

PROJECT MANUAL

Project:

LONGVIEW SCHOOL DISTRICT STEAM BOILER REPLACEMENT DESIGN-BUILD

February 3, 2022

PROJECT NO. 2022-05



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LONGVIEW SCHOOL DISTRICT NO. 122

ALL THOSE PROVIDING BIDS – PLEASE READ THIS NOTICE

The Longview School District occasionally experiences problems with contractors who, after being awarded a bid, indicated they have made an error or have some other difficulty and do not intend to honor their bid. For this reason we want all contractors to be fully aware of the district's position with regard to the bidding process and the honoring of bids submitted.

State of Washington statutes require the Longview School District to go through a prescribed bidding process on all purchases over defined dollar limits. The district takes the bidding process seriously and its intent is to solicit bids that are accurate and that each contractor intends to honor. bidding contractor you are expected to submit bids that are accurate, complete, and contain all terms and conditions which you feel are necessary. If you find changes to your bid are necessary after you have submitted it to the district, the following guidelines will control.

- I. Bids may be changed in any way or withdrawn any time up to the time and date of bid submittal.
- II. AFTER THE TIME AND DATE OF THE BID SUBMITTAL, Bids cannot be changed. If accepted, the bid is considered to be a binding contract that you as the contractor will be expected to honor.
- III. A recap of the bids will be sent to all bidders after official acceptance by the School Board.

ADVERTISEMENT FOR BID

Bids will be accepted for the following project:

PROJECT NO.: 2022-05

TITLE: Longview School District
Steam Boiler Replacement – Design Build

AGENCY: Longview School District No. 122

ESTIMATED BASE QUOTE COST RANGE: \$120,000 to \$145,000

ABBREVIATED PROJECT DESCRIPTION: Replacement of Steam Boiler and associated related work.

SUBMITTAL TIME/DATE/LOCATION: **Prior to 2:00 P.M., Monday, February 28, 2022.**
Bids will only be accepted via e-mail to
bhowe@longview.k12.wa.us

BY: Longview School District No. 122

PRE-PROPOSAL WALK-THROUGH: **10:00 A.M., Friday, February 11, 2022.** Meet at **Central Kitchen/Warehouse. (north of Discovery High School, West of R.A. Long Cafeteria)** **The Pre-Proposal Walk-through is Mandatory for bidders.**

The School district will make the plans available for contractors to view online without charge at:

<https://longviewschools.com/business-and-finance/bids-and-requests-for-proposals>

Please direct questions regarding this project to the office of the Consultant, MKE & Associates, Inc. 6915 S. Macadam Avenue, Suite 200, Portland, OR 97219 (503) 892 1188

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

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

INSTRUCTIONS TO BIDDERS

1.01 DEFINITIONS

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

- G. A **“Bid”** is a complete and properly signed proposal to do the Work or designated portion thereof, submitted in accordance with the Bidding Documents, for the sums therein stipulated and supported by any data called for by the Bidding Documents.
- H. A **“Bidder”** is a person or entity who submits a Bid for a prime contract with the Longview School District for the Work described in the proposed Contract Documents.
- I. The **“Bidding Documents”** include the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid form, any other sample bidding and contract forms, the Bid Bond, and the proposed Contract Documents, including any Addenda issued prior to receipt of Bids.
- J. The **“Contract Documents”** proposed for the Work consist of the Agreement Between Owner and Contractor, the General Conditions of the Contract (as well as any Supplemental, Special or other Conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.
- K. To be considered **“Responsible”** or meet **“Responsibility”** requirements, a Bidder must meet the following supplemental criteria applicable to this Project to the satisfaction of the Architect and the Longview School District:
- (1) The ability, capacity, and skill to perform the Contract;
 - (2) The character, integrity, reputation, judgment, experience, and efficiency of the Bidder;
 - (3) Whether the Bidder can perform the Contract within the time specified;
 - (4) The previous and existing compliance by the Bidder with laws relating to the Contract;
 - (5) The quality of performance of previous contracts, including demonstration of successful completion of similar projects in the last three (3) years;
 - (6) The designated Project Manager shall have a minimum of three (3) years of successful experience in project management and scheduling of projects of similar scope and complexity;
 - (7) The designated Superintendent shall have a minimum of five (5) years of successful supervision of projects of similar scope and complexity;
 - (8) Any other qualifications required by the Contract Documents or Bidding Documents; and
 - (9) Such other information as may be secured having a bearing on the decision to award the contract.
- L. A **“Sub-bidder”** is a person or entity who submits a bid to a Bidder for materials, equipment or labor for a portion of the Work.
- M. A **“Unit Price”** is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services as described in the Bidding Documents or in the proposed Contract Documents. The Longview School District reserves the right to reject at any time, without impairing the balance of the proposal, any or all such predetermined unit prices.

1.02 BIDDER'S REPRESENTATIONS

By making its Bid, each Bidder represents that:

- A. BIDDING DOCUMENTS. The Bidder has read and understands the Bidding Documents, and its Bid is made in accordance with them.
- B. POSSIBLE SELF-PERFORMED WORK REQUIREMENT. The Bidder will perform *with its own forces* at least that percentage (if any) of the Work required by the Bidding Documents or the Contract Documents.
- C. PRE-BID MEETING. The Bidder has attended the pre-bid meeting(s) required by the Bidding Documents. The Project site is available for inspection for prospective bidders at a mandatory pre-bid site meeting and walk-through, as indicated in the Advertisement for Bids, and existing conditions should be examined. NOTE: THE INDIVIDUAL REPRESENTING THE GENERAL CONTRACTOR AT THE MANDATORY PRE-BID MEETING SHALL BE AN OFFICER OR OWNER OF THE COMPANY AND HAVE THE OFFICIAL CAPACITY TO BE A DULY AUTHORIZED REPRESENTATIVE OF THE COMPANY.
- D. BASIS. Its Bid is based upon the materials, systems, services, and equipment required by the Bidding Documents, without exception.
- E. EXAMINATION. The Bidder has carefully examined and understands the Bidding Documents, the Contract Documents (including, without limitation, any liquidated damages and insurance provisions), and the Project site, including any existing buildings, it has familiarized itself with the local conditions under which the Work is to be performed and has correlated its observations with the requirements of the proposed Contract Documents and it has satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services and other items to be furnished, and all other requirements of the Contract Documents. The Bidder has also satisfied itself as to the conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof, including but not limited to those conditions and matters affecting: transportation, access, disposal, handling and storage of materials, equipment and other items; availability and quality of labor, water, electric power and utilities; availability and condition of roads; climatic conditions and seasons; physical conditions at the Project site and the surrounding locality; topography and ground surface conditions; and equipment and facilities needed preliminary to and at all times during the performance of the Work. The failure of the Bidder fully to acquaint itself with any applicable condition or matter shall not in any way relieve the Bidder from the responsibility for performing the Work in accordance with, and for the Contract Sum and within the Contract Time provided for in, the Contract Documents.
- F. PROJECT MANUAL. The Bidder has checked its copies of the Project Manual with the Table of Contents bound therein to ensure the Project Manual is complete.
- G. SEPARATE WORK. The Bidder has examined and coordinated all Drawings, Contract Documents, and Specifications for any other contracts to be awarded separately from, but in connection with, the Work being bid upon, so that the Bidder is fully informed as to conditions affecting the Work under the contract being bid upon.
- H. LICENSE REQUIREMENTS. Bidders and their proposed Subcontractors shall be registered and shall hold such licenses as may be required by the laws of Washington, including RCW 18.27, for the performance of the Work specified in the Contract Documents.

- I. NO EXCEPTIONS. Bids must be based upon the materials, systems and equipment described and required by the Bidding Documents, without exception.

1.03 BIDDING DOCUMENTS

A. COPIES

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

B. INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

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

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

C. SUBSTITUTIONS

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

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

D. ADDENDA

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

1.04 BIDDING PROCEDURE

A. FORM AND STYLE OF BIDS

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

authorized to bind the Bidder to a contract. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder, and provide other information requested.

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

B. POTENTIAL LISTING OF SUBCONTRACTORS

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

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

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

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

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

MULTIPLE SUBMITTAL TIMES. In the event the Bidding Documents call for a second submittal time for receipt of alternate bids, and no additional Subcontractors are listed with such alternate bids, the Longview School District will consider that there is no change in the Subcontractors from those listed with the base Bid.

2. **Failure to Submit.** In accordance with RCW 39.30.060, failure of a Bidder to submit as part of the Bid the names of such proposed heating, ventilation and air conditioning, plumbing, and electrical Subcontractors or to name itself to perform such Work or the naming of two or more Subcontractors to perform the same Work shall render the Bidder's Bid nonresponsive and, therefore, void.
3. **Requirement to Subcontract.** The Bidder, if awarded the Contract, will subcontract with the listed Subcontractor for performance of the portion of the Work designated on the Form

of Proposal, subject to the provisions of the Contract for Construction and RCW 39.30.060. The Bidder shall not substitute a listed Subcontractor in furtherance of bid shopping or bid peddling.

4. **Replacement.** If a listed Subcontractor is unable to comply with any bondability, qualification, or other requirements of the Contract or Bidding Documents (including without limitation a finding of Subcontractor non-Responsibility), the Longview School District may require the Bidder to replace the Subcontractor with a Subcontractor acceptable to the Longview School District at no change in the Contract Sum or Contract Time.
5. **Subcontractor Standards.** Subcontractors shall meet contractual and technical qualifications standards, and provide specialized certification, licensing, and/or payment and performance bonding where specified.

C. BID SECURITY

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

D. SUBMISSION OF BIDS

1. **Procedure.** The Bid, the Bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party specified in the Advertisement or Invitation to Bidders and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated

portion of the Work for which the Bid is submitted. If the Bid is sent by mail the sealed envelope shall be enclosed in a separate mailing envelope with the notation “*SEALED BID ENCLOSED*” on the face thereof.

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

E. MODIFICATION OR WITHDRAWAL OF BID

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

F. NOTICE

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

1.05 CONSIDERATION OF BIDS

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

- B. **REJECTION OF BIDS:** The Longview School District shall have the right but not the obligation to reject any or all Bids for any reason or for no reason, to reject a Bid not accompanied by required Bid security or by other material or data required by the Bidding Documents, or to reject a Bid which is in any way incomplete or irregular.

C. **ACCEPTANCE OF BID (AWARD)**

1. **Owner.** The Longview School District intends (but is not bound) to award a Contract to the lowest Responsible and Responsive Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Longview School District has the right to waive any informality or irregularity in any Bid(s) received and to accept the Bid which, in its judgment, is in its own best interests.
2. **Alternates.** The Longview School District shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Contract Documents or Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and the Alternates (if any) accepted. The Longview School District retains the right to accept Alternate Bid items at the price bid within 45 days after the Agreement is executed.
3. **Requirements for Award.** Before the Award, the lowest Responsive Bidder shall meet the Award Requirements.

D. **BID PROTEST PROCEDURES**

1. **Procedure.** A Bidder protesting for any reason the Bidding Documents, a bidding procedure, the Longview School District's objection to the Bidder or a person or entity proposed by the Bidder, including but not limited to a finding of non-Responsibility, the award of the Contract or any other aspect arising from or relating in any way to the bidding shall cause a written protest to be filed with the Longview School District within two (2) business days of the event giving rise to the protest and, in any event, no later than two (2) business days after the date upon which Bids are opened. (Intermediate Saturdays, Sundays, and legal holidays are not counted.) The written protest shall include the name of the protesting Bidder, a detailed description of the specific factual and legal grounds for the protest, copies of all supporting documents, and the specific relief requested. The written protest shall be delivered to:

Patti Bowen
Executive Director of Business Services
Longview School District
2715 Lilac Street
Longview, WA 98632

2. **Consideration.** Upon receipt of the written protest, the Longview School District will consider the protest. The Longview School District may, within three (3) business days of the Longview School District's receipt of the protest, provide any other affected Bidder(s) the opportunity to respond in writing to the protest. If the protest is not resolved by mutual agreement of the protesting Bidder and the Longview School District, the Superintendent of the Longview School District or his or her designee will review the issues and promptly furnish a final and binding written decision to the protesting Bidder and any other affected Bidder(s) within six (6) business days of the Longview School District's receipt of the protest. (If more than one (1) protest is filed, the Longview School District's decision will be provided within six (6) business days of the Longview School District's receipt of the last protest.) If no reply is received from the Longview School District during the six (6) business-day period, the protest shall be deemed rejected.

3. **Waiver.** Failure to comply with these protest procedures will render a protest waived.
4. **Condition precedent.** Timely and proper compliance with and exhaustion of these protest procedures shall be a condition precedent to any otherwise permissible judicial consideration of a protest.

1.06 POST BID INFORMATION

A. INFORMATION FROM APPARENT LOW BIDDER

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

- (a) submit additional information regarding the use of their own forces and the use of subcontractors and suppliers;
- (b) a properly executed Contractor's Qualification Statement on the form provided (unless otherwise required to be submitted at the time of the Bid);
- (c) a letter or form from the Bidder's insurance company stating that the insurance required by the Contract Documents will become effective upon execution of the Contract;
- (d) a letter or form from the Bidder's surety stating that the bond(s) required by the Contract Documents will become effective upon execution of the Contract;
- (e) if requested by the Longview School District, a detailed breakdown of the Bid in a form acceptable to the Longview School District;
- (f) the names of the persons or entities (including a designation of the Work to be performed with the Contractor's own forces, and the names of those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work;
- (g) the proprietary names and the suppliers of the principal items or systems of materials and equipment proposed for the Work; and
- (h) a State Board of Education Form D-9, if requested.

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

2. **Responsibility.** The Bidder will be required to establish to the satisfaction of the Architect and the Longview School District the reliability and Responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents as well as qualifications set forth in the Sections of the Project Manual pertaining to such proposed Subcontractor's respective trades. The Responsibility of the Bidder may be judged in part by the Responsibility of these proposed entities. The following will be considered:
 - The ability, capacity, and skill to perform the contract;
 - The character, integrity, reputation, judgment, experience, and efficiency of the Bidder;
 - Whether the Bidder can perform the contract within the time specified;
 - The quality of performance of previous contracts;

- The previous and existing compliance by the Bidder with laws relating to the contract; and
- Such other information as may be secured having a bearing on the decision to award the contract.

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

- (a) The Bidder does not have sufficient prior experience (or an acceptable substitute thereof, as described below) with projects of a similar nature in technical, managerial, and financial requirements to that in the present Contract being bid. In addition to such established contractors, a newly established contractor may be considered qualified if it has shown on the Contractor's Qualification Statement that it is staffed with sufficient technical, managerial, and financial personnel with prior experience in the nature of construction for which the Bids are invited.
- (b) The Bidder does not have sufficient capability to undertake the obligations of the Contract. A determination will be made when the Longview School District's review of the probable cash flow needs of the Bidder for this Project (including payroll, cost of material and supplies, equipment rental costs, and any other direct or incidental costs of the Contract), concludes that the Bidder does not have sufficient financial resources to enable it to satisfy its financial obligations under the Contract.
- (c) The Bidder has submitted unrealistic unit prices as determined by other Bidders' unit prices for this Project.
- (d) The Bidder does not have sufficient staff, equipment, or plant available to perform the Contract. The Longview School District's determination in this matter will be based upon that represented by Bidder in the Contractor's Qualification Statement.
- (e) The Bidder has a history of unsatisfactory performance of contracts of this or similar nature, regardless of whether such contracts existed between the Longview School District and the Bidder, or other parties and the Contractor.
 - A determination of this nature will be made if the Longview School District, after review of the Bidder previous work experience, determines that the Bidder's unsatisfactory performance has resulted predominantly from the Bidder's failure rather than a failure to perform by another party. The School District will give the Contractor an opportunity to explain such nonperformance's before any final determination is reached.
 - A determination of failure to perform will be made if the Longview School District is satisfied after review of the Bidder's prior experience, that the Bidder has repeatedly failed to satisfy its obligations under past contracts and the School District cannot safely assume satisfactory performance of the Contract by the Bidder.
 - In reaching its determination, the Longview School District may consider statements of other parties to the prior unperformed contracts, as well as the representations of the Bidder on its Contractor's Qualification Statement.

3. **Subcontractors.** The Responsibility of the Bidder may be judged in part by the Responsibility of its Subcontractors. Bidders must verify Responsibility criteria for each first-tier Subcontractor. A Subcontractor of any tier that hires other Subcontractors must verify Responsibility criteria for each of its lower-tier Subcontractors. Verification shall include that each Subcontractor, at the time of subcontract execution, is Responsible and

possesses an electrical contractor license, if required by RCW 19.28, or an elevator contractor license, if required by RCW 70.87, and can obtain any payment and performance bonds required of the Bidding or Contract Documents.

4. **Request to Modify Criteria.** No later than ten (10) days prior to the Bid Date, a potential Bidder may request in writing that the Longview School District modify the Responsibility criteria listed in clause (2) above or elsewhere in the Contract Documents or the Bidding Documents. The Longview School District will evaluate the information submitted by the potential Bidder and respond before the Bid Date. If the evaluation results in a change of the criteria, the Longview School District will issue an Addendum identifying the new criteria.
 5. **Objection.** Prior to the Award of the Contract, the Architect will notify the Bidder in writing if either the Longview School District or the Architect, after due investigation, has reasonable objection to the Bidder or a person or entity proposed by the Bidder, and the Longview School District will provide the reasons for the determination. The Bidder may appeal the determination within two (2) business days of its receipt of the objection by presenting additional information to the Longview School District, and the Longview School District will consider the additional information before issuing its final determination. The Bidder may, after the Longview School District's objection or determination, and at Bidder's option, (1) withdraw the Bid, (2) submit an acceptable substitute person or entity with no change in the Contract Time and no adjustment in the Base Bid or any Alternate Bid, even if there is a cost to the Bidder occasioned by the substitution, or (3) appeal by filing a protest in accordance with paragraph 5(D). In the event of withdrawal, Bid security will not be forfeited.
 6. **Change.** Persons and entities proposed by the Bidder and to whom the Longview School District or the Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Longview School District and the Architect.
 7. **Right to Terminate.** The Bidder's representations concerning its qualifications will be construed as a covenant under the Contract. Should it appear that the Bidder has made a material misrepresentation on its Contractor's Qualification Statement, the Longview School District shall have the right to terminate the Contract for Contractor's breach, and the School District may then pursue such remedies as exist elsewhere under this Contract, or as otherwise are provided at law or equity.
- B. **INFORMATION FROM OTHER BIDDERS:** All other Bidders designated by the Architect as under consideration for award of a Contract shall also provide a properly executed Contractor's Qualification Statement, if so requested by the Longview School District.
- C. **BIDDING MISTAKES:** The Longview School District will not be obligated to consider notice of claimed bidding mistakes received more than three (3) business days after the Bid opening. In accordance with Washington law, a low Bidder that claims error and fails to enter into the Contract is prohibited from bidding on the Project if a subsequent call for Bids is made for the Project.
- 1.07 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND**
- A. **BOND REQUIREMENTS:** Within seven (7) days after the issuance of the Longview School District's notice of intent to award the Contract, and prior to the date of execution of the Contract, the Bidder shall furnish evidence satisfactory to the Longview School District of its ability to obtain statutory bonds pursuant to RCW 39.08 covering the faithful performance of the Contract

and the payment of all obligations arising thereunder in the form and amount prescribed in the Contract Documents. The cost of such bond shall be included in the Base Bid.

- B. **SUBCONTRACTOR BONDS.** The Longview School District reserves the right to require certain Subcontractors to furnish performance and labor and material payment bonds in form as set forth herein and as set forth under the Bidding Documents or Contract Documents. The School District shall not, however, be responsible for any costs for any Subcontractor bonds unless the Longview School District, prior to the execution of the Owner-Contractor Agreement, requires the Bidder, in writing, to furnish such bonds from designated Subcontractors. Should any bonds be furnished by subcontract bidders, or be required by any Bidder to be furnished by any subcontract bidder or Subcontractor, without the written request of the Longview School District prior to the execution of the Owner-Contractor Agreement, the costs for any such bonds shall be at the expense of the Bidder and shall not be added to the Contract Sum.
- C. **TIME OF DELIVERY AND FORM OF BONDS.** The Bidder shall deliver the bonds and other documents required by the Contract Documents to the Longview School District pursuant to the Contract Documents and in no event any later than seven (7) days after the date of execution of the Contract and prior to commencing operations at the site. The bonds shall be written in the form approved by the Longview School District for public work, as required by RCW 39.08. The bonds shall be written by a surety firm licensed to do business in the State of Washington, with an A.M. Best rating of at least A-/VIII. The Bidder shall require the Attorney-in-Fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his/her Power of Attorney.

1.08 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

- A. **FORM TO BE USED:** The Agreement for the Work will be written on the form(s) contained in the Bidding Documents, including any General, Supplemental or Special Conditions, and the other Contract Documents included with the Project Manual. In the event no form is enclosed, an AIA Document A101-2007, "Standard Form of Agreement Between Owner and Contractor, where the basis of payment is a Stipulated Sum," along with the General Conditions (AIA Document A201-2007), as both are revised, modified and supplemented by the Longview School District, will be used.
- B. **CONFLICTS:** In case of conflict between the provisions of these Instructions and any other Bidding Document, these Instructions shall govern. In case of conflict between the provisions of the Bidding Documents and the Contract Documents, the Contract Documents shall govern.

1.09 CONTRACT DOCUMENTS

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

- A. **RETAINAGE:** The Contract Documents specify the statutory retainage requirements of RCW 60.28 for this Project.
- B. **CONTRACT TIME:** The Contract Documents specify the Contract Time. Timely completion of this Project is essential to the Longview School District.
- C. **PREVAILING WAGES:** The Contract Documents contain requirements regarding the payment of prevailing wages pursuant to RCW 39.12.
- D. **WRITTEN CLAIMS AND NOTICE:** The Contract Documents contain a number of provisions that require the Contractor to provide notice of Claims and to make and support Claims, in

writing, within a specified time in order to maintain the Claim. The School District is under no obligation to consider Claims that fail, in any respect, to meet these requirements.

- E. **CHANGES IN CONTRACT SUM:** The Contract Documents contain provisions specifying requirements for and pricing of changes in the Contract Sum.
- F. **DISPUTE RESOLUTION:** The Contract Documents contain provisions replacing the arbitration provisions of the form General Conditions with an alternative dispute resolution procedure which, among other things, requires non-binding mediation of all disputes.
- G. **CONTRACTOR REGISTRATION:** Pursuant to RCW 39.06, the Bidder shall be registered or licensed as required by the laws of the State of Washington, including but not limited to, RCW 18.27.
- H. **COMMISSIONING OF OPERATIONAL SYSTEMS:** Certain systems may be designated in the Contract Documents as “Selected” or “Critical” or “Operational” Systems. If so, after the Contractor notifies the Longview School District as specified prior to the Date of Substantial Completion that the Systems are up and running and ready for normal operation, the Longview School District will schedule a pre-commissioning inspection of these Systems.
- I. **TAXES.** The Contractor shall include in its Bid and pay for all applicable taxes except State Sales Tax and Local Sales Tax, which shall be excluded in the preparation of its Bid. Such State and Local Sales Taxes shall be added to the Contract Sum, paid by the Longview School District to the Contractor, and then paid by the Contractor over the course of the Project. Refer to general, supplementary or other conditions regarding further information.
- J. **OTHER PROVISIONS:** The above paragraphs contain descriptions of some but not all of the provisions of the Contract Documents. Bidders should review in detail the Contract Documents themselves and not rely upon the above paragraphs in this article as complete or inclusive.

1.10 POSSIBLE TRENCH EXCAVATION SAFETY PROVISIONS

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

END OF SECTION

PROPOSAL: Longview School District
Steam Boiler Replace – Design Build
Project No. 2022-05

TO: Longview School District No. 122
2080 38th Avenue
Longview, WA 98632

FROM: _____

DATE: Monday, February 28, 2022

TIME: 2:00 p.m.

PLACE: E-mailed only to: bhowe@longview.k12.wa.us

The undersigned contractor declares that he has carefully examined the drawings and specifications, that he has made an examination of the site of the proposed work and has made such investigations necessary to determine the character of material and the conditions to be encountered. The undersigned hereby proposes to furnish all material and labor and perform all work to complete the **Steam Boiler Replacement – Design Build** project in accordance with the drawings and specifications provided by the firm MKE & Associates, Inc, 6915 S. Macadam Avenue, Suite 200, Portland, OR 97219 (503) 892 1188 and to be bound by the following documents:

Instructions to Bidders
Proposal Form
General Conditions of the Contract for Construction
Prevailing Wage Rates
Specifications
Drawings

SCOPE OF WORK:

- Replace of Steam Boiler and associated work per bid documents.

The undersigned contractor hereby proposes to furnish all material and complete the work as shown on the drawings and specifications for the sum of:

BASE BID: STEAM BOILER REPLACEMENT – DESIGN BUILD

Perform work identified in the documents.

_____ Dollars (\$_____)
(Does not include State and Local Sales Tax)

ACCEPTANCE OF BIDS:

The Owner reserves the right to reject any or all bids and waive all informalities and to accept only such bids as may be in the Owner's best interests. The separation of project costs into base bid and alternate bids is for owner's accounting purposes. It is the intent to award all alternate bids.

TIME:

The undersigned contractor agrees that it will substantially complete the project by August 26, 2022. The undersigned contractor agrees to hold this proposal open for twenty (20) days following the opening of bids and to execute the Agreement within five (5) days of the Notice of Intent to Award Contract

Time is of the essence of the contract. Delay in substantial completion will cause the Owner additional general expenses in ways including but not limited to: delay or interruption of the ability to use the facility as required for school functions, and the costs of employees devoting attention to the project. Work on-site may start no sooner than June 20, 2022.

For each day after the substantial completion date that the Contractor has not achieved substantial completion, the Contractor shall pay as general liquidated damages the sum of Two Hundred Dollars (\$200.00).

The Contractor, by submitting his bid, represents that he has reviewed the above-referenced costs and damages and agrees with The Longview School District that the above stated liquidated sums are reasonable estimates of both the direct costs and damages to The Longview School District which would be incurred in the event of a failure by the Contractor to achieve substantial completion on or before the date provided in the contract documents for substantial completion.

PERFORMANCE AND PAYMENT BOND

The Contractor will be required to submit a Performance and Payment bond for the project in an amount equal to the contract amount prior to execution of the Owner-Contractor agreement.

LABOR RATES:

The State of Washington prevailing wage rates are applicable for this public works project located in Cowlitz County. Bidders are responsible to verify and use the most recent prevailing wage rates. The "Effective Date" for this project is the Bid Form due date above. The applicable state of Washington prevailing wage rates may be found on the Department of Labor & Industries website located at: <https://secure.lni.wa.gov/wagelookup/>.

CORRECTION PERIOD:

The undersigned contractor understands and agrees that he shall be held responsible for a period of (12) twelve months after the Date of Substantial Completion, guaranteeing to replace at its own expense any defective work due to poor material or poor workmanship. This right shall be in addition to any other right the Owner may have.

The Owner reserves the right to reject any or all bids and waive all informalities and to accept only such bids as may be in the Owner's best interests.

The contractor states below whether it is doing business as an individual, a co-partnership, or as a corporation. If a co-partnership, all partners are named and the person signing on behalf of the co-partnership states his position with the co-partnership. If a corporation, the contractor gives the state of incorporation, whether it is licensed to do business in the State of Washington, and the position of the person signing on behalf of the corporation.

The undersigned contractor hereby represents that his bid is made without connection with any person, firm or corporation making a bid on the same material, and is in all respects fair and without collusion or fraud.

FIRM _____

BUSINESS AS _____

STATE OF INCORPORATION _____

WASHINGTON CONTRACTOR LICENSE NO. _____

PARTNERS_____

BY_____

Signature and Title

ADDRESS_____

ZIP CODE_____

TELEPHONE_____

DATE:_____

I have received Addenda Nos. _____

END OF SECTION

Project Name:_____

The undersigned attests, under penalty of perjury, that the bidder has no final and binding citation or notice of assessment from Labor & Industries for:

- Minimum wage requirements and labor standards (RCW 49.46)
- Wages – payment – collection (RCW 49.48)
- And, only for contracts awarded between Sept. 1, 2010, and Dec. 31, 2013, not been found in violation of requirements to submit of information to L & I about certain “off-site, prefabricated, nonstandard, project specific items” (RCW 39.04.370)

Authorized Signature

Printed Name

Title

Date

AIA® Document A201™ – 2007

General Conditions of the Contract for Construction

for the following PROJECT:

Longview School District
Steam Boiler Replace - Design Build

THE OWNER:

(Name, legal status and address)

Longview School District No. 122

2715 Lilac Street

Longview, Washington 98632

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

THE ARCHITECT:

(Name, legal status and address)

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Int.

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Owner or Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include other documents such as the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements. In the event of a conflict or discrepancy among or in the Contract Documents, interpretation shall be governed in the following priority, with an Addendum or a revision to a Contract Document having precedence over the original document and later Addenda having precedence over earlier:

- .1 Agreement (revised A101-2007) (written amendments having precedence)
- .2 Any Supplementary Conditions
- .3 These revised General Conditions (A201-2007)
- .4 Any Special Conditions
- .5 Specifications
- .6 Drawings (large-scale having precedence over small-scale, and written or computed dimensions having precedence over scaled dimensions)
- .7 Material and systems schedules.

In the event that Work is shown on Drawings but not contained in Specifications, the Work as shown shall be provided at no change in the Contract Sum or Contract Time, according to specifications to be issued by the Architect that are consistent with and reasonably inferable from the Work shown on the Drawings.

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a ~~Sub-subcontractor~~, Sub-subcontractor (although the Owner does not waive any third-party beneficiary rights it may otherwise have as to Subcontractors of any tier), (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 THE WORK

The term "Work" means the ~~construction and services~~ construction, services, and administrative procedures required by the Contract Documents, whether completed or partially ~~completed~~, completed and whether new construction or modification of existing structures, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project. Where the Work requires construction that modifies or interfaces with existing structures, the Contractor shall ensure that the Work is compatible and interfaces with the as-built conditions of the existing structures.

§ 1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

§ 1.1.5 THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

§ 1.1.6 THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 INSTRUMENTS OF SERVICE

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, the Project Manual, studies, surveys, models, sketches, drawings, specifications, and other similar materials through which the Work to be executed by the Contractor is described.

§ 1.1.8 INITIAL DECISION MAKER PROJECT MANUAL

~~The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.~~ Project Manual is a volume or volumes usually assembled for the Work which may include the bidding requirements, sample forms, Conditions of the Contract, Specifications, and other related materials such as construction details and schedules.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any ~~trade, trade, nor shall it remove the obligation to complete all of the Work when coordination~~ between the specifications and the drawings or coordination between subcontracts is required.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words not defined in the Contract Documents that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.2.4 If there is any inconsistency in the Contract Drawings, or between the Contract Drawings and the Specifications, unless otherwise ordered in writing by the Architect or the Owner, the Contractor shall provide the better quality of, or the greater quantity of, work or materials as reasonably interpreted by the Architect or the Owner.

§ 1.3 CAPITALIZATION

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles and identified references to Sections in this document or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 INTERPRETATION

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement. Reference in the singular to an article, device, item or piece of equipment shall include the larger of the number of such articles indicated in the Contract Documents or the number required to complete the installation.

§ 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

§ 1.5.1 The Architect and the Architect's consultants ~~shall~~ shall, subject to any right of the Owner, be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and ~~will~~ will, subject to any right of the Owner, retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the ~~Work~~ Work under the Contract Documents and with respect to the Project. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. All copies of the Instruments of Service, except the Contractor's record set, shall be returned or suitably accounted for to the Architect, on request, upon completion of the Work. The Contractor may retain one record set. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

~~If the parties intend to transmit Instruments of Service Contractor acknowledges that drawings, specifications, Instruments of Service, or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents, that Contractor receives in digital form may contain transmission or translation errors and are issued for convenience only, and thus Contractor may only rely upon hard copy documents.~~

ARTICLE 2 OWNER

§ 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the ~~Owner or the Owner's authorized representative, School District Board of Directors or the Owner's authorized representative.~~ The "Owner" does not include teachers, district administrators, the school principal, staff, custodians, maintenance or safety workers, or others at the school. WAIVERS OF PROVISIONS OF THIS CONTRACT CAN ONLY BE MADE IN WRITING AND BY THE OWNER'S BOARD OF DIRECTORS. No other person is authorized to grant such waivers on behalf of the Owner. No officer, agent, representative, or employee of the Owner shall be personally responsible for any liability arising under this Agreement.

~~§ 2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.~~

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 ~~Prior to commencement of the Work, the Contractor may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. Thereafter, the Contractor may only request such evidence if (1) Contract if the Owner fails to make payments of undisputed amounts to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum; or (3) require or if the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or the portion of the Work affected by a material change, due and the Owner agrees.~~ After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary environmental approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities. The Contractor is responsible to secure and pay for licenses and all other permits, subject to Section 3.7.1.

§ 2.2.3 The Owner ~~shall~~ may furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work. The Contractor should assume that the locations of any underground or hidden utilities, underground tanks,

plumbing or electrical runs indicated in the surveys or Contract Documents are shown in approximate locations, but the Contractor is responsible for making all utility location checks. The Contractor is responsible for performing all utilities investigation and location work to determine the precise locations thereof. The Contractor shall not damage or interrupt utilities or utilities services of any kind. The Contractor shall bear the risk of loss arising out of its Work which directly or indirectly damages or interrupts any utilities or utilities services, or causes or contributes to damages of any nature, except in the case where the loss resulted because the utility location information provided by Owner or Utility Provider was inaccurate.

§ 2.2.4 The ~~Owner-Owner~~, upon written request, shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such reasonable information or services.

§ 2.2.5 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor ~~one copy up to twenty (20) electronic "CD" copies~~ of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly or materially fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order signed personally or by an agent specifically so empowered by the Owner to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of itself or the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ~~ten-day~~ seven (7) day period after receipt of written notice from the Owner to commence and continue to make reasonable progress toward the correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services and expenses made necessary by such default, neglect or failure. ~~Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. The right of the Owner to correct the Work pursuant to this Section 2.4 shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of itself or others.~~ If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, ~~if required~~ bonded, and insured in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the ~~Contract Documents, Documents and submittals~~ accepted pursuant to Section 3.12. The Contractor shall comply with any requirements of the Office of the Superintendent of Public Instruction.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.1.4 The Contractor shall be and operate as an independent contractor in the performance of the Work and shall have complete control over and responsibility for all personnel performing the Work. The Contractor is not authorized

to enter into any agreements or undertakings for or on behalf of the Owner or to act as or be an agent or employee of the Owner.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents. By executing this Contract, the Contractor represents and acknowledges that the Contract Sum is reasonable compensation for all the Work, that it is performing with its own forces any percentage of Work specified in the Contract Documents or the Bidding Documents (not including general conditions Work), that the Contract Time is adequate for the performance of the Work, and that it has carefully examined the Contract Documents and the Project site, including any existing structures and access thereto, and any drawings of the existing conditions available from the Owner, and that it has satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services and other items to be furnished and all other requirements of the Contract Documents, as well as the surface conditions and other foreseeable matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof, including but not limited to those conditions and matters affecting: transportation, access, local regulations, disposal, handling and storage of materials, equipment and other items; availability and quality of labor, water, electric power, utilities, drainage; availability and condition of roads; normal climatic conditions and seasons; physical conditions at the Project site and the surrounding locality; topography and ground surface conditions; and equipment and facilities needed preliminary to and at all times during the performance of the Work. The failure of the Contractor to fully acquaint itself with any such condition or matter shall not in any way relieve the Contractor from the responsibility for performing the Work in accordance with the Contract Documents and within the Contract Time and the Contract Sum.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Drawings, Specifications, and other Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of ~~any existing conditions~~ and verify any existing conditions, including all general reference points and any interfering existing conditions, related to that portion of the Work, and shall observe any conditions at the site affecting it ~~it~~ and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing such activities. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect and the Owner any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Owner or Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Owner and Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require. The Contractor shall comply with all applicable Federal, State, County and City laws, ordinances and regulations, including, but not limited to, the latest applicable versions of:

1. International Building Code as adopted by the State of Washington;
2. Uniform Plumbing Code;
3. Uniform Mechanical Code;
4. International Fire Code
5. National Electrical Code;
6. Washington State Energy Code;
7. Washington State Rules and Regulations for Barrier-Free Design;
8. Americans with Disabilities Act (ADA);
9. Federal and State Safety Codes as adapted and/or modified by State and Local Ordinances;
10. Washington Sustainable Schools Protocol (WSSP) to the extent that this Project receives any State of Washington funds; and
11. Any applicable Municipal Code.

