



PUBLIC IMPROVEMENT PROJECT

INVITATION TO BID

Solicitation No: 20-0008

Hiteon HVAC and Controls Upgrades

ITB Closing (Due Date & Time):
November 24, 2020 at 2:00 PM Pacific Time

Issued by:
Beaverton School District 48J
16550 SW Merlo Road
Beaverton, Oregon 97003
October 19, 2020

**PUBLIC IMPROVEMENT
INVITATION TO BID**

Solicitation No: ITB 20-0008

Summary

The purpose of this Invitation to Bid (Solicitation) is to obtain competitive Bids from qualified General Contractors (Bidder) interested in the provision of Hiteon HVAC and Controls Upgrades for the Beaverton School District.

This is a public works project subject to ORS 279C.800 to 279C.870.

A MANDATORY pre-Bid conference will be held on October 28, 2020 at 2:00 PM at 13800 SW Brockman Rd, Beaverton, OR 97008.

Bidders must submit their Bid pursuant to the provisions of this Solicitation to contracts@beaverton.k12.or.us, **PRIOR** to the Closing:

**SOLICITATION CLOSING: November 24, 2020 at 2:00 PM Pacific Time
LATE BIDS WILL NOT BE ACCEPTED**

Timely submitted Bids will be opened in public and read aloud immediately after Closing at the below conference line:

+1(503)356.4400

Participant code: 41605148

Bidders must submit a **First-Tier Subcontractor Disclosure Form** *EITHER* with the emailed Bid submission *OR* by email to contracts@beaverton.k12.or.us no later than:

DISCLOSURE DEADLINE: November 24, 2020 at 4:00 PM Pacific Time

Prospective Bidders must register with ORPIN – <http://orpin.oregon.gov/> to obtain the Solicitation documents and plan sets.

Bidders must familiarize themselves with the entire Solicitation.

All questions and comments about this solicitation must be directed ONLY IN WRITING to:
contracts@beaverton.k12.or.us

THE DISTRICT MAY REJECT ANY BID NOT IN COMPLIANCE WITH ALL PRESCRIBED REQUIREMENTS.

SECTION I - INTRODUCTION

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1. INTRODUCTION:

This Solicitation is issued pursuant to ORS 279A, ORS 279C and the Oregon Attorney General Model Rules Divisions 46 and 49.

2. DEFINITIONS:

The term "District" or "Owner" throughout this document means the Beaverton School District. The term "Bidder" means the person or firm that submits a Bid in response to this Solicitation. The term "Bid" or "Offer" means a written response to provide services in response to this Solicitation. The term "Contractor" or "Supplier" means the Bidder awarded a contract as a result of this Solicitation.

3. SOLICITATION REVIEW:

Bidders must carefully review the Solicitation documents and are responsible for knowing and understanding all terms and conditions. Unless defects, ambiguities, omissions, or errors are brought to the District's attention by protest pursuant to REQUEST FOR CLARIFICATION OR CHANGE; SOLICITATION PROTESTS (Section III, Paragraph 5), protests or appeals based on such defects, ambiguities, omissions or errors received after issuance of the Notice of Intent to Award may not be favorably considered.

4. BACKGROUND:

- a. The Beaverton School District encompasses approximately 57 square miles in northwestern Oregon in Washington County. The District, located in the Portland, Oregon metro area, is the third largest School District in Oregon.
- b. The Beaverton School District has approximately 4,700 employees. The District is responsible for educating approximately 40,870 students in kindergarten through grade 12 at thirty-four (34) Elementary Schools, eight (8) Middle Schools, six (6) High Schools, five (5) Options Schools, and nineteen (19) Options Programs.

5. SCOPE OF WORK:

The Scope of this Project includes upgrading HVAC components and Direct Digital Controls (DDC) at Hiteon Elementary School. The Scope is described in more detail in the Statement of Work and in the Attachments to this ITB. The Engineer's Estimate for the project is \$350,000.00.

6. CONTRACT:

The successful Bidder, selected by the District, will receive an AIA A101 Owner Contractor Agreement with AIA A201 General Conditions. A sample is enclosed herein (see Attachments). The provisions of the sample AIA A101 Owner Contractor Agreement and AIA A201 General Conditions are in addition to the requirements set forth in this Solicitation.

- a. Bidders are advised to thoroughly review and familiarize themselves with the standard contract. Certain contract terms reflect state statute and may not be altered.
- b. The Contractor will be expected to promptly sign a contract including all standard terms and conditions contained in the sample contract.
- c. Personnel substitution – if the contractor must substitute personnel included in the original bid they must obtain written District approval of substituted personnel, prior to substitution.

7. AMENDMENTS:

The District may amend a Contract without additional competition pursuant to OAR 137-049-0910.

8. DISTRICT REPRESENTATIVE:

The District Representative for the project is Jeffrey Hamman, Senior Project Manager.

SECTION I - INTRODUCTION

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9. SOLICITATION SCHEDULE:

The milestones for the selection process are set forth below. The dates are specific and will be followed to the extent reasonably possible. The purpose of this schedule is for Bidder information only. Required dates for Contract period milestones, submittals and any other activities are provided elsewhere in this Solicitation. The District reserves the right to deviate from this schedule.

<u>Solicitation Milestone</u>	<u>Date</u>
Mandatory Pre-Bid conference	October 28 th , 2020, 2:00 PM PDT
Deadline for submitting requests for clarification, change, substitution, or solicitation protest	November 6 th , 2020 5:00 PM PST
Final Addendum (if Required) on or about	November 12 th , 2020
Bids Due	November 24 th , 2020 2:00PM PST
Notice of Intent to Award (NOI) on or about	November 25 th , 2020
Award Contract on or about	December 7 th , 2020

10. CONTACT DURING SOLICITATION:

Questions must be submitted in writing via email to contracts@beaverton.k12.or.us as indicated on the Summary page of this Solicitation. No other contact regarding this solicitation during the solicitation process is permitted. Unauthorized contact regarding this solicitation may subject the offender's Bid to rejection.

