- J. Provide No. 12 AWG insulated conductor or suitable pull string in empty conduit, except sleeves and nipples.
- K. Install expansion joints where conduit crosses building expansion or seismic joints.

3.04 CONDUIT PENETRATIONS

- A. Fire-Rated Walls and Floors: Seal conduit penetrations using one of the following methods:
 - 1. Provide mechanical fire-stop fittings with UL listed fire rating equal to wall or floor rating.
 - 2. Seal opening around conduit with UL listed foamed silicone elastomer compound.
- B. Non Fire-Rated Walls: Silicone RTV foam membrane permitted.

3.05 FLEXIBLE CONDUIT

- A. Use limited to the following:
 - 1. Lighting fixture pigtails to remote junction box in accessible ceilings.
 - 2. Interior motor connections.
 - 3. Flexible conduit may not be installed in stud walls in new construction.
 - 4. Flexible conduit may be fished in stud walls.
- B. Provide separate ground conductor full length of flexible conduit or outside of conduit.

3.06 ELECTRICAL METALLIC TUBING

- A. Dry locations where not subject to damage.
- B. Concealed in non-masonry/concrete walls or ceiling.
- C. Exposed runs above 8 feet in non-protected areas.

END OF SECTION

OUTLET AND JUNCTION BOXES

Part 1 - GENERAL

1.01 SECTION INCLUDES

- A. Wall and ceiling outlet boxes.
- B. Pull and junction boxes.

1.02 PROJECT CONDITIONS

- A. Verify Field measurements are as shown on drawings.

1.03 SUBMITTALS

- A. Submit product data under provisions of Section 26 01 00.
- B. Provide product data showing configurations, finishes, dimensions, and manufacturer's instructions.

Part 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS - OUTLET BOXES

- A. Bowers.
- B. Raco/Bell.
- C. Steel City.
- D. Thomas and Betts
- E. Substitutions: under provisions in Section 260100.

2.02 OUTLET BOXES

- A. Sheet Metal Outlet Boxes: Galvanized steel

2.03 ACCEPTABLE MANUFACTURERS - PULL AND JUNCTION BOXES

- A. Circle AW.
- B. Hoffman.
- C. Rittal.
- D. Substitutions: under provisions of Section 26 01 00.

2.04 PULL AND JUNCTION BOXES

- A. Sheet Metal Boxes: Galvanized steel.
- B. Sheet Metal Boxes Larger Than 18 Inches in Any Dimension: Hinged enclosure.

Part 3 - EXECUTION

3.01 COORDINATION OF BOX LOCATIONS

- A. Provide electrical boxes as shown on Drawings, and as required for splices, taps, wire pulling, equipment connections, and code compliance.
- B. Electrical box locations shown on Contract Drawings are approximate unless dimensioned. Verify location of floor boxes and outlets in offices and work areas prior to rough-in.
- C. Locate and install boxes to allow access. .

3.02 OUTLET BOX INSTALLATION

- A. Do not install boxes back-to-back in walls. Provide minimum 6 inch separation, except provide minimum 24 inch separation in acoustic-rated walls.
- B. Provide knockout closures for unused openings.
- C. Support boxes independently of conduit.
- D. Support boxes above suspended ceilings from structure. Provide dedicated support wires for boxes as required by NEC 300
- E. Use multiple-gang boxes where more than one device are mounted together: do not use sectional boxes. Provide barriers to separate wiring of different voltage systems.
- F. Install boxes in walls without damaging wall insulation.
- G. Coordinate mounting heights and locations of outlets mounted above counters, benches, and backsplashes with architectural drawings.
- H. Position outlets to locate luminaires as shown on reflected ceiling plans.
- I. In inaccessible ceiling areas, position outlets and junction boxes within 6 inches of recessed luminaire, to be accessible through luminaire ceiling opening.
- J. Provide recessed outlet boxes in finished areas: secure boxes to interior wall and partition studs, accurately positioning to allow for surface finish thickness. Use stamped steel stud bridges for flush outlets in hollow stud wall, and adjustable steel channel fasteners for flush ceiling outlet boxes.
- K. Align wall-mounted outlet boxes for switches, thermostats, and similar devices.

END OF SECTION

ELECTRICAL IDENTIFICATION

Part 1 - GENERAL

1.01 SECTION INCLUDES

- A. Nameplates.
- B. Wire and cable markers.
- C. Pull box and junction box identification.
- D. Device plate identification.