§ 3.2.4 ~~If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues any design errors or omissions or inconsistencies noted by the Contractor, or clarifications or instructions issued by the Owner or the Architect in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make any Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.~~ authorities unless the Contractor recognized or reasonably should have recognized such error, inconsistency, omission or difference and failed to report it to the Owner and the Architect. If the Contractor performs any construction activity it knows or reasonably should have known involves an error, inconsistency or omission in the Contract Documents or reports referenced therein without such notice to the Owner and the Architect, the Contractor shall be responsible for such performance and shall bear the attributable costs for correction.

§ 3.2.5 Any investigations of hidden or subsurface conditions have been made for design purposes. The results of these investigations may be bound into the Project Manual or otherwise available for the convenience of the Bidders and the Sub-bidders but are not a part of the Contract Documents unless specifically so indicated. While the Contractor may reasonably rely upon such investigation results, there is no guarantee, express or implied, that the conditions indicated are representative of those existing throughout the site or that unforeseen developments may not occur. The Contractor is solely responsible for reasonably interpreting the information and extrapolating beyond the testing location, including each individual boring, test pit or other location.

§ 3.2.6 The Contractor shall do no Work without applicable Drawings, Specifications, or written modifications or, where required, Shop Drawings, Product Data, or Samples, unless instructed to do so in writing by the Architect and the Owner.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, ~~sequences~~ sequences, assembly details 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 The Contractor shall review any such specific instructions concerning construction means, methods, techniques, assembly details, 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. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner required thereof, and shall advise the Owner and Architect (a) if the specified instruction or procedure deviates from what the Contractor considers to be good construction practice or jeopardizes jobsite safety, (b) if following the instruction or procedure will negatively affect any warranties, or (c) if the Contractor objects to the instruction or procedure. The Contractor shall propose alternative instructions or procedures acceptable to the Contractor, for which no increase in the Contract Sum or Time will be made. The Contractor shall not proceed with such alternative instruction or procedure without the written acceptance of the Owner and the Architect and the Contractor shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures.~~

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's principals, agents, employees, Subcontractors of any tier and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors. ~~Subcontractors of any tier.~~

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work. Under no condition shall a section of Work proceed prior to preparatory work having been completed, cured, dried and otherwise made satisfactory to receive the related

work. Responsibility for timely installation of all materials and equipment rests solely with the Contractor, who shall maintain coordination control at all times. The Contractor shall require its Subcontractors of any tier to be familiar with all aspects of the Contract Documents related to their Work. The Contractor shall ensure that the responsible Subcontractor has carefully examined all preparatory work that has been executed to receive its work and has notified the Contractor (who shall notify the Owner and Architect in writing) of any defects or imperfections in preparatory work that will, in any way, affect satisfactory completion of the Work. The lack of such notification or the failure of the Contractor to inspect such portions of the Work shall constitute an acceptance of preparatory work and a waiver of any later claim of defect therein.

§ 3.3.4 The Contractor shall perform such detailed examination, inspection and quality surveillance of the Work as will ensure that the Work is progressing and is being completed in strict accordance with the Contract Documents, including the then current issue of the Drawings, Specifications, and accepted shop drawings. The Contractor shall be responsible for examination, inspection and quality surveillance of all Work performed by any Subcontractor of any tier. The Contractor shall determine when it is necessary to perform, and shall perform, tests (in addition to those requested by the Owner or required by the Specifications or any other provision of the Contract Documents) to verify its inspections or to ensure that the Work is being completed in strict accordance with the Contract Documents. Any inspections performed by or on behalf of the Owner shall not be deemed an approval of the Work.

§ 3.3.5 The Contractor shall plan and lay out all Work in advance of installation so as to coordinate all Work without delay or revision. The Contractor shall establish and maintain existing lot lines, restrictions, existing survey markers of any kind, and bench marks. The Contractor shall establish and maintain all other lines, levels and bench marks necessary for the execution of the Work and take necessary steps to prevent their dislocation or destruction. The Contractor shall employ a professional land surveyor registered in the State of Washington to initially lay out and be responsible for the accuracy of the Work. The Contractor shall provide an as-built surveyed site plan noting all site improvements, including but not limited to building corners, storm, sewer, drains, grade and invert elevations.

§ 3.3.6 The Contractor's superintendent shall provide a Daily Report to the Owner for each work day during the Contract Time, whether or not any Work is performed, and for each non-work day in which Work is performed on the site. The Daily Report shall be completed on a form approved by the Owner and Architect, and submitted to the Owner and the Architect on the work day following the day covered in the Report. Some of the required report forms are included in the Specifications.

§ 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. The Contractor shall install temporary meters to quantify the Contractor's required reimbursement for utilities.

§ 3.4.2 Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the After the Contract has been executed, the Owner and the Architect may consider a written request for the substitution of material or products in place of those specified in the Contract Documents only as described in the Specifications and following the procedures of the Contract Documents. The written request must include the specifications for the material or product and any proposed change in the Contract Sum or Contract Time. The Contractor may make substitutions only with the explicit written consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive. By requesting a substitution, the Contractor represents that it has personally investigated the proposed material or product and determined that it is equal or better in all respects to that specified (or if not equal or better in all respects, the Contractor shall identify such deficiencies), that the same or better warranty will be provided for the substitution, that complete cost data, including all direct and indirect costs of any kind, has been presented, that it waives any other known or unknown Claim for an increase in the Contract Sum or Contract Time, that it has coordinated with affected Subcontractors and will not impact other parts of the Work, and that it will coordinate the installation of the substitute if accepted and make all associated changes in the Work.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

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§ 3.4.3.1 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work, including observance of drug testing and all smoking, tobacco, alcohol, parking, safety, weapons, background checks, sexual harassment, and other rules governing the conduct of personnel at the Owner's property and the Project site. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them. The Contractor shall ensure that all persons performing the Work comply with the Owner's tobacco-free policy, and will not and do not engage in inappropriate conduct or inappropriate contact with students or staff. Neither the Contractor nor any of its Subcontractors of any tier shall utilize any employee at the site or permit any contact between children at a public school and any employee who has pled guilty to or been convicted of any felony crime involving the physical neglect of a child under Chapter 9A.42 RCW, the physical injury or death of a child under Chapter 9A.32 RCW or Chapter 9A.36 RCW (except motor vehicle violations under Chapter 46.61 RCW), sexual exploitation of a child under Chapter 9A.68A RCW, sexual offenses under Chapter 9A.44 RCW where a minor is a victim, promoting prostitution of a minor under Chapter 9A.88 RCW, the sale or purchase of a minor child under Chapter 9A.64.030 RCW, or violation of similar laws of another jurisdiction. The Contractor shall remove from the Work and Work site any employee or other person who has engaged in such actions or who the Owner reasonably considers objectionable without change in the Contract Sum or Contract Time. Without limiting the generality of the foregoing, the Contractor shall ensure by appropriate provisions in each subcontract agreement that the Contractor may remove from the Work and Work site any Subcontractor or Subcontractor's employee who has engaged in such action. At no change to the Contract Sum or Contract Time, the Contractor shall remove from the Work and Work site any employee or other person pursuant to this Section 3.4.3. Failure to comply with these requirements is grounds for immediate termination of the Agreement for cause.

§ 3.4.4 Prevailing Wages.

§ 3.4.4.1 Pursuant to RCW 39.12, "Prevailing Wages on Public Works," no worker, laborer, or mechanic employed in the performance of any part of the Work shall be paid less than the "prevailing rate of wage" (in effect as of the date that bids are due) as determined by the Industrial Statistician of the Department of Labor and Industries. The schedule of the prevailing wage rates for the locality or localities where this contract will be performed is attached to the executed contract and made a part of the Contract Documents by reference as though fully set forth herein; if not attached, then the applicable prevailing wages are determined as of the Bid Date for the county in which the Project is located and are available at <http://www.lni.wa.gov/TradesLicensing/PrevWage/WageRates/default.asp>. A copy is available for viewing at the Owner's office, and a hard copy will be mailed upon request. To the extent that there is any discrepancy between the attached or provided schedule of prevailing wage rates and the published rates applicable under WAC 296-127-011, or if no schedule is attached, the applicable published rates shall apply with no increase in the Contract Sum. It is the Contractor's responsibility to ensure that the correct prevailing wage rates are paid. The Contractor shall provide the respective Subcontractors with a schedule of the applicable prevailing wage rates. Questions relating to prevailing wage data should be addressed to the Industrial Statistician upon request.

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| Mailing | Department of Labor and Industries |
| Address: | Prevailing Wage Office |
| | PO Box 44540 |
| | Olympia, WA 98504 |
| Telephone: | (360) 902-5335 |
| Facsimile: | (360) 902-5300 |

§ 3.4.4.2 Pursuant to RCW 39.12.060, in case any dispute arises as to what are the prevailing rates of wages for work of a similar nature, and such dispute cannot be adjusted by the parties in interest, including labor and management representatives, the matter shall be referred for arbitration to the director of the Department of Labor and Industries of the state, and his or her decision therein shall be final and conclusive and binding on all parties involved in the dispute.

§ 3.4.4.3 The Contractor shall defend, indemnify and hold the Owner harmless, including attorneys' fees, from any violation or alleged violation by the Contractor or any Subcontractor of any tier of RCW 39.12 ("Prevailing Wages on Public Works") and Chapter 51 RCW ("Industrial Insurance"), including without limitation RCW 51.12.050.

§ 3.4.5 The Contractor shall comply with all applicable provisions of RCW 49.28 ("Hours of Labor").

§ 3.4.6 Pursuant to RCW 49.70, "Worker and Community Right to Know Act," and WAC 296-307-560 et seq., the Contractor shall provide the Owner copies of and have available at the Project Site a workplace survey or material

safety data sheets for all "hazardous" chemicals under the control or use of Contractor or any Subcontractor of any tier at the Project Site. The Contractor shall not be entitled to an increase in the Contract Time or Contract Sum arising from its failure or alleged failure to comply with this statute or regulation.

§ 3.4.7 Certified Asbestos-Free and Lead-Free Products: All products and materials incorporated into the Project as part of the Work shall be certified as "asbestos-free" and "lead-free" by United States standards. At the completion of the Project the Contractor shall submit Certifications of Asbestos-Free and of Lead-Free Materials certifying that all materials and products incorporated into the Work meet the requirements of this section.

§ 3.4.8 The Contractor shall be responsible for labor peace on the Project and shall at all times use its best efforts and exercise its best judgment as an experienced contractor to adopt and implement policies and practices designed to avoid work stoppages, slowdowns, disputes or strikes where reasonably possible and practical under the circumstances, and shall at all times maintain Project-wide labor harmony.

§ 3.4.9 Materials shall conform to the manufacturer's standards in effect at the date of execution of the Contract Documents and shall be installed in strict accordance with the manufacturer's instructions, specifications and directions. The Contractor shall, if required in writing by the Owner or Architect, furnish satisfactory evidence regarding the kind and quality of any materials identifying thereon the source, and warranting their quality and compliance with the Contract Documents.

§ 3.5 WARRANTY

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or explicitly permit otherwise. The Contractor further warrants that the Work will be performed in a skillful and workmanlike manner, will conform to the requirements of the Contract Documents, and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be requirements, including substitutions not properly approved and authorized, is considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, by abuse by the Owner, alterations to the Work not executed or supervised by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Owner or Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. The Contractor is not relieved of its general warranty obligations by the specification of a particular product or procedure in the Contract Documents. Warranties in the Contract Documents shall survive completion, acceptance and final payment. The Contractor shall collect, assign, and deliver to the Owner any specific written warranties given by others. Warranty language shall comply with the Contract Documents and shall be submitted to the Owner and Architect at least thirty (30) days prior to ordering the warranted material or equipment.

§ 3.6 TAXES

The Contractor shall pay sales, consumer, use all taxes, including but not limited to sales, consumer, use, B & O, income, and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, received, whether or not yet effective or merely scheduled to go into effect. The only taxes excluded from the Contract Sum and separately reimbursable are state and local sales taxes on the Contract Sum.

§ 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Owner will secure and pay for only the permits and governmental fees listed in the Special Conditions as its responsibility, and the Contractor shall secure and pay for all other permits, fees, and licenses necessary for the execution of the Work, including without limitation all utility connection fees, Subcontractor permits and fees including plan check fees for deferred submittals, the application fees and review fees for any and all shop drawings or bidder designed systems, any inspection fees not covered by the initial building permit fee, including reinspection fees, Department of Labor and Industries fees, renewals and penalties, miscellaneous, ancillary and governmental fees, as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded, concluded, other than those that the Specifications explicitly indicate the Owner is providing. The Contractor will pay for all license fees, renewals and penalties.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work. The Contractor shall coordinate and schedule all Work with permitting agencies, utility companies, and other such agencies determined to have jurisdictional authority necessary for completion of the Work. The Contractor shall keep the Owner informed of communications from these authorities and utilities. The Owner will assist the Contractor with such coordination and scheduling, but the Owner is not responsible for any delays caused by such permitting agencies, utility companies, and other such agencies determined to have jurisdictional authority. The Contractor shall be responsible for providing all information, documents, and fees to the permitting agencies, utility companies, and other such agencies determined to have jurisdictional authority within 30 days after issuance of the Notice to Proceed as necessary to obtain and coordinate permits, utility and other such connections. The Contractor shall obtain all permit renewals during the course of the Work at the Contractor's expense. The Contractor will be responsible for providing information and fees to the Department of Labor and Industries.

§ 3.7.3 If the Contractor observes that portions of the Contract Documents are at variance with applicable laws, statutes, ordinances, building codes, rules and regulations, or lawful orders of public authorities, the Contractor shall promptly notify the Architect and Owner in writing, and necessary changes shall be accomplished by appropriate Modification. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 **Concealed or Unknown Conditions.** If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in any soils reports made available by the Owner to the Contractor or in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide written notice to the Owner and the Architect before conditions are disturbed and in no event later than ~~24~~ seven (7) days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or ~~both~~ both, consistent with the requirements of the Contract Documents. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. ~~If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15, writing. Any Claim of the Contractor arising from the Architect's determination or recommendation shall be made in accordance with the dispute resolution procedure in Article 15. No increase to the Contract Sum or the Contract Time shall be allowed if the Contractor knew or reasonably should have known of the concealed conditions prior to its executing the Contract.~~

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall ~~notify the Owner and Architect. Upon receipt of such immediately notify the Owner and Architect by telephone call and also in writing. Upon receipt of such written notice,~~ the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations that may affect the human remains, burial markers, archaeological sites or wetlands until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract ~~Time~~ Time, if any, arising from the existence of such remains or features may shall be made as provided in Article 15.

§ 3.8 ALLOWANCES

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

§ 3.8.2 Unless otherwise provided in the Contract Documents,

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

Allowances are defined in the Contract Documents due to the uncertainty in the scope, price and quantity of the Allowance items at the time the Contract was executed. Whenever actual costs are more or less than the allowance, the Contract Sum will be adjusted accordingly by Change Order. The Contractor must provide the Owner with written notice of its intent to exceed an allowance amount, with estimates and justification (providing the Owner with the opportunity to approve or reject the excess costs) before exceeding an allowance amount.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness in sufficient time to avoid delay in the Work.

§ 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a ~~competent~~ competent, experienced project manager, project engineer, superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply within the 14 day period shall constitute notice of no reasonable objection. Contractor shall use an experienced superintendent, who shall be an employee of the Contractor and shall remain on the Project site whenever Subcontractors of any tier are present and not less than eight hours per day, five days per week, unless the job is closed down due to a legal holiday, a general strike, conditions beyond the control of the Contractor, termination of the Contract in accordance with the Contract Documents or unless Final Completion is attained. The project manager and project engineer shall also be employees of the Contractor. The superintendent shall not be employed on any other project during the course of the Work. The Contractor shall also have available for work on site experienced, skilled employees, such as carpenters, laborers, erection specialists, etc., to perform work as needed.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed. Contractor, within ten (10) days after being awarded award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent, project manager, and project engineer. The Owner or Architect may reply within a reasonable time to the Contractor stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent, project manager, or project engineer or (2) that the Architect or Owner requires additional time to review. Failure of the Owner or Architect to reply within a reasonable time shall constitute notice of no reasonable objection. Within ten (10) days after issuance of the Notice to Proceed, the Contractor shall also furnish to the Architect and Owner:

- .1 A chain-of-command organizational chart which includes all supervisory personnel, including the project manager, the project engineer and the superintendent, assistant superintendent and lead foreman, that the Contractor intends to use on the Work. The chart shall specify any limits of authority for each person, including any limitation on his or her ability to speak for and bind the Contractor, as well as any limits on decision-making authority with respect to specific dollar values, contract time, and issues affecting quality of the Work.

- .2 Complete resumes, including all past and current projects, for the project manager, the project engineer and the superintendent. The Owner intends to review the resumes and verify references, and it reserves the right to reject personnel reasonably believed to be unsuitable or incompatible for the Project. The Contractor shall replace any rejected personnel with an agreeable replacement at no increase in the Contract Sum or Contract Time.
- .3 A list of telephone numbers for all key personnel of the Contractor and its principal subcontractors for purposes of contacting personnel after hours in the event of an emergency. The list shall be periodically updated as necessary to ensure the Owner has the most current information.

§ 3.9.4 The Contractor shall not employ a proposed superintendent, project manager, or project engineer to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent, project manager, or project engineer without the Owner's consent.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly after being awarded the Contract, and within ten (10) days after issuance of the Notice to Proceed, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work, preliminary Contractor's construction schedule for the Work consistent with the requirements of the Contract Documents. Prior to submitting its first Application for Payment, the Contractor, after consultation with its Subcontractors, shall submit two (2) hard color copies and an electronic copy of the Contractor's construction schedule consistent with the requirements of the Contract Documents. The Owner may withhold up to ten percent of any progress payment until a satisfactory schedule is submitted. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals least monthly and as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, Project, and shall provide for expeditious and practicable execution of the Work. The Contractor shall allocate in the schedule of values a separate line item in the amount of at least one-half of one percent (.5%) of the Contract Sum for scheduling, which shall cover both the initial schedule and all monthly updates. The Contractor shall request payment for this line item with each Payment Application, based upon the percentage completion of the Project. For any month that the Contractor fails to submit an updated schedule, the Contractor shall not be entitled to any payment for scheduling for that month, and the percentage of the scheduling line item represented by that month's percentage of completion of the Work shall be permanently deducted from the Contract Sum by Change Order.

§ 3.10.1.1 Contractor shall promptly notify the Owner and the Architect in writing of any proposed changes in the Project Schedule or the Contract Time or of any event which could delay performance of any item of the Work, stating the cause of the delay, expected duration of the delay, the anticipated effect of the delay on the Project Schedule and the action being taken to correct the delay. Notification of potential delay does not constitute a change in the Contract Time; only a Change Order signed by the Owner can amend the Contract Time. The Contractor shall comply with Article 15 with regard to any delays that it believes are the responsibility of the Owner or are otherwise the subject of a Claim for additional Contract Time.

§ 3.10.1.2 If any Project Schedule submitted sets forth a date for Substantial Completion for the Work or any phase of the Work beyond the Dates of Substantial Completion established in the Contract Documents (as the same may be extended as provided in the Contract Documents), the Contractor shall submit to the Architect and the Owner for their review and approval a narrative description of the means and methods which the Contractor proposes to use to expedite the progress of the Work to ensure timely completion of the various phases of the Work and the Work as a whole. Regardless of the cause of any delay, the Contractor shall exercise reasonable efforts to bring the Project back into compliance with the Project Schedule.

§ 3.10.1.3 To the extent that the Contractor or any Subcontractor or material supplier of any tier is responsible for the delay, the Contractor shall take all necessary action to bring the Project back into compliance with the Project Schedule, including without limitation increasing the number of personnel on the Project and implementing overtime and double shifts.

§ 3.10.2 The Contractor shall prepare and keep current a submittal schedule, promptly after being awarded the Contract and thereafter as necessary update it thereafter at least monthly to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Owner and Architect's review. The Owner and Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect and Owner reasonable time to review

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submittals in accordance with the Specifications and submittal procedures. The Contractor should expect a response time of at least fourteen (14) days for the Architect's review and at least twenty-one (21) days for review by the Architect's consultants. Complex, inter-related or multiple submittals will often take longer. Neither the Owner nor the Architect can guarantee response times from governmental authorities, such as permitting agencies or review of any required deferred submittals. If the Contractor fails to submit a an acceptable submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in ~~general~~ accordance with the most recent schedules submitted to the Owner ~~and Architect~~, and Architect and shall promptly notify the Owner of any substantial deviations from those schedules.

§ 3.10.4 The Contractor shall attend and participate in and ensure applicable Subcontractors of any tier attend and participate in:

- .1 A preconstruction meeting;
- .2 Regular weekly on-site Project status meetings scheduled by the Owner or by the Architect to review progress of the Work, to discuss the Contractor's progress reports, to obtain necessary Owner's or Architect's approvals, and generally to keep the Owner and Architect informed and involved in the progress of the Project; and
- .3 Other meetings scheduled from time to time by the Owner or by the Architect to review progress of the Work and other pertinent matters.

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner and update at least weekly one record copy of the Drawings, Specifications, Addenda, ~~Change Orders~~ Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one record copy of ~~approved-accepted~~ Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and the Owner and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed. The location of all existing or new hidden piping, valves, conduit, cabling and utilities, as located during the course of construction, shall be appropriately marked until the actual field location dimensions and coordinates are incorporated on the as-built drawings, and mechanical and electrical deviations and changes shall be included. The documents shall include all Architectural, Mechanical, Electrical, Structural, Landscape, and Civil as-built drawings, whether changes occur or not, using Owner-approved CAD software (AutoCad version 14.1 or newer). These documents, as well as the approved permit set of plans, shall be available to the Architect and Owner at the site and reviewed with them on a monthly basis. Upon Final Completion of the Work, the Contractor shall transfer all as-built information in a clear and legible manner as described in the Contract Documents and in compliance with all requirements of local governmental entities, shall certify in writing that these documents reflect complete and accurate "as-built" conditions and shall deliver the following in a clear, clean and legible manner and in compliance with all requirements of local governmental authorities: (i) complete, integrated copies of the documents in both paper form in good condition and in electronic form in the same format as originally created by the Architect, (ii) the approved permit set of plans, and (iii) the full-size record documents, Shop Drawings, Specifications, Addenda, maintenance manuals and warranties to the Architect for submittal to the Owner in accordance with the provisions of the Contract Documents. Satisfactory maintenance of up-to-date as-built drawings on a monthly basis will be a requirement for approval of progress payments.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples and/or assemblies or mock-ups that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is for the Contractor to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review and approval of such submittals by the Owner or the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which 4.2.7 and shall not constitute an approval or acceptance of the Contractor's means and methods or a waiver or modification of any requirement of the Contract Documents. Informational submittals upon which the Owner or the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the (but are not required to be) returned by the Owner or Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, note any deviations from the Contract Documents, approve in writing, and submit to the Architect-Architect, Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved-accepted by the Owner and Architect or, in the absence of an approved-accepted submittal schedule, with reasonable promptness and frequency and in such sequence and uniform flow rate as to cause no delay in the Work or in the activities of the Owner or of separate contractors-contractors, and shall notify the Owner and Architect of any expedited review required. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect without action, which will not constitute an Owner-caused delay to the Contractor. At the time of submission, the Contractor shall inform the Architect in writing if expedited review is requested or if there is any deviation in the Shop Drawings, Product Data, or Samples from the requirements of the Contract Documents. So far as practicable, each Shop Drawing or Product Data submittal shall bear a cross reference note referring to Drawing or detail numbers on the Drawings showing the same Work in order to facilitate checking of Shop Drawing or Product Data and their prompt return to the Contractor. Shop Drawings for interrelated Work shall be submitted at approximately the same time. Unless otherwise directed in writing, the Contractor shall submit one reproducible copy and five black line print copies to the Architect for its use and distribution. The Architect will retain the reproducible copy. The Contractor shall keep accurate records of the receipt, review and delivery of all Submittals and shall submit to the Owner reports every other week on the status of their review, identifying the location and the causes of any failure to promptly receive such submissions and suggesting responsibility.

§ 3.12.6 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

- .1 Each submittal shall bear a stamp or specific written indication that the Contractor has satisfied its responsibilities under the Contract Documents with respect to the review of the submission. The Contractor's superintendent must initial each submittal. Submittals that are simply passed through by the Contractor's clerical staff are not sufficient to meet these requirements.
- .2 Each submittal shall be accompanied by a completed Submittal Cover Sheet, as included in the Project Manual or provided by the Architect, which shall clearly identify applicable Specification Section and paragraph number(s), material, supplier, pertinent data such as catalog numbers and the use for which it is intended.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved-reviewed and no exceptions taken by the Architect.

§ 3.12.8 The Work shall be in accordance with approved-accepted submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval approval, review or acceptance of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof-approval, review or acceptance thereof. Any corrections or modifications to Shop Drawings made by the Architect shall be deemed accepted by the Contractor, without change in Contract Sum or Contract Time, unless the

Contractor provides the Architect with written notice at least three (3) working days before commencing any Work from such Shop Drawings and complies with change procedures. The Contractor shall make all corrections requested by the Architect and, when requested by the Architect, provide a corrected Submittal without change in the Contract Sum or Contract Time.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval or acceptance of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, ~~approve-accept~~ or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

§ 3.12.11 Any mechanical systems shown in the Drawings are diagrammatic. (Other Drawings may also be diagrammatic.) The Contractor shall provide dimensioned Shop Drawings and details for all plumbing piping, ductwork, heating system piping, underground hot water piping, hot water boilers, and accessories to indicate complete systems. Shop Drawings shall be to 1/4" = 1'-0" minimum scale in all mechanical rooms, boiler rooms, as well as where accuracy or location is necessary for coordination or installation purposes. Ductwork Shop Drawings shall include a separate drawing to not less than 1/4" = 1'-0" scale showing all duct penetrations through structure (floors, roof, and walls) dimensioned, and all equipment locations, weights and pad details for all HVAC equipment. Critical dimensions of all equipment pad, and pipe or duct penetrations through structure shall be included.

§ 3.13 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, permits, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment. Materials and equipment on site shall be used directly in the Work and not stored on site after their use is complete. There shall be no use of existing on-site facilities (parking, toilets, etc.) without the Owner's prior approval. Portions of the site may be occupied and in use during construction. The Contractor is responsible to coordinate its Work with any such occupation or use at no increase to the Contract Sum or Contract Time and at no disruption to the occupancy or use.

§ 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to access or complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably

withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 3.14.3 Existing structures and facilities, including but not limited to buildings, landscaping, utilities, topography, streets, curbs, and walks, that are damaged or removed due to excavations or other construction work of the Contractor, shall be patched, repaired or replaced by the Contractor to the satisfaction of the Architect, the owner of such structures and facilities, and governmental authorities having jurisdiction. In the event the governmental authorities require that the repairing and patching be done with their own labor and/or materials, the Contractor shall abide by such regulations and it shall pay for such work at no additional cost to the Owner.

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding ~~area-area~~, including roads, free from accumulation of waste materials or rubbish caused by operations under the Contract. The Contractor shall furnish portable containers on site for use by all trades. At the Owner's request and, in any event, at the completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor for any clean-up costs.

§ 3.15.3 The Contractor shall only use waste receptacles provided by the Contractor and shall appropriately dispose of any waste material off site.

§ 3.16 ACCESS TO WORK

The Contractor shall provide the Owner and Architect keyed access to the Work in preparation and progress wherever located.

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

§ 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law and subject to the following conditions, the Contractor shall defend, indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them -its board members, officials, employees, consultants, students, and volunteers, the Architect, Architect's consultants, and agents and employees, successors and assigns of any of them ("Indemnified Parties") from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, direct and indirect, or consequential, including but not limited to costs, design professional and consultant fees, and attorneys' fees incurred on such claims and in proving the right to indemnification, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, Subcontractor of any tier, their agents and anyone directly or indirectly employed by any 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, liable ("Indemnitor"). Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.1.1 The Contractor shall fully defend, indemnify, and hold harmless the Indemnified Parties for the sole negligence of the Indemnitor.

§ 3.18.1.2 To the extent of the Indemnitor's negligence, the Contractor shall defend, indemnify, and hold harmless the Indemnified Parties for the concurrent negligence of the Indemnitor.

§ 3.18.1.3 The Contractor agrees to being added by the Owner or the Architect as a party to any arbitration or litigation with third parties in which the Owner or Architect alleges indemnification or contribution from the Contractor, any of its Subcontractors of any tier, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable. The Contractor agrees that all of its Subcontractors of any tier shall, in their subcontracts, similarly stipulate; in the event any does not, the Contractor shall be liable in place of such Subcontractor(s) of any tier. To the extent any portion of this Section 3.18 is stricken by a court or arbitrator for any reason, all remaining provisions shall retain their vitality and effect.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, Subcontractor of any tier, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor of any tier under workers' compensation acts, disability benefit acts or other employee benefit acts. After mutual negotiation of the parties, the Contractor waives immunity as to the Owner, the Architect and their respective consultants only under Title 51 RCW, "Industrial Insurance." IF THE CONTRACTOR DOES NOT AGREE WITH THIS WAIVER, IT MUST PROVIDE A WRITTEN NOTICE TO THE OWNER PRIOR TO THE DATE FOR THE RECEIPT OF BIDS, OR THE CONTRACTOR WILL BE DEEMED TO HAVE NEGOTIATED AND WAIVED THIS IMMUNITY.

ARTICLE 4 ARCHITECT

§ 4.1 GENERAL

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture or engineering in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Architect" means the Architect or the Architect's authorized representative and does not include any employees of the Owner.

§ 4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld. Owner and Architect.

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

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative but not the Owner's agent during construction until the date the Architect issues the final Certificate for Payment. Payment and from time to time during the one (1) year period for correction of Work. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract. The Architect is not the agent of the Owner and is not authorized to agree on behalf of the Owner to changes in the Contract Sum or Contract Time, nor to waive provisions of the Contract Documents, nor to direct the Contractor to take actions that change the Contract Sum or Contract Time.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with and to keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not. Neither the Architect nor the Owner will have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1. The presence of the Architect or the Owner at the site shall not in any manner be construed as assurance that the Work is being completed in compliance with the Contract Documents, nor as evidence that any requirement of the Contract Documents of any kind, including notice, has been met or waived. The Contractor shall reimburse the Owner for any amounts paid to the Architect for site visits made necessary by the fault of the Contractor or by defects and deficiencies in the Work.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. ~~The Architect will not~~ Neither the Architect nor the Owner will be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. ~~The Architect will not~~ Neither the Architect nor the Owner will have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work. Neither the Architect nor the Owner will be responsible for defining the extent of any subcontract or dealing with disputes between the Contractor and third parties.

§ 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. The Contractor shall simultaneously provide the Owner with a direct copy of all written communications to the Architect, including all notices, requests, transmittals, Claims, and potential changes in the Contract Sum or Contract Time but not including Shop Drawings, Product Data or Samples. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the ~~Contractor~~ Contractor except as provided in the Contract Documents. Communications by and with separate contractors shall be through the Owner.

§ 4.2.5 Based on the Architect's observations and evaluations of the Work and the Contractor's Applications for Payment, the Architect will ~~review and certify~~ make recommendations to and otherwise assist the Owner to determine the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 ~~The Architect has~~ Both the Architect and the Owner have authority to reject Work that does not conform to the Contract Documents. Whenever the Architect or the Owner considers it necessary or advisable, the Architect or the Owner will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect or the Owner nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect or the Owner or their representatives to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and ~~approve, accept,~~ or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product ~~Data and Samples,~~ Data, Samples, and other submittals required by the Contract Documents, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken with reasonable promptness in accordance with the submittal schedule ~~approved~~ accepted by the Architect or, in the absence of an ~~approved~~ accepted submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, weights or gauges, fabrication processes, coordination with the work of other trades, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval or acceptance of a specific item shall not indicate approval of an assembly of which the item is a component. The Contractor shall clearly note, and the Architect shall not be required to search out for, any deviations from the Contract Documents not clearly identified by the Contractor, nor shall the Architect be required to review partial submissions of those for which submission for correlated items have not been received. Regardless of how a submittal is marked, the Contractor should not presume that the Architect has reviewed a submittal in every aspect.

§ 4.2.8 The Architect or Owner will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will ~~conduct inspections~~ make observations, make recommendations and otherwise assist the Owner to determine the date or dates of Substantial Completion and the date of ~~final completion~~; Final Completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment upon compliance with the requirements of the Contract Documents and pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. ~~The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.~~

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the ~~Contract Documents~~ Drawings and Specifications on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which interpretations required of the Architect shall be furnished in compliance with this Section 4.2.11, then delay shall not be recognized on account of failure by the Architect to furnish such interpretations until fifteen (15) days after written request is made for them.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and initial decisions, the Architect will endeavor to secure faithful performance of the Contract by both Owner and Contractor, will not show partiality to either and will not be liable to the Contractor for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the ~~Contract Documents~~ Documents and agreeable to the Owner.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within a reasonable time and any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the ~~site~~ site or to supply materials or equipment. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the ~~site~~ site or to supply materials or equipment. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.1.3 A Subcontractor of any tier is a Subcontractor or a Sub-subcontractor.

§ 5.1.4 The designation of terms in this article is not meant to change or alter the definitions contained in RCW 60.28, "Lien for Labor, Materials, Taxes on Public Works," RCW 39.12, "Prevailing Wages on Public Works," or other statutory definitions of a subcontractor for the purposes of such statutes.

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

§ 5.2.1 ~~Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, Within ten (10) days after the Owner's request the Contractor shall furnish in writing to the Owner through and the Architect the names of all persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect may reply within 14 days~~ Work (i.e., at least 2% of the Contract Sum), as well as the proprietary names and the

suppliers of the principal items or systems of materials and equipment proposed for the Work. The Contractor shall organize this list of Subcontractors in the same sequence as the Index of Specification Sheets, and state the Work category followed by the name of the Subcontractor and/or fabricator (or "Contractor" where the portion of the Work is by the Contractor's own forces), including the address, telephone number, individual name of the project contact, and his or her email address. The list shall be accompanied by evidence of any qualifications required within the technical sections of the Project Manual and satisfactory to the Architect and Owner. The list shall be updated promptly as part of the payment process if additional Subcontractors of any tier are engaged. If the Agreement is executed, no progress payment will become due until this information is so furnished. No action or inaction of the Owner or Architect in response to receipt of the names of the proposed Subcontractors of any tier shall constitute approval of any Subcontractor of any tier or of its performance. The Architect may reply promptly to the Contractor in writing stating (1) whether or not the Owner or the Architect, after due investigation, has reasonable objection to any such proposed person or entity or (2) that the Owner or Architect requires additional time for review. "Reasonable objection" shall include without limitation lack of "responsibility" of the proposed Subcontractor, as defined in RCW 39.26.160(2), the Contract Documents, the bidding documents, or lack of qualification as required within the bidding documents or the technical sections of the Project Manual. Failure of the Owner or Architect to reply within the 14-day period promptly shall constitute notice of no reasonable objection. If the Owner makes a reasonable objection, the Contractor shall replace the Subcontractor with no increase to the Contract Sum or Contract Time. Such a replacement shall not relieve the Contractor of its responsibility for the performance of the Work and compliance with all of the requirements of the Contract within the Contract Sum and Contract Time.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made a timely and reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was qualified, "responsible" and reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required. qualified names as required, and no increase in the Contract Sum or Contract Time shall be allowed for such change if the Owner reasonably concludes that (1) a proposed Subcontractor is not "responsible" as defined in RCW 39.26.160(2), the Contract Documents, the bidding documents, or the technical sections of the Project Manual, or if the proposed Subcontractor has materially failed to perform satisfactorily (such as causing a material delay) on one or more projects for the Owner within three years of the bidding date, (2) the proposed Subcontractor is not qualified as required within the technical sections of the Project Manual, or (3) the proposed Subcontractor is different from the entity listed with the Bid. Such a replacement shall not relieve the Contractor of its responsibility for the performance of the Work or compliance with all of the requirements of the Contract within the Contract Sum and Contract Time. The Contractor's listing or use of any Subcontractor that is not "responsible" shall be sufficient cause for the Owner to declare that the Contractor is not a responsible bidder, unless the Contractor agrees to substitute a responsible Subcontractor at no change to the Contract Sum or Contract Time.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution. If the Owner reasonably concludes that any portion of the Work subcontracted by the Contractor is not being prosecuted in accordance with the Contract Documents, the Contractor shall, upon request of the Owner, remove the Subcontractor performing such work. This removal shall not relieve the Contractor of its responsibility for the performance of the Work or complying with all of the requirements of the Contract within the Contract Sum and Contract Time, nor shall the Owner be obligated to so request.