11. Additional information regarding this solicitation and certain forms for download are available on the ORPIN website: www.orpin.oregon.gov

12. COMMERCIAL ACTIVITIES TAX:

The Beaverton School District is a governmental entity and thus specifically excluded from being a subject taxpayer per the rules. Please do not include the CAT on any invoice, change order, or proposal for work with the Beaverton School District. For solicitations or bids which have the CAT included we will ignore the line of the submission, for submitted invoices we will deduct, and for any contracts we will be processing deductive contract modifications.

SECTION II – STATEMENT OF WORK

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1. **PURPOSE AND INTRODUCTION:**

This Solicitation is for retaining a general contractor (GC) to furnish, install, manage and coordinate all work as shown in the Attachments and as described herein on behalf of the Beaverton School District. The project is an HVAC and Direct Digital Controls (DDC) upgrade at Hiteon Elementary School. This project primarily converts all remaining pneumatically controlled mechanical equipment to DDC on the District's Johnson Controls network. Main components include A wing VAV boxes, AHUs, TUs, Radiators and RTUs as shown in the attached Drawings and Specifications. Site work will begin in early December 2020 and all work is to be substantially completed by February 5th, 2021 as coordinated with the District. The Project is described in summary terms below and in the attached documents.

2. **BACKGROUND AND SCHOOL DESCRIPTION:**

This project is primarily taking place within the A and C wings, Admin, Cafeteria and Gymnasium areas at Hiteon Elementary School. Hiteon was originally constructed in 1974 with several improvements over time. The school is currently comprised of 78,972 square feet of building space. This school is located at 13800 SW Brockman Street, Beaverton, OR 97005.

3. **OPERATIONAL ATTRIBUTES:**

The District requires the project to be substantially completed by the beginning of the District Hybrid learning activities, which is currently planned to start February 8, 2021. The District is currently engaged in Comprehensive Distance Learning and the building should be available for work promptly upon execution the Contract. Coordination will be required when teachers and staff return to the building. Work in any occupied spaces shall have to be pre-approved by the project team. The contractor may need to perform swing shift and weekend work to complete the Work by the substantial completion date. See the below Project Schedule for further information.

4. **GENERAL REQUIREMENTS:**

Please refer to attached plans and specifications. It is intended that the Contractor provides a complete project and coordinates work with the District, Contractors and Consultants hired by the District, and all applicable agencies having authority.

- a. Work to include supplying, storing and handling of all required materials.
- b. Work includes protection of neighboring finishes and replacement/repair of any damaged surfaces including but not limited to ceiling tiles, wall board, paint, insulation, concrete block, etc.
- c. Contractor shall provide all labor, materials, equipment, transportation, and other facilities and services as necessary and/or required to execute all of the Work.
- d. Any and all hazardous materials/abatement will be the responsibility of the General Contractor.

All work areas shall be cleaned of any construction debris on a daily basis. General Contractor is responsible for material removal and disposal. Provide dust control and HVAC protection as required to protect the rest of the school from construction debris. Upon completion of the project, the General Contractor is to provide final cleaning of all work installed, replaced or repaired including jobsite office.

SECTION II – STATEMENT OF WORK
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5. SPECIFIC REQUIREMENTS:

Reference the Attachments to this Solicitation for more Specific Requirements.

6. PROJECT SCHEDULE:

The project milestones are set forth below. The dates are approximate but will be followed to the extent reasonably possible. The purpose of this schedule is for information only.

<u>Project Milestone</u>	<u>Completion Date</u>
Project Commencement	December 14 th , 2020
Substantial Completion	February 5 th , 2021
Final Completion	February 19 th , 2021

7. BONDS AND INSURANCE:

The Contractor awarded this solicitation must, within Five (5) calendar days after receipt of the Contract for signature:

- Provide the required Performance Bond and Payment Bond;
- Provide proof that the Statutory Public Works Bond has been filed with the CCB;
- Provide Insurance Certificate(s) (summary-level insurance requirements are listed below; Exhibit E of the Sample Contract includes all requirements) and any guarantees and/or other required item(s).
- Sign the Contract issued by the District Purchasing Department.
- If these items are not received as specified then the Contract may not be executed, a Bid bond claim may be filed, and the Contract may be awarded to the next lowest Bidder.

Summary-Level Insurance Requirements* (See Exhibit E to the Attached Sample Contract for all Requirements)

Insurance Coverage Type	Occurrence/Loss	Aggregate	District as Additional Insured	Subrogation Waived	Required for Sub-Contractors ***
Employer's Liability		\$500,000		X	
Worker's Comp	Statutory Limits	Statutory Limits		X	X
Commercial General Liability	\$1,000,000	\$2,000,000	X		X
Business Automobile Liability		\$1,000,000	X		X
Professional Liability**	\$1,000,000	\$2,000,000			X
Pollution Liability Insurance	\$1,000,000	\$1,000,000			
Asbestos/hazardous materials Abatement**					X
True Umbrella Policy		\$5,000,000			
Builder's Risk	Contract Amt.	Contract Amt.			

*The Summary-Level Insurance Requirements are only intended to draw Bidders' attention to the Insurance Requirements for this Solicitation. Bidders must carefully review Exhibit E Insurance Requirements to the Sample Contract for exact and full Insurance Requirements. If there are any discrepancies between the Summary-Level Insurance Requirements and those listed under Exhibit E Insurance Requirements to the Sample Contract, Exhibit E Insurance Requirements to the Sample Contract shall govern.

**Only required if such services are included in the Contract/Sub-Contracts resulting from this Solicitation.

***The District may require Contractor to provide certificates of Sub-Contractor's insurance at any time.

Insurance Waiver Requests: Any Insurance Waiver Requests must be submitted in writing to contracts@beaverton.k12.or.us, prior to the Deadline for Questions/Change Requests/Solicitation Protests.

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8. NOTICE TO PROCEED:

- a. The Contractor must not begin work until a Notice to Proceed is issued by the District Representative.
- b. The District reserves the right to cancel the Contract at no penalty if it is in the best interest of the public to do so, if:
 - i. A protest was received that overturns the award of this Contract, or
 - ii. Funding for the project is not available.