1.02 RELATED SECTIONS

- A. Section 26 27 26 - Wiring Devices.

Part 2 - PRODUCTS

2.01 MATERIALS

- A. Nameplates:
 - 1. Engraved three-layer laminated plastic.
 - 2. White letters.
 - 3. Black background.
- B. Wire and Cable Markers:
 - 1. Heat shrink thermo-labels. Brady or Panduit.
- C. Labels:
 - 1. Adhesive Film Labels: Machine printed, in black on clear background, by thermal transfer or equivalent process.

Part 3 - EXECUTION

3.01 INSTALLATION

- A. Degrease and clean surfaces to receive nameplates.
- B. Install nameplates parallel to equipment lines.
- C. Secure nameplates to equipment fronts using screws or drive rivets.
 - 1. Secure nameplate to inside face of recessed panelboard doors in finished locations.
 - 2. Secure nameplate to inside face of panelboard doors in unfinished locations.
- D. Use stick-on characters for identification of individual wall switch and receptacle cover plates.

3.02 WIRE IDENTIFICATION

- A. Provide wire markers on each conductor in panelboards pull boxes, and at load connection.
- B. Identify with branch circuit or feeder number for power and lighting circuits.

- C. Identify control wire number as indicated on equipment manufacturer's shop drawings.

3.03 PULL BOX AND JUNCTION BOX IDENTIFICATION

- A. Identify each junction box with complete system description. Examples:
 - 1. Telephone / Network.
 - 2. 208 V system.
- B. Optional Methods:
 - 1. Neat hand lettering with permanent black marker.
 - 2. Engraved nameplates.
 - 3. Stick on labels.
- C. Locations:
 - 1. On outside of box cover where concealed.
 - 2. In exposed box locations, locate on inside of box cover.
 - 3. Identify main pull boxes by number and indicate numbers on record drawings.

3.04 DEVICE PLATE IDENTIFICATION:

- A. Provide circuit labeling at all new and existing electrical outlets shown on floor plans, whether affected by the work or not.
- B. Black letter color. 1/8 inch letter height.
- C. Location:
 - 1. Bottom center of device plate for single gang and bottom center of device for multiple gang outlets.
 - a. Provide branch circuit identification (such as "C-37" to indicate Panel "C" Circuit #37) at bottom center of device plate.

END OF SECTION

WIRING DEVICES

Part 1 - GENERAL

1.01 SECTION INCLUDES

- A. Wall switches.
- B. Lighting Control Stations
- C. Receptacles.
- D. Device plates and box covers.

1.02 RELATED SECTIONS

- A. Section 26 05 32 - Outlet, Pull and Junction Boxes.
- B. Section 26 05 53 - Electrical Identification.

1.03 SUBMITTALS

- A. Submit product data under provisions of Section 26 01 00.
- B. Provide product data showing configurations, finishes, dimensions, and manufacturer's instructions.

1.04 SUBSTITUTIONS

- A. Products specified herein are so specified to establish a minimum level of product quality as determined by the engineer. Except where indicated no substitutions are allowable, equivalent quality products may be submitted to the Architect for approval, under provisions of Section 26 01 00.

Part 2 - PRODUCTS

2.01 LIGHTING CONTROL STATIONS

- A. Approved manufacturers:
 - 1. Lutron Grafik Eye QS series.
- B. Compatible with electronic loads.
- C. 6 zone control station:
 - 1. Individual slider control for each zone
 - 2. 4 preset pushbuttons
 - 3. On / off pushbutton
 - 4. Flip lid over slider controls
 - 5. Black finish
 - 6. 2000 watt load capacity
- D. Remote preset control station:
 - 1. 4 preset pushbuttons
 - 2. On / Off pushbutton

2.02 ACCEPTABLE MANUFACTURERS - WALL SWITCHES AND RECEPTACLES

- A. Hubbell.
- B. Leviton.
- C. Arrow Hart..

2.03 WALL SWITCHES

- A. AC general use quiet type switch with toggle handle. Gray.
- B. 20 amp rating, 120-277 volts.
- C. Self-grounding type
- D. Hubbell 1221 Series.

2.04 RECEPTACLES

- A. Convenience and straight blade receptacles.
 - a. Specification Grade
 - b. Gray

2.05 ACCEPTABLE MANUFACTURERS WALL PLATES

- A. Hubbell.
- B. Leviton.
- C. P&S/LeGrand.
- D. Substitution: under provisions of Section 26 01 00.