§ 5.2.5 The Contractor shall perform with its own organization and under its immediate supervision a portion of the Work not including general conditions amounting to not less than the percentage (if any) of the total Contract Sum specified in the Contract Documents or in the Bidding Documents.

§ 5.2.6 The Contractor shall verify responsibility criteria for each first-tier Subcontractor. A Subcontractor of any tier that engages other Subcontractors must verify responsibility criteria for each of its lower-tier Subcontractors.

Verification shall include that each Subcontractor, at the time of subcontract execution, meets the responsibility criteria listed in the Instructions to Bidders.

§ 5.3 SUBCONTRACTUAL RELATIONS

~~By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents.~~

Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors. § 5.3.1 By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors. The Contractor shall provide to the Owner copies of the written agreements between the Contractor and any Subcontractor on request. The Owner will endeavor to keep these agreements confidential subject to its obligations under Chapter 42.56 RCW.

§ 5.3.2 The Contractor shall schedule, supervise and coordinate the operations of all Subcontractors of any tier, including any suppliers of early procurement items and any Assigned Subcontractors. No subcontracting of any of the Work shall relieve the Contractor from its responsibility for the performance of the Work in accordance with the Contract Documents or from its responsibility for the performance of any other of its obligations under the Contract Documents. The Contractor is responsible for the timely, accurate and appropriate Subcontractor coordination of the Work of lower tier Subcontractors in accordance with the overall Work, including communications, meetings, drawings, illustrations, and other necessary associated activities required for the successful coordination of all trades, schedules, materials and workmanship. The Owner shall provide to the Contractor copies of any written Owner-Supplier agreements to any early procurement contracts, to the extent that such agreements are identified in the Specifications.

§ 5.3.3 The Contractor agrees to diligently, and using its best efforts, cause each Subcontractor of any tier to correct, at that Subcontractor's own expense, all work performed by the Subcontractor of any tier that is defective in material or workmanship or otherwise fails to conform to the Contract Documents, including all necessary removal, replacement and/or repair of any other portion of the Project which may be damaged in removing, replacing or repairing any portion of the Project. If any Subcontractor of any tier defaults in its obligation promptly to correct any such deficiency, the Contractor shall be responsible for correcting the deficiency.

§ 5.3.4 The Contractor shall give, and shall cause its Subcontractors of any tier to give, all required notices and comply with all applicable health and safety laws, rules, regulations, codes and lawful orders of public authorities and of quasi-governmental authorities relating to the Work, including without limitation all OSHA and WISHA

requirements, and the Contractor shall, and shall cause applicable Subcontractors of any tier to, indemnify, defend and hold harmless the Owner from and against any and all claims, liabilities, fines and attorneys' fees arising from any failure of the Contractor or a Subcontractor of any tier to have complied with any such requirements in any respect.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

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

- .1 assignment is effective only after termination of the Contract by the Owner ~~for cause~~ pursuant to Section 14.2 or 14.4 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the ~~subcontract~~ subcontract, but only for events and payment obligations that arise after the date of the assignment.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than ~~30~~ sixty (60) days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. ~~If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.~~

§ 5.5 LIENS

§ 5.5.1 The Contractor shall promptly pay (and secure the discharge of any liens asserted by) all persons properly furnishing labor, equipment, materials or other items in connection with the performance of the Work (including, but not limited to, any Subcontractors of any tier) to the extent that the Owner has paid the Contractor for such. The Contractor shall furnish to the Owner such releases of liens and claims and other documents monthly with its payment applications to evidence such payment (and discharge). The Owner may, at its option, withhold payment, in whole or in part, to the Contractor until such documents are furnished. The Contractor may provide other security acceptable to the Owner, such as a bond, in lieu of paying disputed liens or claims.

§ 5.5.2 The Contractor shall defend, indemnify, and hold harmless the Owner from any liens, including all expenses and Architects' and attorneys' fees, except to the extent a lien has been filed because of the failure of the Owner to make a contractually required payment.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article ~~4-15~~ 15, except that the Contractor shall have no claim for such construction or operations to the extent disclosed in the Bidding Documents or Contract Documents. The Contractor is also responsible to coordinate its Work with any other entities performing work on or adjacent to the site, such as work in the right of way and work by utility companies, and the Contractor shall incorporate such work into its project schedule.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction ~~schedules~~ schedules when directed to do so. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual

~~agreement.~~ agreement with the Owner. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

§ 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents. If the Contractor receives items from a separate contractor or from the Owner for storage, erection or installation, the Contractor shall acknowledge receipt for items delivered, and thereafter will be held responsible for the care, storage and any necessary replacement of items received.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect and Owner apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse and indemnify the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective ~~construction~~ construction of the separate contractor. If such a separate contractor sues or initiates any proceeding against the Owner on account of any damages or delays alleged to have been caused by the Contractor, the Owner shall notify the Contractor. The Contractor shall defend all such proceedings at its own expense, and shall defend, indemnify, and hold the Owner harmless from any damages awarded on such claims, including all attorneys' fees and other costs incurred by the Owner.

§ 6.2.4 The Contractor shall promptly remedy damage caused by the Contractor ~~wrongfully causes~~ to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.2.6 Should the Contractor or any of its Subcontractors of any tier cause damage of any kind, including but not limited to delay, to any other contractor or subcontractor on the Project, the Contractor shall, upon due notice, promptly attempt to settle with such other contractor or subcontractor by agreement or otherwise to resolve the dispute.

§ 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and ~~the Architect will allocate the cost among those responsible.~~ responsible plus a ten percent (10%) markup on such costs.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, solely by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect or Owner alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

§ 7.1.4 Before effectuating a change in the Work or in the Contract Documents, the Owner may request the Contractor to propose the amount of change in the Contract Sum, if any, and the extent of change in the Contract Time, if any, arising from the proposed change in the Work. The Contractor shall submit its responsive proposal as soon as possible and within fourteen (14) days, and shall in good faith specify the components and amounts by which the Contract Sum and/or Contract Time would change. Labor, materials and equipment shall be limited to and itemized in the manner described in Section 7.5 for the Contractor and major Subcontractors. If the Contractor fails to respond within this time, the Owner may withhold some or all of a progress payment otherwise due until the tardy proposal is received. If the Owner explicitly accepts the proposal in writing, the Owner and the Contractor will be immediately bound to the terms of the proposal, the change will be included promptly in a future Change Order, and the change in the Work described in the proposal shall commence expeditiously. The Owner may reject the proposal, in which case the Owner may either not effectuate the change in the Work or may order the change through a Construction Change Directive or supplemental instruction or an order for a minor change in the Work. The Owner and Architect may confer directly with Subcontractors of any tier concerning any item proposed to the Owner under this Article.

§ 7.1.5 If the Contractor adds a reservation of rights that has not been initialed by the Owner to any Change Order, Construction Change Directive, Change Order proposal, Application for Payment or any other document, all amounts therein shall be considered disputed and not due or payable unless and until costs are re-negotiated or the reservation is withdrawn or changed in a manner satisfactory to and, in all cases, initialed by the Owner. If the Owner makes payment for a Change Order or an Application for Payment that contains a reservation of rights not initialed by the Owner to indicate agreement with the reservation, and if the Contractor negotiates the check for such payment, then the reservation of rights shall be deemed waived, withdrawn and of no effect.

§ 7.2 CHANGE ORDERS

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

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

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly. The Owner's use of a Construction Change Directive does not constitute agreement that the directive constitutes a change in the Work, the Contract Sum, or the Contract Time. For any change in the Work, whether initiated by a Construction Change Directive or a Change Order Proposal, the Contractor must submit its proposed price and any proposed extension of the Contract Time to the Owner within ten (10) days of the date of the Construction Change Directive or Change Order Proposal. If the Contractor fails to submit a proposed price and time within this time period, the Owner may establish what it believes to be the fair price of the changed work, and any additional Contract Time, and this price and time submitted by the Owner shall be final and binding upon the parties, as if they had signed a Change Order in this amount, without recourse to submitting any claims or litigation. Payment for any Changes to the Work shall not exceed the labor and equipment indicated on the daily work logs.

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

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following ~~methods~~ methods or as mutually agreed by the Owner and Contractor:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be proposed by the Owner and determined in a manner agreed upon by the parties (accompanied by the Contractor's itemized estimate of probable cost) and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed (e.g., more than fifty percent) in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices but not the Contract Time or any other portion of the Contract Sum shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work ~~involved and advise the Architect involved.~~ As soon as possible, and within seven (7) days of receipt, the Contractor shall advise the Architect in writing of the Contractor's agreement or disagreement with the proposed adjustment or the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time. The Contractor's response shall reasonably specify the reasons for its disagreement and the adjustment or other terms that it proposes. Without such timely written response, the Contractor shall conclusively be deemed to have accepted the Owner's adjustment. The Contractor's disagreement shall not relieve the Contractor of its obligation to comply promptly with any written notice issued by the Owner or the Architect. The adjustment shall then be determined by the Architect in accordance with the provisions of the Contract Documents. The ultimate adjustment shall not exceed the larger amount submitted.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including any adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be ~~recorded as incorporated into~~ a Change Order.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, ~~the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, or if cost is to be determined under Section 7.3.3.3, the Contractor shall provide a not-to-exceed price for the Construction Change Directive Work within fourteen (14) days of receipt of the Construction Change Directive, and the Contractor shall keep and present, itemized in the categories of Section 7.5 and in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:~~

- .1 ~~Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;~~
- .2 ~~Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;~~
- .3 ~~Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;~~
- .4 ~~Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and~~
- .5 Additional costs of supervision and field office personnel directly attributable to the change. In order to facilitate checking of such quotations, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by complete itemization of costs, including labor, equipment, material and subcontract costs. When major cost items arise from Subcontractors of any tier, these items shall also be similarly itemized. Approval may not be given without such itemization. Failure to provide data within twenty-one (21) days of the Owner's or Architect's request shall constitute waiver of any Claim for changes in the Contract Time or Contract Sum. The total cost of any change, including a Claim under Article 15, shall be limited to the reasonable value, as determined by the Owner (subject to appeal through the dispute resolution procedure of Article 15), of the items in

Section 7.5. Unless otherwise agreed in writing by the Owner, the cost shall not exceed the lower of the prevailing cost for the work in the locality of the Project or the cost of the work in the current edition of R.S. Means Company, Inc., Building Construction Cost Data as adjusted to local costs and conditions. The Architect and the Owner may communicate directly with Subcontractors of any tier concerning costs of any Work included in a Construction Change Directive. If the Contractor disagrees with the method or the adjustment in the Contract Time, the adjustment or method shall be referred to the Architect for determination, and any adjustment shall be limited to the change in the actual critical path of the Contractor's Construction Schedule directly caused thereby.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be the largest of (i) the reasonable and prevailing value of the deletion or change, (ii) the line item value in the Schedule of Values, or (iii) the actual net cost as confirmed by the Architect-Owner. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, ~~the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15- and provided that any reservations of rights regarding the Construction Change Directive have been initialed by the Owner, amounts not in dispute for such changes in the Work may be included in Applications for Payment accompanied by a Change Order indicating the parties' agreement with part or all of such costs.~~

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and ~~the Architect will prepare a~~ will be recorded by preparation and execution of an appropriate Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 MINOR CHANGES IN THE WORK

~~The Architect has and the Owner have authority to order minor changes in the Work (sometimes called a Design Clarification) not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect such as a Field Instruction or an Architect's Supplemental Instruction and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly. If the Contractor believes that such order causes an increase in the Contract Sum or Time, the Contractor must properly submit a notice and Claim pursuant to Article 15.~~

§ 7.5 PRICING COMPONENTS

§ 7.5 The total cost of any Change in the Work or of any other increase or decrease in the Contract Sum, including a Claim, shall be limited to the following components:

§ 7.5.1 Direct labor costs: These are the labor costs determined by the number of additional craft hours and the hourly costs necessary to perform the change in the Work. The hourly cost shall be based upon the following:

- .1 Basic wages and fringe benefits: The hourly wage (without markup or labor burden) and fringe benefits paid by the Contractor as established by the Washington Department of Labor and Industries or contributed to labor trust funds as itemized fringe benefits, whichever is applicable, not to exceed that specified in the applicable "Intent to Pay Prevailing Wage" for the laborers, apprentices, journeymen, and foremen performing and/or directly supervising the Change in the Work on the site. The premium portion of overtime wages is not included unless pre-approved in writing by the Owner. Costs paid or incurred by the Contractor for vacations, per diem, subsistence, housing, travel, bonuses, stock options, or discretionary payments to employees are not separately reimbursable. The Contractor shall provide copies of certified payrolls for itself and Subcontractors of any tier upon the Owner's request.

- .2 Workers' insurances: Direct contributions to the State of Washington as industrial insurance; medical aid; and supplemental pension by class and rates established by the Washington Department of Labor and Industries.
- .3 Federal insurances: Direct contributions required by the Federal Insurance Compensation Act (FICA); Federal Unemployment Tax Act (FUTA); and State Unemployment Compensation Act (SUCA).

Upon the Owner's request, the Contractor shall substantiate all claimed wage rates and shall provide a breakdown of the various components of the labor costs in a form provided or approved by the Owner.

§ 7.5.2 Direct material costs: This is an itemization, including material invoice, of the quantity and cost of additional materials reasonable and necessary to perform the change in the Work. The unit cost shall be based upon the net cost after all discounts or rebates, freight costs, express charges, or special delivery costs, when applicable. No lump sum costs will be allowed except when approved in advance by the Architect and the Owner. If the Contractor is offered discounts and/or rebates based upon prompt payment, the Contractor shall offer the Owner the opportunity to take advantage of such discount and/or rebate, and if the Owner makes such a prompt payment then the Owner shall only be charged the price as reduced by the discount and/or rebate. If the Owner declines the opportunity the Contractor may keep any such discounts and/or rebates it achieves through its own prompt payment. If the Contractor does not provide the Owner the opportunity to participate then the Contractor may only charge the net costs after consideration of discounts and rebates.

§ 7.5.3 Construction equipment usage costs: This is an itemization of the actual length of time that construction equipment appropriate for the Work will be used solely on the change in the Work at the site times the applicable rental cost as established by the lower of the local prevailing rate published in The Rental Rate Blue Book by Data Quest, San Jose, California, as modified by the AGC/WSDOT agreement or the actual, reasonable rate paid to unrelated third parties as evidenced by rental receipts. Rates and quantities of equipment rented that exceed the local fair market rental costs shall be subject to the Owner's prior approval. Total rental charges for equipment or tools shall not exceed 75% of the fair market purchase value of the equipment or the tool. Actual, reasonable mobilization costs are permitted if the equipment is brought to the Site solely for the change in the Work. If more than one rate is applicable, the best available rate will be utilized. The rates in effect at the time of the performance of the changed Work are the maximum rates allowable for equipment of modern design and in good working condition and include full compensation for furnishing all fuel, oil, lubrication, repairs, maintenance, and insurance to the same extent as the comparable Blue Book or fair market rate. Equipment not of modern design and/or not in good working condition will have lower rates. Hourly, weekly, and/or monthly rates, as appropriate, will be applied to yield the lowest total cost. When rental rates payable do not include fuel, lubrication, maintenance, and servicing, as defined as operating costs in the reference, such operating costs shall be reimbursed based on actual costs. The rate for equipment necessarily standing by for future use on the changed Work shall be no more than 50% of the rate established above. If equipment is required for which a rental rate is not established by Blue Book, an agreed rental rate shall be established for that equipment, which rate and use must be approved by the Owner prior to performing the Work.

§ 7.5.4 Cost of change in insurance or bond premium. This is defined as:

- .1 Contractors' liability insurance: The actual cost (expressed as a percentage submitted with the certificate of insurance provided under Section 11.1.3, and subject to audit) of any changes in the Contractor's liability insurance arising directly from the changed Work; and
- .2 Public works bond: The actual cost (expressed as a percentage submitted with evidence of bondability under Section 11.4.1, and subject to audit) of the change in the Contractor's premium for the Contractor's statutorily required performance and payment bond arising directly from the changed Work, and any such premiums for the Changed Work on Subcontractor bonds that have been contractually required by the Owner. The Contractor is not entitled to any increased premium on any retainage bond.

Upon request, the Contractor shall provide the Owner with supporting documentation from its insurer or surety of any associated cost incurred.

§ 7.5.5 Subcontractor costs: These are payments the Contractor makes to Subcontractors for changed Work performed by such Subcontractors. The Subcontractors' cost of changed Work shall be determined in the same manner as prescribed in this Section 7.5 and, among other things, shall not include consultant costs, attorneys' fees, or claim preparation expenses.

§ 7.5.6 Fee: This is the allowance for all combined overhead, profit and other costs, including all office, home office and site overhead (including facilities, purchasing, clerical, project manager, project engineer, other engineers, project foreman, estimator, superintendent and their vehicles and assistants), taxes (except for sales tax), employee per diem, subsistence and travel costs, warranty, safety costs, printing and copying, quality control/assurance, purchasing, small or hand tool (a tool that costs \$500 or less and is normally furnished by the performing contractor) or expendable charges, preparation of as-built drawings, impact on unchanged Work, Change Order and Claim preparation, and delay and impact costs of any kind (cumulative, ripple, or otherwise). No such costs may be added to the total cost to the Owner of any Change Order, Construction Change Directive, Claim or any other claim of any kind on this Project. No Fee shall be due, however, for direct settlements after Substantial Completion by the Owner of Subcontractor claims. The Fee shall be limited in all cases to the following schedule:

- .1 The Contractor shall receive 15% of the cost of any materials supplied or work properly performed by the Contractor's own forces.
- .2 The Contractor shall receive 8% of the amount owed (less fee) directly to a Subcontractor or supplier for materials supplied or for work properly performed by that Subcontractor or supplier.
- .3 Each Subcontractor of any tier shall receive 12% of the cost of any materials properly supplied or work performed by its own forces.
- .4 Each Subcontractor of any tier shall receive 5% of the amount (less fee) it properly incurs for materials supplied or work properly performed by its suppliers or subcontractors of any lower tier.
- .5 The Contractor and its Subcontractors of any tier shall receive no more than 5% of any amounts owed to any remote, sub-tier subcontractors which are within the lines of contractual responsibility but not in privity of contract with such Contractor or Subcontractors, for work performed by that remote, sub-tier subcontractor.
- .6 The cost to which this Fee is to be applied shall be determined in accordance with Section 7.5.1 through 7.5.4.
- .7 The total summed Fee of the Contractor and all Subcontractors of any tier shall not exceed 25% of any amounts owed to any remote, lower-tier Subcontractors that are within the lines of contractual responsibility but not in privity of contract with such Contractor or Subcontractor(s), for Work performed by that remote, lower-tier Subcontractor. If the Fee would otherwise exceed 25%, the Contractor shall proportionately reduce the Fee percentage for the Contractor and all Subcontractors except for the Subcontractor supplying material or performing work with its own forces. None of the fee percentages authorized in this Section 7.5.6 may be compounded with any other fee percentage or percentages authorized in this Section.

If a change in the Work involves both additive and deductive items, the appropriate Fee allowed will be added to the net difference of the items. If the net difference is negative, no Fee will be added to the negative figure as a further deduction. The parties acknowledge that the fees listed in this Section 7.5.6 are substantially greater than the fees and overhead normally included in determining the Contract Sum bid; that these higher percentages are a sufficient amount to compensate the Contractor for all effects and impacts of Changes in the Work; and that the resultant overcompensation of the Contractor for some Changes compensates the Contractor for any Changes for which the Contractor believes the percentage is otherwise insufficient.

ARTICLE 8 TIME

§ 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 Within ten (10) days after issuance of the Owner's notice of award the Contract, the Contractor shall submit evidence of bondability, evidence of insurability, and all other documents required by that time by the Contract Documents. The date of commencement of the Work is the date established in the Agreement by the Owner in its conditional notice to proceed, which the Owner does not intend to issue until the Contractor has complied with the terms of the notice of award. Work on the site may begin when the Contractor complies with any requirements of the notice to proceed and submits the bonds, certificates of insurance and all other documents required by the Contract Documents.

§ 8.1.3 The date of Substantial Completion (or a designated portion thereof) is the date certified by the Architect and set by the Owner in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time. Time and shall achieve Final Completion within thirty (30) days thereafter (or such other period of time for specific phases as is specified in the Contract Documents).

§ 8.2.4 THE TIMELY COMPLETION OF THIS PROJECT IS ESSENTIAL TO THE OWNER. The Owner will incur serious and substantial damages if Substantial Completion of the Work does not occur within the Contract Time; however, it would be difficult if not impossible to determine the amount of such damages, which could include, for example, personnel and overtime costs, transportation costs, governmental fees, storage costs, portable rental costs, loss of use, and lost opportunities. Consequently, provisions for liquidated damages as a reasonable estimate of loss may be included in the Contract Documents. The Owner's right to liquidated damages is not affected by partial completion, occupancy, or beneficial occupancy. The Contractor shall furnish sufficient forces, construction plant and equipment, and shall work such hours, including night shifts, overtime operations and weekend and holiday work as may be necessary to insure the completion of the Work in accordance with the date of Substantial Completion and the accepted Contractor's Construction Schedule. If the Contractor fails to perform in a timely manner in accordance with the Contract Documents and, through the fault of the Contractor or Subcontractor(s) of any tier fails to meet the Contractor's Construction Schedule, the Contractor shall take such steps as may be necessary to immediately improve its progress by increasing the number of workers, shifts, overtime operations or days of work or other means and methods, all without additional cost to the Owner.

§ 8.2.5 If the Work is to be performed in phases, with separate dates set forth for Substantial Completion elsewhere in the Contract Documents, then the specified liquidated damages shall apply separately to each such phase unless otherwise specified.

§ 8.2.6 Any provisions in the Contract for liquidated damages are intended to be in lieu of the liability of the Contractor for special, incidental and consequential damages (such as cost of capital and loss of profits, use and revenue) sustained by the Owner but shall not relieve or release the Contractor from liability for any and all damage or damages suffered by the Owner due to other breaches of the Contract or suffered by separate contractors.

§ 8.2.7 It is the Contractor's option, but not its right, to attempt to complete the Project earlier than the dates specified in the Contract Documents. Thus any claim based upon delay shall be evaluated based upon the dates specified in the Contract Documents, not an earlier projected completion that the Contractor may propose.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work ~~by (1) by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by (2) by changes ordered in the Work only to the extent reflected in approved Change Orders providing for specific extensions of the Contract Time; or (3) by unanticipated, abnormal weather (see Section 15.1.5.2); or (4) by unexpected industry-wide labor disputes, fire, unusual delay in deliveries, governmental delays (including unanticipated permit delays not caused by the Contractor); delays caused by a local jurisdictions' scheduled days off shall not be considered an excusable delay), unavoidable casualties or other causes beyond the Contractor's control; or by (5) by delay authorized by the Owner pending mediation and arbitration; or by litigation; or (6) by other causes that the Architect-Owner determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine time, limited to the change in the actual critical path of the Contractor's Construction Schedule directly caused thereby, as the Owner may determine consistent with the provisions of the Contract Documents. In no event, however, shall the Contractor be entitled to any~~ (1) by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by (2) by changes ordered in the Work only to the extent reflected in approved Change Orders providing for specific extensions of the Contract Time; or (3) by unanticipated, abnormal weather (see Section 15.1.5.2); or (4) by unexpected industry-wide labor disputes, fire, unusual delay in deliveries, governmental delays (including unanticipated permit delays not caused by the Contractor); delays caused by a local jurisdictions' scheduled days off shall not be considered an excusable delay), unavoidable casualties or other causes beyond the Contractor's control; or by (5) by delay authorized by the Owner pending mediation and arbitration; or by litigation; or (6) by other causes that the Architect-Owner determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine time, limited to the change in the actual critical path of the Contractor's Construction Schedule directly caused thereby, as the Owner may determine consistent with the provisions of the Contract Documents. In no event, however, shall the Contractor be entitled to any

extension of time absent proof of (1) delay to an activity on the critical path of the Contract Schedule, so as to actually delay the Project completion beyond the date of Substantial Completion, or (2) delay transforming an activity into the critical path of the Contract Schedule, so as to actually delay the Project completion beyond the date of Substantial Completion.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.15 and shall include any proposed changes in the Contractor's Construction Schedule or the Contract Time, a description of any event that could delay performance or supplying of any item of the Work, the expected duration of the delay, the anticipated effect of the delay on the Contractor's Construction Schedule, and the action being taken to correct the delay situation. That the Owner or Architect may be aware of the occurrence or existence of a delay through means other than the Contractor's written notification shall not constitute a waiver of a timely or written notice or Claim. The Contractor has an obligation to minimize and mitigate schedule impacts.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

- .1 If the delay was not caused by the Owner, the Contractor, a Subcontractor of any tier, or the Architect, or anyone acting on behalf of any of them, the Contractor is entitled only to an increase in the Contract Time in accordance with the Contract Documents but not an increase in the Contract Sum. If the delay was caused by the Contractor, a Subcontractor of any tier, or anyone acting on behalf of any of them, the Contractor is not entitled to an increase in the Contract Time or in the Contract Sum. The Contractor shall not recover damages, an equitable adjustment or an increase in the Contract Sum or Contract Time from the Owner where the Contractor could have reasonably avoided the delay by the exercise of due diligence. The Contractor shall be able to recover an increase in the Contract Sum, provided it is consistent with the terms of the Contract Documents, only if the delay directly impacts the critical path, could not have reasonably been anticipated or avoided, was unreasonable and was caused by the Owner or anyone acting on its behalf as permitted under the Contract Documents. The Owner is not obligated directly or indirectly for damages, an equitable adjustment, or an increase in the Contract Sum for any delay suffered by a Subcontractor of any tier that does not increase the Contract Time.
- .2 In the event the Contractor (including any Subcontractors of any tier) is held to be entitled to damages from the Owner for delay beyond the payment permitted in Section 7.5.6, it is agreed that the total combined damages to the Contractor and any Subcontractors of any tier for each day of delay shall be limited to the same daily liquidated damage rate specified in the Contract Documents due the Owner for the Contractor's delay in achieving Substantial Completion. By submitting its bid on the Work, the Contractor represents that it would be difficult if not impossible to determine the amount of any delay damages due it, that it has taken this provision for liquidated damages into consideration in its bid, and that these liquidated damages are a reasonable estimate of its loss. No damages will be allowed for any time prior to fourteen (14) days before receipt of written notice of the Claim of the delay pursuant to Article 15.
- .3 The Contractor shall not in any event be entitled to damages arising out of actual or alleged loss of efficiency; morale, fatigue, attitude, or labor rhythm; constructive acceleration; home office overhead; expectant underrun; trade stacking; reassignment of workers; rescheduling of work, schedule compression, concurrent operations; dilution of supervision; learning curve; beneficial or joint occupancy; logistics; ripple; season change; extended overhead; profit upon damages for delay; impact damages; cumulative impacts; or similar damages. Any effect that such alleged costs may have upon the Contractor or its Subcontractors of any tier is fully compensated through the percentage Fee on Change Orders paid through Section 7.5.6 and any liquidated damages paid hereunder.
- .4 The Contractor shall not be entitled to any adjustment in the Contract Time or the Contract Sum, or to any additional payment of any sort, by reason of the loss or the use of any float time, including time not on the critical path or time between the Contractor's anticipated completion date and the end of the Contract Time, whether or not the float time is described as such on the Contractor's Construction Schedule.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.2 SCHEDULE OF VALUES

~~Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, At least fourteen (14) days before the first Application for Payment, the Contractor shall submit to the Architect, before the first Application for Payment, Architect a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect or Owner may require. This schedule, unless objected to by the Architect, the Architect or the Owner, shall be used as a basis for reviewing the Contractor's Applications for Payment.~~

- .1 Mobilization shall be a maximum of one-half of one percent (0.5%) of the Contract Sum, and shall be paid only if supported by an itemized breakdown of costs acceptable to the Owner.
- .2 Payment applicable to the expenses of Contractor's bond and/or builder's risk insurance will be made only upon receipt of paid invoices from surety and/or insurance carrier.
- .3 No payment will be made for shop drawings or submittals until on-site receipt of materials, except for structural steel, fire sprinkler, automatic temperature control, and fire alarm shop drawings that have been reviewed and accepted by the Architect.
- .4 The schedule of values shall allocate at least one percent (1%) of the Contract Sum to Commissioning, as defined in Section 9.8.1.2.
- .5 The schedule of values shall also allocate at least two percent (2%) of the Contract Sum as a separate line item for that portion of the Work between Substantial Completion and Final Completion, including without limitation punchlist completion and furnishing of deliverables (including but not limited to approved operations and maintenance data, approved record documents, warranties and bonds, delivery of extra stock, and all other documentation or items of the Work required for Final Completion final payment), which will be earned and paid as part of the final payment. This line item shall be entitled "Final Documentation and Punchlist Completion." This percentage is not the statutory retainage described in Section 9.3.4 or any other retainage but rather requires the Contractor to recognize that the Contractor and its Subcontractors will expend significant costs in advancing the Work from Substantial Completion to Final Completion, and that this amount is not earned until Final Completion of the Work is accomplished. At its sole discretion, the Owner may release portions of this amount progressively as items are completed.
- .6 Itemize separately line item costs for permits, bonds, insurance, layout and supervision, scheduling, and temporary facilities.

§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents. Progress payments will be made monthly for work duly certified, approved, and performed during the calendar month preceding the application. These amounts are paid in trust to the Contractor for distribution to Subcontractors to the extent and in accordance with the approved Application for Payment.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders. Draft Application. Within the first ten (10) days of each month, the Contractor shall submit to the Architect a report on the current progress of the Work as compared to the Contractor's Construction Schedule, an updated Construction Schedule, and a draft, itemized application for payment for Work performed during the prior calendar month on a State of Washington Application for Payment on Contract form approved by the Owner. This shall not constitute a payment request. The Contractor, the Architect and the Owner shall meet within the next ten (10) days and confer regarding the current progress of the Work and the amount of payment to which the Contractor is entitled. The Architect or the Owner may request the Contractor to provide data substantiating the Contractor's right to payment as the Owner or the Architect may require, such as copies of requisitions from Subcontractors of any tier, lien releases, and certified payroll records, and reflecting retainage as provided elsewhere in the Contract Documents. The Contractor shall not be entitled to make a payment request, nor is any payment due the Contractor, until such data is furnished.

§ 9.3.1.2 Payment Request. Within ten (10) days after the Contractor, the Owner and the Architect have met and conferred regarding the updated draft application, and the Contractor has furnished all progress information required

and all data requested by the Owner or Architect under Section 9.3.1.1 above, the Contractor has submitted current meeting minutes, daily reports, as-built drawings and commissioning logs (if requested) and an updated (bar chart) construction schedule, the Contractor may submit a payment request by the 10th day of the following month in the agreed-upon amount, in the form of a notarized, itemized Application for Payment, in triplicate, for Work properly performed during the prior calendar month on a form supplied or approved by the Owner, along with a lien release on a form approved by the Owner from each Subcontractor for whose Work the Owner paid the Contractor for the prior month. The Application shall also state that prevailing wages have been paid in accordance with the prefiled statements of intent to pay prevailing wages on file with the Owner and that all payments due Subcontractors of any tier from the Owner's payment the prior month have been made. The submission of this Application constitutes a certification that the Work is current on the Contractor's Construction Schedule, unless otherwise noted on the application. Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay. A payment request shall not be valid unless it complies with the requirements of the Contract Documents.

§ 9.3.1.3 Disputed Amounts. If the Contractor believes it is entitled to payment for Work performed during the prior calendar month in addition to the agreed-upon amount, the Contractor may, also within ten (10) days after the meeting in Section 9.3.1.1, submit to the Owner and the Architect along with the approved payment request a separate written payment request specifying the exact additional amount due, the category in the Schedule of Values in which the payment is due, the specific Work for which the additional amount is due, and why the additional payment is due. Furthermore, for the submittal to be considered, pursuant to WAC 296-127-320, the Contractor and all Subcontractors shall file with the Owner by the same date certified copies of all payroll records relating to the additional amount due.

§ 9.3.1.4 Validity of Payment Requests. A payment request shall not be valid unless it complies with the requirements of the Contract Documents. If a separate payment request concerning a disputed amount does not comply with the requirements of the Contract, the Owner will provide a written statement to the Contractor stating why the disputed amount is not owed and/or why the separate payment request does not comply with the requirements of the Contract.

§ 9.3.1.5 Payments to Subcontractors. No payment request shall include amounts the Contractor does not intend to pay to a Subcontractor because of a dispute or other reason. If, after making a request for payment but before paying a Subcontractor for its performance covered by the payment request, the Contractor discovers that part or all of the payment otherwise due to the Subcontractor is subject to withholding from the Subcontractor under the subcontract (such as for unsatisfactory performance or non-payment of sub-subcontractors), the Contractor may withhold the amount as allowed under the subcontract, but it shall give the Subcontractor, the Owner and the Architect written notice of the remedial actions that must be taken as soon as practicable after determining the cause for the withholding but before the due date for the Subcontractor payment, and pay the Subcontractor within eight (8) working days after the Subcontractor satisfactorily completes the remedial action identified in the notice.

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

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

§ 9.3.4 Retainage.

§ 9.3.4.1 In accordance with RCW 60.28, a sum equal to five percent (5%) of each approved Application for Payment shall be retained. After award of a Contract for public improvements, or work for which retained percentages are required to be reserved under the provision of RCW 60.28, the Owner shall require the Contractor to exercise, in writing, one of the options listed below:

- .1 Retained percentages will be retained in a fund by the Owner not subject to release until sixty (60) days following the Final Acceptance of the Work as completed and as provided in Section 9.10.4; or
- .2 Deposited by the Owner in an interest-bearing account in a bank, mutual savings bank or savings and loan association and not subject to release until sixty (60) days following Final Acceptance of the Work as completed and as provided in Section 9.10.4; or
- .3 Placed in escrow with a bank or trust company and not subject to release until sixty (60) days following the Final Acceptance of the Work as completed and as provided in Section 9.10.4.
- .4 If the Contractor provides a bond in place of retainage, it shall be in an amount equal to 5% of the Contract Sum plus change orders. The minimum requirements for the bond are that it must be on a form acceptable to the Owner, with an A.M. Best rating of "A-" or better and a financial rating of no less than "VIII," signed by a surety registered by the Washington State Insurance Commissioner and on the currently authorized insurance list published by the Washington State Insurance Commissioner; additional requirements as established by the Owner may be applied.

§ 9.3.4.2 The Contractor or a Subcontractor may withhold payment of not more than five percent (5%) as retainage from the monies earned by any Subcontractor or Sub-subcontractor, provided that the Contractor pays interest to the Subcontractor at the same interest rate it receives from its reserved funds. If requested by the Owner, the Contractor shall specify the amount of retainage and interest due a Subcontractor.

§ 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven (7) days after receipt of the Contractor's approved Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial and Final Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Owner may, with or without the Architect's concurrence, withhold payment, and the Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, evidence or subsequent observations, it may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;

- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 ~~repeated unsatisfactory prosecution of the Work by the Contractor, including but not limited to failure to carry out the Work in accordance with the Contract Documents, Documents;~~
- .8 delay by the Contractor and/or its Subcontractor(s) of any tier, or failure to comply with the Contractor's Construction Schedule requirements;
- .9 failure to submit affidavits pertaining to wages paid as required by statute;
- .10 failure to submit a properly updated Construction Schedule;
- .11 failure to comply with a requirement of the Contract Documents in which the Owner has reserved the right to withhold payment;
- .12 liquidated damages;
- .13 failure to properly maintain as-builts;
- .14 failure to properly submit daily construction records; or
- .15 failure to properly submit certified payrolls.