9. ADDITIONAL REQUIREMENTS:

- a. The District has implemented the e-Builder Project Management software platform for coordination of efforts, approvals, and expedited communication. All prime project team members will be required to utilize the program. Each Contractor will be provided a seat (license) and a minimum of four (4) hours training.
- b. All persons involved in the project who will have a physical presence on site at any time during the course of the project will need to clear a background check. The basic criteria of clearance and refusal offenses will be provided by the District Project Representative. Contractors and sub-contractors must provide a report of who has cleared the background check by an approved agency.
- c. **LIQUIDATED DAMAGES:** If the Work is not Substantially Complete by the applicable required Substantial Completion date, the Contractor shall pay to the Owner liquidated damages in the amount of **\$500.00** for each and every day of delay in achieving Substantial Completion.

10. BUSINESS EQUITY:

The Bidder understands that the District maintains a goal of engaging minority, women, emerging, service-disabled veteran and socially or economically disadvantaged businesses (DMWESBSDLVBE) as service providers in delivering services necessary to implement our bond program. The District aspires to a goal of ten (10) percent DMWESBSDLVBE content, by contract value, in completing our capital bond work, and the Contractor shall expend reasonable efforts to reach this content in the total value of their contracts with the District.

11. NO WAIVER OF CONDITIONS:

Failure of the Owner to insist on strict performance will not constitute a waiver of any of the provisions of this Contract or waiver of any other default of the Contractor.

12. SAFE, INCLUSIVE, AND RESPECTFUL WORKSITE.

- a. Each of the Awarded Contractor's employees, subcontractors' employees and principals / owners involved in the Work shall be required to act in a safe, respectful, inclusive, and professional manner while performing the Work. This includes but is not limited to the Contractor taking whatever means and manner of action Contractor deems necessary to prevent, control, and enforce, any acts in violation of the forgoing standards ("Incidents"). Incidents include, but are not limited to: 1) excessive, offensive, or disruptive noise, including music; 2) the use of offensive language; 3) smoking or drinking of alcoholic beverages, or use of illegal substances on the Site; 4) physical violence; 5) riding in the passenger elevators; 6) thievery; 7) the transportation of articles or materials deemed hazardous; and 8) symbols, language, and other acts of hate, racism, sexism, discrimination, harassment, and bullying.

SECTION IV – INSTRUCTIONS TO BIDDERS:
PUBLIC IMPROVEMENT PROCUREMENT PROCESS
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1. FORMAL SELECTION PROCEDURE

The District will solicit Bids for Public Improvement Contracts by Invitation to Bid ("ITB"), except as otherwise allowed or required pursuant to ORS 279C.335 and 279A.030.

2. ELIGIBILITY TO BID

- a. **Construction Contracts.** The District will not consider a Person's Offer to do Work as a Contractor, as defined in ORS 701.005(2), unless the Person has a current, valid certificate of registration issued by the Construction Contractor's Board at the time the Offer is made.
- b. **Landscape Contracts.** The District will not consider a Person's Offer to do Work as a landscape Contractor as defined in ORS 671.520(2), unless the Person has a current, valid landscape Contractor's license issued pursuant to ORS 671.560 by the State Landscape Contractors Board at the time the Offer is made.
- c. **Non-complying Entities.** The District will deem a Bid received from a Person that fails to comply with this rule nonresponsive and will reject the Bid as stated in ORS 279C.365(1)(k), unless contrary to federal law or subject to different timing requirements set by federal funding agencies.
- d. **Asbestos Abatement Work.** The Contractor or a subcontractor under the Contract must be licensed under ORS 468A.720 for work regarding asbestos abatement projects.

3. PRE-BID CONFERENCE

- a. **Purpose.** The District may hold pre-Bid conferences with prospective Bidders prior to Closing, to explain the procurement requirements, obtain information, and/or to conduct site inspections.
- b. **Required Attendance.** The District may require attendance at the pre-Bid conference as a condition for submission of a Bid. A mandatory attendance requirement is considered to have been met if, at any time during the mandatory meeting, a representative of an offering firm is present.
- c. **Notice.** The Summary page of this solicitation indicates the pre-Bid conference scheduled date and time, and whether the pre-Bid conference is mandatory or non-mandatory.
- d. **Statements Not Binding.** Statements made by the District's representatives at the pre-Bid conference do not change the Solicitation unless the District confirms such statements by Written Addendum.

4. ADDENDA

- a. **Issuance; Receipt.** The District may change this Solicitation only by Written Addenda. A Bidder must provide written acknowledgement of receipt of all issued Addenda with their Bid on the Bidder Certification.
- b. **Notice and Distribution.** The District will publish notice of all Addenda on the ORPIN (Oregon Procurement Information Network) Website. Addenda may be downloaded from the ORPIN website. It is the Bidders' responsibility to inquire about Addenda. Bidders should frequently check the ORPIN website until Closing about any Addenda issued, i.e., at least once weekly until the week of Closing and at least once daily the week of the Closing.
- c. **Timelines; Extensions.** The District will issue Addenda within a reasonable time to allow prospective Bidders to consider the Addenda in preparing their Bid. The District may extend the Closing if the District determines prospective Bidders need additional time to review and respond to Addenda. Except to the extent required by public interest, the District will not issue Addenda less than 72 hours before the Closing unless the Addendum also extends the Closing.
- d. **Request for Change or Protest.** Unless a different deadline is set forth in the Addendum, a Bidder may submit a Written request for change or protest to the Addendum, as provided in OAR 137-049-0260, by the close of the District's next business day after issuance of the Addendum, or up to the last day allowed to submit a request for change or protest under OAR 137-049-0260, whichever date is later. The District will consider only a Bidder's request for change or protest to the Addendum; the District will not

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consider a request for change or protest to matters not added or modified by the Addendum, unless the Bidder submits the request for change or protest before the deadline for the District's receipt of request for change or protests as set forth in OAR 137-049-0260(2) and (3).