2.06 WALL PLATES

- A. Decorative Cover Plate:
 - 1. Smooth stainless steel, 302 alloy with brushed finish.

Part 3 - EXECUTION**3.01 INSTALLATION**

- A. Switches:
 - 1. Wall switches 48 inches above floor to top of box.
 - 2. OFF position down, unless otherwise noted.
 - 3. Derate ganged dimmer switches as instructed by manufacturer.
 - 4. Dimmer switches shall not use common neutral.
- B. Receptacles:
 - 1. 18 inches above floor, unless otherwise noted.
 - 2. 6 inches above counters, unless otherwise noted.
 - 3. 3 inches above backsplash, unless otherwise noted.
 - 4. Grounding pole on bottom.
 - 5. Verify exact height and orientation of outlets with Architectural Details prior to rough-in.
 - 6. Provide 20 amp rated receptacles.

- C. Plates:
 - 1. Decorative plates on switch, receptacle, and blank outlets in finished areas.
 - 2. Install device and wall plates flush and level.
 - 3. Where outlets are adjacent to each other at same mounting heights, install under common device plate, except when outlets are of different voltages, such as telephone and duplex receptacle, unless otherwise noted.

- D. Communication Outlets:
 - 1. Provide mudring at each network faceplate location.
 - 2. Stub $\frac{3}{4}$ " conduit with bushings at both ends from mudring location to accessible ceiling space.
 - 3. Provide new J ring supports at locations shown on drawings for communication wiring.

3.02 LIGHTING CONTROL STATIONS

- A. Install control stations and accessories per manufacturer's recommendations.
- B. Contractor is responsible for initial programming of lighting control station presents. Coordinate preset programming with exhibit contractor and Owner.
- C. Provide demonstration of system operation at completion of project.

END OF SECTION

LIGHTING FIXTURES

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Provide lighting fixtures and light track, complete with lamps, at each lighting fixture location shown.

1.02 SECTION INCLUDES

- A. Interior luminaires and accessories.
- B. Lamps.
- C. Ballasts.

1.03 RELATED SECTIONS

- A. Section 26 27 26- Wiring Devices.

1.04 SUBMITTALS

- A. Submit product data under provisions of Section 26 01 00.
- B. Include outline drawings, lamp and ballast data, support points, weights, and accessory information for each luminaire type.
- C. Submit manufacturer's installation instructions under provisions of Section 26 01 00.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site under provisions of Section 26 01 00. Store and protect products under provisions of Section 26 01 00.

1.06 JOB CONDITIONS

- A. Existing Conditions:
 - 1. Prior to ordering lighting fixtures, verify finish material in locations where lighting fixtures are mounted.
 - 2. Prior to ordering lighting fixtures, verify conditions for mounting lighting fixtures and select proper mounting hardware.
 - 3. Verify fire rating of new and existing ceilings.

Part 2 - PRODUCTS

2.01 INTERIOR LUMINAIRES AND ACCESSORIES

- A. See Luminaire Schedule.
 - 1. Finishes and Manufacturer: Same as for lighting fixture, unless otherwise noted.

2.02 BALLASTS (FLUORESCENT NON-DIMMING TYPE)

- A. Type - Solid state electronic.
 - 1. Designed to operate specified lamp.
 - 2. Lamp / ballast assembly to meet Nema Premium High Efficiency standards.
 - 3. Programmed Rapid start.
 - 4. Low Ballast Factor
 - 5. High frequency operation >20 MHZ.
 - 6. Less than 10% THD.
 - 7. See Luminaire Schedule on Drawings for number of lamps controlled by single ballast.

Part 3 - EXECUTION**3.01 INSTALLATION**

- A. Install lamps in luminaires and lampholders.
- B. Fixture Support:
 - 1. Light fixtures mounted in or on suspended ceilings shall be positively attached to the suspended ceiling system.
 - 2. Support surface-mounted luminaires directly from building structure.
 - 3. Support all pendant fixtures and all other incandescent, fluorescent, and HID fixtures in excess of 50 lbs independently of outlet box from roof, floor, or ceiling structure above. Use approved hanger, lag screws, lag bolts, toggle bolts, or cinch anchors to support fixture plus 100 lbs at each support.
 - 4. Coordinate with other trades for additional framing or support, if required to properly install recessed, surface, and pendant mounted fixture in various ceiling suspension systems.