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

§ 9.5.3 ~~If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.~~ Pursuant to RCW 39.12, "Prevailing Wages on Public Works," the Contractor will not receive any payment until the Contractor and all Subcontractors of any tier for whom payment is sought have submitted state-approved "Statements of Intent to Pay Prevailing Wage" to the Owner. The statement must have the approval of the Industrial Statistician of the Department of Labor and Industries before it is submitted to the Owner. The statement must include the Contractor's registration number, the number of workers in each trade classification, and the applicable wage rate for each trade listed. The Contractor agrees to provide each Subcontractor of any tier with a schedule of applicable prevailing wage rates. The Contractor and the respective Subcontractors of any tier shall pay all fees required by the Department of Labor and Industries, including fees for the approval of the "Statement of Intent to Pay Prevailing Wages." Approved copies of the "Statement of Intent to Pay Prevailing Wages" must be posted where workers can easily read them.

§ 9.5.4 The Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

§ 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Architect has issued a Certificate for Payment, and it has been approved by the Owner, the Owner shall make payment in the manner and within the time provided in the Contract Documents, ~~and shall so notify the Architect.~~ Documents. The Owner will make a progress payment within thirty (30) days of its receipt and approval of the Architect's Certificate for Payment; any payments made by or through the Office of the Superintendent of Public Instruction shall be made in accordance with the policies, procedures, and forms required by that office. The Owner shall be entitled to withhold payment to the extent provided by the Contract Documents, notwithstanding the issuance of a Certificate for Payment.

§ 9.6.2 The Contractor shall pay each Subcontractor no later than seven (7) days after receipt of payment from the Owner ~~the Owner~~, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement

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with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner. If the Contractor does not receive payment for any cause which is not the fault of a particular Subcontractor but does receive payment for materials supplied or work performed by that Subcontractor, the Contractor shall pay that Subcontractor in accordance with its subcontract for its satisfactorily completed work, less the retained percentage.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the ~~Contractor~~ Contractor, satisfactory to the Owner, that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. ~~If the Contractor fails to furnish such evidence within seven days,~~ Work and the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of ~~Work not in accordance with the Contract Documents.~~ Work.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.7 FAILURE OF PAYMENT

If the Architect ~~does not~~ improperly fails to issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's ~~Application for Payment,~~ timely and complete Application for Payment under Section 9.3.1.2 (subject to the approved payment schedule), or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount ~~certified by the Architect or awarded by binding dispute resolution,~~ due and owing to the Contractor, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and ~~start-up,~~ plus interest start-up as provided for in Section 7.5 of these General Conditions of the Contract Documents.

§ 9.8 SUBSTANTIAL COMPLETION AND OCCUPANCY

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

§ 9.8.1.1 Substantial Completion is the stage in the progress of the Work, or portion thereof designated and approved by the Architect and Owner, when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can fully occupy or utilize the Work, or the designated portion thereof, for its intended use, including FF&E and student, teacher, and staff occupancy. The fact that the Owner may occupy the Work or a designated portion thereof does not indicate that the Work is acceptable in whole or in part. All Work other than incidental corrective or punch list work shall be completed, including but not limited to the following:

- (1) Obtain applicable occupancy permits, including fire/life safety systems and health department approval, pressure vessel permits, elevator permits, and similar approvals or certificates by governing authorities and franchised services, assuring the Owner's full access and use of completed Work.
- (2) Submit the Contractor's punch list of items to be completed or corrected and written request for inspection.

- (3) Complete final start-up, testing, and commence instruction and training sessions on all major building systems including HVAC and controls, intercom, data communications, fire alarm, telephone, fire sprinkler, security and clocks, and establish a Date of Commissioning.
- (4) Make final changeover of locks and transmit new keys to the Owner, and advise the Owner of the changeover in security provisions.
- (5) Discontinue or change over and remove unnecessary temporary facilities and services from the project site.
- (6) Advise the Owner on coordination of shifting insurance coverages, including proof of extended coverages as required.
- (7) Complete final cleaning.

The Work is not Substantially Complete unless the Architect reasonably judges that the Work can achieve Final Completion within thirty (30) days (or such other period of time as is specified in the Contract Documents), appropriate cleaning has occurred, all designated systems and parts are commissioned and usable, including balancing of the HVAC system, utilities are connected and operating normally and training sessions have occurred, all required temporary occupancy permits, pressure vessel permits, elevator permits, and similar approvals or certificates by governing authorities and franchised services, assuring the Owner's full access to the Work have been issued, O & M manuals have been submitted for review, and the Work is accessible by normal vehicular and pedestrian traffic routes. The fact that the Owner may occupy the Work or a designated portion thereof does not indicate that the Work is Substantially Complete or is acceptable in whole or in part, nor does such occupation toll or change any liquidated damages due the Owner.

§ 9.8.1.2 Date of Commissioning of Selected Equipment and Systems. The equipment and systems so designated in the Contract Documents are considered "Selected Equipment and Systems." When the Contractor considers that all Selected Equipment and Systems are complete, fully functional, ready for normal operation and functional performance testing, and all pre-commissioning checklists are completed, the Contractor shall so notify the Architect in writing a minimum of 40 days prior to the Date of Substantial Completion (or such other date as may be established in the Contract Documents). A reasonable period shall be allowed for the Architect and commissioning agent to schedule and observe the functional performance tests identified in the Contract Documents. If the inspection discloses that the Selected Equipment and Systems are not Substantially Complete or that any item is not in accordance with the requirements of the Contract Documents, the Contractor shall expeditiously, and before the Date of Commissioning, complete or correct such item upon notification by the Architect or commissioning agent. The Contractor shall then submit a request for another inspection to determine completion of those Selected Equipment and Systems and pay the costs associated with the reinspection, including fees of the Architect, commissioning agent and their consultants. When all the Selected Equipment and Systems are complete, the Owner's commissioning agent will notify the Owner in writing, which shall establish the Date of Commissioning. Training of Owner personnel shall begin immediately after the Date of Commissioning and shall be conducted by appropriate Subcontractor personnel on site who are knowledgeable with the construction and operation of each system prior to departure of the installing entity from the site. Warranties on any Selected Equipment and Systems required by the Contract Documents shall commence on the Date of Commissioning, unless otherwise provided, but the Contractor shall retain the responsibility to maintain the system until Final Acceptance.

§ 9.8.1.3 Indemnification. The Contractor shall defend, indemnify, and hold harmless the Owner and the Architect and their agents, employees, and consultants, successors and assigns from and against all claims, damages, losses and expenses of third parties, direct and indirect, or consequential, including costs, design professional fees, and attorneys' fees incurred by the Owner related to such claims and in proving the right to indemnification, arising out of or resulting from the failure of the Contractor to attain the Date of Commissioning less than thirty (30) days prior to the Date of Substantial Completion fixed by the Contract Documents. In particular, the Contractor acknowledges that a 30-day period after the Date of Commissioning and prior to occupancy is specified during which all HVAC, mechanical, electrical, control and environmental management systems are fully operational under procedures and loads intended to provide unoccupied space with positive performance for pre-occupancy environmental documentation, and the systems are scheduled to operate under a procedure intended to dissipate out-gassing that may occur from interior and other materials.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. The Contractor shall proceed promptly to complete and

correct items on the list. The Contractor shall immediately clean-up any dust or debris created through punchlist work activities. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, and upon verification by the Architect that all permits, approvals, testing, training and other submittals and administrative actions required under the Contract Documents for obtaining Substantial Completion have been satisfied, the Architect and, at its option, the Owner will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion. If the Owner or Architect determines that the Work or designated portion is not substantially complete, the Contractor shall expeditiously complete the Work or designated portion, and again request an inspection. The Contractor shall pay the costs associated with this third and any further reinspections.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that which, upon approval of the Owner, shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. Completion, except that warranties for HVAC equipment shall commence with acceptance of the Commissioning Report by the Owner's Board of Directors. The Contractor shall attach and submit with the executed Certificate of Substantial Completion, the Certificate of Occupancy, as well as a written list of each outstanding and unresolved Claim; any Claim not so submitted and identified, other than retainage and the undisputed balance of the Contract Sum, shall be deemed waived and abandoned. If the Owner or Architect determines that the Work or designated portion is not Substantially Complete, the Contractor shall expeditiously complete the Work or designated portion, again request an inspection, and pay the costs associated with the re-inspection, including Architect and consultant fees.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and Any items not included by the Architect but required or necessary for Final Completion of the Contract shall be supplied and installed by the Contractor as a part of the Contract Sum, notwithstanding their not being recorded by the Architect. Upon written acceptance of the Certificate of Substantial Completion by the Owner and the Contractor, and upon the Contractor's Application for Payment and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof as provided in the Contract Documents. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents. No further payment will be due or owing until the payment following Final Completion.

§ 9.8.6 The Contractor shall prepare, continue to monitor with the Architect, and cause to be completed, all punchlists with respect to the activity of each Subcontractor and report weekly to the Owner on outstanding punchlist items. Beginning thirty (30) days before the scheduled date of Substantial Completion, the Contractor shall prepare reports weekly, identifying items to be completed in order to obtain required certificates of occupancy and make recommendations to the Owner with respect to effectuating the earliest possible completion. The Contractor shall include this report as a schedule item on its CPM schedule.

§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may, upon written notice to the Contractor, take possession of, operate, occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the

~~period for correction of the Work and commencement of warranties required by the Contract Documents, complete. Unless otherwise agreed in writing, such possession, use or operation shall not be deemed an acceptance of any portion of the Work, nor accelerate the time for any payment to the Contractor under the Contract, nor prejudice any rights of the Owner under the Contract or under any insurance, bond, guaranty or other requirement of the Contract, nor relieve the Contractor of the risk of loss or any of its obligations under the Contract, nor establish a Date of Substantial or Final Completion, nor establish a date for termination or partial termination of the running of liquidated damages, nor constitute a waiver of any Owner claims. If the Contractor fails to achieve Substantial Completion of the Work within the Contract Time, or fails to achieve Final Completion of the Work within thirty (30) days of Substantial Completion (or such other period of time as is specified in the Contract Documents), the Owner may take possession of, use or operate all or any part of the Work without an increase in the Contract Sum or the Contract Time on account of such possession or use. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.~~

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled. **Final Completion.**

§ 9.10.1.1 The Contractor shall cause punch list items to be completed within thirty (30) days of Substantial Completion (or such other period of time as is specified in the Contract Documents) or within such reasonable period as may be required to correct the item (in the event that the punch list items are, because of their nature, incapable of correction during that period) provided that the Contractor commences to correct the item within that period and thereafter diligently and in good faith pursues the corrective action to completion. If, at fifteen (15) days after the Date of Substantial Completion, the Owner considers that the punch list items are unlikely to be completed within thirty (30) days of the Date of Substantial Completion (or such other period of time as is specified in the Contract Documents), the Owner may, upon seven (7) days' written notice to the Contractor, take over and perform some or all of the punch list items. If the Contractor fails to correct the deficiencies within the time period specified, the Owner may deduct the actual cost of performing this punch list work, including any design costs, plus 15% to account for the Owner's transaction costs from the Contract Sum.

§ 9.10.1.2 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance, the Architect will promptly make such inspection accompanied by the Contractor (if requested by the Architect or Owner). If the Architect or Owner determines that some or all of the punch list items are not accomplished, the Contractor shall be responsible to the Owner for all costs, including re-inspection fees, for any subsequent Architect's inspection to determine compliance with the punch list. When the Architect finds all punch list items complete and the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly notify the Owner and the Contractor in writing that, to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.1.3 The Contractor is liable for, and the Owner may deduct from any amounts due the Contractor, all Architect, engineer or other design consultant fees and all Commissioning Agent and Construction Manager fees incurred by the

Owner for services performed more than thirty (30) days after Substantial Completion of all the Work (or such other period of time as is specified in the Contract Documents), whether or not those services would have been performed prior to that date had Final Completion been achieved in a timely manner.

§ 9.10.1.4 When the Architect finds that the Work has been concluded, a final occupancy permit has been issued, any commissioning process and validation process have been successfully concluded and the Commissioning Report has been accepted by the Owner's Board of Directors, and the Contractor has submitted all the items identified in Section 9.10.1.5 to the Architect, the Contractor may submit a final Application for Payment. The Architect will then promptly issue a final Certificate for Payment stating that the entire balance found to be due the Contractor and noted in said final Certificate is due and payable. The Architect's final Certificate for Payment shall establish the date of Final Completion upon its execution by the Owner.

§ 9.10.1.5 "Final Completion" will be attained when the Contractor has accomplished the following:

- (1) Complete all requirements listed in Section 9.8 for Substantial Completion.
- (2) Complete all remaining punch list items and remaining Work, and obtain approval by Architect and Owner that all Work is complete.
- (3) Obtain permanent occupancy permits (if only a temporary occupancy permit was issued at Substantial Completion).
- (4) Submit final change order and final Application for Payment.
- (5) Submit record documents, any final property survey, and operation and maintenance manuals required by the Contract Documents.
- (6) Deliver tools, spare parts, extra stock of material and similar physical items to the Owner as required by the Contract Documents.
- (7) Complete final cleaning after punchlist work (in addition to the final cleaning that was required to obtain Substantial Completion).
- (8) Complete instruction and training sessions on all major building systems including HVAC, intercom, data communications, fire alarm, telephone, fire sprinkler, emergency power, security and clocks.
- (9) Submit executed warranties.
- (10) Make final changeover of locks and transmit new keys to the Owner, and advise the Owner of the changeover in security provisions.
- (11) Discontinue or change over and remove temporary facilities and services from the project site.
- (12) Advise the Owner on coordination of shifting insurance coverages, including proof of extended coverages as required.
- (13) Acceptance of the final Commissioning Report by the Owner's Board of Directors.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that Final Acceptance and Payment.

§ 9.10.2.1 Neither final payment nor any retained percentage shall become due until after the Owner's Board of Directors has formally accepted the Project ("Final Acceptance"). To achieve Final Acceptance, the Architect must have issued a final Certificate for Payment under Section 9.10.1.4, an occupancy permit must have been issued, Final Completion must have occurred, and the Contractor must have submitted to the Architect and the Owner the following:

- (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, except for any claims that are specifically identified on the affidavit (Affidavit of Payment of Debts and Claims, AIA form G706 or equivalent),
- (2) 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 ~~30~~ thirty (30) days' prior written notice has been given to the Owner,
- (3) 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,
- (4) consent of surety, if any, to final payment and (5), if required by the Owner, (AIA form G707 or equivalent),
- (5) other data establishing payment or satisfaction of or protection against 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. Owner (Contractor's Affidavit of

Release of Liens, AIA form G706A or equivalent). 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.

- (6) pursuant to RCW 39.12.040, an "Affidavit of Wages Paid" from the Contractor and from each Subcontractor of any tier certified by the Industrial Statistician of the Washington State Department of Labor and Industries, with the fees paid by the Contractor or Subcontractor,
- (7) a letter from the Architect indicating that the Work is complete and recommending Final Acceptance of the Project by the Owner,
- (8) certification that the materials in the Work are "lead-free" and "asbestos-free,"
- (9) a certified statement that the Contractor has closed all necessary permits or otherwise met the requirements of all governing jurisdictions related to this project, including but not limited to all city or county departments, health districts and utility districts, provided to Owner with a copy of all closed or signed off permits,
- (10) record documents; and
- (11) all warranties, guarantees, training, manuals, operation instructions, certificates, spare parts, maintenance manuals and stock, specified excess material, as-built drawings and other documents, training or items required by the Contract Documents or local governmental entities.

§ 9.10.2.2 Pursuant to RCW 60.28, "Lien for Labor, Materials, Taxes on Public Works," completion of the Contract Work shall occur upon Final Acceptance.

§ 9.10.3 If, after Substantial Completion of the Work, ~~final completion thereof~~ Final Completion is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner ~~shall, may,~~ upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. ~~If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.~~

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from
1. ~~liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;~~
2. ~~failure of the Work to comply with the requirements of the Contract Documents; or~~
3. ~~terms of special warranties required by the Contract Documents.~~ **Release of Retainage:** The retainage will be held and applied by the Owner as a trust fund in a manner required by RCW 60.28. Release of the retainage will be processed in ordinary course of business upon the expiration of sixty (60) days following Final Acceptance of the Work by the Owner provided that no notice of lien shall have been given as provided in RCW 60.28, that no claims have been brought to the attention of the Owner and that the Owner has no claims under this Contract; and provided further that, for state-funded projects, release of retention has been duly authorized by the State. The following items also must be obtained prior to release of retainage: pursuant to RCW 60.28, a certificate from the Department of Revenue; pursuant to RCW 50.24, a certificate from the Department of Employment Security; and appropriate information from the Department of Labor and Industries.

§ 9.10.5 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. **Waiver of Claims**

§ 9.10.5.1 Final Payment by Owner. The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

1. liens, statutory retainage, Claims, security interests or encumbrances arising out of the Contract and unsettled;
2. failure of the Work to comply with the requirements of the Contract Documents; or
3. terms of special warranties required by the Contract Documents.

§ 9.10.5.2 Final Payment to Contractor. 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 and attached to the Contractor's final Application for Payment.

§ 9.10.5.3 The execution of a Change Order shall constitute a waiver of Claims by the Contractor arising out of the Work to be performed or deleted pursuant to the Change Order, except as specifically described in the Change Order. Reservations of rights will be deemed waived and are void unless the reserved rights are specifically described in detail to the satisfaction of the Owner and are initiated by the Owner. If the Contractor adds a reservation of rights that has not been initiated by the Owner to any Change Order, Construction Change Directive, Change Order proposal, Application for Payment or any other document, all amounts therein shall be considered disputed and not due or payable unless and until costs are re-negotiated or the reservation is withdrawn or changed in a manner satisfactory to and in all cases initiated by the Owner. If the Owner makes payment for a Change Order or an Application for Payment that contains a reservation of rights not initiated by the Owner to indicate agreement with the reservation, and if the Contractor negotiates the check for such payment, then the reservation of rights shall be deemed waived, withdrawn, and of no effect.

§ 9.10.6 If a Subcontractor of any tier refuses to furnish a release or waiver required by the Owner, the Owner may (a) retain in the fund, account, or escrow funds in such amount as to defray the cost of foreclosing the liens of such claims and to pay attorneys' fees, the total of which shall be no less than 150% of the claimed amount, or (b) accept a bond from the Contractor, satisfactory to the Owner, to indemnify the Owner against such lien. If any such lien remains unsatisfied after all payments from the retainage are made, the Contractor shall refund to the Owner all moneys that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

§ 9.10.7 The Contractor and all Subcontractors of any tier shall maintain books, ledgers, records, documents, estimates, bids, correspondence, logs, schedules, emails, facsimiles, and other tangible and electronic data and other evidence relating or pertaining to the costs and/or performance of the Contract ("records") to such extent and in such detail as will properly reflect and fully support compliance with the requirements of the Contract Documents and with all costs, charges and other amounts of whatever nature. The Contractor shall preserve such records for a period of three (3) years following the date of Final Acceptance under the Contract and for such longer period as may be required by any other provision of the Contract. Within seven (7) days of the Owner's request, the Contractor agrees to make available at the office of the Contractor during normal business hours all records for inspection, audit and reproduction (including electronic reproduction) by the Owner or its representatives. These requirements shall also be applicable to each Subcontractor of any tier and included in each Subcontract and purchase order issued with respect to the Work, except fixed-price Subcontracts where the price is \$25,000 or less. The Contractor agrees, on behalf of itself and Subcontractors of any tier, that any rights under RCW 42.56 will commence at Final Acceptance, and that the invocation of such rights at any time by the Contractor or a Subcontractor of any tier, or their respective representatives, shall initiate an equivalent right to disclosures from the Contractor and Subcontractors of any tier for the benefit of the Owner. Failure to fully comply with any requirements of this Section shall constitute a material breach of contract and shall constitute a waiver of all claims by the Contractor and any Subcontractor that does not fully comply.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

~~The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.~~ § 10.1.1 The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall have the right to control and shall be solely and completely responsible for conditions of the work site, including safety of all persons and property, during performance of the Work. The Contractor shall maintain the Work site and perform the Work in a manner that meets statutory and common-law requirements for the provision of a safe place to work. This requirement shall apply continuously and not be limited to working hours. Any review by the Owner or the Architect of the Contractor's performance shall not be construed to include a review of the adequacy of the Contractor's safety measures in, on or near the site of the Work.

§ 10.1.2 No action or inaction of the Owner or the Architect relating to safety or property protection or a violation thereof shall in any way: (1) relieve the Contractor of sole and complete responsibility for the violation and the correction thereof, or of sole liability for the consequences of said violation; (2) impose any obligation upon the Owner or Architect to inspect or review the Contractor's safety program or precautions or to enforce the Contractor's

compliance with the requirements of this Article 10; (3) impose any continuing obligation upon the Owner or Architect to ensure the Contractor performs the Work safely or to provide such notice to the Contractor or any other person or entity; (4) affect the Contractor's sole and complete responsibility for performing the Work safely or the Contractor's responsibility for the safety and welfare of its employees and the employees of Subcontractors of any tier; or (5) affect the Contractor's responsibility for the protection of property, students, staff and the general public.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

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

§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss. The Contractor shall comply with all notices and comply with all requests from the Owner regarding the safety and protection of the Owner's students and staff. The Contractor shall comply with the safety regulations set forth in "Safety Standards for Construction" and "General Safety Standards" and any other requirements published by the Washington State Department of Labor and Industries. The Contractor shall comply with the Federal Occupational Safety and Health Act of 1970 (OSHA), including all revisions, amendments and regulations issued thereunder, and the provisions of the Washington Industrial Safety Act of 1973 (WISHA), including all revisions, amendments and regulations issued thereunder by the Washington State Department of Labor and Industries. The WISHA regulations shall apply to all excavation, trenching and ditching operations. In case of conflict between any such requirements, the more stringent applicable regulation or requirement shall apply.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities. The Contractor shall maintain at the work site office or other well-known place at the work site all materials (e.g., a first aid kit) necessary for giving first aid to the injured, and shall establish, publish and make known to all employees procedures for ensuring immediate removal to a hospital or a doctor's care, persons, including employees, who may have been injured on the site. Employees shall not be permitted to work on the site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care. The Contractor's and/or any Subcontractors shall ensure that at least one of such employees has a valid, effective first aid card.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the ~~Work~~, Work and explicitly permitted by the Contract Documents, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not load or permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 ~~INJURY OR DAMAGE TO PERSON OR PROPERTY~~ At all times until the Owner's occupancy of the Work or a designated portion of the Work, the Contractor shall protect from damage, weather, deterioration, theft, vandalism and malicious mischief and shall bear the risk of any uninsured loss or destruction of, or injury or damage to, all materials, equipment, tools, and other items incorporated or to be incorporated in the Work or designated portion, or consumed or used in the performance of the Work or designated portion, and all Work in process and completed Work or designated portion. The Contractor is responsible for any deductible amounts related to any insurance coverage.

§ 10.2.9 Any notice given to the Contractor by the Owner or the Architect of a safety or property protection violation will not: (1) relieve the Contractor of sole and complete responsibility for the violation and the correction thereof, or for sole liability for the consequences of said violation; (2) impose any obligation upon the Owner or Architect to inspect or review the Contractor's safety program or precautions or to enforce the Contractor's compliance with the requirements of this Article 10; or (3) impose any continuing obligation upon the Owner or Architect to provide such notice to the Contractor or any other persons or entity.

§ 10.2.10 INJURY OR DAMAGE TO PERSON OR PROPERTY

If ~~either party~~ the Contractor suffers injury or damage to person or property because of an alleged act or omission of the ~~other party, Owner,~~ or of others for whose acts ~~such party is the Owner~~ may be legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the ~~other party-Owner~~ within a reasonable time not exceeding 21 twenty-one (21) days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter. This Section does not apply to Claims, damages for additional costs or time, acceleration, or delay.

§ 10.3 HAZARDOUS MATERIALS

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), (PCB) or soil contaminated with petroleum products, encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing. The Contractor shall proceed with the Work in areas not affected.

§ 10.3.2 Upon receipt of the Contractor's written notice, and with the Owner's agreement, the Owner shall obtain the services of a licensed laboratory to reasonably verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be verified that it has been rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable ~~objection.~~ objection, but the Owner shall not be responsible for any delay resulting from the Contractor's objection to such person or entity. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time ~~shall may~~ be extended appropriately and the Contract Sum ~~shall may~~ be increased in the amount of the Contractor's demonstrated and reasonable additional costs of shut-down, delay and start-up and start-up, which adjustments shall be accomplished as provided in Articles 7, 8 and 15.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property

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(other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking ~~indemnity~~ indemnity or if the removal of such material or substance was a part of the Contractor's Work.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's ~~fault~~ fault, misuse, or negligence in the use and handling of such materials or substances. The Contractor shall store all hazardous materials safely, whether or not required by Contract Documents. The Contractor shall not install hazardous materials, including without limitation asbestos, lead, mercury, or polychlorinated biphenyl (PCB), in the Work.

§ 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without ~~fault~~ or negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

§ 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

§ 10.5 PUBLIC SAFETY AND CONVENIENCE

§ 10.5.1 The Contractor shall conduct its Work so as to ensure the least possible obstruction to vehicular traffic and inconvenience to the general public and others in the vicinity of the Work and to ensure the protection of persons, property and natural resources. No road or street shall be closed to the public except with the permission of the Owner and the proper governmental authority. Fire hydrants on or adjacent to the Work shall be accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the Contractor to ensure the use of sidewalks, fire lanes, private and public driveways and proper functioning of gutters, sewer inlets, drainage ditches and culverts, irrigation ditches and natural water courses, if any, on the Work site.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located ~~such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:~~

- ~~1. Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;~~
- ~~2. Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;~~
- ~~3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;~~
- ~~4. Claims for damages insured by usual personal injury liability coverage;~~
- ~~5. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;~~
6. Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; possessing a Best's policyholder's rating of A- or better and a financial rating of no less than VIII and reasonably acceptable to the Owner, an occurrence-based Commercial General Liability Insurance Policy, which shall provide personal injury, bodily injury and property damage liability to cover the Contractor's operations, including Subcontractors and suppliers of any tier; owned, non-owned and hired vehicles; on

work the Contractor may subcontract or sublet to others; and on the indemnity provisions of this Contract, including but not limited to premises, products/completed operations, personal injury, blanket contractual liability, explosion, collapse or underground (XCU), and stopgap employer's liability. The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect, their consultants and employees, any required governmental agencies and others designated in the Contract Documents as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations, and this insurance shall include a severability of interest (cross liability clause) for Work performed under this Contract. The Contractor's policy shall be designated primary coverage for both defense and indemnity, and any Owner's policies excess. Such limits of liability insurance shall have per project general aggregate provisions and shall not be less than the following:

- .1 Comprehensive General Liability, Bodily Injury and Property Damage Liability, including Premise and Operations, Independent Contractors, Protective Liability, Completed Operations and Products, Contractual, Combined Single Limit of at least \$1,000,000 per occurrence, with a per-project aggregate limit of at least \$2,000,000; and
- .2 Comprehensive Automobile Liability, Bodily Injury and Property Damage Combined Single Limit of at least \$1,000,000; and
- .3 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18. In addition, the Contractor shall maintain a true umbrella policy which provides excess limits over the primary layer, in an amount not less than \$2,000,000.

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether Coverages shall be written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment-Final Acceptance and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents-payment. Completed operations coverage shall remain in force for three (3) years after Final Acceptance. The insurance described above shall include coverage for underground, collapse and explosion exposures. In addition, the Contractor shall purchase and maintain insurance for claims under workers' compensation (industrial insurance), disability benefit and other similar employee benefit acts in the State statutory amount and Stop Gap Liability Insurance (Employer's Contingent Liability Insurance) with coverage of at least \$1,000,000 each occurrence/each accident. All policies and certificates must be signed copies and the Contractor shall provide written notice by certified mail to the Owner and Architect 45 days before the policies expire or are cancelled or any coverages afforded under the policies are reduced, limits decreased, or the additional insureds removed. The Contractor shall furnish to the Owner and Architect copies of any subsequently issued endorsements amending, modifying, altering or restricting coverage or limits. Furthermore, such policies or certificates shall contain a clause verifying that the policy contains coverage for blanket contractual liability including both oral and written contracts and that liability coverages include protection for underground, collapse and explosion and that the indemnification provisions of Section 3.18 are acknowledged. Losses up to the deductible amount or otherwise not covered by insurance shall be the responsibility of the Contractor.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

PROOF OF INSURANCE

§ 11.1.3.1 Before any presence on site, commencing Work or exposure to loss can occur, or, in any event, within ten (10) days after the Owner has issued its Conditional Notice to Proceed, the Contractor shall furnish the Owner with four copies of Certificates of Insurance on AIA Document G705 or ACORD Certificate of Liability Insurance as evidence of all insurance required by the Contract Documents, including an endorsement to the insurance policies

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naming the Owner, the Architect, their consultants and employees, any required governmental agencies and others designated in the Contract Documents as additional insureds. If the Agreement is executed, no Progress Payment will be due until all such Certificates are furnished. The Contractor shall furnish to the Owner and Architect copies of any subsequently issued endorsements amending, modifying, altering or restricting coverage limits. Furthermore, such policies or certificates shall contain a clause verifying that the policy contains coverage for blanket contractual liability including both oral and written contracts and that liability coverages include protection for underground, collapse and explosion and that the indemnification provisions of Section 3.18 are acknowledged. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness. Upon written request, the Contractor will provide a copy of its policies to the Owner.

§ 11.1.3.2 The Owner's specification or approval of the insurance in this Contract or of its coverage or amount shall not relieve or decrease the liability of the Contractor under the Contract Documents or otherwise. Coverages are the minimum to be provided and are not limitations of liability under the Contract, indemnification, or applicable law provisions. The Contractor may, at its expense, purchase larger coverage amounts. Notwithstanding anything herein to the contrary, the Contractor shall provide all bonding, insurance, and permit documentation as required by governmental entities for all portions of the Project.

§ 11.1.4 The Contractor shall ensure and require that Subcontractors of any tier have insurance coverage to cover bodily injury and property damage on all operations and all vehicles owned or operated by Subcontractors of all tiers in the minimum amount of \$1,000,000 per occurrence with a \$2,000,000 aggregate limit. Also, the Subcontractors shall name the Contractor and the Owner and cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

§ 11.1.5 If the Owner is damaged by the failure of the Contractor to maintain any of the insurance in this Article 11 or to so notify the Owner, then the Contractor shall bear all costs attributable thereto. The Owner may withhold payment pending receipt of all certificates of insurance. Failure to withhold payment shall not constitute a waiver.

§ 11.2 OWNER'S LIABILITY INSURANCE

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

§ 11.3 PROPERTY INSURANCE

§ 11.3.1 Unless otherwise provided, the Owner-The Contractor shall purchase and maintain, maintain until Final Acceptance, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form to cover the course of construction upon the entire Work at the site and all materials or equipment furnished or installed by the Owner on the Project in the amount of the initial Contract Sum, Sum less costs of clearing, preparation and excavation of the site under this Agreement, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles.

Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project. This insurance shall insure against the perils of fire and extended coverage and physical loss or damage, including earthquake, and shall provide "all risk" coverage for the interests of the Owner, the Contractor and Subcontractors as named insured, as their respective interests appear. Upon written request, the Contractor will provide a copy of its policy to the Owner. Each loss may be subject to a deductible of not more than \$5,000, except that the deductible for earthquake losses shall be no greater than 5% of the loss. This insurance shall include as loss payee the Owner, the Contractor and Subcontractors of any tier as named insureds, as their respective interests appear. The policy shall be endorsed to allow complete or partial occupancy by the Owner before or after Substantial Completion without the insurer's approval. Except for losses

caused by the Owner, losses up to the deductible amount or otherwise not covered by insurance shall be the Contractor's responsibility.

§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

~~§ 11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.~~

§ 11.3.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

§ 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit. All tools and equipment of the Contractor and Subcontractors of any tier not intended as part of the construction or installation of the Work will be the sole responsibility of the Contractor.

~~§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.~~

§ 11.3.2 BOILER AND MACHINERY INSURANCE

The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

§ 11.3.3 LOSS OF USE INSURANCE

The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

~~§ 11.3.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.~~

~~§ 11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.~~

§ 11.3.6 Before an exposure to loss may occur, the ~~Owner~~ Contractor shall file with the ~~Contractor~~ Owner a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally

applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor/Owner.

§ 11.3.7 WAIVERS OF SUBROGATION

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner does not waive the subrogation rights to the extent of its property insurance on structures or portions of structures that do not comprise the Work. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

~~§ 11.3.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10- Adjustment.~~ Upon the occurrence of a loss insured under the property insurance, the Owner shall participate in and approve the adjustment and settlement of any loss with the insurers. 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. Any inconsistent policy provisions will supersede the provisions of this Section.

~~§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.~~

~~§ 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.~~

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

~~§ 11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering Contractor shall secure from a surety company acceptable to the Owner, admitted and licensed in the State of Washington, possessing an A.M. Best rating of "A-" or better and a financial rating of no less than "VIII," and shall pay for bonds covering the faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract under the Contract Documents, each in the full amount of the Contract Sum plus sales tax, pursuant to RCW 39.08, "Contractor's Bond."~~ Within ten (10) days after the Owner's issuance of the notice of intent to award the Contract, the Contractor shall deliver evidence of its bondability to the Owner. Within ten (10) days of its execution of the Contract, the Contractor shall (1) submit a letter from its surety specifying the percentage to be paid by the Contractor for increases in the Contract Sum, and (2) deliver two copies of the bonds to the Owner and one copy to the Architect. THE OWNER

MAY DECLINE TO ENTER INTO THE CONTRACT IF EVIDENCE OF BONDABILITY IS NOT RECEIVED. THE OWNER MAY WITHHOLD PAYMENT TO THE CONTRACTOR UNTIL SUCH SURETY BONDS ARE RECEIVED. The Contractor shall be responsible for any delay in the Contract Time because of failure to submit acceptable bonds.

§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.4.3 Subcontractor Bondability and Potential Subcontractors' Bonds. Within seven (7) days after the issuance of the notice of intent to award the Contract, any Subcontractors so required in the Bidding or Contract Documents or Special Conditions shall deliver evidence of their bondability to the Owner through the Contractor. The evidence shall include a letter from each such subcontractor's bonding company that contains the price of a payment and performance bond to be issued during the 30-day period after conditional notice to proceed. The bonding company must be acceptable to the Owner and admitted and licensed in the State of Washington. The bond(s) shall be in an amount equal to the full contract sum of the subcontract between the Subcontractor and the Contractor but shall not include sales tax. The bonds shall be conditioned that the Subcontractor shall faithfully perform all the provisions of its subcontract, payment of all obligations arising thereunder, and for one year's maintenance for correction of defective work. If the Owner elects to require a payment and performance bond from one or more of these Subcontractors, it will so notify the Contractor in writing within 14 days of receipt of the evidence of bondability from the respective Subcontractor, in which case the Contract Sum shall be increased by a Change Order in the amount specified in the letter, unless otherwise agreed by the parties. THE OWNER MAY DECLINE TO ENTER INTO THE CONTRACT OR MAY REQUIRE A CHANGE OF SUBCONTRACTOR AT NO INCREASE IN THE CONTRACT SUM OR CONTRACT TIME IF THIS EVIDENCE OF BONDABILITY IS NOT TIMELY RECEIVED. THE OWNER MAY WITHHOLD PAYMENT TO THE CONTRACTOR UNTIL SUCH SURETY BONDS ARE RECEIVED.

§ 11.5 If the Owner is damaged by the failure of the Contractor to maintain any of the bonds or insurance in this Article 11 or to so notify the Owner, then the Contractor shall bear all costs attributable thereto. The Owner may withhold payment pending receipt of all certificates of insurance and bonds. Failure to withhold payment shall not constitute a waiver.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's or the Owner's request or to requirements of a governmental authority or as otherwise specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, Owner or governmental authority, be uncovered for the Architect's requesting party's examination and be replaced at the Contractor's expense without change in the Contract Time, Time or Contract Sum.