5. REQUESTS FOR CLARIFICATION CHANGE, SUBSTITUTION REQUEST, OR SOLICITATION PROTEST

- a. **Clarification.** No later than the deadline for submitting a written request for clarification, change, substitution, or solicitation protest a Bidder may request that the District clarify any provision of the Solicitation. Such requests must be received prior to the stated deadline in email at contracts@beaverton.k12.or.us. The District's clarification to a Bidder, whether orally or in Writing, does not change the Solicitation and is not binding on the District unless the District amends the Solicitation by denoting "CHANGES" on a written Addendum.
- b. **Request for Change.**
 - i. **Delivery.** No later than the deadline for submitting a written request for clarification, change, substitution, or solicitation protest, a Bidder may request in writing a change to the Solicitation Documents. A Bidder must deliver the Written request for change to the District prior to the stated deadline to contracts@beaverton.k12.or.us. (Bidder is responsible for ensuring receipt by the District.)
 - ii. **Content of Request for Written Change:**
 - A. A Bidder's Written request for change must include a statement of the requested change(s) to the Contract terms and conditions, including any Specifications, together with the reason for the requested change.
 - B. A Bidder must include the following identifying information in its request for change as follows:
 - I. "Request for Change"; and
 - II. Solicitation number.
- c. **Substitution Requests.**
 - i. **During Solicitation.** No later than the deadline for submitting a written request for clarification, change, substitution, or solicitation protest, a Bidder may request in writing a substitution to any specified products (e.g., requests for approved equal decisions, etc.). Such requests must be submitted prior to the stated deadline to contracts@beaverton.k12.or.us. (Bidder is responsible for ensuring receipt by the District.) Requests must be submitted using the Substitution Request Form if one is attached to this Solicitation.
 - ii. **During Contract.** Any Substitution Requests submitted after a Contract has been executed shall be governed by the terms and conditions of said Contract.
- d. **Protest.**
 - i. **Delivery.** No later than the deadline for submitting a written request for clarification, change, substitution, or solicitation protest, a Bidder may protest Specifications or Contract terms and conditions. A Bidder must deliver a written protest on those matters to contracts@beaverton.k12.or.us by the stated deadline.
 - ii. **Content of Protest.**
 - A. A Bidder's Written protest must include:
 - (i) A detailed statement of the legal and factual grounds for the protest;
 - (ii) A description of the resulting prejudice to the Bidder; and
 - (iii) A statement of the desired changes to the Contract terms and conditions, including any Specifications.
 - B. A Bidder must mark its protest as follows:
 - (i) "Contract Provision Protest"; and
 - (ii) Solicitation number.

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- c. **District Response.** The District is not required to consider a Bidder's request for change or protest after the deadline established for submitting such request or protest. The District will provide notice to the applicable Person if it entirely rejects a protest. If the District agrees with the Person's request or protest, in whole or in part, the District will either issue an Addendum reflecting its determination under OAR 137-49-0260 or cancel the Solicitation under OAR 137-49-0270.
- e. **Extension of Closing.** If the District receives a written request for change or protest from a Bidder in accordance with this Rule, the District may extend Closing if the District determines an extension is necessary to consider the request or protest and issue an Addendum, if any, to the Solicitation.

6. CANCELLATION OF SOLICITATION

Cancellation in the Public Interest. The District may cancel a Solicitation for good cause if the District finds that cancellation is in the public interest. The District's reasons for cancellation will be made part of the Solicitation file.

7. BID SUBMISSIONS

- a. **Offer and Acceptance.** The submitted Bid is the Bidder's offer to enter into a Contract. The Offer is always a "Firm Offer," i.e., the Bid must be held open by the Bidder for the District's acceptance for sixty (60) days. The District may elect to accept the Bid at any time during the specified period, and the District's Award of the Contract to a Bidder constitutes acceptance of the Offer and binds the Bidder to the Contract.
- b. **Responsive Bid.** The District may award a Contract only to a Responsible Bidder with a Responsive Bid.
- c. **Contingent Bids.** A Bidder must not make a Bid contingent upon the District's acceptance of any terms or conditions (including Specifications) other than those contained in this Solicitation.
- d. **Bidders Acknowledgement.** By signing and submitting a Bid, the Bidder acknowledges they have read and understand the terms and conditions contained in the Solicitation and that they accept and agree to be bound by the terms and conditions of the Solicitation.
- e. **Instructions.** A Bidder must submit and sign their Bid. A Bidder must initial any corrections or erasures to their Bid.
- f. **Forms.** Bidders must submit their Bid on the form(s) provided.
- g. **Documents.** Bidders must provide the District with all documents and descriptive literature requested.
- h. **Facsimile Submissions.** The District will not accept facsimile Bids.
- i. **Product Samples and Descriptive Literature.** The District may require product samples or descriptive literature if it is necessary or desirable to evaluate the quality, features or characteristics of the offered items. The District will dispose of product samples or return or make available for return product samples to the Bidder.
- j. **Identification of Bids.**
 - i. To ensure proper identification and handling, the Bids must be submitted to contracts@beaverton.k12.or.us and the email subject line/body text/file names should include the Bidder's name and the Solicitation number, and/or other clearly identifying information.
 - ii. The District is not responsible for Bids submitted in any manner, format or to any delivery point other than as required in the Solicitation.
- k. **Receipt of Bids.** Bidders are responsible for ensuring that the District receives their Bid at the required delivery point prior to the closing due date and time. Bids must only be emailed to contracts@beaverton.k12.or.us and received prior to the closing due date and time.
- l. Failure to submit Bids in accordance with the provisions of this Section will be grounds to declare the Bid as nonresponsive.
- m. **Certification.** Bidders must (on the Bidder Certification enclosed):
 - i. Identify whether the Bidder is or is not a "resident Bidder," as defined in ORS 279A.120(1);

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- ii. Indicate that the Bidder will comply with Prevailing Wage Laws ORS 279C.800 through ORS 279C.870 or 40 U.S.C. 3141 et seq;
- iii. Provide certification of nondiscrimination in obtaining any required subcontractors in accordance with ORS 279A.110(4); and
- iv. Provide written acknowledgment of receipt of all Addenda.