3.02 RELAMPING

- A. Relamp luminaires which have failed lamps at completion of work.

3.03 ADJUSTING AND CLEANING

- A. Align luminaires and clean lenses and diffusers at completion of work. Clean paint splatters, dirt, and debris from installed luminaires.
- B. Touch up luminaire finish at completion of work.

3.04 PREPARATION

- A. Field Measurements:
 - 1. Coordinate fixture location with final Architectural design.
- B. Noisy Ballasts:
 - 1. Architect shall determine which ballasts are excessively noisy and to be replaced at no cost to owner.
 - 2. Check: Ballasts shall be tightly fastened to fixture and have no loose connections.

END OF SECTION

FIRE ALARM SYSTEMS**Part 1 - GENERAL****1.01 SUMMARY**

- A. The Contractor shall furnish and install fire alarm devices, as specified herein and indicated on the drawings.
- B. The system shall include visual alarm devices, a wiring system and all accessory devices required to provide a complete operating system.
- C. All components shall be compatible with the existing system.

1.02 RELATED SECTIONS

- A. Section 260530 - Conduit.
- B. Section 260519 - Wire and Cable.
- C. Section 260532 - Outlet, Pull and Junction Boxes.

1.03 SUBMITTALS

- A. Submit plans and specifications to the local fire marshal as required. Obtain his written acceptance of the system prior to beginning work and ordering equipment.

1.04 OPERATION AND MAINTENANCE DATA

- A. Submit test and signal circuit load measurement data under provisions of Section 260100.
- B. Include manufacturer representative's letter stating that system is operational.

1.05 REFERENCES

- A. NFPA 72 - National Fire Alarm Code.
- B. NFPA 101 - Life Safety Code.
- C. UBC Chapter 11 - Accessibility.

Part 2 - PRODUCTS**2.01 ACCEPTABLE MANUFACTURERS**

- A. Simplex.
- B. Silent Knight.
- C. Notifier.
- D. Wheelock.
- E. Pyrotronics.
- F. GE
- G. Substitutions: under provisions of Section 260100.

Part 3 - EXECUTION**3.01 INSTALLATION**

- A. Install system in accordance with manufacturer's instructions.
- B. Mounting Heights:
 - 1. Audible and visual signal devices 90 inches above floor.
- C. Wire:
 - 1. Furnish and install all required wiring in accordance with Local and National Codes and Article 210 of the National Board of Fire Underwriter's Standard Number 72.
 - 2. 14 AWG minimum size conductors for fire alarm detection and signal circuit conductors or as per manufacturer's recommendations and as per NEC.
 - 3. All wiring shall be in conduit. Conduit shall be sized by the Contractor.
- D. The Contractor shall test all conductors for ground before making final wiring connections. This shall be done with a megger insulation tester or equal.
- E. All "J" boxes for fire alarm system shall be painted red and labeled in white letters, minimum 1/4" "fire alarm".

3.02 FIELD QUALITY CONTROL

- A. Field testing will be performed under provisions of Section 260100.
- B. Test in accordance with NFPA 72H and local fire department requirements.

3.03 INSPECTION AND TESTS UPON COMPLETION OF SYSTEM

- A. Check out and final connections to the fire alarm control panel shall be made by factory trained technicians. Measure load on existing notification circuits and check backup battery capacity to confirm existing notification circuit has adequate capacity for new strobes.
- B. The system, upon completion of installation by the Electrical Contractor, shall be checked out and all connections to initiating and indicating devices shall be supervised by factory trained technicians in the employ of a factory franchised dealer for the product installed. Each individual device shall be checked out and tested for operation by a factory trained technician.
- C. Tests by the Electrical Contractor shall include tests for grounds and short circuits, continuity tests of exterior circuit. Performance of controls and all initiating and indicating devices shall be made by the factory trained technicians in the employ of a factory authorized franchised dealer for the product installed.
- D. The report covering these tests and inspection will be submitted direct to the Architect in triplicate.

3.04 WARRANTY

- A. The Contractor shall warrant the completed Fire Alarm System wiring and equipment to be free from inherent mechanical and electrical defects for a period of one (1) year from the date of the completed and certified test or from the date of first beneficial use.

END OF SECTION