§ 12.1.2 If a portion of the Work has been covered that the Architect, Architect, Owner or governmental authority has not specifically requested to examine prior to its being covered, ~~the Architect covered and for which the Contract Documents did not require inspection,~~ the Architect, Owner or governmental authority may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner employed by the Owner, and in that event the Owner or the separate contractor shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

The Contractor shall promptly correct Work rejected by the Architect or Owner or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one (1) year after the later of the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under ~~Section 9.9.1, the Contract Documents,~~ or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it according to the requirements of this Section 12.2.2 with no change in the Cost of the Work promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. ~~The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4. If the Contractor does not promptly in accordance with the provisions of this Section 12.2.2 initiate work to correct the Work designated in the notice, the Owner may proceed to correct the Work, the Owner may without further notice dispose of materials and equipment as it sees fit, and the Contractor will be liable for all costs. This correction period of one year shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work. This obligation shall survive acceptance of the Work under the Contract and termination of the Contract, is in addition to other warranties provided by contract or law, and does not establish a time limit for damages.~~

- 1 If, in the Owner's opinion, the nonconforming Work either prevents the use of a portion of the facility and/or immediate response is required to prevent further damage or to restore security to prevent external entrance, and/or is a safety hazard (e.g., break in the waterline, sprinkler system failure, failure of the heating system, inability to close or lock exterior door, etc.), the Contractor shall initiate corrective work on site the same day if the Contractor is notified prior to noon, or by noon the following day if notified after noon, and shall complete corrective action within 48 hours.
- 2 If, in the Owner's opinion, the nonconforming Work has the potential of becoming a safety hazard, of affecting internal security, or of limiting the use of the facility (e.g., potential loss of heat in a single classroom, failure of one or more plumbing fixtures, loose carpet seam in corridor, interior door lock not working, etc.), the Contractor shall initiate corrective work on site within two (2) working days and shall complete corrective action within five (5) working days.
- 3 If, in the Owner's opinion, the nonconforming Work does not have an impact on the use of the building, but must be fixed, (e.g., interior door closer broken, window cracked, wall covering seam coming loose, etc.), the Contractor shall initiate corrective work on site within fourteen (14) days and shall complete corrective action within twenty-eight (28) days.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall ~~not~~ be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable by the greater of the (1) cost of correction or (2) diminution of value of the Work that is not in accordance with the requirements of the Contract Documents. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

The Contract shall be governed by the internal law of the place where the Project is located except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4 located, without regard to its choice of law provisions.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to partners, successors, assigns and legal representatives of such other party in respect to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 13.2.3 If a majority of the ownership or the control of Contractor is acquired by a third party, and such acquisition reasonably imperils performance or creates a conflict of interest that the Owner, in its sole discretion, cannot reasonably reconcile, then the Owner may terminate this Contract at any time pursuant to Section 14.2, except that the Owner shall give the Contractor thirty (30) days written notice of termination and the opportunity for the Contractor to cure prior to termination.

§ 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, the designated representative as identified in Sections 8.3 and 8.4 of the A101, or to an officer of the corporation for which it was intended; or if delivered at, or sent by facsimile, registered or certified mail-mail, or by courier service providing proof of delivery to, the last business address known to the party giving notice. The date of written notice shall be the earlier of the date of personal delivery, actual receipt by facsimile, or three (3) calendar days after the date of postmark.

§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law. The Contractor's sole remedy for claims, disputes and other matters in question of the Contractor, direct or indirect, arising out of, or relating to, the Contract Documents or breach thereof, except claims which have been waived under the terms of the Contract Documents, however, is the dispute resolution procedure of Article 15.

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

§ 13.4.3 If any portion of this Contract is held to be void or unenforceable, the remainder of the Contract shall be enforceable without such portion.

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made at an appropriate time and as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. ~~authorities having jurisdiction shall be made at an appropriate time.~~ Unless otherwise provided,

the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to or provided by the Owner, or with the appropriate public authority, and the Owner shall bear all related costs of tests, inspections and approvals. necessary tests, inspections and approvals, except that the Contractor will be responsible for any costs of retesting and any extra costs caused by the Contractor. The Contractor shall give the Architect and Owner timely notice of when and where tests and inspections are to be made so that the Architect and Owner may be present for such procedures. The independent testing agency shall prepare the test reports, logs and certificates applicable to the specific inspections and tests and promptly and simultaneously deliver the specified number of copies of them to the designated parties. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Owner and the Architect.

§ 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. The Contractor shall provide the Owner and Architect forty-eight (48) hours' notice prior to all tests and inspections.

§ 13.5.7 If the Owner is responsible under the Contract Documents, law or regulation to pay only for an inspection of any inspector, consultant or Architect, the Owner shall be required to pay only for the first actual inspection. If the Contractor arranges for an inspection and an extra cost is incurred because the inspector is required to wait, to leave without inspecting, to perform a partial inspection, to return to complete or reinspect, or otherwise to expend time other than for the primary inspection, the Contractor shall be responsible for all such costs to the extent caused by the Contractor. If the Contractor does not pay the charges for which it is responsible within thirty (30) days of billing, the Owner has the option to pay the charges directly and backcharge the Contractor on the next progress payment for the amount paid plus a 10% handling fee.

§ 13.5.8 No acceptance by the Owner of any Work shall be construed to result from any inspections, tests or failures to inspect or test by the Owner, the Owner's representatives, the Architect or any other person. No inspection, test, failure to inspect or test, or failure to discover any defect or nonconformity by the Owner, the Owner's representatives, the Architect or any other person shall relieve the Contractor of its responsibility for meeting the requirements of the Contract Documents or impair the Owner's right to reject defective or nonconforming items or right to avail itself of any other remedy to which the Owner may be entitled, notwithstanding the Owner's knowledge of the defect or nonconformity, its substantiality or the ease of its discovery. Entities performing inspections and/or testing do not have the authority to direct the Contractor's means and methods and are not agents or representatives of the Owner or Architect. Inspections which meet the requirements of code shall not override the requirements of the Contract Documents, which may be more stringent.

§ 13.6 INTEREST

Payments due and unpaid under the Contract Documents shall bear interest ~~from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the~~

~~place where the Project is located as specified by RCW 39.76, not to exceed the Bank of America prime rate plus 2%.~~

§ 13.7 TIME LIMITS ON CLAIMS

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the ~~Agreement within the time period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work.~~ Agreement, and within the shorter of the time period specified by applicable law and the time limits identified in this Agreement. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

§ 13.8 STATUTES AND OTHER REQUIREMENTS

The Contractor shall abide by the provisions of all applicable Washington statutes and regulations. Although a number of statutes are referenced in the Contract Documents, these references are not meant to be a complete list and should not be relied upon as such.

§ 13.8.1 Contractor Registration and Related Requirements. Pursuant to RCW 39.06, "Registration, Licensing of Contractors," the Contractor shall be registered and licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27, "Registration of Contractors." The Contractor shall: have a current state unified business identifier number; have industrial insurance coverage for the Contractor's employees working in Washington as required in Title 51 RCW; have an employment security department number as required in Title 50 RCW; have a state excise tax registration number as required in Title 82 RCW, and; not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations).

§ 13.8.2 Law against Discrimination. The Contractor shall comply with pertinent statutory provisions relating to public works of RCW 49.60, "Discrimination."

§ 13.8.3 Provisions for Aged and Handicapped Persons. Contractor shall comply with pertinent statutory provisions relating to public works of RCW 70.92, "Provisions in Buildings for Aged and Handicapped Persons," and the Americans with Disabilities Act.

§ 13.8.4 Safety Standards. The Contractor shall comply with pertinent provisions of RCW 49.17, "Washington Industrial Safety and Health Act," and Chapter 296-155 WAC, "Safety Standards for Construction Work."

§ 13.8.5 Unemployment Compensation. Pursuant to RCW 50.24, "Contributions by Employers," in general and RCW 50.24.130 in particular, the Contractor shall pay contributions for wages for personal services performed under this Contract or arrange for a bond acceptable to the commissioner.

§ 13.8.6 Drug-Free Workplace. The Contractor and all Subcontractors of any tier shall fully comply with all applicable federal, state, and local laws and regulations regarding drug-free workplace, including the Drug-Free Workplace Act of 1988. Any person not fit for duty for any reason, including the use of alcohol, controlled substances, or drugs, shall immediately be removed from the Work.

§ 13.8.7 Tobacco-Free Environment. Pursuant to RCW 28A.210.310, smoking or use of any kind of lighted pipe, cigar, cigarette or any other lighted smoking equipment, material or smokeless tobacco products is prohibited on all school district property.

§ 13.8.8 Weapons-Free Environment. The Contractor and its employees, agents, and Subcontractors of any tier shall not bring onto the Project site or onto any Owner property any firearm or any other type of weapon described in either RCW 9.41.280(1) or RCW 9.41.250. Any person violating this Section shall immediately be removed from the Work, and such a violation shall be grounds for a termination of this Agreement for cause at the Owner's discretion.

§ 13.8.9 Asbestos Removal. To the extent this Project involves asbestos removal, the Contractor shall comply with Chapter 49.26 RCW, "Health and Safety--Asbestos," and any provisions of the Washington Administrative Code promulgated thereunder, and the applicable section of the Specifications should be viewed for possible insurance required for the applicable Subcontractor.

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ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 ~~The Except as provided by RCW 60.28.080, the~~ Contractor may terminate the Contract if the Work is stopped for a period of ~~30~~sixty (60) consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has improperly not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven (7) days' written notice to the Owner and ~~Architect, Architect~~ (during which period the Owner has the opportunity to cure), terminate the Contract and recover from the Owner payment for Work ~~executed, including reasonable overhead and profit, properly executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead and profit on Work executed, direct costs incurred by reason of such termination, and damages-direct damages. The total recovery of the Contractor shall not exceed the unpaid balance of the Contract Sum.~~

§ 14.1.4 If the Work is stopped for a period of ~~60~~sixty (60) consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven (7) additional days' written notice to the Owner and the Architect, (during which period the Owner has the opportunity to cure), terminate the Contract and recover from the Owner as provided in Section 14.1.3. The total recovery of the Contractor shall not exceed the unpaid balance of the Contract Sum.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner ~~may terminate the Contract if the Contractor may, upon seven (7) days' written notice to the Contractor, terminate (without prejudice to any right or remedy of the Owner) the whole or any portion of the Work or the Contract for cause if the Contractor:~~

- .1 ~~repeatedly~~ refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make prompt payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 ~~repeatedly~~ materially disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public ~~authority; authority having jurisdiction;~~ or
- .4 fails to prosecute the Work or any portion thereof with sufficient diligence to ensure the Substantial Completion of the Work within the Contract Time; or
- .5 is adjudged bankrupt, makes a general assignment for the benefit of its creditors, or if a receiver is appointed on account of its insolvency; or
- .6 fails to comply with the provisions of RCW 28A.400.330 by permitting a worker on the Project having contact with children who has been convicted of or pled guilty to a felony crime involving children as described in Section 3.4.3; or
- .7 otherwise is guilty of a material or substantial breach of or default under a provision of the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, ~~upon certification by the Initial Decision Maker that sufficient cause exists to justify such action,~~ Owner may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven (7) days' written notice, terminate employment of the Contractor on all or a portion of the Work and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing ~~the Work~~ the Work; and
- .4 Take or direct any or all of the actions in Section 14.5.1.

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

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, ~~shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.~~ survive termination of the Contract.

§ 14.2.5 If the Owner terminates a portion of the Work, the Contractor shall continue the performance of the remainder of the Work in accordance with the Contract Documents to the extent not terminated.

§ 14.2.6 If, after the Contractor has been terminated pursuant to this Section 14.2 or otherwise for cause, it is determined that none of the circumstances set forth in Section 14.2.1 exists, then such termination shall be considered a termination for convenience pursuant to Section 14.4.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

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

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for ~~increases~~ changes in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall ~~include profit.~~ be consistent with the terms of the Contract Documents. No adjustment shall be made to the extent

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

§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate (without prejudice to any right or remedy of the Owner) the whole or any portion of the Contract for the Owner's convenience and without cause.

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

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

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment ~~for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.~~ consistent with the Contract Documents for Work properly executed, and costs necessarily incurred by reason of such termination (such as the cost of settling and paying claims arising out of the termination of

Work under subcontracts or orders), along with reasonable profit on the Work not executed, not to exceed two and a half percent (2.5%) of the Cost of the Work not performed. The total sum to be paid to the Contractor under this Section 14.4 shall not exceed the Contract Sum as reduced by the amount of payments otherwise made, by the larger of (1) the actual value or (2) the scheduled value of Work not terminated, and as otherwise permitted by this Contract. The amounts payable to the Contractor shall exclude the fair value of property which is destroyed, lost, stolen or damaged so as to become undeliverable to the Owner or to a buyer pursuant to Sections 14.5.1.6 or 14.5.1.7.

§ 14.5 EFFECTS OF TERMINATION BY OWNER

§ 14.5.1 Unless the Owner directs otherwise, after receipt of a Notice of Termination from the Owner pursuant to Section 14.2 or 14.4, the Contractor shall promptly:

- .1 stop Work under the Contract on the date and as specified in the Notice of Termination;
- .2 place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for completion of any portion of the Work that is not terminated;
- .3 procure cancellation of all orders and subcontracts, upon terms acceptable to the Owner, to the extent that they relate to the performance of Work terminated;
- .4 assign to the Owner all of the right, title and interest of the Contractor under all orders and subcontracts, as directed by the Owner, in which case the Owner shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;
- .5 with the Owner's approval, settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts not assigned to the Owner;
- .6 transfer title and deliver to the entity or entities designated by the Owner the fabricated or unfabricated parts, Work in process, partially completed supplies and equipment, materials, parts, tools, dies, jigs and other fixtures, completed Work, supplies and other material produced as part of, or acquired in connection with the performance of, the Work terminated, and the completed or partially completed plans, drawings, information and other property related to the Work;
- .7 use its best efforts to sell any property of the types referred to in Section 14.5.1.6. The Contractor shall not be required to extend credit to any buyer, and may acquire any such property under the conditions prescribed by and at a price or prices approved by the Owner, and the proceeds of any such transfer or disposition may be applied in reduction of any payments to be made by the Owner to the Contractor;
- .8 take such action as may be necessary or as directed by the Owner to preserve and protect the Work and property related to this Project in the possession of the Contractor in which the Owner has an interest; and
- .9 continue performance only to the extent not terminated.

§ 14.5.2 In arriving at any amount due the Contractor after termination, the following deductions shall be made:

- .1 all unliquidated advance or other prior payments on account made to the Contractor applicable to the terminated portion of the Contract;
- .2 any claim the Owner may have against the Contractor;
- .3 an amount necessary to protect the Owner against outstanding or potential liens or claims; and
- .4 the agreed price for or the proceeds of sale of any materials, supplies or other things acquired by the Contractor or sold, pursuant to the provisions of Section 14.5.1.7, and not otherwise recovered by or credited to the Owner.

§ 14.5.3 If (and only if) the termination pursuant to Section 14.4 is partial, the Contractor may file a Claim for an equitable adjustment of the price or prices specified in the Contract relating to the continued portion of the Contract. Any claim by the Contractor for an equitable adjustment under this Section must be asserted within sixty (60) days from the effective date of the partial Termination.

§ 14.5.4 The Contractor shall refund to the Owner any amounts paid by the Owner to the Contractor in excess of costs reimbursable under the Contract Documents.

§ 14.5.5 The Contractor shall, from the effective Date of Termination until the expiration of three (3) years after final settlement under this Contract, preserve and make available to the Owner, at all reasonable times at the office of the Contractor, and without charge to the Owner, all books, records, documents, photographs and other evidence bearing on the costs and expenses of the Contractor under this Contract and relating to the terminated Work. The Owner may have costs reimbursable under this Article 14 audited and certified by independent certified public accountants selected by the Owner, who shall have full access to all the books and records of the Contractor.

§ 14.5.6 The damages and relief from termination by the Owner specifically provided in Article 14 shall be the Contractor's sole entitlement in the event of termination.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 CLAIMS

§ 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of the Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. ~~Contract Documents.~~ The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the ~~Contract.~~ Contract Documents. The responsibility to substantiate Claims shall rest with the party making the Claim. Claims must be initiated in writing and include the information and substantiation required by the Contract Documents. Neither a Request for Information, nor a Construction Change Directive, nor a Change Order, nor a reservation of rights, nor minutes of a meeting, nor a Daily Report, nor any log entry, nor an Owner's request for or the Contractor's response to a Change Order proposal or a Proposal Request, nor a notice of a potential or future Claim shall constitute a Claim.

§ 15.1.2 NOTICE OF CLAIMS

~~Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.~~

§ 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, including the dispute resolution process and except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and maintain the Contractor's Construction Schedule, and the Owner shall continue to make payments in accordance with the Contract Documents. ~~The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.~~

§ 15.1.4 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the ~~Work.~~ Work, and a written notice and written Claim must be made in accordance with this Article 15, or it will be waived. If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Architect, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Architect, (4) failure of payment by the Owner, (5) termination of the Contract by the Owner, (6) Owner's suspension or (7) other reasonable grounds, a Claim shall be filed in accordance with this Article 15. The Contractor shall not be entitled to an increase in the Contract Sum or Contract Time arising out of an error or conflict in or among the Contract Documents where the Contractor failed adequately to review the Contract Documents or failed to report the error or conflict to the Owner and Architect in a timely manner consistent with the requirements of the Contract Documents. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given, given, and a written Claim must be made in accordance with Article 15, or it will be waived. The Contractor's Claim shall include an estimate of any cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary. Any adjustment in the Contract Time arising from a Change or a Claim shall be limited to the change in the actual critical path of the Project directly caused thereby. If the delay was not caused by the Owner, the Contractor, a Subcontractor of any tier, or the Architect, or anyone acting on behalf of any of them, the Contractor is entitled only to an increase in the Contract Time in accordance with the Contract Documents but not a change in the Contract Sum. If the delay was caused by the Contractor, a Subcontractor of any tier, or anyone acting on behalf of any of them, the Contractor is not entitled to an increase in the Contract Time or in the Contract Sum.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably

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anticipated and had an adverse effect on the scheduled ~~construction-construction~~, and that the Work was on schedule (or not behind schedule through the fault of the Contractor) at the time the adverse weather conditions occurred. Neither the Contract Time nor the Contract Sum will be adjusted for normal inclement weather. The Contractor shall be entitled to a change in the Contract Time only (but not a change in the Contract Sum) if the Contractor can substantiate to the reasonable satisfaction of the Owner and Architect that there was materially greater than normal inclement weather considering the full term of the Contract Time and using a ten-year average of accumulated record mean values from climatological data compiled by the U.S. Department of Commerce National Oceanic and Atmospheric Administration for the locale closest to the Project, and that the alleged abnormal inclement weather actually extended the critical path of the Work. The change in Contract Time shall be provisional until Substantial Completion has been achieved, at which time the change in the Contract Time shall be the extent to which the total net accumulated number of calendar days lost due to inclement weather from commencement of the Work until Substantial Completion exceeds the total net accumulated number to be expected for the same period from the aforesaid data.

§ 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes without limitation:

- .1 damages incurred by the Owner for rental expenses, ~~for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and~~
- .2 damages incurred by the Contractor for principal and home office overhead and expenses including without limitation the compensation of personnel stationed there, for losses of financing, business and reputation, ~~and for loss of profit except anticipated profit arising directly from the Work for losses on other projects, for loss of profit, and for interest or financing costs.~~

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of damages specified in the A101 Agreement or liquidated damages, when applicable, in accordance with the requirements of the Contract Documents. ~~Documents, or to preclude an obligation of the Contractor to indemnify the Owner for direct, indirect or consequential damages alleged by a third party.~~

§ 15.2 INITIAL DECISION RESOLUTION OF CLAIMS AND DISPUTES

§ 15.2.1 Claims, ~~excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner. In an effort to reduce the incidence and costs to all parties of extended disputes, all Claims, direct or indirect, arising out of, or relating to, the Contract Documents or the breach thereof, except claims which have been waived under the terms of the Contract Documents, shall be decided exclusively by the following alternative dispute resolution procedure unless the parties mutually agree in writing otherwise. To the extent that the Owner and Contractor agree to any partnering process to help resolve disputes, such processes shall be in addition to, and not in place of, the mandatory dispute resolution procedures in the Contract Documents.~~

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more ~~of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim. Except for Claims requiring notice before proceeding with the affected Work as otherwise described in the Contract Documents, the Contractor shall submit a written notice of any Claim to the Owner and the Architect within fourteen (14) days of the occurrence of the event giving rise to such Claim and shall include a clear description of the event leading to or causing the Claim. For all Claims, the Contractor shall submit a written Claim as provided herein within thirty (30) days of submitting the notice. Claims shall include a clear description of the Claim and any proposed~~

change in the Contract Sum (showing all components and calculations) and/or Contract Time (showing cause and analysis of the resultant delay in the critical path and other information referenced in Section 8.3.2) and shall provide data fully supporting the Claim, including without limitation a complete explanation as to why the relief sought is not within the scope of the Contract Documents. The Contractor may delay submitting data by an additional fourteen (14) days if it notifies the Owner in its Claim that substantial data must be assembled. Failure to properly submit the notice or Claim shall constitute waiver of the Claim. The Claim shall be deemed to include all changes, direct and indirect, in cost and in time to which the Contractor (and Subcontractors of any tier) is entitled and may not contain reservations of rights without the Owner's written approval; any such unapproved reservations of rights shall be without effect. Any claim of a Subcontractor of any tier may be brought only through, and after review by, the Contractor. For the purposes of calculating such time periods, an "event giving rise to a Claim" is not a Request for Information but rather is a response that the Contractor believes would change the Contract Sum and/or Contract Time. The fact that the Owner and the Contractor may consider, discuss or negotiate an untimely or waived Claim shall in no way be deemed to constitute a waiver of any notice or other provisions of the Contract Documents.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense. Notice and Claims. All notices and Claims shall be made in writing as required by the Contract. Any notice of a Claim of the Contractor against the Owner and any Claim of the Contractor, whether under the Contract or otherwise, must be made pursuant to and in strict accordance with the applicable provisions of the Contract. No act, omission, or knowledge, actual or constructive, of the Owner or the Architect shall in any way be deemed to be a waiver of the requirement for timely written notice and a timely written Claim unless the Owner and the Contractor sign an explicit, unequivocal written waiver approved by the Owner's Board of Directors. The fact that the Owner and the Contractor may consider, discuss, or negotiate a Claim that has or may have been defective or untimely under the Contract shall not constitute a waiver of the provisions of the Contract Documents unless the Owner and Contractor sign an explicit, unequivocal waiver approved by the Owner's Board of Directors. The Contractor expressly acknowledges and agrees that the Contractor's failure to timely submit required notices and/or timely submit Claims has a substantial impact upon and prejudices the Owner, including but not limited to the inability to fully investigate or verify the Claim, mitigate damages, choose alternative options, adjust the budget, delete or modify the impacted Work, and/or monitor time, cost and quantities. For these and other reasons, the parties stipulate that the Owner is prejudiced by the Contractor's failure to timely submit notices and/or Claims as required by the Contract Documents, and that the Owner shall not be required to establish any actual prejudice in order to enforce the notice and Claim provisions of the Contract Documents.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part. Upon receipt of a Claim against the Contractor or at any time thereafter, the Architect or the Owner may, but are not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Architect or the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution. If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines prior to resolution of the Claim by the Architect, by mediation or by litigation.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1. At any time following the Owner's receipt of the written Claim, the Owner may require that an officer of the Contractor, a principal of the Architect, and the Owner's Superintendent or designee (all with authority to settle) meet, confer, and attempt to resolve the Claim. If the Claim is not resolved during such meeting, the Contractor may bring

no litigation against the Owner unless the Claim is first subject to nonbinding mediation as described in this Article 15. This mediation requirement cannot be waived except by an explicit written waiver by both parties.

~~§ 15.2.6.1~~ Either party may, within 30 days from the date of an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 MEDIATION

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.6 shall be subject to mediation as a condition precedent to the initiation of binding dispute resolution. This requirement cannot be waived except by an explicit written waiver signed by the Owner and the Contractor.

~~§ 15.3.2~~ The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, mediation. A request for mediation shall be filed in writing with the other party to the Contract, and the parties shall promptly attempt to mutually agree upon a mediator. If the parties have not reached agreement on a mediator within thirty (30) days of the request, either party may file the request with the American Arbitration Association or such other alternative dispute resolution service to which the parties mutually agree, with a copy to the other party, and the mediation shall be administered by the American Arbitration Association (or other agreed service) in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement currently in effect. A request for mediation shall be made in writing, writing and delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation Contract. Mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, mediation, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 The parties to the mediation shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.3.4 An officer of the Contractor and the Owner's Superintendent or designee must attend the mediation session with authority to settle the Claim. To the extent there are other parties in interest, such as the Architect or Subcontractors, their representatives, also with authority to settle the Claim, shall also attend the mediation session. Unless the Owner and the Contractor mutually agree in writing otherwise, all unresolved Claims shall be considered at a single mediation session that shall occur after Substantial Completion but prior to Final Acceptance by the Owner.

§ 15.4 ARBITRATION LITIGATION

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded. Litigation. The Contractor may bring no litigation on Claims unless such Claims have been properly raised and considered in the procedures of this Article 15. The Contractor shall have the burden to demonstrate in any litigation that it has complied with all requirements of this Article 15. All unresolved Claims of the Contractor shall be waived and released unless the Contractor has complied with the time limits of the

Contract Documents, and litigation is served and filed within the earlier of (a) 120 days after the Date of Substantial Completion approved in writing by the Owner or (b) ninety (90) days after Final Acceptance. This requirement cannot be waived except by an explicit written waiver signed by the Owner and the Contractor. The pendency of a mediation (the time period between the written mediation request and the date of mediation) shall toll these deadlines until the earlier of the mediator providing written notice to the parties of impasse or thirty (30) days after the date of the mediation session. Neither the Contractor nor a Subcontractor of any tier, whether claiming under a bond or lien statute or otherwise, shall be entitled to attorneys' fees directly or indirectly from the Owner (but may recover attorneys' fees from the bond or statutory retainage fund itself to the extent allowable under law).

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim. The Owner may join the Contractor as a party to any litigation or arbitration involving the alleged fault, responsibility, or breach of contract of the Contractor or Subcontractor of any tier.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 CONSOLIDATION OR JOINDER

§ 15.4.4.1 Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Contractor under this Agreement.

Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, Graehm C. Wallace, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with this certification at 15:12:49 on 12/12/2014 under Order No. 1337858007_1 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A201™ – 2007, General Conditions of the Contract for Construction, as published by the AIA in its software, other than changes shown in the attached final document by underscoring added text and striking over deleted text.

(Signed)

(Title)

(Dated)

AIA[®] Document A101[™] – 2007

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the ____ day of _____ in the year 2021
(In words, indicate day, month and year.)

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

Longview School District No. 122
2715 Lilac Street
Longview, Washington 98632

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

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

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

The Owner and Contractor agree as follows.

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

AIA Document A201[™]–2007, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

Init.

TABLE OF ARTICLES

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ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the entire Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed established in a notice to proceed issued by the Owner.

(Insert the date of commencement if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)

The notice to proceed is expected to be issued on or before _____, with on-site work commencing on _____.

If, prior to the commencement of the Work, the Owner requires time to file mortgages and other security interests, the Owner's time requirement shall be as follows:

N/A

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

§ 3.3 The Contractor shall achieve Substantial Completion of the entire Work not later than (—) days from the date of commencement, or as follows:

(Insert number of calendar days. Alternatively, a calendar date may be used when coordinated with the date of commencement. If appropriate, insert requirements for earlier Substantial Completion of certain portions of the Work.)

Portion of Work
All of the Work

Substantial Completion Date

, subject to adjustments of this Contract Time as provided in the Contract Documents, and shall achieve Final Completion no later than thirty (30) days after achieving Substantial Completion.

(Insert provisions, if any, for liquidated damages relating to failure to achieve Substantial Completion on time or for bonus payments for early completion of the Work.)

If the Contractor does not Substantially Complete the Work by the date noted above, the Owner will be forced to incur substantial expenses for extended costs and to coordinate the Project work with school activities. For that reason, liquidated damages shall be assessed for each calendar day after the Contract Time that Substantial Completion is not timely achieved, in the amount of \$ _____ per calendar day. Liquidated Damages shall be assessed for each day that Final Completion is not timely achieved at \$ _____ per calendar day. These amounts are cumulative and shall both be assessed for any day that any one of these dates are not met.

ARTICLE 4 CONTRACT SUM

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

§ 4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

§ 4.3 Unit prices, if any; any; these descriptions are summary in nature, and the scope of this work is described in the Contract Documents:

(Identify and state the unit price; state quantity limitations, if any, to which the unit price will be applicable.)

| Item | Units and Limitations | Price Per Unit (\$0.00) |
|------|-----------------------|-------------------------|
|------|-----------------------|-------------------------|

§ 4.4 Allowances included in the Contract Sum, if any:

(Identify allowance and state exclusions, if any, from the allowance price.)

| Item | Price |
|------|-------|
|------|-------|

ARTICLE 5 PAYMENTS

§ 5.1 PROGRESS PAYMENTS

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

See the Contract Documents.

§ 5.1.3 ~~Provided that an Application for Payment is received by the Architect not later than the _____ day of a month, the~~
The Owner shall make payment of the certified amount to the Contractor not later than the _____ day of the _____ month. If an
~~Application for Payment is received by the Architect after the application date fixed above, payment shall be made by~~

~~the Owner not later than () days after the Architect receives the Application for Payment as provided in the Contract Documents.~~

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

§ 5.1.4 Each Application for Payment shall be based on the most recent approved schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- .1 Take that portion of the Contract Sum 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 Sum allocated to that portion of the Work in the schedule of values, less retainage of Five percent (5.00 %). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Section 7.3.9 of AIA Document A201™-2007, General Conditions of the Contract for Construction;
- .2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored and insured off the site at a location agreed upon in writing), less retainage of Five percent (5.00 %);
- .3 Subtract the aggregate of previous payments made by the Owner; and
- .4 Subtract amounts, if any, for which the Architect or the Owner has withheld or nullified a Certificate for Payment as provided in Section 9.5 of AIA Document A201-2007.

§ 5.1.7 The progress payment amount determined in accordance with Section 5.1.6 shall be further modified under the following circumstances:

- .1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to ~~the full amount of the Contract Sum, ninety-eight percent (98%) of the Contract Sum (see Section 9.2.5 of the A201 regarding the final two percent (2%) of the Contract Sum to be paid after Substantial Completion)~~, less such amounts as the Architect shall determine for incomplete Work, ~~retainage applicable to such work and unsettled claims; statutory retainage applicable to such work, unsettled claims, and other amounts specified in the Contract Documents; and~~
(Section 9.8.5 of AIA Document A201-2007 requires release of applicable retainage upon Substantial Completion of Work with consent of surety, if any.)
- .2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Section 9.10.3 of AIA Document A201-2007.

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

(If it is intended, prior to Substantial Completion of the entire Work, to reduce or limit the retainage resulting from the percentages inserted in Sections 5.1.6.1 and 5.1.6.2 above, and this is not explained elsewhere in the Contract Documents, insert here provisions for such reduction or limitation.)

Per statute and the Contract Documents.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 FINAL PAYMENT

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 12.2.2 of AIA Document A201-2007, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the ~~Architect~~ Architect; and
- .3 Final Acceptance has occurred.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows: thirty (30) days after completion of all requirements listed in the revised A201-2007 General Conditions.

§ 5.2.3 Retainage shall be paid according to statute and the Contract Documents.

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 INITIAL DECISION MAKER

The Architect will serve as Initial Decision Maker pursuant to Section 15.2 of AIA Document A201-2007, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker. *(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)*

None.

§ 6.2 BINDING DISPUTE RESOLUTION

For any Claim subject to, but not resolved by, mediation pursuant to Section 15.3 of AIA Document A201-2007, the method of binding dispute resolution shall be as follows:

(Check the appropriate box. If the Owner and Contractor do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.)

☐ — Arbitration pursuant to Section 15.4 of AIA Document A201-2007

☒ — Litigation in a court of competent jurisdiction

☐ — Other *(Specify)*

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201-2007.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201-2007.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201-2007 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

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

Payments due and unpaid under the Contract Documents shall bear interest as specified by RCW 39.76, not to exceed the Bank of America prime plus two percent per annum.

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

Patti Bowen
Director of Business Services
Longview School District
2715 Lilac Street
Longview, WA 98632
Telephone: (360) 575-7020
pbowen@longview.k12.wa.us

§ 8.4 The Contractor's representative:
(Name, address and other information)

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

§ 8.6 Other provisions:

N/A

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 9.1.1 The Agreement is this executed AIA Document A101-2007, Standard Form of Agreement Between Owner and ~~Contractor~~ Contractor, as revised.

§ 9.1.2 The General Conditions are AIA Document A201-2007, General Conditions of the Contract for ~~Construction~~ Construction, as revised.

§ 9.1.3 ~~The Supplementary and other Conditions of the Contract~~ Any other Supplementary or other Conditions of the Contract are contained in the Project Manual dated _____:

| Document | Title | Date | Pages |
|----------|-------|------|-------|
|----------|-------|------|-------|

§ 9.1.4 ~~The Specifications~~ Specifications are those contained in the Project Manual and are as follows:
(Either list the Specifications here or refer to an exhibit attached to this Agreement.)
See the Attached Project Manual Sections

| Section | Title | Date | Pages |
|---------|-------|------|-------|
|---------|-------|------|-------|

§ 9.1.5 ~~The Drawings~~ Drawings are those referenced in the Project Manual and are as follows:
(Either list the Drawings here or refer to an exhibit attached to this Agreement.)
See the Attached Index of Drawings

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Number

Title

Date

§ 9.1.6 The Addenda, if any:

Number

Date

Pages

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

§ 9.1.7 Additional documents, if any, forming part of the Contract Documents:

~~1~~ AIA Document E201™ 2007, Digital Data Protocol Exhibit, if completed by the parties, or the following:

2 Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201-2007 provides that bidding requirements such as advertisement or invitation to bid, Instructions to Bidders, sample forms and the Contractor's bid are not part of the Contract Documents unless enumerated in this Agreement. They should be listed here only if intended to be part of the Contract Documents.)

See Revised General Conditions.

Department of Labor & Industries Prevailing Wage Rates.

ARTICLE 10 INSURANCE AND BONDS

The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A201-2007.

(State bonding requirements, if any, and limits of liability for insurance required in Article 11 of AIA Document A201-2007.)

Type of insurance or bond

See Revised General Conditions

Limit of liability or bond amount (\$0.00)

See Revised General Conditions

This Agreement entered into as of the day and year first written above.

OWNER (Signature)

CONTRACTOR (Signature)

(Printed name and title)

(Printed name and title)

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(2033413425)

**SECTION 01 10 00
SUMMARY**

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: STEAM BOILER REPLACEMENT - DESIGN BUILD
- B. The Project consists of the replacement of an existing steam boiler and related accessories at the Longview School District Central Kitchen.

1.02 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price as described in Bid Proposal Form.

1.03 DESCRIPTION OF ALTERATIONS WORK

- A. Scope of demolition and removal work is indicated on drawings.
- B. Scope of alterations work is indicated on drawings.

1.04 OWNER OCCUPANCY

- A. Owner intends to continue to occupy adjacent portions of the existing buildings for typical summer period school operations.
- B. Owner intends to occupy a certain portion of the Project prior to the completion date for the conduct of normal operations.
- C. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- D. Schedule the Work to accommodate Owner occupancy.

1.05 CONTRACTOR USE OF SITE AND PREMISES

- A. Construction Operations: Limited to areas noted on Drawings.
- B. Arrange use of site and premises to allow:
 - 1. Owner occupancy.
 - 2. 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. Utility Outages and Shutdown:
 - 1. Limit disruption of utility services to hours the building is unoccupied.
 - 2. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
 - 3. Prevent accidental disruption of utility services to other facilities.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 10 00

SECTION 01 20 00
PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

- A. Section - General Conditions: Additional requirements for progress payments, final payment, changes in the Work.
- B. Section 01 78 00 - Closeout Submittals: Project record documents.

1.03 SCHEDULE OF VALUES

- A. Use Schedule of Values Form: AIA G703, edition stipulated in the Agreement.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.
- C. Forms filled out by hand will not be accepted.
- D. Submit Schedule of Values in duplicate within 10 days after date of Owner-Contractor Agreement.
- E. Format: Break out the work categories of each school separately on the Schedule of Values.
- F. Include within each line item, a direct proportional amount of Contractor's overhead and profit.
- G. Include a line item of 3% of the contractor amount for punchlist and closeout.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

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

- I. 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 MODIFICATION PROCEDURES

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Owner will issue instructions directly to Contractor.
- B. For other required changes, Owner will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
 - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
 - 2. Promptly execute the change.
- C. For changes for which advance pricing is desired, Owner will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 3 days.
- D. Contractor may propose a change by submitting a request for change to Owner, describing the proposed change and its full effect on the work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation. Document any requested substitutions in accordance with Section 01 60 00.
- E. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
 - 1. For change requested by Owner for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
 - 2. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Owner.
- F. Substantiation of Costs: Provide full information required for evaluation.
 - 1. On request, provide the following data:
 - a. Quantities of products, labor, and equipment.
 - b. Overhead and profit.
 - c. Justification for any change in Contract Time.
 - d. Credit for deletions from Contract, similarly documented.
 - 2. Support each claim for additional costs with additional information:
 - a. Origin and date of claim.
 - b. Dates and times work was performed, and by whom.
 - c. Time records and wage rates paid.
 - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
- G. Execution of Change Orders: Owner will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- H. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- I. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.