8. BID SECURITY

- a. **Security Amount.** The District requires Bid security of 5% of the Bidder's Bid, consisting of the base Bid together with all additive alternates. The Bidder must forfeit Bid security after Award if the Bidder fails to execute the Contract and promptly return it with any required Performance Bond and Payment Bond and with any required proof of insurance (see enclosed sample contract for amount requirements).
- b. **Form of Bid Security.** The District may accept only the following forms of Bid security:
 - i. A surety bond from a surety company authorized to do business in the State of Oregon;
 - ii. An irrevocable letter of credit issued by an insured institution as defined in ORS 706.008; or
 - iii. A cashier's check or Bidders certified check.
- c. **Return of Security.** The District will return or release the Bid security of all unsuccessful Bidders after a Contract has been fully executed and all required bonds and insurance have been provided, or after all Bids have been rejected.

9. PRE-CLOSING MODIFICATION OR WITHDRAWAL

- a. **Modifications.** A Bidder may modify their Bid in writing prior to the Closing. A Bidder must prepare and submit any modification to their Bid to the District in accordance with OAR 137-49-0280. Any modification must include the Bidder's statement that the modification amends and supersedes the prior Bid. The Bidder must email its modification to contracts@beaverton.k12.or.us and mark the email subject line as follows:
 - i. "Bid Modification"; and
 - ii. Solicitation Number.
- b. **Withdrawals.**
 - i. A Bidder may withdraw its Bid by Written notice submitted by email to contracts@beaverton.k12.or.us on the Bidder's letterhead, signed by an authorized representative of the Bidder. The notice must be received by the District prior to the Closing. The Bidder or authorized representative of the Bidder may also withdraw its Bid in Person prior to the Closing, upon presentation of appropriate identification and satisfactory evidence of authority;
 - ii. The District may release an unopened, withdrawn Bid to the Bidder or its authorized representative, after voiding any date and time stamp mark, if applicable;
 - iii. The Bidder must mark the Written request to withdraw a Bid as follows:
 - A. Bid Withdrawal; and
 - B. Solicitation Number.
- c. **Documentation.** The District will include all documents relating to the modification or withdrawal of Bids in the Solicitation file.

10. RECEIPT, OPENING, AND RECORDING OF BIDS; CONFIDENTIALITY OF BIDS

- a. **Receipt.** The Bidder is responsible for ensuring that the District receives its Bid at the required delivery point prior to the Closing, regardless of the method used to submit or transmit the Bid.
- b. **Opening and Recording.** The District will publicly open Bids including any modifications made to the Bid pursuant to OAR 137-49-0320. In the case of Invitations to Bid, to the extent practicable, the District will read aloud the name of each Bidder, the Bid price(s), and such other information, as the District considers appropriate. The District will open and publicly read bids over the following conference line:

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+1(503)356.4400

Participant code: 41605148

- c. **Availability.** After Opening, the District will make Bids available for public inspection. The District may withhold from disclosure those portions of a Bid that the Bidder designates as trade secrets or as confidential proprietary data in accordance with applicable law. See ORS 192.501(2); ORS 646.461 to 646.475. To the extent the District determines such designation is not in accordance with applicable law, the District will make those portions available for public inspection. The Bidder must separate information designated as confidential from other non-confidential information at the time of submitting its Bid. Prices, makes, model or catalog numbers of items offered, scheduled delivery dates, and terms of payment are not confidential, and will be publicly available regardless of a Bidder's designation to the contrary.

11. LATE BIDS, WITHDRAWALS AND MODIFICATIONS

Any Bid received after the Closing date and time is late. A Bidder's request for withdrawal or modification of a Bid received after Closing is late. The District will not consider late Bids, withdrawals or modifications except as permitted in OAR 137-049-0350 or OAR 137-049-0390.

12. MISTAKES

- a. **Generally.** To protect the integrity of the competitive Procurement process and to assure fair treatment of Bidders, the District will carefully consider whether to permit waiver, correction or withdrawal of Bids for certain mistakes.
- b. **District Treatment of Mistakes.** The District will not allow a Bidder to correct or withdraw an Offer for an error in judgment. If the District discovers certain mistakes in a Bid after Opening, but before Award of the Contract, the District may take the following action:
- i. The District may waive, or permit a Bidder to correct, a minor informality. A minor informality is a matter of form rather than substance that is evident on the face of the Bid, or an insignificant mistake that can be waived or corrected without prejudice to other Bidders. Examples of minor informalities include a Bidder's failure to:
 - A. Return the correct number of signed Bids or the correct number of other documents required by the Solicitation;
 - B. Sign the Bid in the designated block, provided a Signature appears elsewhere in the Bid, evidencing an intent to be bound; and
 - C. Acknowledge receipt of an Addendum to the Solicitation, provided that it is clear on the face of the Bid that the Bidder received the Addendum and intended to be bound by its terms; or the Addendum involved did not affect price, quality or delivery.
 - ii. The District may correct a clerical error if the error is evident on the face of the Bid or other documents submitted with the Bid, and the Bidder confirms the District's correction in Writing. A clerical error is a Bidder's error in transcribing its Bid. Examples include typographical mistakes, errors in extending unit prices, transposition errors, arithmetical errors, instances in which the intended correct unit or amount is evident by simple arithmetic calculations (for example a missing unit price may be established by dividing the total price for the units by the quantity of units for that item or a missing, or incorrect total price for an item may be established by multiplying the unit price by the quantity when those figures are available in the Bid). In the event of a discrepancy, unit prices will prevail over extended prices.
 - iii. The District may permit a Bidder to withdraw an Offer based on one or more clerical errors in the Bid only if the Bidder shows with objective proof and by clear and convincing evidence:
 - A. The nature of the error;
 - B. That the error is not a minor informality under this subsection or an error in judgment;