1.06 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 01 20 00

SECTION 01 25 00
SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedural requirements for proposed substitutions.

1.02 RELATED REQUIREMENTS

- A. Instructions to Bidders: Restrictions on timing of substitution requests.
- B. Substitution Request Form (At end of this section): Required form for substitution requests made prior to award of contract (During procurement).
- C. Section 01 60 00 - Product Requirements: Fundamental product requirements, product options, delivery, storage, and handling.

1.03 DEFINITIONS

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials, products, assemblies, and equipment.
 - 1. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project submitted prior to submission of bids.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
 - 2. Agrees to provide the same warranty for the substitution as for the specified product.
 - 3. Agrees to 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.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
 - 1. Note explicitly any non-compliant characteristics.
- C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
 - 1. Forms indicated in the Project Manual are adequate for this purpose, and must be used.
- D. Limit each request to a single proposed substitution item.

3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT

- A. Submittal Time Restrictions:
 - 1. Instructions to Bidders specifies time restrictions and the documents required for submitting substitution requests during the bidding period.
- B. Submittal Form (before submission of bid):
 - 1. Submit substitution requests by completing the form attached to this section. See this form for additional information and instructions. Use only this form; other forms of submission are unacceptable.

3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

- A. Substitutions will not be considered under one or more of the following circumstances:
 - 1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
 - 2. Without a separate written request.

3. When acceptance will require revisions to Contract Documents.

3.04 RESOLUTION

- A. Owner may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.

3.05 CLOSEOUT ACTIVITIES

- A. See Section 01 78 00 - Closeout Submittals, for closeout submittals.
- B. Include completed Substitution Request Forms as part of the Project record.

3.06 ATTACHMENTS

- A. A facsimile of the Substitution Request Form (During Construction) required to be used on the Project is included after this section.

END OF SECTION 01 25 00

SECTION 01 30 00
ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

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

1.02 RELATED REQUIREMENTS

- A. Section 01 60 00 - Product Requirements: General product requirements.
- B. Section 01 70 00 - Execution and Closeout Requirements: Additional coordination requirements.

1.03 GENERAL ADMINISTRATIVE REQUIREMENTS

- A. Comply with requirements of Section 01 70 00 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.
- B. Make the following types of submittals to Owner:
 - 1. Requests for Interpretation (RFI).
 - 2. Shop drawings, product data, and samples.
 - 3. Manufacturer's instructions and field reports.
 - 4. Applications for payment and change order requests.
 - 5. Progress schedules.
 - 6. Coordination drawings.
 - 7. Correction Punch List and Final Correction Punch List for Substantial Completion.
 - 8. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING

- A. Owner will schedule a meeting after Notice of Award.
- B. Attendance Required:
 - 1. Owner.
 - 2. Contractor.
- C. Agenda:
 - 1. Execution of Owner-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.
 - 4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
 - 5. Designation of personnel representing the parties to Contract .
 - 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 7. Scheduling.
- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Owner, participants, and those affected by decisions made.

3.02 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the work at maximum bi-monthly intervals.
- B. Attendance Required:
 - 1. Contractor.
 - 2. Owner.
 - 3. Contractor's superintendent.
 - 4. Major subcontractors.
- C. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems that impede, or will impede, planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Maintenance of progress schedule.
 - 7. Corrective measures to regain projected schedules.
 - 8. Planned progress during succeeding work period.
 - 9. Maintenance of quality and work standards.
 - 10. Effect of proposed changes on progress schedule and coordination.
 - 11. Other business relating to work.
- D. 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.

3.03 CONSTRUCTION PROGRESS SCHEDULE

- A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of work, with a general outline for remainder of work.
- B. Submit updated schedule with each Application for Payment.

3.04 REQUESTS FOR INTERPRETATION (RFI)

- A. Definition: A request seeking one of the following:
 - 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
- B. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
 - 1. Prepare a separate RFI for each specific item.
 - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
 - b. Do not forward requests which solely require internal coordination between subcontractors.
 - 2. Prepare in a format and with content acceptable to Owner.
- C. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
 - 1. Include in each request Contractor's signature attesting to good faith effort to determine from Contract Documents information requiring interpretation.
 - 2. Unacceptable Uses for RFIs: Do not use RFIs to request the following::
 - a. Approval of submittals (use procedures specified elsewhere in this section).
 - b. Approval of substitutions (see Section - 01 60 00 - Product Requirements)
 - c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).

- d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
- 3. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, Contract Documents, with no additional input required to clarify the question. They will be returned without a response, with an explanatory notation.
- D. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
 - 1. Official Project name and number, and any additional required identifiers established in Contract Documents.
 - 2. Discrete and consecutive RFI number, and descriptive subject/title.
 - 3. Issue date, and requested reply date.
 - 4. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
 - 5. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- E. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- F. Review Time: Owner will respond and return RFIs to Contractor within five calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
 - 1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- G. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
 - 1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
 - 2. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.

3.05 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
 - 1. Product data.
 - 2. Shop drawings.
 - 3. Samples for selection.
 - 4. Samples for verification.
- B. Submit to Owner for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed 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.

3.06 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.

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

3.07 NUMBER OF COPIES OF SUBMITTALS

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

3.08 SUBMITTAL PROCEDURES

- A. General Requirements:
 - 1. Use a separate transmittal for each item.
 - 2. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
 - 3. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
 - 4. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
 - 5. 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.
 - 6. Schedule submittals to expedite the Project, and coordinate submission of related items.
 - 7. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
- B. Product Data Procedures:
 - 1. Submit only information required by individual specification sections.
 - 2. Collect required information into a single submittal.
 - 3. Do not submit (Material) Safety Data Sheets for materials or products.
- C. Shop Drawing Procedures:
 - 1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
 - 2. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.

3.09 SUBMITTAL REVIEW

- A. Submittals for Review: Owner will review each submittal, and approve, or take other appropriate action.
- B. Owner's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.

END OF SECTION 01 30 00

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Transportation, handling, storage and protection.
- C. Product option requirements.
- D. Substitution limitations.

1.02 RELATED REQUIREMENTS

- A. Section 01 25 00 - Substitution Procedures: Substitutions made during procurement and/or construction phases.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by Contract Documents.

2.02 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.

PART 3 EXECUTION

3.01 SUBSTITUTION LIMITATIONS

- A. See Section 01 25 00 - Substitution Procedures.

3.02 TRANSPORTATION AND HANDLING

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

3.03 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.

- D. Comply with manufacturer's warranty conditions, if any.
- E. Prevent contact with material that may cause corrosion, discoloration, or staining.
- F. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- G. There is no storage area for product at any school location. Arrange for delivery when required for integration into the work.

END OF SECTION 01 60 00

SECTION 01 70 00
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Cutting and patching.
- C. Cleaning and protection.
- D. Starting of systems and equipment.
- E. Demonstration and instruction of Owner personnel.
- F. Closeout procedures, including Contractor's Correction Punch List, 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, Electronic document submittal service.
- C. Section 01 78 00 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.

1.03 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. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
 - 1. Indoors: Limit conduct of especially noisy interior work to the hours of 6 pm to 7 am.

1.04 COORDINATION

- A. See Section 01 10 00 for occupancy-related requirements.
- B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- C. Notify affected utility companies and comply with their requirements.
- D. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- E. Coordinate space requirements, supports, and installation of electrical work. Follow routing indicated for cabling as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- F. Coordinate completion and clean-up of work of separate sections.

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 - Product Requirements.

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 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.

3.04 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work.
 - 2. Fit products together to integrate with other work.
 - 3. Provide openings for penetration of mechanical, electrical, and other services.
 - 4. Match work that has been cut to adjacent work.
 - 5. Repair areas adjacent to cuts to required condition.
 - 6. Repair new work damaged by subsequent work.
 - 7. Remove samples of installed work for testing when requested.
 - 8. Remove and replace defective and non-complying work.
- C. 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.
- D. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- F. Restore work with new products in accordance with requirements of Contract Documents.

- G. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. 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.
- I. Patching:
 - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 - 2. Match color, texture, and appearance.
 - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.05 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- C. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.06 SYSTEM STARTUP

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Verify that wiring and support components for equipment are complete and tested.
- C. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.07 DEMONSTRATION AND INSTRUCTION

- A. Demonstrate operation of each item of equipment.
- B. 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.

3.08 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 carpet and other surfaces to remove dust and debris from construction operations.
- C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

3.09 CLOSEOUT PROCEDURES

- A. Accompany Owner on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Owner's Notice of Substantial Completion.
- B. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Owner's Substantial Completion inspection.
- C. Conduct Substantial Completion inspection and create Final Correction Punch List containing Owner's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Owner.
- D. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.

END OF SECTION 01 70 00

SECTION 01 78 00
CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project record documents.
- B. Operation and maintenance data.
- C. Warranties and bonds.

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 Owner with claim for final Application for Payment.
- B. Operation and Maintenance Data:
 - 1. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
- 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 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings: Legibly mark each item to record actual construction including:
 - 1. Field changes of dimension and detail.
 - 2. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

- A. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- B. 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.
- C. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

- A. For Each Item of Equipment and Each System:
 - 1. Description of unit or system, and component parts.
 - 2. Identify function, normal operating characteristics, and limiting conditions.
 - 3. Include performance curves, with engineering data and tests.
 - 4. Complete nomenclature and model number of replaceable parts.
- B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.
- C. Operating Procedures: Include operating instructions.

3.04 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

- A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.
- B. Where systems involve more than one specification section, provide separate tabbed divider for each system.
- C. 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. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.
- F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.
- G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.
- H. Text: Manufacturer's printed data, or typewritten data on 20 pound paper.
- I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

3.05 WARRANTIES AND BONDS

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

END OF SECTION 01 78 00



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STEAM BOILER REPLACEMENT – DESIGN BUILD Longview, WA

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BASIC HVAC REQUIREMENTS - DESIGN BUILD

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. This Section specifies the basic requirements for all Contractor design and installed equipment. It applies to all sections included in Division 23.
- B. Contractor shall provide complete engineering calculations and design of the HVAC systems satisfying the direction and criteria of this specification and all other supporting documents and drawings.
- C. Provide the design and all materials, labor and equipment required to install a complete and fully operational HVAC systems as indicated by the contract drawings and this specification.
- D. Contractor shall not compromise or diminish any existing building system, service or function in his execution of the work. Any such potential impacts shall be immediately brought to the attention of the Architect/Engineer.
- E. The HVAC work scope includes, but is not necessarily limited to the following:
 - 1. Replace existing Burnham E 30 low pressure steam boiler with new along with all necessary accessories including but not limited to; UL two stage burner and controls, ASME relief valve, steam gauge and gauge glass set, operating pressure control, manual reset, low fire control, low water cut off and float switch. Reconnect gas piping and provide new gas train. Provide new concrete pad or base rails and seismic attachments for new boiler. Boiler to be shipped Knocked Down to allow for assembly in existing boiler room.
 - 2. Demolish and dispose of existing boiler, flue, shell and tube heat exchanger and piping accessories and the like to allow for installation of new equipment.
 - 3. Replace boiler flue from the boiler through the roof. Patch and repair roof as required.
 - 4. Replace gate shutoff valves in steam header. Provide new 2.5-inch steam header piping and connect to existing piping downstream of new valves.
 - 5. Existing atmospheric feed tank and boiler feed pump are to remain. Provide new piping from feed pump to boiler.
 - 6. Provide new chemical treatment for steam system.
 - 7. On the mezzanine level; replace the shell and tube heat exchanger, strainer, isolation valves, pressure reducing valve, control valve and actuator, hot water air separator and the like between the steam connection, and hot water pump. The hot water pump and atmospheric expansion tank are to remain. Reconnect as necessary. The steam trap is to be rebuilt or replaced at contractor's option. Condensate piping downstream of trap to remain.
 - 8. Contractor to coordinate and include pricing for all necessary controls for a complete and working system. Contractor to provide functional testing and start-up with manufacturer's representative.
 - 1. Controls to be provided by Delta Connects, contact Matt Axtell; maxtell@deltaconnects.com; 206-730-5671.
 - 9. Mechanical Contractor is to coordinate all electric connections and carry all necessary electrical and controls work as part of their scope.
- F. Obtain and pay for all permits, licenses, fees and taxes applicable to this project as required by law.
- G. Cooperate with other trades in furnishing material and information required for installation and operation of mechanical items.
- H. Requirements for the following are included:
 - 1. Related work (other Contract Documents and specification sections) that must be combined with the requirements of this Section.
 - 2. Design performance.
 - 3. Delivery, storage, and handling.
 - 4. Quality assurance and standards.
 - 5. Submittals.
 - 6. Product quality, basic type, and finishes.

7. Design criteria.
8. Installation.
9. Mounting and shimming.
10. Inspection.
11. Safety considerations.
12. Cleaning, startup, and adjustments.

1.02 RELATED WORK

- A. This general section shall be used in conjunction with the following other specifications and related Contract Documents to establish the total requirements for the project equipment and systems:
 1. The Contract.
 2. General and specific mechanical specifications and drawings included in the project.

1.03 DEFINITIONS

- A. "Indicated": Refers to graphic representations, notes or schedules in the Drawings; or to other paragraphs or schedules in Specifications and similar requirements in the Contract Documents.
 1. Terms such as "shown", "noted", "scheduled", and "specified", are used to notify or help the user to locate reference. Location is not limited.
- B. "Directed": Terms such as "directed", "Requested", "authorized", "selected", "approved", "required", and "permitted" mean directed by Architect/Engineer, approved by Architect/Engineer and similar phrases.
- C. "Approved": When used in conjunction with Architect/Engineer's action on contract submittals, applications, requests, is limited to Architect/Engineer's duties and responsibilities as stated in the Conditions of the Contract.
- D. "Regulations": Includes laws, ordinances, statutes and lawful orders issued by authorities having jurisdiction, as well as rules, conventions and agreements within the construction industry that control performance of Work.
- E. "Furnish": Means to supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation and similar operations.
- F. "Install": Describes operations at Project site including actual unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, supporting, isolating, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations.
- G. "Provide": Means to furnish and install.
- H. "Installer": A contractor, or another entity engaged by the contractor, either as an employee, subcontractor, or contractor of a lower tier, to perform a particular construction activity including installation, erection, application or similar operations.
 1. Installers are required to be experienced in operations they are engaged to perform.
 2. The term "experience" means having successfully completed a minimum of three previous projects similar in scope and size to this Project and within the time frame indicated in the "Quality Assurance" section of the Specifications. In addition, it means being familiar with special requirements indicated and having complied with requirements of authorities having jurisdiction.
- I. "Project Site": Is defined as the space available to the Contractor for performing construction activities, either exclusively or in conjunction with others performing other work as part of Project.

1.04 DESIGN PERFORMANCE

- A. Compliance by the Contractor and/or Vendor with the provisions of this Specification does not relieve him of the responsibilities of furnishing equipment and materials of proper design, mechanically suited to meet operating guarantees at the specified service conditions.

1.05 SUBMITTALS

- A. Product Data: Submit complete sets of manufacturer's product data in .PDF format for approval. All submittals are to be received in no more than (3) three packages. See Division 1 for further information regarding submittal requirements. Literature submitted shall clearly indicate the

model number, capacity, rated operating conditions, size, weight, support requirements, electrical power requirements, utility (fuel, air, cooling water, etc.) requirements, and options furnished. Submittals shall include, but are not necessarily limited to the following;

1. HVAC: Boilers; piping; valves; supports and anchors; controls and the like.
 2. Calculations: Provide for factory selection and sizing of all noise attenuation, vibration isolation, thermal expansion and seismic restraints; with good engineering practice. Include design criteria used and assumptions made.
 3. Provide complete construction and permit documents as required for permit.
- B. Operation and Maintenance Data: Submit one complete sets of manufacturer's literature for approval. Data shall include installation, start-up, and maintenance instructions, parts lists, and wiring diagrams.
- C. Substitutions: System design was based upon the equipment and materials listed on the specifications herein. At contractor's option, another manufacturer's equipment of similar quality, capacity and features may be submitted for prior approval. Prior permission to substitute does not relieve the contractor of the responsibility of including this information in the bound submittal packages.
- D. When specified, prepare and submit shop drawings and prints of plans, sections, details and diagrams to minimum scale (1/4" = 1'-0"). Drawings shall be coordinated, dimensioned and indicate equipment, recommended clearances, pipe, duct, fire protection and electrical in relation to architectural and structural features. Include minor piping, drains, valves and the like. Indicate exact locations and elevations of valves, piping specialties, access doors, dampers and the like.
- E. Shop drawings shall be created and submitted on AutoCAD release 2017 or later.

1.06 QUALITY ASSURANCE

- A. Codes and Standards: Comply with the provisions of the latest versions of the following codes, standards and specifications, except where more stringent requirements are shown or specified:
1. State of Washington "IBC".
 2. State of Washington "IMC".
 3. State of Washington "UPC".
 4. State of Washington "IFC".
 5. ANSI / ASHRAE 90 - "Energy Efficient Design of New Buildings."
 6. ANSI / ASHRAE 62 - "Ventilation for Acceptable Indoor Air Quality."
 7. NEBB - "Procedural Standard for Testing, Adjusting, and Balancing of Environmental Systems."
 8. ANSI B31.9 "Building Service Piping".
 9. SMACNA - "HVAC Duct Construction Standards".
 10. NFPA - Sections 54.
- B. Wherever the specification calls for or describe materials or construction of better quality or larger sizes than are required by the above rules and regulations, these specifications shall govern. Should there be any direct conflict between the above rules and regulations and the specifications the rules shall govern.
- C. Installer Qualifications: Company specializing in performing the work required with a minimum of five years documented experience.
- D. Contractor shall furnish and install all work in accordance with manufacturer's recommendations.
- E. Equipment shall have U.L. label listing.

1.07 MATERIALS AND SUBSTITUTIONS

- A. Shop drawings of proposed material and equipment that differ from the specified basis of design materials and equipment shall be accompanied by shop drawings that define changes, physical layout and performance. These drawings shall show modifications of architectural,

plumbing, electrical and mechanical work required by the proposed materials and equipment such as relocation of flues, drains, piping, ducts, revised electrical circuits, relocation of roof or wall penetrations, revised foundations and the like.

1.08 DELIVERY, STORAGE AND PROTECTION

- A. Delivery: Deliver to site with manufacturer's labels intact and legible.
- B. Preparation for shipment:
 - 1. Each unit shall be suitably prepared for the shipment specified and for storage in accordance with manufacturer's instructions in a manner requiring no disassembly prior to operation.
 - 2. The Contractor shall be solely responsible for the adequacy of the Preparation for Shipment provisions employed with respect to materials and application.
 - 3. One complete set of Installations, Operating and Maintenance Instructions shall be packed and shipped with the equipment. This set is in addition to the sets that are to be sent directly to the Owner.
- C. Handling: Avoid damage. Comply with manufacturer's installation instruction requirements for rigging, unloading and transporting units.
- D. Storage: Inside protected from weather, dirt and construction dust. Where necessary to store outside, elevate well above grade and enclose with durable, waterproof wrapping. Cap all pipe ends. Taping pipe ends is not adequate or allowable.

1.09 PROJECT CONDITIONS

- A. General: Provide products that are compatible with other portions of the work and provide products with the proper power characteristics and similar adaptations for the project.
- B. Arrangement: Arrange ductwork and piping parallel with primary lines of the building construction and with a minimum 7 feet overhead clearance in unfinished equipment rooms where possible.
- C. Coordination: Where several elements of the work must be sequenced and positioned in order to fit the available space, prepare shop drawings showing the actual physical dimensions (at accurate scale) required for installation and submit prior to purchase/fabrication/installation of any of the elements involved in the coordination.

1.10 STANDARDS

- A. General: Provide all new materials and equipment, identical to apparatus or equipment in successful operation for a minimum of five years. Provide materials of comparable quality omitted here but necessary to complete the work. Maximum allowable variation from stated capacities, minus 5% to plus 10% as approved in each case.
- B. Governing Standards: The following are typical standards generally referenced in these specifications and identified by their acronym. Federal Specifications (FS), American Society for Testing Materials (ASTM), American National Standards Institute (ANSI), Manufacturer's Standardization Society of the Valve and Fitting Industry, Standard Practice (MSS SP-69), Cast Iron Soil Pipe Institute (CISPI), Underwriters Laboratory (UL) numbers are given.
- C. Wherever the specifications call for or describe materials or construction of better quality or larger sizes than are required by the above standards or code, these specifications shall govern. For any direct conflict between specifications and the above standards or codes, the standards or codes shall govern.

1.11 WARRANTIES

- A. Equipment under this section of the specifications shall be guaranteed for a period of one year from date of acceptance against defective materials, design, and workmanship.
- B. Contractor shall leave entire installation in complete working order and free from defects in material, workmanship, or finish.
- C. The HVAC contractor, by accepting these specifications and by signing the contract, shall guarantee the following:

1. All equipment, material, and workmanship against defects in material and workmanship for a period of one (1) year from date of final acceptance by the Owner. The HVAC contractor shall furnish written guarantee to replace defective work and materials furnished under this section, at no cost to the Owner, for this one (1) year period.
 2. That equipment and material will produce the results specified.
- D. The Owner reserves the right to make temporary repairs as necessary to keep equipment in operating condition without voiding the guarantees or relieving responsibility during the guarantee period.
 - E. Provide, at no cost to the Owner, one qualified service technician for an 8-hour period after a period of 90 calendar days from date of acceptance of systems by Owner to repair, replace any latent deficiency.

1.12 EXTRA MATERIALS

- A. Provide one set of spare filters for each air handling unit, furnace, fan-coil, etc..

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 LAYOUT AND COORDINATION

- A. Site Examination: Before starting work, carefully examine site and all Contract Drawings. Become thoroughly familiar with conditions governing work on this project. Verify all indicated elevations, building measurements, rough-in dimensions and equipment locations before proceeding with any work.
- B. The inclusion and proper location of supports, pads sleepers, openings, anchoring and the like provided by others is the responsibility of the contractor under this Section. Cutting and/or boring shall be permitted under this Section only with the written approval of the Architect.
- C. It shall be the contractor's responsibility to coordinate and have provided by the other trades where not covered by the Contractor's work scope of work all electrical wiring and power to equipment, controls and devices, all plumbing and any other work from other trades as required to provide fully functional HVAC systems per the contract documents.
- D. Discrepancies: Any error, conflict or discrepancy in Specifications and/or existing conditions shall be reported immediately. Do not proceed with any questionable items of work until clarification of same has been made. Under no circumstances shall beams, girders, footings, or columns be cut for mechanical items. Casting of pipes into concrete is prohibited.

3.02 MECHANICAL EQUIPMENT WIRING

- A. Provide all motor starters, control devices, and wiring complete from power source.
- B. Equipment and systems specified, are based upon requirements of specific manufacturers which are intended as somewhat typical of several makes which may be approved. Provide all field wiring and/or devices necessary for a complete and operable system controls for the actual selected equipment/system.

3.03 INSTALLATION

- A. Provide clearance for installation of insulation and access to valves, fittings, etc. on pipe and duct systems.
- B. Provide drain piping to over nearest floor drain for boilers, and the likes.
- C. Locating and Positioning Equipment: Observe all Codes and Regulations and good common practice in locating and installing mechanical equipment and material so that completed installation presents the least possible hazard. Maintain recommended clearances for repair and service to all equipment.
- D. Installation shall be in accordance with the requirements of the equipment manufacturer, including special requirements for seismic restraints.
- E. Equipment Manufacturer's Responsibility and Services:

1. A manufacturer's representative for major equipment and operating systems shall be provided as necessary to assist the Contractor during installation, and to provide written certification that the equipment has been installed as specified and in accordance with the manufacturer's representative.
 2. The manufacturer's representative shall provide the initial startup of equipment in the presence of the Owner.
 - a. Provide a pre-start check of all piping, valves, control devices, control panels, and equipment.
 - b. Calibrate and adjust equipment and controls for operation at the specified design and conditions.
 - c. Provide a record of all startup events noting problems and their resolution.
 - d. Provide a record of all set points for operational controls and devices.
 3. Upon the completion of the equipment startup, provide instructional time with the Owner's personnel to review the operations and maintenance manuals and perform each step necessary for startup, shutdown, troubleshooting, and routine maintenance. The instructional time shall be scheduled through the Owner.
 4. Upon completion of the inspections, startup, testing, and checkout procedures, the equipment manufacturer shall submit written notice to the Owner that the units are ready for use by the Owner. Provide a certificate of calibration for all equipment.
- F. Anchorage: Anchor and/or brace all mechanical equipment, piping and ductwork to resist displacement due to seismic action, include snubbers on equipment mounted on spring isolators.

3.04 MOUNTING AND SHIMMING

- A. Level the equipment by means of 304 stainless steel wedges (stainless steel plates and stainless-steel shims) or PVC/poly wedges in areas of extreme corrosive environments. Wedge taper shall not be greater than 1/4 inch per foot. Use double wedges to provide a level bearing surface for the equipment. Secure each pair of wedges in their final positions with one tack weld on each side after leveling is complete. Wedging shall be executed in a manner that will prevent a change in level or springing of the Baseplate when the anchor bolts are tightened.

3.05 INSPECTION

- A. The Contractor shall inspect his work to ensure the installation and workmanship is in accordance with these specifications and acceptable industry standards for the work being done.
- B. All materials, equipment, and workmanship shall be subject to inspection at any time by the Owner. Contractor shall correct any work, materials, or equipment not in accordance with the Contract Documents.
- C. Any work enclosed or covered up prior to inspection and testing shall be uncovered. After the work has been tested, inspected and accepted, repair as necessary to return disturbed work to its original and proper condition at no cost to the Owner.

3.06 SAFETY CONSIDERATIONS

- A. All equipment shall be installed with suitable access clearances that satisfy OSHA and code requirements for maintenance or removal of replaceable parts and components, and with necessary inions or flanges to perform the maintenance or removal without removing the connecting appurtenances.

3.07 CLEANING, START-UP, AND ADJUSTING

- A. The Contractors shall be responsible for proper operation of all systems, minor subsystems, and services provided under this section. He shall coordinate start-up procedures, calibration, and system checkout with all project managers. Any system operational problems shall be diagnosed; all correctional procedures shall be initiated as required to bring out the system into compliance with the design, and the problem then shall be rechecked to verify that the system operates normally.

- B. Thoroughly clean all parts of the installation at the completion of the work. The Contractor shall clean up and remove from the premises all refuse material, crates, and rubbish arising from his work.

END OF SECTION

METERS AND GAUGES FOR HVAC PIPING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Thermometers and thermometer wells.

1.02 RELATED REQUIREMENTS

- A. Section 23 21 13 - Hydronic Piping.
- B. Section 23 22 13 - Steam and Condensate Heating Piping.

1.03 REFERENCE STANDARDS

- A. ASTM E1 - Standard Specification for ASTM Liquid-in-Glass Thermometers; 2014.
- B. ASTM E77 - Standard Test Method for Inspection and Verification of Thermometers; 2014, with Editorial Revision (2017).

1.04 SUBMITTALS

- A. Product Data: Provide list that indicates use, operating range, total range and location for manufactured components.
- B. Project Record Documents: Record actual locations of components and instrumentation.

1.05 FIELD CONDITIONS

- A. Do not install instrumentation when areas are under construction, except for required rough-in, taps, supports and test plugs.

PART 2 PRODUCTS

2.01 STEM TYPE THERMOMETERS

- A. Manufacturers:
 - 1. Weksler Glass Thermometer Corp: www.wekslerglass.com.
 - 2. Terice.
 - 3. Ametek (U.S. Gauge).
 - 4. Other approved manufacturers: Ashcroft, Marshalltown, Weiss.
 - 5. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Thermometers - Fixed Mounting: Red- or blue-appearing non-toxic liquid in glass; ASTM E1; lens front tube, cast aluminum case with enamel finish.
 - 1. Size: 9 inch scale.
 - 2. Window: Clear glass.
 - 3. Stem: 3/4 inch brass.
 - 4. Accuracy: 2 percent, per ASTM E77.
 - 5. Calibration: Degrees F and Degrees C.
- C. Thermometers - Adjustable Angle: Red- or blue-appearing non-toxic liquid in glass; ASTM E1; lens front tube, cast aluminum case with enamel finish, cast aluminum adjustable joint with positive locking device; adjustable 360 degrees in horizontal plane, 180 degrees in vertical plane.
 - 1. Size: 9 inch scale.
 - 2. Window: Clear glass.
 - 3. Stem: 3/4 inch NPT brass.
 - 4. Accuracy: 2 percent, per ASTM E77.
 - 5. Calibration: Degrees F and Degrees C.

2.02 DIAL THERMOMETERS

- A. Manufacturers:
 - 1. Weksler Glass Thermometer Corp: www.wekslerglass.com.
 - 2. Terice.
 - 3. Ametek (U.S. Gauge).
 - 4. Other approved manufacturers: Ashcroft, Marshalltown, Weiss.

5. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Thermometer: ASTM E1, stainless steel case, adjustable angle with front recalibration, bimetallic helix actuated with silicone fluid damping, white with black markings and black pointer hermetically sealed lens, stainless steel stem.
 1. Size: 5 inch diameter dial.
 2. Lens: Clear glass.
 3. Accuracy: 1 percent.
 4. Calibration: Degrees F and Degrees C.

2.03 THERMOMETER SUPPORTS

- A. Socket: Brass separable sockets for thermometer stems with or without extensions as required, and with cap and chain.
- B. Flange: 3 inch outside diameter reversible flange, designed to fasten to sheet metal air ducts, with brass perforated stem.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install thermometers in piping systems in sockets in short couplings. Enlarge pipes smaller than 2-1/2 inch for installation of thermometer sockets. Ensure sockets allow clearance from insulation.
- C. Install thermometer sockets adjacent to controls system thermostat, transmitter, or sensor sockets.
- D. Provide instruments with scale ranges selected according to service with largest appropriate scale.
- E. Install gauges and thermometers in locations where they are easily read from normal operating level. Install vertical to 45 degrees off vertical.
- F. Adjust gauges and thermometers to final angle, clean windows and lenses, and calibrate to zero.

END OF SECTION

HVAC SEISMIC RESTRAINT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Seismic restraint of equipment, piping and ductwork.

1.02 RELATED SECTIONS

- A. Section 23 00 00 - Basic HVAC Requirements.
- B. Section 23 07 19 - HVAC Piping Insulation.
- C. Section 23 21 13 - Hydronic Piping.
- D. Section 23 22 13 - Steam and Condensate Heating Piping.
- E. Section 23 51 00 - Breechings, Chimneys, and Stacks.
- F. Section 23 52 23 - Cast-Iron Boilers.

1.03 QUALITY ASSURANCE

- A. Seismic Restraints:
 - 1. The Anchorage and/or seismic restraint of permanent equipment and associated systems listed below shall be designed to resist the total design seismic forces prescribed in the latest edition of the International Building Code.
 - a. All floor or roof-mounted equipment weighing 400 lbs. or greater.
 - b. All suspended or wall-mounted equipment weighing 20 lbs. or greater.
 - c. All vibration-isolated equipment weighing 20 lbs. or greater.
 - d. All piping 1 1/4 inches nominal diameter and larger located in boiler, mechanical equipment and refrigeration mechanical rooms.
 - e. All piping 2 1/2" inches nominal diameter and larger.
 - f. Pipes, electrical conduit and ducts supported by a trapeze where none of those elements would individually require bracing, require bracing when the combined operating weight of all elements supported by the trapeze is 10 lbs/ft or greater.
- B. All calculations shall be in accordance with Chapter 16 of the latest edition of the International Building Code.

1.04 SUBMITTALS

- A. Submit the following in accordance with Section 01 30 00:
 - 1. All anchorage and seismic restraints shall be designed and stamped by a professional engineer licensed in the state of the project location. Design shall include:
 - a. Number, size and location of anchors for floor or roof-mounted equipment. For curb-mounted equipment, provide design of attachment of both the unit to the curb and the curb to the structure. In addition, provide calculations or test data verifying the curb can accept the seismic loads.
 - b. Number, size and location of seismic restraint devices and anchors for vibration-isolated and suspended equipment. Provide calculations or test data verifying the horizontal and vertical ratings of the seismic restraint devices.
 - c. Number, size and location of braces and anchors for suspended piping and ductwork on shop drawings. In addition:
 - 1) The contractor must select a single seismic restraint system pre-designed to meet the requirements of the latest edition of the International Building Code such as the 2011 Mason Industries Seismic Restraint Guidelines for Suspended Piping, Ductwork, Electrical Systems and floor and roof mounted equipment.
 - 2) Details or designs from separate seismic restraint guidelines are not acceptable. Installations not addressed by the selected system must be designed, detailed and submitted along with the shop drawings.
 - 3) Maximum seismic loads shall be indicated on drawings at each brace location. Drawings shall bear the stamp and signature of the registered professional

engineer licensed in the state of the project location who designed the layout of the braces.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Amber Booth.
- B. Mason Industries, Inc.
- C. Kinetics Corporation.
- D. Vibrex.
- E. Substitutions: Under provisions of Section 01 60 00.

2.02 SEISMIC RESTRAINTS

- A. General Requirements:
 - 1. Seismic restraints shall be provided for all equipment, both supported and suspended, piping and ductwork as listed above.
 - 2. Bracing of piping and ductwork shall be in accordance with provisions set forth in SMACNA seismic restraint manual.
 - 3. Structural requirements for restraints, including their attachment to building structure, shall be reviewed and approved by the structural engineer.
 - 4. Attachments to supported or suspended equipment must be coordinated with the equipment manufacturer.
- B. Supported Equipment Products:
 - 1. Seismic restraints shall consist of interlocking steel members restrained by shock absorbent neoprene materials compounded to bridge bearing specifications as previously noted in paragraph 1.3. Elastomeric materials shall be replaceable and be a minimum 3/4-inch thick. Snubbers shall be manufactured with an air gap between hard and resilient material of not less than 1/8-inch, nor more than 1/4-inch. Type 1 - Seismic Snubbers: All-directional seismic snubbers shall consist of interlocking steel members restrained by a one-piece molded neoprene bushing of bridge bearing neoprene. Bushing shall be replaceable and a minimum of 1/4 inch thick. A minimum air gap of 1/8 inch shall be incorporated in the snubber design in all directions before contact is made between the rigid and resilient surfaces. Snubber end caps shall be removable to allow inspection of internal clearances. The snubber shall be designed to accept horizontal and vertical seismic loads as defined in Section 1.03.B. Mason Type Z-1225 or Z-1011.
 - 2. Each snubber shall be capable of restraint in all three mutually orthogonal directions. Type 2 - Seismic Sway Braces - Seismic sway braces shall consist of galvanized steel aircraft cables or steel angles/channels. Cables braces shall be designed to resist seismic tension loads and steel braces shall be designed to resist both tension and compression loads with a minimum safety factor of 2. Brace end connections shall be steel assemblies that swivel to the final installation angle. Do not mix cable and steel braces to brace the same system or equipment. Steel angles, when required, shall be clamped to the threaded hanger rods at the seismic sway brace locations utilizing a minimum of two ductile iron clamps. Sway braces shall be designed to accept horizontal and vertical seismic loads as defined in Section 1.03.B. Mason Type SCB, SSB, SRC and UC.
 - 3. Submittals shall include load versus deflection curves up to 1/2-inch on the x, y and z planes.
 - 4. Mason Model Z-1011
- C. Bracing of Pipes:
 - 1. Provide seismic bracing of all piping as detailed below. (Exception: Piping suspended by individual hangers 12 inches or less in length, as measured from the top of the pipe to the bottom of the support where the hanger is attached, need not be braced).
 - a. Brace all gas piping.
 - b. Brace all piping located in boiler rooms, mechanical equipment rooms, and refrigeration mechanical rooms that is 1-1/4-inch nominal diameter and larger.

- c. Brace all pipes 2-1/2-inch nominal diameter and larger.
- 2. For all gas piping, as specified in 1(a) the bracing details, schedules, and notes may be used, except that transverse bracing shall be at 20 feet maximum, and longitudinal bracing shall be at 40 feet maximum.
- 3. Seismic braces for pipes on trapeze hangers may be used.
- 4. Provide flexibility in joints where pipes pass through building seismic joints or expansion joints or where rigidly supported pipes connect to equipment with vibration isolators. For threaded piping, the flexibility may be provided by the installation of swing joints.
- 5. Cast iron pipe of all types, glass pipe, and any other pipe jointed with a shield and clamp assembly, where the top of the pipe is 12 inches or more from the supporting structure, shall be braced on each side of a change in direction of 90 degrees or more. Riser joints shall be braced or stabilized between floors.
- 6. Vertical risers shall be laterally supported with a riser clamp at each floor. For buildings greater than six stories high, all risers shall be engineered individually.
- D. Suspended Equipment and Piping and Ductwork:
 - 1. Cable Method: The seismic restraint shall consist of a combination of stranded steel aircraft cable and the specified vibration isolation hanger with an added nut and neoprene and steel washer. The cable resists lateral and downward motion. The modified vibration hanger resists upward motion.
 - 2. Cable attachment details, cable size, and the neoprene and steel washers shall be sized by the manufacturer and are to be indicated in the Shop Drawings.
 - 3. Provide detailed Shop Drawings for approval in sufficient time to allow structural attachment work to be incorporated into the normal work sequence.

PART 3 EXECUTION

3.01 SEISMIC RESTRAINTS

- A. General:
 - 1. Install and adjust seismic restraints so that the equipment, piping, and ductwork supports are not degraded by the restraints.
 - 2. Restraints must not short circuit vibration isolation systems or transmit objectionable vibration or noise.
- B. Supported Equipment:
 - 1. Each vibration isolation frame for supported equipment shall have a minimum of four seismic snubbers mounted as close as possible to the vibration isolators and/or the frame extremities.
 - 2. Care must be taken so that a minimum 1/8-inch air gap in the seismic restraint snubber is preserved on all sides in order that the vibration isolation potential of the isolator is not compromised. This requires that the final snubber adjustment be completed after the vibration isolators are properly installed and the installation approved.
- C. Bracing of Pipes:
 - 1. Branch lines may not be used to brace main lines.
 - 2. Transverse bracing shall be at 40 feet maximum except where a lesser spacing is indicated in the SMACNA tables for bracing of pipes.
 - 3. Longitudinal bracing shall be at 80 feet maximum except where a lesser spacing is indicated in the tables. In pipes where thermal expansion is a consideration, an anchor point may be used as the specified longitudinal brace provided that it has a capacity equal to or greater than a longitudinal brace. The longitudinal braces and connections must be capable of resisting the additional force induced by expansion and contraction.
 - 4. A rigid piping system shall not be braced to dissimilar parts of the building or to two dissimilar building systems that may respond differently during an earthquake.
 - 5. Transverse bracing for one pipe section may also act as longitudinal bracing for a pipe section of the same size connected perpendicular to it if the bracing is installed within 24 inches of the elbow or tee.
- D. Suspended Equipment, Piping, and Ductwork Cable Method:

1. Cables shall be adjusted to a degree of slackness approved by the Structural Engineer.
2. Uplift and downward restraint nuts and washers for the Type HST hangers shall be adjusted so that there is a minimum 1/4-inch clearance.

END OF SECTION

HVAC PIPING INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Piping insulation.
- B. Jackets and accessories.

1.02 RELATED REQUIREMENTS

- A. Section 23 21 13 - Hydronic Piping: Placement of hangers and hanger inserts.
- B. Section 23 22 13 - Steam and Condensate Heating Piping: Placement of hangers and hanger inserts.

1.03 REFERENCE STANDARDS

- A. ASTM A 167 - Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip; 2004.
- B. ASTM C195 - Standard Specification for Mineral Fiber Thermal Insulating Cement; 2007 (Reapproved 2013).
- C. ASTM C449 - Standard Specification for Mineral Fiber Hydraulic-Setting Thermal Insulating and Finishing Cement; 2007 (Reapproved 2013).
- D. ASTM C547 - Standard Specification for Mineral Fiber Pipe Insulation; 2017.
- E. ASTM C553 - Standard Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications; 2013.
- F. ASTM C1695 - Standard Specification for Fabrication of Flexible Removable and Reusable Blanket Insulation for Hot Service; 2010 (Reapproved 2015).
- G. ASTM D1621 - Standard Test Method for Compressive Properties Of Rigid Cellular Plastics; 2016.
- H. ASTM D1623 - Standard Test Method for Tensile And Tensile Adhesion Properties of Rigid Cellular Plastics; 2017.
- I. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2018b.

1.04 SUBMITTALS

- A. Product Data: Provide product description, thermal characteristics, list of materials and thickness for each service, and locations.
- B. Manufacturer's Instructions: Indicate installation procedures that ensure acceptable workmanship and installation standards will be achieved.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with not less than three years of documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified in this section with minimum 3 years of experience.
- C. Surface-Burning Characteristics: For insulation and related materials, UL/ULC Classified per UL 723 or meeting ASTM E 84, by a testing and inspecting agency acceptable to authorities having jurisdiction. Factory label insulation and jacket materials and adhesive, mastic, tapes, and cement material containers, with appropriate markings of applicable testing agency.
- D. Insulation Installed Indoors: Flame-spread index of 25 or less, and smoke-developed index of 50 or less.
- E. Insulation Installed Outdoors: Flame-spread index of 75 or less, and smoke-developed index of 150 or less.
- F. Formaldehyde Free: Third party certified with UL Environment Validation.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Accept materials on site, labeled with manufacturer's identification, product density, and thickness.

1.07 FIELD CONDITIONS

- A. Maintain ambient conditions required by manufacturers of each product.
- B. Maintain temperature before, during, and after installation for minimum of 24 hours.

1.08 DEFINITIONS

- A. Thermal Conductivity (K value): Units of Btu-inch/hour per square foot per degree F.
- B. UL GREENGUARD: Provides independent third-party, Indoor Air Quality (IAQ) certification of products for emissions of respirable particles and Volatile Organic Compounds (VOC's), including formaldehyde and other specific product-related pollutants. Certification is based upon criteria used by EPA, OSHA, and WHO.
- C. ASJ+: All Service Jacket composed of aluminum foil reinforced with glass scrim bonded to a kraft paper interleaving with an outer film layer leaving no paper exposed.
- D. ASJ: All Service Jacket (no outer film).
- E. SSL+: Self-Sealing Lap with Advanced Closure System.
- F. SSL: Self-Sealing Lap.
- G. FSK: Foil Scrim Kraft; jacketing.
- H. PSK: Poly Scrim Kraft; jacketing.
- I. PVC: PolyVinyl Chloride.
- J. Glass Mineral Wool: Interchangeable with fiber glass, but replacing the term in the attempt to disassociate and differentiate Glass Mineral Wool from the potential health and safety of special purpose or reinforcement products that do not meet the bio solubility criteria of insulation made from glass. Rock Mineral Wool will replace the traditional Mineral Wool label. Both are used in lieu of the Mineral Fiber label.
- K. ECOSE Technology: a revolutionary new binder system based on rapidly renewable bio-based materials; rather than petroleum-based chemicals commonly used in other glass mineral wool insulation materials. ECOSE Technology reduces the binder embodied energy by up to 70 percent and does not contain phenol, formaldehyde, acrylics or artificial colors.
- L. Imperative 11, Red List - requires that manufacturers disclose the ingredients in their products to insure that they are free of Red List chemicals and materials. The Red List represents the "worst in class" materials, chemicals and elements known to pose serious risks to human health and the greater ecosystem.
- M. Polybrominated diphenyl ethers (PBDE) such as Penta-BDE, Octa-BDE or Deca-BDE fire retardants: have been linked to adverse health effects after exposure in low concentrations.
- N. UL Classified: UL has tested and evaluated samples of the product with respect to certain properties of the product. UL Classifies products to:
 - 1. Applicable UL requirements.
 - 2. Standards for safety.
 - 3. Standards of other National and International organizations.

PART 2 PRODUCTS

2.01 REGULATORY REQUIREMENTS

- A. Surface Burning Characteristics: Flame spread index/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84 or UL 723.
- B. Materials shall not contain pentabrominated diphenyl ethers (PBDEs) in amounts greater than allowed by law.

2.02 GLASS FIBER

- A. Manufacturers:
 - 1. Johns Manville Corporation; Model "Micro-Lok HP": www.jm.com. www.jm.com.
 - 2. Owens Corning Corp SSL II: www.owenscorning.com. www.owenscorning.com.
 - 3. CertainTeed Corporation: www.certainteed.com. www.certainteed.com.
 - 4. Knauf Insulation; Model "Pipe Insulation ASJ-SSL": www.knaufusa.com. www.knaufusa.com.
 - 5. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Insulation: ASTM C 547; rigid molded, noncombustible.
 - 1. 'K' value: ASTM C 177, 0.24 at 75 degrees F.
 - 2. Maximum service temperature: 850 degrees F.
 - 3. Maximum moisture absorption: 0.2 percent by volume.
- C. Insulation: ASTM C 547; semi-rigid, noncombustible, end grain adhered to jacket.
 - 1. 'K' value: ASTM C 177, 0.24 at 75 degrees F.
 - 2. Maximum service temperature: 650 degrees F.
 - 3. Maximum moisture absorption: 0.2 percent by volume.
- D. Vapor Barrier Jacket: White kraft paper with glass fiber yarn, bonded to aluminized film; moisture vapor transmission when tested in accordance with ASTM E 96/E 96M of 0.02 perm-inches.
- E. Tie Wire: 0.048 inch stainless steel with twisted ends on maximum 12 inch centers. F. Vapor Barrier Lap Adhesive:
 - 1. Compatible with insulation.
- F. Insulating Cement/Mastic:
 - 1. ASTM C 195; hydraulic setting on mineral wool.
- G. Indoor Vapor Barrier Finish:
 - 1. Cloth: Untreated; 9 oz/sq yd weight.
- H. Vinyl emulsion type acrylic, compatible with insulation, black color.
- I. Outdoor Vapor Barrier Mastic:
 - 1. Vinyl emulsion type acrylic or mastic, compatible with insulation, black color.
- J. Outdoor Breather Mastic:
 - 1. Vinyl emulsion type acrylic or mastic, compatible with insulation, black color.
- K. Insulating Cement:
 - 1. ASTM C 449/C 449M.

2.03 GLASS MINERAL WOOL

- A. Manufacturers:
 - 1. Knauf Insulation; Earthwool 1000 degree F pipe covering with ECOSE Technology or Knauf Earthwool RediKlad pipe covering with ECOSE Technology.
 - 2. Johns Manville: www.jm.com.
 - 3. Owens Corning Corp: www.owenscorning.com.
 - 4. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Insulation: ASTM C547 and ASTM C795; rigid molded, noncombustible.
 - 1. K Value: ASTM C177, 0.24 at 75 degrees F.
 - 2. Maximum service temperature: Type I 850 degrees F or Type IV 1000 degrees F.
 - 3. Maximum Moisture Absorption: 0.2 percent by volume.
 - 4. Glass mineral wool bonded with a bio-based thermosetting resin.
 - 5. Product shall be validated by UL/E to: be formaldehyde free; have an EPD.
 - 6. Product should contain a minimum 50% recycled content.
- C. Insulation: ASTM C547 and ASTM C795; rigid molded, noncombustible, with wicking material to transport condensed water to the outside of the system for evaporation to the atmosphere.

1. K Value: ASTM C177, 0.23 at 75 degrees F.
 2. Maximum Service Temperature: 220 degrees F.
 3. Maximum Moisture Absorption: 0.2 percent by volume.
- D. Insulation: ASTM C547 and ASTM C795; semi-rigid, noncombustible, end grain adhered to jacket.
1. Maximum Service Temperature: 650 degrees F.
 2. Maximum Moisture Absorption: 0.2 percent by volume.
- E. Vapor Barrier Jacket: ASJ+: All Service Jacket composed of aluminum foil reinforced with glass scrim bonded to a kraft paper interleaving with an outer film layer leaving no paper exposed; or White kraft paper with glass fiber yarn, bonded to aluminized film; moisture vapor transmission when tested in accordance with ASTM E96/E96M of 0.02 perm-inches.
- F. Filament Tape: 4 mil.
- G. Vapor Barrier Lap Adhesive: Compatible with insulation.
1. Compatible with insulation.
- H. Insulating Cement/Mastic: ASTM C195; hydraulic setting on mineral wool.
1. ASTM C195; hydraulic setting on mineral wool.
- I. Indoor Vapor Barrier Finish:
1. Cloth: Untreated; 9 oz/sq yd weight.
 2. Vinyl emulsion type acrylic, compatible with insulation, black color.
- J. Outdoor Vapor Barrier Mastic: Vinyl emulsion type acrylic or mastic, compatible with insulation, black color.
1. Vinyl emulsion type acrylic or mastic, compatible with insulation, black color.
- K. Outdoor Breather Mastic:
1. Vinyl emulsion type acrylic or mastic, compatible with insulation, black color.
- L. Insulating Cement: ASTM C449.
1. ASTM C449/C449M.

2.04 CELLULAR GLASS

- A. Manufacturers:
1. Owens Corning Corporation; _____: www.ocbuildingspec.com/#sle.
 2. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Pipe and Tubing Insulation: ASTM C552, Type II, Grade 6.
1. K Value: 0.35 at 100 degrees F.
 2. Service Temperature Range: From 250 degrees F to 800 degrees F.
 3. Water Vapor Permeability: 0.005 perm inch maximum per inch.
 4. Water Absorption: 0.5 percent by volume, maximum.
 5. Density: A minimum of 6.12 lb/cu ft.
- C. Block Insulation: ASTM C552, Type I, Grade 6.
1. K Value: 0.35 at 100 degrees F.
 2. Service Temperature: 800 degrees F, maximum.
 3. Water Vapor Permeability: 0.005 perm inch maximum per inch.
 4. Water Absorption: 0.5 percent by volume, maximum.

2.05 JACKETS

- A. Canvas Jacket: UL listed 6 oz/sq yd plain weave cotton fabric treated with dilute fire retardant lagging adhesive.
1. Lagging Adhesive: Compatible with insulation.
 - a. Manufacturers:
 - 1) _____.
 - b. Compatible with insulation.

2.06 ACCESSORIES

- A. General Requirements:
 - 1. Provide required accessories in accordance with and subject to the recommendations of the insulation manufacturer.
 - 2. Furnish compatible materials which do not contribute to corrosion, soften, or otherwise attack surfaces to which applied, in either the wet or dry state.
 - 3. Supply materials that are asbestos free.

2.07 REUSABLE INSULATION JACKETS

- A. Manufacturers:
 - 1. Thermaxx Unitherm International: www.unitherm.com.
 - 2. Pacor Rapid Wrap: www.pacorinc.com.
- B. Insulation:
 - 1. Mineral wool with silicone coated fiberglass jacket and 304 stainless steel hooks and wire lacing or velcro straps and "O" ring.
- C. R-Value: Min R-4.
- D. Temperature: 350 degrees F.
- E. Application: All heating valves, strainers, etc., 4-inch size and over.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Test piping for design pressure, liquid tightness, and continuity prior to applying insulation materials.
- B. Verify that surfaces are clean and dry, with foreign material removed.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install in accordance with NAIMA National Insulation Standards.
- C. Exposed Piping: Locate insulation and cover seams in least visible locations.
- D. For hot piping conveying fluids over 140 degrees F, insulate flanges and unions at equipment.
- E. Glass Fiber Insulated Pipes Conveying Fluids Above Ambient Temperature:
 - 1. Provide standard jackets, with or without vapor barrier, factory-applied, or field-applied. Secure with self-sealing longitudinal laps and butt strips with pressure-sensitive adhesive. Secure with outward clinch expanding staples.
 - 2. Insulate fittings, joints, and valves with insulation of like material and thickness as adjoining pipe. Finish with glass cloth and adhesive or PVC fitting covers.
- F. Inserts and Shields:
 - 1. Application: Piping 1-1/2 inches diameter or larger.
 - 2. Shields: Galvanized steel between pipe hangers or pipe hanger rolls and inserts.
 - 3. Insert location: Between support shield and piping and under the finish jacket.
 - 4. Insert Configuration: Minimum 6 inches long, of same thickness and contour as adjoining insulation; may be factory fabricated.
 - 5. Insert Material: Hydrous calcium silicate insulation or other heavy density insulating material suitable for the planned temperature range.
- G. Continue insulation through walls, sleeves, pipe hangers, and other pipe penetrations. Finish at supports, protrusions, and interruptions.
- H. Glue all elastometric insulation seams per manufacturer's recommendations. Do not leave any gaps or openings in insulation that allow moisture condensation between insulation and pipe wall.
- I. Use manufacturer's insulated support on elastic insulation to provide continuous insulation through the support. Glue butt joints.

- J. Buried Piping: Provide factory-fabricated assembly with inner all-purpose service jacket with self-sealing lap, and asphalt impregnated open mesh glass fabric, with one mil thick aluminum foil sandwiched between three layers of bituminous compound; outer surface faced with polyester film.
- K. Heat Traced Piping: Insulate fittings, joints, and valves with insulation of like material, thickness, and finish as adjoining pipe. Size large enough to enclose pipe and heat tracer. Cover with aluminum jacket with seams located on bottom side of horizontal piping.

3.03 SCHEDULE

- A. Heating Systems:
 - 1. Heating Water Supply and Return:
 - a. Glass Fiber, Rigid, Insulation:
 - 1) Pipe Size Range: 4 inch and under.
 - 2) Thickness: 1-1/2 inch.
 - 3) Pipe Size Range: Over 4 inch.
 - 4) Thickness: 2 inch.
 - 2. Low Pressure Steam Piping:
 - a. Glass Mineral Wool, Rigid, Insulation:
 - 1) Pipe Size Range: Under 2 inch.
 - 2) Thickness: 2 inch.
 - 3) Pipe Size Range: Over 2 inch.
 - 4) Thickness: 3 inch.
 - 3. Low Pressure Steam Condensate:
 - a. Glass Mineral Wool, Rigid, Insulation:
 - 1) Pipe Size Range: 4 inch and under.
 - 2) Thickness: 1-1/2 inch.
 - 3) Pipe Size Range: Over 4 inch.
 - 4) Thickness: 2 inch.
- B. Equipment:
 - 1. Heating Systems:
 - a. Heat Exchangers/Converters: Cellular Glass Insulation: 3" inches thick.
 - b. Air Separators: Cellular Glass Insulation: 1-1/2 inches thick.

END OF SECTION

HYDRONIC PIPING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pipe and pipe fittings for:
- B. Valves:
 - 1. Gate valves.
 - 2. Ball valves.
 - 3. Check valves.

1.02 RELATED REQUIREMENTS

- A. Section 23 0719 - HVAC Piping Insulation.
- B. Section 23 2114 - Hydronic Specialties.

1.03 REFERENCE STANDARDS

- A. ASME (BPV IX) - Boiler and Pressure Vessel Code, Section IX - Welding and Brazing Qualifications; The American Society of Mechanical Engineers; 2010.
- B. ASME B16.3 - Malleable Iron Threaded Fittings; The American Society of Mechanical Engineers; 1998 (R2006).
- C. ASME B31.9 - Building Services Piping; The American Society of Mechanical Engineers; 2008 (ANSI/ASME B31.9).
- D. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2010.
- E. ASTM A234/A234M - Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service; 2011.
- F. MSS SP-58 - Pipe Hangers and Supports - Materials, Design and Manufacture, Selection, Application, and Installation; Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.; 2009.
- G. MSS SP-71 - Gray Iron Swing Check Valves, Flanged and Threaded Ends; Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.; 2005.
- H. MSS SP-110 - Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends; Manufacturers Standardization Society of the Valve and Fittings Industry, Inc.; 1996.

1.04 SUBMITTALS

- A. Product Data: Include data on pipe materials, pipe fittings, valves, and accessories. Provide manufacturers catalogue information. Indicate valve data and ratings.
- B. Manufacturer's Installation Instructions: Indicate hanging and support methods, joining procedures.
- C. Maintenance Data: Include installation instructions, spare parts lists, exploded assembly views.

1.05 QUALITY ASSURANCE

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

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.
- B. Provide temporary protective coating on cast iron and steel valves.
- C. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.

- D. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

PART 2 PRODUCTS

2.01 HYDRONIC SYSTEM REQUIREMENTS

- A. Comply with ASME B31.9 and applicable federal, state, and local regulations.
- B. Piping: Provide piping, fittings, hangers and supports as required, as indicated, and as follows:
 - 1. Where more than one piping system material is specified, provide joining fittings that are compatible with piping materials and ensure that the integrity of the system is not jeopardized.
 - 2. Use non-conducting dielectric connections whenever jointing dissimilar metals.
 - 3. Grooved mechanical joints may be used as a coupling for equipment connection only.
 - 4. Provide pipe hangers and supports in accordance with ASME B31.9 unless indicated otherwise.
- C. Pipe-to-Valve and Pipe-to-Equipment Connections: Use flanges, unions, or grooved couplings to allow disconnection of components for servicing; do not use direct welded, soldered, or threaded connections.
 - 1. Where grooved joints are used in piping, provide grooved valve/equipment connections if available; if not available, provide flanged ends and grooved flange adapters.
- D. Valves: Provide valves where indicated and as follows:
 - 1. Provide drain valves where indicated, and if not indicated provide at least at main shut-off, low points of piping, bases of vertical risers, and at equipment. Use 3/4 inch gate or ball valves with cap; pipe to nearest floor drain.
 - 2. Isolate equipment using gate valves with lug end flanges or grooved mechanical couplings.
 - 3. For throttling and isolation service in chilled and condenser water systems, use only.
- E. Welding Materials and Procedures: Conform to ASME (BPV IX).

2.02 HEATING WATER PIPING, ABOVE GRADE

- A. Steel Pipe: ASTM A53/A53M, Schedule 40, black, using one of the following joint types:
 - 1. Welded Joints: ASTM A234/A234M, wrought steel welding type fittings; AWS D1.1 welded.
 - 2. Threaded Joints: ASME B16.3, malleable iron fittings.

2.03 EQUIPMENT DRAINS AND OVERFLOWS

- A. Steel Pipe: ASTM A53/A53M, Schedule 40 galvanized; using one of the following joint types:
 - 1. Threaded Joints: Galvanized cast iron, or ASME B16.3 malleable iron fittings.
- B. Copper Tube: ASTM B88 (ASTM B88M), Type M (C), drawn; using one of the following joint types:
 - 1. Solder Joints: ASME B16.18 cast brass/bronze or ASME B16.22 solder wrought copper fittings; ASTM B32 lead-free solder, HB alloy (95-5 tin-antimony) or tin and silver.

2.04 PIPE HANGERS AND SUPPORTS

- A. Provide hangers and supports that comply with MSS SP-58.
 - 1. If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.
- B. Hangers for Pipe Sizes 1/2 to 1-1/2 Inch: Malleable iron or carbon steel, adjustable swivel, split ring.
- C. Hangers for Hot Pipe Sizes 2 to 4 Inches: Carbon steel, adjustable, clevis.
- D. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.
- E. Wall Support for Pipe Sizes to 3 Inches: Cast iron hook.
- F. Floor Support for Hot Pipe Sizes to 4 Inches: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
- G. Hanger Rods: Mild steel threaded both ends, threaded one end, or continuous threaded.

- H. Inserts: Malleable iron case of galvanized steel shell and expander plug for threaded connection with lateral adjustment, top slot for reinforcing rods, lugs for attaching to forms; size inserts to suit threaded hanger rods.

2.05 UNIONS, FLANGES, AND COUPLINGS

- A. Unions for Pipe 2 Inches and Under:
 - 1. Ferrous Piping: 150 psig malleable iron, threaded.
- B. Flanges for Pipe Over 2 Inches:
 - 1. Ferrous Piping: 150 psig forged steel, slip-on.
 - 2. Gaskets: 1/16 inch thick preformed neoprene.
- C. Mechanical Couplings for Grooved and Shouldered Joints: Two or more curved housing segments with continuous key to engage pipe groove, circular C-profile gasket, and bolts to secure and compress gasket.
 - 1. Dimensions and Testing: In accordance with AWWA C606.
 - 2. Housing Material: Malleable iron or ductile iron, galvanized.
 - 3. Gasket Material: EPDM suitable for operating temperature range from -30 degrees F to 230 degrees F.
 - 4. Gasket Material: Nitrile rubber suitable for operating temperature range from -20 degrees F to 180 degrees F.
 - 5. Bolts and Nuts: Hot dipped galvanized or zinc-electroplated steel.
 - 6. When pipe is field grooved, provide coupling manufacturer's grooving tools.
 - 7. Manufacturers:
 - a. Victaulic Company: www.victaulic.com.
 - b. Substitutions: See Section 01 60 00 - Product Requirements.
- D. Dielectric Connections: Union or waterway fitting with water impervious isolation barrier and one galvanized or plated steel end and one copper tube end, end types to match pipe joint types used.

2.06 GATE VALVES

- A. Manufacturers:
 - 1. Hammond Valve Corp.; Model CS1550: www.hammondvalve.com.
 - 2. Stockham; Model 1822V.
 - 3. Substitutions: See Section 01 60 00 - Product Requirements.
- B. 4 Inches and Larger: Cast steel body, steel trim, bolted bonnet, rising stem, hand-wheel, outside screw and yoke, solid wedge disc with bronze seat rings, flanged ends.

2.07 BALL VALVES

- A. Manufacturers:
 - 1. Hammond Valve Corp.; Model 8901: www.hammondvalve.com.
 - 2. NIBCO, Inc.; Model T-FP600A: www.nibco.com.
 - 3. Watts; Model FBV-1: www.watts.com.
 - 4. Milwaukee Valve Company; Model BA-125: www.milwaukeevalve.com.
 - 5. Apollo Valves; Model 94A: www.apollovalves.com.
 - 6. Substitutions: See Section 01 60 00 - Product Requirements.
- B. 3 Inches and Smaller: MSS SP-110, Class 150, 600 WOG, bronze, two piece body, chrome plated brass ball, full port, teflon seats and stuffing box ring, blow-out proof stem, lever handle solder or threaded ends.

2.08 SPRING LOADED CHECK VALVES

- A. Manufacturers:
 - 1. Hammond Valve; Model IR9354: www.hammondvalve.com.
 - 2. NIBCO, Inc.; Model F-910: www.nibco.com.
 - 3. Milwaukee Valve Company; Model 1800: www.milwaukeevalve.com.
 - 4. Apollo Valves; Model 910WB: www.apollovalves.com.

- 5. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Class 125, globe style, iron body, bronze trim, stainless steel springs, bronze disc, seals, lug style ends.

PART 3 EXECUTION

3.01 PREPARATION

- A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
- B. Prepare pipe for grooved mechanical joints as required by coupling manufacturer.
- C. Remove scale and dirt on inside and outside before assembly.
- D. Prepare piping connections to equipment using jointing system specified.
- E. Keep open ends of pipe free from scale and dirt. Protect open ends with temporary plugs or caps.
- F. After completion, fill, clean, and treat systems. Refer to Section 23 2500 for additional requirements.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install heating water piping to ASME B31.9 requirements.
- C. Route piping in orderly manner, parallel to building structure, and maintain gradient.
- D. Install piping to conserve building space and to avoid interfere with use of space.
- E. Group piping whenever practical at common elevations.
- F. Sleeve pipe passing through partitions, walls and floors.
- G. Slope piping and arrange to drain at low points.
- H. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.
- I. Pipe Hangers and Supports:
 - 1. Install in accordance with ASME B31.9.
 - 2. Support horizontal piping as scheduled.
 - 3. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.
 - 4. Place hangers within 12 inches of each horizontal elbow.
 - 5. Use hangers with 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
 - 6. Support vertical piping at every floor. Support riser piping independently of connected horizontal piping.
 - 7. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.
- J. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings. Refer to Section 23 0719.
- K. Use eccentric reducers to maintain top of pipe level.
- L. Install valves with stems upright or horizontal, not inverted.

3.03 SCHEDULES

- A. Hanger Spacing for Steel Piping.
 - 1. 1/2 inch, 3/4 inch, and 1 inch: Maximum span, 7 feet; minimum rod size, 1/4 inch.
 - 2. 1-1/4 inches: Maximum span, 8 feet; minimum rod size, 3/8 inch.
 - 3. 1-1/2 inches: Maximum span, 9 feet; minimum rod size, 3/8 inch.
 - 4. 2 inches: Maximum span, 10 feet; minimum rod size, 3/8 inch.
 - 5. 2-1/2 inches: Maximum span, 11 feet; minimum rod size, 3/8 inch.

6. 3 inches: Maximum span, 12 feet; minimum rod size, 3/8 inch.

END OF SECTION

HYDRONIC SPECIALTIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Air vents.
- B. Air separators.
- C. Strainers.

1.02 RELATED REQUIREMENTS

- A. Section 23 2113 - Hydronic Piping.

1.03 SUBMITTALS

- A. Product Data: Provide product data for manufactured products and assemblies required for this project. Include component sizes, rough-in requirements, service sizes, and finishes. Include product description, model and dimensions.
- B. Manufacturer's Installation Instructions: Indicate hanging and support methods, joining procedures.

1.04 QUALITY ASSURANCE

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

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.
- B. Provide temporary protective coating on cast iron and steel valves.
- C. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
- D. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

PART 2 PRODUCTS

2.01 AIR VENTS

- A. Manufacturers:
 - 1. Armstrong International, Inc.: www.armstronginternational.com.
 - 2. ITT Bell & Gossett; Model 107A: www.bellgossett.com.
 - 3. Taco, Inc.; Model Hyvent: www.taco-hvac.com.
 - 4. Amtrol Inc.; Model 70: www.amtrol.com.
 - 5. Spirotherm; Model Spirotop: www.spirotherm.com.
 - 6. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Manual Type: Short vertical sections of 2 inch diameter pipe to form air chamber, with 1/8 inch brass needle valve at top of chamber.
- C. Float Type:
 - 1. Brass or semi-steel body, copper, polypropylene, or solid non-metallic float, stainless steel valve and valve seat; suitable for system operating temperature and pressure; with isolating valve.
 - 2. Cast iron body and cover, float, bronze pilot valve mechanism suitable for system operating temperature and pressure; with isolating valve.
- D. Washer Type:
 - 1. Brass with hygroscopic fiber discs, vent ports, adjustable cap for manual shut-off, and integral spring loaded ball check valve.

2.02 AIR SEPARATORS

- A. Manufacturers:
 - 1. ITT Bell & Gossett; Model Rolairtrol: www.bellgossett.com.

2. Armstrong International, Inc.; Model VA/VAS: www.armstronginternational.com.
 3. Amtrol Inc.; Model Series SVR: www.amtrol.com.
 4. Taco, Inc.; Model Series AC: www.taco-hvac.com.
 5. Spirotherm; Model Spirovent: www.spirotherm.com.
 6. Substitutions: See Section 01 60 00 - Product Requirements.
- B. In-line Air Separators:
1. Cast iron for sizes 1-1/2 inch and smaller, or steel for sizes 2 inch and larger; tested and stamped in accordance with ASME (BPV VIII, 1); for 125 psi operating pressure.

2.03 STRAINERS

- A. Manufacturers:
1. Hammond; Model 3010/3030: www.hammondvalve.com.
 2. Watts; Model 777S/77F: www.watts.com.
 3. Mueller Steam Specialty; Model 351-M/758: www.muellersteam.com.
 4. Wheatley; Model BTY/YF: www.wheatleyhvac.com.
 5. Metraflex; Model TS/TF: www.metraflex.com.
 6. Apollo Valves; Model 59/59-300: www.apollovalves.com.
 7. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Size 2 inch and Under:
1. Screwed brass or iron body for 175 psi working pressure, Y pattern with 1/32 inch stainless steel perforated screen.
- C. Size 2-1/2 inch to 4 inch:
1. Flanged iron body for 175 psi working pressure, Y pattern with 3/64 inch stainless steel perforated screen.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install specialties in accordance with manufacturer's instructions.
- B. Where large air quantities can accumulate, provide enlarged air collection standpipes.
- C. Provide manual air vents at system high points and as indicated.
- D. Provide air separator on suction side of system circulation pump and connect to expansion tank.
- E. Provide valved drain and hose connection on strainer blow down connection.

END OF SECTION

STEAM AND CONDENSATE HEATING PIPING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pipe and pipe fittings.
- B. Pipe hangers and supports.
- C. Valves.
- D. Steam piping system.

1.02 RELATED REQUIREMENTS

- A. Section 23 07 19 - HVAC Piping Insulation.
- B. Section 23 22 14 - Steam and Condensate Heating Specialties.

1.03 REFERENCE STANDARDS

- A. ASME BPVC-IX - Boiler and Pressure Vessel Code, Section IX - Welding, Brazing, and Fusing Qualifications; The American Society of Mechanical Engineers; 2013.
- B. ASME B16.3 - Malleable Iron Threaded Fittings: Classes 150 and 300; 2016.
- C. ASME B31.9 - Building Services Piping; 2014.
- D. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2018.
- E. MSS SP-58 - Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application, and Installation; 2009.

1.04 SYSTEM DESCRIPTION

- A. When more than one piping system material is selected, ensure systems components are compatible and joined to ensure the integrity of the system is not jeopardized. Provide necessary joining fittings. Ensure flanges, unions, and couplings for servicing are consistently provided.
- B. Use unions and flanges downstream of valves and at equipment or apparatus connections. Use dielectric unions where joining dissimilar materials. Do not use direct welded or threaded connections.
- C. Provide pipe hangers and supports in accordance with ASME B31.9 or MSS SP-58 unless indicated otherwise.
- D. Use gate valves for shut-off and to isolate equipment, part of systems, or vertical risers.
- E. Use gate valves for throttling, bypass, or manual flow control services.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on pipe materials, pipe fittings, valves and accessories. Provide manufacturers catalogue information. Indicate valve data and ratings.
- C. Welders Certificate: Include welders certification of compliance with ASME BPVC-IX.
- D. Manufacturer's Installation Instructions: Indicate hanging and support methods, joining procedures.
- E. Maintenance Data: Include installation instructions, spare parts lists, exploded assembly views.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.
- B. Installer Qualifications: Company specializing in performing the work of this section, with minimum five years of documented experience.
- C. Welder Qualifications: Certified in accordance with ASME BPVC-IX.

1.07 REGULATORY REQUIREMENTS

- A. Conform to ASME B31.9 and ASME B31.1 code for installation of piping system.
- B. Provide certificate of compliance from authority having jurisdiction indicating approval of welders.
- C. Welding Materials and Procedures: Conform to ASME (BPV IX) and applicable state labor regulations.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Accept valves on site in shipping containers with labelling in place. Inspect for damage.
- B. Provide temporary protective coating on cast iron and steel valves.
- C. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
- D. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

PART 2 PRODUCTS

2.01 LOW PRESSURE STEAM PIPING (15 PSIG MAXIMUM) AND CONDENSATE PIPING

- A. Steel Pipe: ASTM A53/A53M, Schedule 40, black.
 - 1. Fittings: ASME B16.3 malleable iron Class 150, or ASTM A234/A234M wrought steel.
 - 2. Fittings: ASTM A 234/A 234M forged steel welding type.
 - 3. Joints: Threaded, or AWS D1.1/D1.1M welded.
 - 4. Joints: Welded for pipe 1-1/2 inches and larger.

2.02 PIPE HANGERS AND SUPPORTS

- A. Provide hangers and supports that comply with MSS SP-58.
 - 1. If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.
- B. Hangers for Pipe Sizes 1/2 to 1-1/2 Inch: Malleable iron, adjustable swivel, split ring.
- C. Hangers for Pipe Sizes 2 to 4 Inches: Carbon steel, adjustable, clevis.
- D. Wall Support for Pipe Sizes to 3 Inches: Cast iron hook.
- E. Floor Support for Pipe Sizes to 4 Inches: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.
- F. Hanger Rods: Mild steel threaded both ends, threaded one end, or continuous threaded.

2.03 UNIONS, FLANGES, AND COUPLINGS

- A. Unions for Pipe 2 Inches and Under:
 - 1. Ferrous Piping: 150 psig galvanized malleable iron, threaded.
- B. Flanges for Pipe Over 2 Inches:
 - 1. Ferrous Piping: 150 psig forged steel, slip-on.
 - 2. Gaskets: 1/16 inch thick preformed non-asbestos graphite fiber.
- C. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.