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- C. That the error cannot be corrected or waived under subsection 12.b.ii above;
 - D. That the Bidder acted in good faith in submitting a Bid that contained the claimed error and in claiming that the alleged error in the Bid exists;
 - E. That the Bidder acted without gross negligence in submitting a Bid that contained a claimed error;
 - F. That the Bidder will suffer substantial detriment if the District does not grant the Bidder permission to withdraw the Offer;
 - G. That the District's or the public's status has not changed so significantly that relief from the forfeiture will work a substantial hardship on the District or the public it represents; and
 - H. That the Bidder promptly gave notice of the claimed error to the District.
- iv. The criteria in subsection 12.b.iii above will determine whether the District will permit a Bidder to withdraw its Bid after Closing. These criteria also will apply to the question of whether the District will permit a Bidder to withdraw its Bid without forfeiture of its Bid bond (or other Bid security), or without liability to the District based on the difference between the amount of the Bidder's Bid and the amount of the Contract actually awarded by the District, whether by Award to the next lowest Responsive and Responsible Bidder, or by resort to a new solicitation.
- c. **Rejection for Mistakes.** The District will reject any Bid in which a mistake is evident on the face of the Bid and the intended correct Bid is not evident or cannot be substantiated from documents submitted with the Bid.
- d. **Identification of Mistakes after Award.** The procedures and criteria set forth above are Bidder's only opportunity to correct mistakes or withdraw Bids because of a mistake. Following Award, a Bidder is bound by its Bid, and may withdraw its Bid or rescind a Contract entered into pursuant to OAR 137 Division 49 only to the extent permitted by applicable law.

13. FIRST-TIER SUBCONTRACTORS; DISCLOSURE AND SUBSTITUTION

- a. **Required Disclosure.** Within two working hours after the Bid Closing, Bidders must submit the First-Tier Subcontractor Disclosure Form identifying any first-tier subcontractors (those Entities that would be contracting directly with the prime contractor) that will be furnishing labor or labor and materials on the Contract, if Awarded, whose subcontract value would be equal to or greater than:
- i. Five percent of the total Contract Price, but at least \$15,000; or
 - ii. \$350,000, regardless of the percentage of the total Contract Price.
- b. **Bid Closing, Disclosure Deadline and Bid Opening.** For each ITB to which this rule applies, the District will:
- i. Set the Bid Closing on a Tuesday, Wednesday or Thursday, and at a time between 2 p.m. and 5 p.m.;
 - ii. Open Bids publicly immediately after the Bid Closing; and
 - iii. Consider for Contract Award only those Bids for which the required disclosure has been submitted by the announced deadline on the form prescribed by the District.
- c. **Submission.** A Bidder must submit the disclosure form required by this rule either in its Bid submission, or within two working hours after Bid Closing in the manner specified by this Solicitation.
- d. **Responsiveness.** Compliance with the disclosure and submittal requirements of ORS 279C.370 and OAR 137-049-0360 is a matter of Responsiveness. Bids that are submitted by Bid Closing, but for which the disclosure submittal has not been made by the specified deadline, are not Responsive and will not be considered for Contract Award.
- e. **District Role.** The District will obtain, and make available for public inspection, the disclosure forms required by ORS 279C.370 and OAR 137-049-0360. The District will also provide copies of disclosure forms to the Bureau of Labor and Industries as required by ORS 279C.835. The District is not required to determine the accuracy or completeness of the information provided on disclosure forms.

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- f. **Substitution.** Substitution of affected first-tier subcontractors must be made only in accordance with ORS 279C.585. The District will accept Written submissions filed under that statute as public records. Aside from issues involving inadvertent clerical error under ORS 279C.585, the District does not have a statutory role or duty to review, approve or resolve disputes concerning such substitutions. See ORS 279C.590 regarding complaints to the Construction Contractors Board on improper substitution.

14. BID EVALUATION CRITERIA

- a. **General.** A Public Improvement Contract, if awarded, will be awarded to the Responsible Bidder submitting the lowest Responsive Bid.
- b. **Bid Evaluation Criteria.** Invitations to Bid may solicit lump-sum Bids, unit-price Bids, or a combination of the two.
- i. **Lump Sum.** If the ITB requires a lump-sum Bid, without additive or deductive alternates, or if the District elects not to award additive or deductive alternates, Bids will be compared on the basis of lump-sum prices, or lump-sum base Bid prices, as applicable. If the ITB calls for a lump-sum base Bid, plus additive or deductive alternates, the total Bid price will be calculated by adding to or deducting from the base Bid those alternates selected by the District, for the purpose of comparing Bids.
- ii. **Unit Price.** If the Bid includes unit pricing for estimated quantities, the total Bid price will be calculated by multiplying the estimated quantities by the unit prices submitted by the Bidder, and adjusting for any additive or deductive alternates selected by the District, for the purpose of comparing Bids. The District will specify within the Solicitation the estimated quantity of the Procurement to be used for determination of the low Bidder. In the event of mathematical discrepancies between unit price and any extended price calculations submitted by the Bidder, the unit price will govern. See OAR 137-049-0350(2)(b).
- c. The District may reject any Bid not in compliance with all prescribed Public Contracting procedures and requirements, and may reject for good cause all Bids upon the District's finding that it is in the public interest to do so.

15. BID EVALUATION AND AWARD; DETERMINATION OF RESPONSIBILITY

- a. **General.** If Awarded, the District will Award the Contract to the Responsible Bidder submitting the lowest, Responsive Bid provided that such Person is not listed by the Construction Contractors Board as disqualified to hold a Public Improvement Contract. See ORS 279C.375 (3)(a). The District may award by item, groups of items or the entire Bid provided such Award is consistent with the Solicitation and in the public interest.
- b. **Determination of Responsibility.** Bidders are required to demonstrate their ability to perform satisfactorily under a Contract. Before Awarding a Contract, the District must have information that indicates that the Bidder meets the standards of responsibility set forth in ORS 279.375(3)(b). To be a Responsible Bidder, the District will determine that the Bidder:
- i. Has available the appropriate financial, material, equipment, facility and Personnel resources and expertise, or ability to obtain the resources and expertise, necessary to meet all contractual responsibilities;
- ii. Has completed previous contracts of a similar nature with a satisfactory record of performance. A satisfactory record of performance means that, to the extent the costs associated with and time available to perform a previous contract were within the Bidder's control, the Bidder stayed within the time and budget allotted for the procurement and otherwise performed the contract in a satisfactory manner. The District should carefully scrutinize a Bidder's record of contract performance if the Bidder is or recently has been materially deficient in contract performance. In reviewing the Bidders performance, the District should determine whether the Bidders deficient

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performance was expressly excused under the terms of Contract, or whether the Bidder took appropriate corrective action. The District may review the Bidders performance on both private and Public Contracts in determining the Bidders record of contract performance.

- iii. Has a satisfactory record of integrity. A Bidder may lack integrity if the District determines the Bidder demonstrates a lack of business ethics such as violation of state environmental laws or false certifications made to the District. The District may find a Bidder not Responsible based on the lack of integrity of any Person having influence or control over the Bidder (such as a key employee of the Bidder that has the authority to significantly influence the Bidders performance of the Contract or a parent company, predecessor or successor Person). The standards for Conduct Disqualification under OAR 137-49-0370 may be used to determine Bidder's integrity. The District may find a Bidder non-responsible based on previous convictions of offenses related to obtaining or attempting to obtain a contract or subcontract or in connection with the Bidder's performance of a contract or subcontract;
 - iv. Is qualified legally to contract with the District; and
 - v. Has supplied all necessary information in connection with the inquiry concerning responsibility. If the Bidder fails to promptly supply information requested by the District concerning responsibility, the District will base the determination of responsibility on any available information, or may find the Bidder not Responsible.
- c. **District Evaluation.** The District will evaluate a Bid only as set forth in the Solicitation and in accordance with applicable law. The District will not evaluate a Bid using any other requirement or criterion.
- d. **Bidder Submissions.**
- i. The District may require a Bidder to submit Product Samples, Descriptive Literature, technical data, or other material and may also require any of the following prior to award:
 - A. Demonstration, inspection or testing of a product prior to award for characteristics such as compatibility, quality or workmanship;
 - B. Examination of such elements as appearance or finish; or
 - C. Other examinations to determine whether the product conforms to Specifications.
 - ii. The District will evaluate product acceptability only in accordance with the criteria disclosed in the Solicitation to determine that a product is acceptable. The District will reject a Bid providing any product that does not meet the Solicitation requirements. The District's rejection of a Bid because it offers non-conforming Work or materials is not Disqualification and is not appealable under ORS 279C.445.
- e. **Evaluation of Bids.** The District will use only objective criteria to evaluate Bids as set forth in the Solicitation. The District will evaluate Bids to determine which Responsible Bidder submitted the lowest Responsive Bid.
- i. **Nonresident Bidders.** In determining the lowest Responsive Bid, the District will, in accordance with OAR 137-046-0310, add a percentage increase to the Bid of a nonresident Bidder equal to the percentage, if any, of the preference given to that Bidder in the state in which the Bidder resides.
 - ii. **Clarifications.** In evaluating Bids, the District may seek information from a Bidder only to clarify the Bidder's Bid. Such clarification must not vary, contradict or supplement the Bid. A Bidder must submit Written and Signed clarifications and such clarifications will become part of the Bidder's Bid.
 - iii. **Negotiation Prohibited.** The District will not negotiate scope of Work or other terms or conditions under an Invitation to Bid process prior to award.

16. NOTICE OF INTENT TO AWARD

- a. **Notice.** At least seven (7) days before the Award of a Public Improvement Contract, the District will issue a Notice of the District's intent to Award the Contract.

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- b. **Form and Manner of Posting.** The form and manner of posting notice will conform to customary practices within the District's procurement system and may be made electronically.
- c. **Finalizing Award.** The District's Award will not be final until the later of the following:
 - i. Seven (7) Days after the date of the notice, unless the Solicitation provided a different period for protest; or
 - ii. The District provides a written response to all timely-filed protests that denies the protest and affirms the Award.
- d. **Prior Notice Impractical.** Posting of notice of intent to award will not be required when the District determines that it is impractical due to unusual time constraints in making prompt Award for its immediate procurement needs, documents the Contract file as to the reasons for that determination, and posts notice of that action as soon as reasonably practical.

17. DOCUMENTATION OF AWARD; AVAILABILITY OF AWARD DECISIONS

- a. **Basis of Award.** After Award, the District will make a record showing the basis for determining the successful Bidder part of the District's Solicitation file.
- b. **Contract Document.** The District will deliver a fully executed copy of the final Contract to the successful Bidder.
- c. **Bid Tabulations and Award Summaries.** Upon request of any Person the District will provide tabulations of Awarded Bids.
- d. **Availability of Solicitation Files.** The District will make completed Solicitation files available for public review at the District.

18. NEGOTIATION WITH BIDDERS PROHIBITED

Except as permitted by ORS 279C.340 and OAR 137-49-0430 when all Bids exceed the cost estimate, the District will not negotiate with any Bidder prior to Contract Award. After Award of the Contract, the District and Contractor may modify the resulting Contract only by change order or Amendment to the Contract in accordance with OAR 137-49-0910.