2.04 GATE VALVES

- A. Steel:
 - 1. Manufacturers:
 - a. Hammond Valve; Model CS1550: www.hammondvalve.com.
 - b. Stockham; Model 1822V: www.stockham.com.
 - c. Substitutions: See Section 01 60 00 - Product Requirements.
 - 2. 4 Inches and Larger:
 - a. Cast steel body, steel trim, bolted bonnet, rising stem, hand-wheel, outside screw and yoke, solid wedge disc with bronze seat rings, flanged ends.

PART 3 EXECUTION

3.01 PREPARATION

- A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
- B. Remove scale and dirt on inside and outside before assembly.
- C. Prepare piping connections to equipment with flanges or unions.
- D. Keep open ends of pipe free from scale and dirt. Whenever work is suspended during construction protect open ends with temporary plugs or caps.
- E. After completion, fill, clean, and treat systems. Refer to Section 23 25 00.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Route piping in orderly manner, plumb and parallel to building structure, and maintain gradient.
- C. Install piping to conserve building space and avoid interference with use of space.
- D. Sleeve pipe passing through partitions, walls, and floors.
- E. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.
- F. Pipe Hangers and Supports:
 - 1. Install in accordance with ASME B31.9.
 - 2. Support horizontal piping as indicated.
 - 3. Place hangers within 12 inches of each horizontal elbow.
 - 4. Use hangers with 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
 - 5. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.
- G. Provide clearance for installation of insulation and access to valves and fittings.
- H. Slope steam piping one inch in 40 feet in direction of flow. Use eccentric reducers to maintain bottom of pipe level.
- I. Slope steam condensate piping one inch in 40 feet. Provide drip trap assembly at low points and before control valves. Run condensate lines from trap to nearest condensate receiver. Provide loop vents over trapped sections.
- J. Prepare unfinished pipe, fittings, supports, and accessories ready for finish painting. Refer to Section 09 91 23.
- K. Install valves with stems upright or horizontal, not inverted.

3.03 SCHEDULES

- A. Hanger Spacing for Steel Steam Piping.
 - 1. 1/2 inch: Maximum span, 8 feet; minimum rod size, 1/4 inch.
 - 2. 3/4 inch and 1 inch: Maximum span, 9 feet; minimum rod size, 1/4 inch.
 - 3. 1-1/4 inches: Maximum span, 11 feet; minimum rod size, 3/8 inch.
 - 4. 1-1/2 inches: Maximum span, 12 feet; minimum rod size, 3/8 inch.
 - 5. 2 inches: Maximum span, 13 feet; minimum rod size, 3/8 inch.
 - 6. 2-1/2 inches: Maximum span, 14 feet; minimum rod size, 3/8 inch.
 - 7. 3 inches: Maximum span, 15 feet; minimum rod size, 3/8 inch.
- B. Hanger Spacing for Steel Steam Condensate Piping.
 - 1. 1/2 inch, 3/4 inch, and 1 inch: Maximum span, 7 feet; minimum rod size, 1/4 inch.
 - 2. 1-1/4 inches: Maximum span, 8 feet; minimum rod size, 3/8 inch.
 - 3. 1-1/2 inches: Maximum span, 9 feet; minimum rod size, 3/8 inch.
 - 4. 2 inches: Maximum span, 10 feet; minimum rod size, 3/8 inch.

END OF SECTION

STEAM AND CONDENSATE HEATING SPECIALTIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Steam traps.
- B. Steam air vents.
- C. Pressure reducing valves.
- D. Steam safety valves.

1.02 RELATED REQUIREMENTS

- A. Section 23 07 19 - HVAC Piping Insulation.
- B. Section 23 22 13 - Steam and Condensate Heating Piping.
- C. Section 23 52 23 - Cast-Iron Boilers.

1.03 REFERENCE STANDARDS

- A. ASME B31.9 - Building Services Piping; 2014.
- B. ASTM A126 - Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings; 2004 (Reapproved 2014).
- C. ASTM A216/A216M - Standard Specification for Steel Castings, Carbon, Suitable for Fusion Welding, for High-Temperature Service; 2018.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data:
 - 1. Provide for manufactured products and assemblies required for this project.
 - 2. Include product description, model, dimensions, component sizes, rough-in requirements, service sizes, and finishes.
 - 3. Submit schedule indicating manufacturer, model number, size, location, rated capacity, load served, and features for each specialty.
 - 4. Include electrical characteristics and connection requirements.
- C. Manufacturer's Installation Instructions: Indicate application, selection, and hookup configuration. Include pipe and accessory elevations.
- D. Operation and Maintenance Data: Include installation instructions, servicing requirements, and recommended spare parts lists.

1.05 QUALITY ASSURANCE

- A. Perform Work in accordance with State of Washington standard for installation of boilers and pressure vessels.
- B. Manufacturer Qualifications: Company specializing in manufacturing the types of products specified in this section, with minimum three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.
- B. Provide temporary protective coating on cast iron and steel valves.
- C. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
- D. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

PART 2 PRODUCTS

2.01 STEAM TRAPS

- A. Steam Trap Applications:

1. Use Float and Thermostatic Traps for:
 - a. Unit heaters.
 - b. Converters.
 - c. Heating coils.
 - d. Steam separators.
 - e. Flash tanks.
 - f. Steam jacketed equipment.
 - g. Direct steam injected equipment.
 - h. Deaerators.
 - i. Process equipment.
 - j. Main headers.
 - k. Branch lines.
- B. Steam Trap Performance:
 1. Select to handle minimum of two times maximum condensate load of apparatus served.
- C. Float and Thermostatic Traps: ASTM A126 cast iron or semi-steel body and bolted cover, stainless steel or bronze bellows type air vent, stainless steel or copper float, stainless steel lever and valve assembly.
 1. Rating: 15 psi WSP.
 2. Features: Access to internal parts without disturbing piping, bottom drain plug.
 3. Accessories: Gauge glass with shut-off cocks.

2.02 STEAM AIR VENTS

- A. Manufacturers:
 1. Armstrong International, Inc.; Model _____: www.armstronginternational.com.
 2. Bell and Gossett, a xylem brand; _____: www.bellgossett.com/#sle.
 3. Spirax-Sarco; _____: www.spiraxsarco.com/us/#sle.
 4. Substitutions: See Section 01 60 00 - Product Requirements.
- B. 125 psi WSP: Balanced pressure type; cast brass body and cover; access to internal parts without disturbing piping; stainless steel bellows, stainless steel valve and seat.

2.03 PRESSURE REDUCING VALVES

- A. Manufacturers:
 1. Armstrong International, Inc; GP 2000 PRV: www.armstronginternational.com/#sle.
 2. McDonnell & Miller, a xylem brand; _____: www.mcdonnellmiller.com/#sle.
 3. Spirax-Sarco; _____: www.spiraxsarco.com/us/#sle.
 4. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Bronze or cast iron body, stainless or chrome steel valve spring, stem, and trim, phosphor bronze diaphragm, direct acting, threaded up to 2 inches, flanged over 2 inches.

2.04 SAFETY RELIEF VALVES

- A. Manufacturers:
 1. Armstrong International, Inc.: www.armstronginternational.com.
 2. ITT McDonnell & Miller, a xylem brand; _____: www.mcdonnellmiller.com/#sle.
 3. Spirax-Sarco; _____: www.spiraxsarco.com/us/#sle.
 4. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Valve: Bronze body, stainless steel valve spring, stem, and trim, direct pressure actuated, capacities ASME certified and labelled.
- C. Accessories: Drip pan elbow.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install steam and steam condensate piping and specialties in accordance with ASME B31.9.
- B. Install specialties in accordance with manufacturer's instructions.

- C. Steam Traps:
 - 1. Provide minimum 3/4 inch size on steam mains and branches.
 - 2. Install with union or flanged connections at both ends.
 - 3. Provide gate valve and strainer at inlet, and gate valve and check valve at discharge.
 - 4. Provide minimum 10 inch long, line size dirt pocket between apparatus and trap.
- D. Remove thermostatic elements from steam traps during temporary and trial usage, and until system has been operated and dirt pockets cleaned of sediment and scale.
- E. Provide pressure reducing stations with pressure reducing valve, valved bypass, strainer and pressure gauge on upstream side, relief valve and pressure gauge on downstream side of pressure reducing valve.
 - 1. Pressure reducing station shall be one or two stages as required, to produce flat reduced pressure curve over range of capacity.
 - 2. Locate pilot operator control minimum 6 feet downstream of valve.
- F. Rate relief valves for pressure upstream of pressure reducing station, for full operating capacity. Set relief at maximum 20 percent above reduced pressure.
- G. When several relief valve vents are connected to a common header, header cross section area shall equal sum of individual vent outlet areas.

END OF SECTION

HVAC WATER TREATMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Materials.
 - 1. System cleaner.
 - 2. Closed system treatment (water).
 - 3. Steam system treatment.
 - 4. Condenser water system treatment (cooling towers).
 - 5. Open system treatment (humidifiers, air washers, evaporative condensers, small cooling towers, liquid coolers).
- B. By-pass (pot) feeder.
- C. Drip feeder.
- D. Solution metering pump.
- E. Solution tanks.
- F. Agitator.
- G. Liquid level switch.
- H. Conductivity controller.
- I. Water meter.
- J. Solenoid valves.
- K. Timers.
- L. Water softeners.
- M. Test equipment.
- N. Side-stream filtration equipment.
- O. Cleaning of piping systems.
- P. Chemical feeder equipment.
- Q. Chemical treatment.

1.02 RELATED REQUIREMENTS

- A. Section 23 22 13 - Steam and Condensate Heating Piping.

1.03 REFERENCE STANDARDS

- A. FM (AG) - FM Approval Guide; current edition.
- B. ITS (DIR) - Directory of Listed Products; current edition.
- C. UL (DIR) - Online Certifications Directory; Current Edition.

1.04 SUBMITTALS

- A. Product Data: Provide chemical treatment materials, chemicals, and equipment including electrical characteristics and connection requirements.
- B. Shop Drawings: Indicate system schematic, equipment locations, and controls schematics, electrical characteristics and connection requirements.
- C. Manufacturer's Installation Instructions: Indicate placement of equipment in systems, piping configuration, and connection requirements.
- D. Manufacturer's Field Reports: Indicate start-up of treatment systems when completed and operating properly. Indicate analysis of system water after cleaning and after treatment.
- E. Operation and Maintenance Data: Include data on chemical feed pumps, agitators, and other equipment including spare parts lists, procedures, and treatment programs. Include step by step instructions on test procedures including target concentrations.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

1. Sufficient chemicals for treatment and testing during required maintenance period.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum ten years of documented experience. Company shall have local representatives with water analysis laboratories and full time service personnel.
- B. Installer Qualifications: Company specializing in performing the type of work specified in this section, with minimum five years of experience and approved by manufacturer.

1.06 REGULATORY REQUIREMENTS

- A. Conform to applicable code for addition of non-potable chemicals to building mechanical systems and to public sewage systems.
- B. Products Requiring Electrical Connection: Listed and classified by UL as suitable for the purpose specified and indicated.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. AmSolv/Division of Amrep, Inc.: www.amsolv.com.
- B. GE Water & Process Technologies: www.gewater.com/#sle.
- C. Nalco, an Ecolab Company: www.nalco.com/#sle.
- D. Culligan Water: www.culligan.com.
- E. Water Care: www.watercare.com.
- F. Wellons: www.wellonsusa.com/wwt.
- G. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 REGULATORY REQUIREMENTS

- A. Comply with applicable codes for addition of non-potable chemicals to building mechanical systems and to public sewage systems.
- B. Comply with UL (DIR) requirements.
- C. Perform work in accordance with local health department regulations.
- D. Provide certificate of compliance from Authority Having Jurisdiction indicating approval of installation.

2.03 MATERIALS

- A. Steam System Treatment:
 1. Manufacturers:
 - a. AmSolv/Division of Amrep, Inc.: www.amsolv.com.
 - b. Chemco: www.chemco.com.
 - c. Nalco, an Ecolab Company: www.nalco.com/#sle.
 - d. Substitutions: See Section 01 60 00 - Product Requirements.
 2. Sequestering agent to reduce hardness and prevent feedline congestion; phosphate.
 3. Base to provide alkalinity; hydroxide.
 4. Oxygen scavenger; sodium sulphite or hydrazine.
 5. Carbon dioxide neutralizer; volatile amines such as morpholine or cyclohexylamine.
 6. Filming amines; octadecylamine.

2.04 BY-PASS (POT) FEEDER

- A. Manufacturers:
 1. Griswold Controls: www.griswoldcontrols.com/#sle.
 2. J. L. Wingert Company: www.jlwingert.com/#sle.
 3. Neptune, a brand of the Dover Company: www.neptune1.com/#sle.
 4. Wessels.
 5. Substitutions: See Section 01 60 00 - Product Requirements.

- B. 2 quart quick opening cap for working pressure of 175 psi.

2.05 DRIP FEEDER

- A. Plastic reservoir with coil of capillary tubing with probe, weight, charging syringe, and clip.

2.06 SOLUTION METERING PUMP

- A. Manufacturers:
 - 1. J. L. Wingert Company: www.jlwingert.com/#sle.
 - 2. Dover Corporation: www.neptune1.com/#sle.
 - 3. Pulsafeeder Engineered Products: www.pulsa.com/#sle.
 - 4. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Positive displacement, diaphragm pump with adjustable flow rate, thermoplastic construction, continuous-duty fully enclosed electric motor and drive, and built-in relief valve.
- C. Electrical Characteristics:
 - 1. Cord and Plug: Provide unit with 6 foot cord and plug for connection to electric wiring system including grounding connector.

2.07 SOLUTION TANKS

- A. 30 gallon capacity, polyethylene, self-supporting, 5 gallon graduated markings; molded fiberglass cover with recess for mounting pump, agitator, and liquid level switch.

2.08 AGITATOR

- A. Totally enclosed electric motor, stainless steel clamp and motor mount, 1/2 inch diameter coated Type 316 stainless steel propeller.
- B. Electrical Characteristics:
 - 1. Cord and Plug: Provide unit with 6 foot cord and plug for connection to electric wiring system including grounding connector.

2.09 LIQUID LEVEL SWITCH

- A. Polypropylene housing with integrally mounted PVC air trap, receptacles for connection to metering pump, and low level alarm.
- B. Electrical Characteristics:
 - 1. Refer to Division 26.

2.10 CONDUCTIVITY CONTROLLER

- A. Manufacturers:
 - 1. Envirocare International: www.envirocare.com/#sle.
 - 2. JENCO Instruments Incorporated: www.jencoi.com/#sle.
 - 3. Omega Engineering, Inc: www.omega.com/#sle.
 - 4. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Packaged monitor controller with solid state circuiting, five percent accuracy, linear dial adjustment, built-in calibration switch, on-off switch and light, control function light, output to control circuit and recorder.
- C. Electrical Characteristics:

2.11 SOLENOID VALVES

- A. Forged brass body globe pattern, normally open or closed as required, general purpose solenoid enclosure, and continuous duty coil.
- B. Electrical Characteristics:
 - 1. Refer to Division 26.

2.12 TIMERS

- A. Electronic timers, infinitely adjustable over full range, 150 second and five minute range, mounted together in cabinet with hands-off-automatic switches and status lights.
- B. Electrical Characteristics:

1. Refer to Division 26.

2.13 WATER SOFTENERS

- A. Manufacturers:
 1. Culligan International Company: www.culligan.com/#sle.
 2. Sterling Water Treatment: www.sterlingwatertreatment.com/#sle.
 3. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Performance:
 1. Refer to equipment schedules on drawings.
 2. Electrical Characteristics: Refer to Division 26.
- C. Softener Tank: Glass fiber reinforced plastic tank. Capacity as recommended by vendor.
- D. Brine Tank: Glass fiber reinforced plastic tank. Capacity as recommended by vendor.
- E. Control: Brass control valve cycled to regenerate from one to twelve day period.

2.14 TEST EQUIPMENT

- A. Provide white enamel test cabinet with local and fluorescent light, capable of accommodating 4 - 10 ml zeroing titrating burettes and associated reagents.
- B. Provide the following test kits:
 1. Alkalinity titration test kit.
 2. Chloride titration test kit.
 3. Sulphite titration test kit.
 4. Total hardness titration test kit.
 5. Low phosphate test kit.
 6. Conductivity bridge, range 0 - 10,000 micro-ohms.
 7. Creosol red pH slide complete with reagent.
 8. Portable electronic conductivity meter.
 9. High nitrite test kit.

PART 3 EXECUTION

3.01 PREPARATION

- A. Systems shall be operational, filled, started, and vented prior to cleaning. Use water meter to record capacity in each system.
- B. Place terminal control valves in open position during cleaning.
- C. Verify that electric power is available and of the correct characteristics.

3.02 CLEANING SEQUENCE

- A. Concentration:
 1. As recommended by manufacturer.
 2. Fill steam boilers only with cleaner and water.
- B. Steam Systems:
 1. Apply heat, slowly raising boiler temperature to 160 degrees F and maintain for 12 hours minimum.
 2. Cool, then drain as quickly as possible.
 3. Refill with clean water, drain, refill and check for sludge.
 4. Repeat until system is free of sludge.
 5. Apply heat to produce steam for piping system and maintain for 8 hours minimum. Bypass traps and waste condensate.
- C. Use neutralizer agents on recommendation of system cleaner supplier.
- D. Remove, clean, and replace strainer screens.
- E. Inspect, remove sludge, and flush low points with clean water after cleaning process is completed. Include disassembly of components as required.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

3.04 CLOSED SYSTEM TREATMENT

- A. Provide one bypass feeder on each system. Install isolating and drain valves and necessary piping. Install around balancing valve downstream of circulating pumps unless indicated otherwise.
- B. Introduce closed system treatment through bypass feeder when required or indicated by test.

3.05 STEAM SYSTEM TREATMENT

- A. Provide bypass feeder on feed water line to each boiler.
- B. Provide solution pumps to feed sequestering agent and base from solution tank into feed water line close to boiler. Provide minimum of one pump per boiler if treatment materials can be mixed. Provide agitator as required.
- C. Provide solution pump to feed oxygen scavenger from solution tank into feed water tank. Provide pumps required to treat feed water. Provide agitator as required.
- D. Provide solution pump to feed carbon dioxide neutralizer or filming amine from solution tank into steam header. Provide agitator as required.
- E. Activate solution pumps when feed water pumps are running.
- F. Provide conductivity controller to sample boiler water and operate solenoid blowdown valve. Provide timer activated sampling with solenoid valve, balancing valve, and conductivity probe. Pipe to blowdown tank.
- G. Provide liquid level switch in each solution tank to deactivate solution pump and agitator and signal mechanical alarm system; refer to Section 23 09 13.

3.06 STEAM BOILERS

- A. General Requirements: This section will outline the steam boilers water treatment requirements. An automated chemical feed and blowdown will be provided to inhibit scale formation and corrosion in both the boilers and the condensate return lines.
- B. The feed system is to consist of an impulse water meter installation on the make up to the Condensate Receiver / DA , in a 3 valve by pass arrangement. This will generate pulses based on water use, which will be transferred to a controller. The controller will be capable of accepting pulses. Each pulse will trigger an adjustable time cycle. The time cycle will run the chemical feed pump/pumps. Blowdown will be sensed by use of a conductivity meter and motorized blowdown valve. Installation of all equipment to be done by the mechanical contractor. Mechanical to interface with electrical contractor where necessary.
- C. The impulse water meter is to be an electrical contact head water meter. The meter is to be sized to serve the boilers at 110% make up at full load. The meter is to be Seaflow MR Model, or equal, and sized to make up water line. Installed in 3 valve by pass.
- D. The controller will capable of monitoring each boiler for conductivity and programmable feed time for each chemical necessary.
- E. The water treatment vendor is to supply an equivalent number of chemical pumps to the number of boilers plus one for the Condensate Receiver / DA. One chemical metering pump discharge will be plumbed to each boiler as per the instructions of the water treatment vendor. The pumps will be plugged into a manual off on auto switch, which is wired through the feed water pumps. (Example: When boiler #1 feedwater pump runs, off/on/auto switch in auto mode runs chemical pump #1. On mode will be manual feed.) One chemical feed pump will be connected to the controller. The discharge of this chemical pump will be plumbed to feed the Condensate Receiver / DA. Install to be done as to the water treatment vendors and manufacturer's instructions.
- F. An alternate system can be supplied consisting of a 50-gallon poly tank and metal stand with a flooded suction metering pump for each boiler. This system will require LMI or Milton Roy high

pressure metering pumps matched to boiler requirements. One tank, stand, agitator, and pump package for each boiler will be supplied per boiler and one additional for the receiver/DA. One tank package will be supplied with pumps and agitators for each boiler, the DA receiver, and the steam header. The impulse water meter will activate relays for each chemical pump and adequate timers will be built into the controller to handle number of pumps. Controller type, Megatron Advantage controllers.

- G. The chemical used shall be a concentrated blend of scale inhibitors, sludge dispersants, corrosion inhibitors, oxygen scavengers and neutralizing amines. The chemicals will be pumped direct from a shipping container and no handling will be necessary.
- H. Appropriate test kits and apparatus will be supplied with training for the owners representative including P Alkalinity, Conductivity, Sulfite.
- I. Automated blowdown controllers with motorized valve packages shall be provided for each steam boiler. The blowdown controller shall monitor Total Dissolved Solids and signal the motorized surface blowdown valve based on set point. The calibration and start up to be done by water treatment vendor. The blowdown controller is to be timed method and adjustable. The controller is to be in a NEMA 12 weatherproof container. The controller is to have a digital display, calibration adjustment, set point adjustment test mode, and off/on switch. Approved LMI, Lakewood, Advantage, or Pulsafeeder of Advantage Controls. The valve package is to be motorized ball valve and sized by water treatment vendor. Valve package is to be pressure rated no less than 50 lbs., above the maximum pressure rating for the boilers. The valve package is to be furnished with metering orifices and sized by the water treatment vendor. Installation to be done by mechanical contractor. Installation to be done to manufacturer's instructions.
- J. Stainless injection corporation stops or quills for each chemical will be supplied.
- K. The chemicals required for the steam boiler treatment will be supplied in quantity to provide for warrantee period including normal service.
- L. The water treatment vendor is to perform an analysis of the make up water to the boilers. If the make up water to the boilers contains more than 40 ppm Total Hardness, a dual tank, alternating softener is to be supplied. The water treatment vendor is to calculate the boilers make up water demand and size and furnish the correct softener model. Approved manufacturers: Culligan, Lindsay Echo, Kisco Siemens, GE, or equal.

3.07 CLOSEOUT ACTIVITIES

- A. Training: Train Owner's personnel on operation and maintenance of chemical treatment system.
 - 1. Provide minimum of two hours of instruction for two people.
 - 2. Have operation and maintenance data prepared and available for review during training.
 - 3. Conduct training using actual equipment after treated system has been put into full operation.

3.08 MAINTENANCE

- A. Provide a separate maintenance contract for specified maintenance service.
- B. Perform maintenance work using competent and qualified personnel under the supervision of the equipment manufacturer or original installer.
- C. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of Owner.
- D. Provide service and maintenance of treatment systems for one year from Date of Substantial Completion.
- E. Provide quarterly technical service visits to perform field inspections and make water analysis on-site. Detail findings in writing on proper practices, chemical treating requirements, and corrective actions needed. Submit two copies of field service report after each visit.
- F. Provide laboratory and technical assistance services during this maintenance period.

- G. Provide on-site inspections of equipment during scheduled or emergency shutdown to properly evaluate success of water treatment program, and make recommendations in writing based upon these inspections.

END OF SECTION

BREECHINGS, CHIMNEYS, AND STACKS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Double wall metal stacks.
- B. Guying and bracing materials.

1.02 RELATED REQUIREMENTS

- A. Section 23 52 23 - Cast-Iron Boilers: Boilers using breeching, chimneys, and stacks.

1.03 REFERENCE STANDARDS

- A. NFPA 54 - National Fuel Gas Code; 2018.
- B. NFPA 211 - Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances; 2016.
- C. SMACNA (DCS) - HVAC Duct Construction Standards Metal and Flexible; 2005 (Revised 2009).
- D. UL 1738 - Standard for fuel gas venting system.

1.04 DEFINITIONS

- A. Breeching: Vent connector.
- B. Chimney: Primarily vertical shaft enclosing at least one vent for conducting flue gases outdoors.
- C. Smoke Pipe: Round, single wall vent connector.
- D. Vent: That portion of a venting system designed to convey flue gases directly outdoors from a vent connector or from an appliance when a vent connector is not used.
- E. Vent Connector: That part of a venting system that conducts the flue gases from the flue collar of an appliance to a chimney or vent, and may include a draft control device.

1.05 DESIGN REQUIREMENTS

- A. Factory built vents and chimneys used for venting natural draft appliances to comply with NFPA 211 and be UL listed and labeled.
- B. Design refractory lined metal stacks for wind loading of 110 mph and seismic loads for Zone 3.

1.06 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data indicating factory built chimneys, including dimensional details of components and flue caps, dimensions and weights, electrical characteristics and connection requirements.
- C. Shop Drawings: Indicate general construction, dimensions, weights, support and layout of breechings. Submit layout drawings indicating plan view and elevations where factory built units are used.
- D. Manufacturer's Instructions: Include installation instructions, and indicate assembly, support details, and connection requirements.

1.07 QUALITY ASSURANCE

- A. Designer Qualifications: Design stacks under direct supervision of a Professional Structural Engineer experienced in design of the type of work specified and licensed in Washington.
- B. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience.
- C. Installer Qualifications: Company specializing in performing the type of work specified in this section with minimum 5 years documented experience, and approved by manufacturer.

1.08 REGULATORY REQUIREMENTS

- A. Conform to applicable code for installation of natural gas burning appliances and equipment.

PART 2 PRODUCTS

2.01 DOUBLE WALL METAL STACKS (NON-CONDENSING, POSITIVE PRESSURE)

- A. Manufacturers:
 - 1. Selkirk Metalbestos; Model IPS: www.selkirkcorp.com.
 - 2. Metal-Fab, Inc.; Model IPIC: www.mtlfab.com.
 - 3. AMPCO; Model IVSI-II: www.ampcostacks.com.
 - 4. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Provide double wall metal stacks, tested to UL 103 and UL listed, for use with building heating equipment, in compliance with NFPA 211.
- C. Fabricate with 1 inch minimum air space between walls. Construct inner jacket of 20 gage ASTM A666, Type 304 stainless steel. Construct outer jacket of aluminum coated steel 24 gage for sizes 10 inches to 24 inches and 20 gage for sizes 28 inches to 48 inches.
- D. Accessories, UL labeled:
 - 1. Ventilated Roof Thimble: Consists of roof penetration, vent flashing with spacers and storm collar.
 - 2. Stack Cap: Consists of conical rainshield with inverted cone for partial rain protection with low flow resistance.

2.02 GUYING AND BRACING MATERIALS

- A. Cable: Three or Four galvanized, stranded wires of the following thickness:
 - 1. Minimized Size: 1/4 inch in diameter.
 - 2. For ID Sizes 4 to 15 Inches: 5/16 inch.
 - 3. For ID Sizes 18 to 24 Inches: 3/8 inch.
 - 4. For ID Sizes 27 to 30 Inches: 7/16 inch.
 - 5. For ID Sizes 33 to 36 Inches: 1/2 inch.
 - 6. For ID Sizes 39 to 48 Inches: 9/16 inch.
 - 7. For ID Sizes 51 to 60 Inches: 5/8 inch.
- B. Pipe: Two or Three galvanized steel, NPS 1-1/4.
- C. Angle Iron: Two or Three galvanized steel, 2 by 2 by 0.25 inch.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install in accordance with NFPA 54.
- C. Install breechings with minimum of joints. Align accurately at connections, with internal surfaces smooth.
- D. Support breechings from building structure, rigidly with suitable ties, braces, hangers and anchors to hold to shape and prevent buckling. Support vertical breechings, chimneys, and stacks at 12 foot spacing, to adjacent structural surfaces, or at floor penetrations. Refer to SMACNA (DCS) for equivalent duct support configuration and size.
- E. Pitch breechings with positive slope up from fuel-fired equipment to chimney or stack.
- F. Clean breechings, chimneys, and stacks during installation, removing dust and debris.
- G. At appliances, provide slip joints permitting removal of appliances without removal or dismantling of breechings, breeching insulation, chimneys, or stacks.

END OF SECTION

CAST-IRON BOILERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Boilers.
- B. Controls and boiler trim.
- C. Steam and condensate connections.
- D. Fuel connection.
- E. Collector, draft hood, and chimney connection.

1.02 RELATED REQUIREMENTS

- A. Section 23 22 13 - Steam and Condensate Heating Piping.
- B. Section 23 51 00 - Breechings, Chimneys, and Stacks.

1.03 REFERENCE STANDARDS

- A. ASME BPVC-IV - Boiler and Pressure Vessel Code, Section IV - Rules for Construction of Heating Boilers; 2017.
- B. ASME BPVC-VIII-1 - Boiler and Pressure Vessel Code, Section VIII, Division 1 - Rules for Construction of Pressure Vessels; 2017.
- C. NFPA 54 - National Fuel Gas Code; 2018.
- D. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data indicating general layout, dimensions, and size and location of water, gas, and vent connections, and electrical characteristics and connection requirements.
- C. Manufacturer's Instructions: Submit manufacturer's complete installation instructions.
- D. Manufacturer's Field Reports: Indicate condition of equipment after start-up including control settings and performance chart of control system.
- E. Operation and Maintenance Data: Include manufacturer's descriptive literature, operating instructions, cleaning procedures, replacement parts list, and maintenance and repair data.
- F. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

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

1.06 REGULATORY REQUIREMENTS

- A. Conform to NFPA 70 code for internal wiring of factory wired equipment.
- B. Conform to ASME BPVC-IV and ASME BPVC-VIII-1 for boiler construction.
- C. Units: UL labeled and listed in UL (GOED).
- D. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Protect units before, during, and after installation from damage to casing by leaving factory shipping packaging in place until immediately prior to final acceptance.

1.08 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.

- B. Provide a ten year pro-rated warranty for cast iron boiler sections.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Smith Cast Iron Boilers/Mestek, Inc; G19HE-58.
- B. Burnham; V908a.
- C. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 MANUFACTURED UNITS

- A. Steam Boilers:
 - 1. Cast iron, pressurized, wet base sectional boiler for low pressure (15 PSI) steam heating systems using natural gas. NOTE: Supplied knocked down for field assembly by contractor.
- B. Capacity:
 - 1. 32.5 BHP.
 - 2. Gross Output: 1,087 MBH.
 - 3. Burner Capacity: 1,342 MBH.
- C. Efficiency:
 - 1. Annual Fuel Utilization Efficiency: 0.80.

2.03 STEAM BOILER TRIM

- A. ASME rated pressure relief valve, 15 psig.
- B. Steam pressure gauge, 0 to 30 psig.
- C. Water column gauge glass set with cocks.
- D. Low water cut-off to prevent burner operation when boiler water drops below safe level.
- E. Operating pressure controller for burner to maintain steam pressure setting.
- F. High limit pressure control with manual reset for burner to prevent steam pressure from exceeding system pressure.
- G. ASME CSD-1 compliant.
- H. Gauge glass & fittings.
- I. Insulated metal jacket.
- J. Cast iron smoke hood with integral damper.
- K. Burner mounting plate with insulation block.
- L. Front & rear observation ports.
- M. Steel angle floor rails for ease of assembly.
- N. Fiber rope flue gas seal between sections.
- O. High temperature hydronic port seals.
- P. Flame retention, forced draft burner.
- Q. Flue brush & handle.

2.04 FUEL BURNING SYSTEM

- A. Burner Operation: On-off with low fire position for ignition.
- B. Gas Burner: Forced draft type for natural gas adjustable combustion air supply, pressure regulator, gas valves, manual shut-off, intermittent spark or glow coil ignition, flame sensing device, and automatic 100 percent shut-off. Honeywell or Power Flame.
- C. Gas Burner Safety Controls: Energize ignition, limit time for establishment of flame, prevent opening of gas valve until pilot flame is proven, stop gas flow on ignition failure, energize blower motor, and after air flow proven and slight delay, allow gas valve to open.

- D. Controls: Pre-wired, factory assembled electronic controls in control cabinet with flame scanner or detector, programming control, relays, and switches. Provide pre-purge and post-purge ignition and shut-down of burner in event of ignition pilot and main flame failure with manual reset.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install boiler on concrete housekeeping base, sized minimum 4 inches larger than boiler base.
- C. Provide connection of natural gas service in accordance with requirements of NFPA 54 and applicable codes.
- D. Provide piping connections and accessories as indicated; refer to Section 23 21 14.
- E. Pipe relief valves to nearest floor drain.
- F. Provide for connection to electrical service.

3.02 SYSTEM STARTUP

- A. Provide the services of manufacturer's field representative for starting and testing unit.

3.03 CLOSEOUT ACTIVITIES

- A. Train operating personnel in operation and maintenance of units.
- B. Provide the services of the manufacturer's field representative to conduct training.

END OF SECTION

HEAT EXCHANGERS FOR HVAC

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shell and tube type heat exchangers.
- B. Accessories and trim.

1.02 RELATED REQUIREMENTS

- A. Section 23 21 13 - Hydronic Piping.
- B. Section 23 21 14 - Hydronic Specialties.
- C. Section 23 22 13 - Steam and Condensate Heating Piping.
- D. Section 23 22 14 - Steam and Condensate Heating Specialties.
- E. Section 25 35 19 - Integrated Automation Control Valves.

1.03 REFERENCE STANDARDS

- A. ASME BPVC-VIII-1 - Boiler and Pressure Vessel Code, Section VIII, Division 1 - Rules for Construction of Pressure Vessels; 2017.

1.04 SUBMITTALS

- A. Product Data: Provide data with dimensions, locations, and size of tappings and performance data.
- B. Shop Drawings: Indicate dimensions, locations, and size of tappings and performance data.
 - 1. Design Data: Indicate in sufficient detail to verify that heat exchangers meet or exceed specified requirements.
 - 2. Test Reports: Indicate tube bundle pressure tests.
- C. Manufacturer's Instructions: Indicate installation and support requirements.
- D. Operation and Maintenance Data: Include start up and shut down instructions, assembly drawings, and spare parts lists.
- E. Warranty: Submit manufacturer's warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.05 REGULATORY REQUIREMENTS

- A. Conform to ASME (BPV VIII, 1) - Boilers and Pressure Vessels Code for manufacture of tubular heat exchangers and heat exchanger shells.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect internals from entry of foreign material by temporary caps on flanged openings.

1.07 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Provide five year manufacturer warranty.

PART 2 PRODUCTS

2.01 SHELL AND TUBE TYPE HEAT EXCHANGER

- A. Manufacturers:
 - 1. Bell & Gossett, a xylem brand: www.bellgossett.com/#sle.
 - 2. Taco; E08210-S.
 - 3. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Heat Transfer Configuration: Heating fluid in shell and heated fluid within tubes.
- C. Type: Steam to liquid, two-pass, 8 inch flanged straight tube path assembly.
- D. Comply with ASME BPVC-VIII-1 for manufacture of tubular heat exchangers and heat exchanger shells.

- E. Maximum Service Temperature: 375 degree F on shell and tube sides.
- F. Tubes: U-tube type with 3/4 inch OD minimum seamless copper tubes suitable for 125 psi working pressure.
- G. Shell: Steel pipe with threaded or flanged piping connections and necessary tappings, steel saddle and attaching U-bolts, prime coated.
- H. Heads: Cast iron with Steel tube sheets, threaded or flanged for piping connections.
- I. Fouling Factor: 0.0005 minimum.
- J. Accessories:
 - 1. Provide pneumatic control valve.
 - 2. Provide inlet/outlet isolation valves.
 - 3. Provide inlet/outlet thermometers with thermowells.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install to permit removal of tube bundle with minimum disturbance to installed equipment and piping.
- C. Support heat exchangers from structure.
- D. Pitch shell to completely drain condensate.
- E. Pipe relief valves to nearest floor drain.
- F. Pipe drain valves to nearest floor drain.

3.02 STEAM TO WATER HEAT EXCHANGER TRIM

- A. Shell: Pressure gauge tapping with pigtail siphon, vacuum breaker.
- B. Water Inlet: Thermometer well, pressure gauge tapping, valved drain.
- C. Water Outlet: Thermometer well for temperature regulator sensor, ASME rated pressure and temperature relief valve, thermometer well, pressure gauge tapping.

END OF SECTION