19. NEGOTIATION WHEN BIDS EXCEED COST ESTIMATE

- a. **Generally.** In accordance with ORS 279C.340, if all Responsive Bids from Responsible Bidders on a competitively Bid Project exceed the District's Cost Estimate, prior to Contract Award the District may negotiate Value Engineering and Other Options with the Responsible Bidder submitting the lowest, Responsive Bid in an attempt to bring the Project within the District's Cost Estimate.
- b. **Rejection of Bids.** In determining whether all Responsive Bids from Responsible Bidders exceed the Cost Estimate, only those Bids that have been formally rejected, or Bids from Bidders who have been formally disqualified by the District, will be excluded from consideration.
- c. **Scope of Negotiations.** The District will not proceed with Contract Award if the scope of the Project is significantly changed from the original Bid. The scope is considered to have been significantly changed if the pool of competition would likely have been affected by the change.
- d. **Discontinuing Negotiations.** The District may discontinue negotiations at any time and will do so if it appears to the District that the apparent low Bidder is not negotiating in good faith or fails to share cost and pricing information upon request. Failure to rebid any portion of the project, or to obtain subcontractor pricing information upon request, will be considered a lack of good faith.
- e. **Limitation.** Negotiations may be undertaken only with the lowest Responsive, Responsible Bidder pursuant to ORS 279C.340. That statute does not provide any additional authority to further negotiate with Bidders next in line for Contract Award.

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20. REJECTION OF BIDS

a. Rejection of a Bid.

- i. The District may reject any Bid upon finding that to accept the Bid may impair the integrity of the Procurement process or that rejecting the Bid is in the public interest.
- ii. The District will reject a Bid upon the District's finding that the Bid:
 - A. Is contingent on the District's acceptance of terms and conditions (including Specifications) that differ from the Solicitation;
 - B. Takes exception to terms and conditions (including Specifications);
 - C. Attempts to prevent public disclosure of matters in contravention of the terms and conditions of the Solicitation or in contravention of applicable law;
 - D. Offers Work that fails to meet the Specifications of the Solicitation;
 - E. Is late;
 - F. Is not in substantial compliance with the Solicitation;
 - G. Is not in substantial compliance with all prescribed public Solicitation procedures.
- iii. The District will reject a Bid upon the District's finding that the Bidder:
 - A. Has not been prequalified under ORS 279C.430 and the District required mandatory prequalification;
 - B. Has been Disqualified;
 - C. Has been declared ineligible under ORS 279C.860 by the Commissioner of Bureau of Labor and Industries and the Contract is for a Public Work;
 - D. Is listed as not qualified by the Construction Contractors Board, if the Contract is for a Public Improvement;
 - E. Has not met the requirements of ORS 279A.105 if required by the Solicitation;
 - F. Has not submitted properly executed Bid or Proposal security as required by the Solicitation;
 - G. Has failed to provide the Certification of Non-Discrimination required under OAR 137-049-0440(3);
 - H. Is not Responsible. See OAR 137-049-0390(2) regarding District determination that the Bidder has met statutory standards of responsibility.
- b. **Form of Business.** The District may investigate any Person submitting a Bid. The investigation may include that Person's officers, Directors, Owners, affiliates, or any other Person acquiring ownership of the Person to determine application of this rule or to apply the Disqualification provisions of ORS 279C.440 to 279C.450 and OAR 137-049-0370.
- c. **Certification of Non-Discrimination.** The Bidder must certify and deliver to the District as part of their Bid, written certification (see attached Bidder Certification) that the Bidder has not discriminated and will not discriminate against any disadvantaged business enterprise, minority-owned business, women-owned business, emerging small business, or business that a service-disabled veteran owns, in obtaining any required subcontracts. Failure to do so will be grounds for disqualification.
- d. **Rejection of all Bids.** The District may reject all Bids for good cause upon the District's Written finding it is in the public interest to do so. The District will notify all Bidders of the rejection of all Bids, along with the good cause justification and finding.
- e. **Criteria for Rejection of All Bids.** The District may reject all Bids upon a Written finding that:
 - i. The content of or an error in the Solicitation, or the Solicitation process unnecessarily restricted competition for the Contract;
 - ii. The price, quality or performance presented by the Bidders is too costly or of insufficient quality to justify acceptance of the Bids;
 - iii. Misconduct, error, or ambiguous or misleading provisions in the Solicitation threaten the fairness and integrity of the competitive process;

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- iv. Causes other than legitimate market forces threaten the integrity of the competitive Procurement process. These causes include, but are not limited to, those that tend to limit competition such as restrictions on competition, collusion, corruption, unlawful anti-competitive conduct and inadvertent or intentional errors in the Solicitation;
- v. The District cancels the Solicitation in accordance with OAR 137-049-0270; or
- vi. Any other circumstance indicating that awarding the Contract would not be in the public interest.

21. PROTEST OF CONTRACTOR SELECTION, CONTRACT AWARD

- a. **Purpose.** An adversely affected or aggrieved Bidder must exhaust all avenues of administrative review and relief before seeking judicial review of the District's Contractor selection or Contract Award decision.
- b. **Notice of Intent to Award.** Unless otherwise provided in the Solicitation, the District will provide written notice to all Bidders of the District's intent to award the Contract. The District's Award will not be final until the later of the following:
 - i. Seven (7) days after the date of the notice, unless the Solicitation provided a different period for protest; or
 - ii. The District provides a written response to all timely-filed protests that denies the protest and affirms the Award.
- c. **Right to Protest Award.**
 - i. An adversely affected or aggrieved Bidder may submit to the District a Written protest of the District's intent to award within seven (7) days after issuance of the notice of intent to award the Contract, unless a different protest period is provided under the Solicitation.
 - ii. The Bidders protest must be in Writing and must specify the grounds upon which the protest is based.
 - iii. A Bidder is adversely affected or aggrieved only if the Bidder is eligible for Award of the Contract as the Responsible Bidder submitting the lowest Responsive Bid and is next in line for Award, i.e., the protesting Bidder must claim and state specific reasons why all lower Bidders are ineligible for Award:
 - A. Because their Bids were non-responsive; or
 - B. The District committed a substantial violation of a provision in the Solicitation or of an applicable Procurement statute or administrative rule, and the protesting Bidder was unfairly evaluated and would have, but for such substantial violation, been the Responsible Bidder offering the lowest Responsive Bid.
 - iv. The District will not consider a protest submitted after the time period established in this Rule or such different period as may be provided in the Solicitation.
- d. **Authority to Resolve Protests.** The District's Purchasing Manager will settle or resolve a written protest submitted in accordance with the requirements of this Rule.
- e. **Decision.** If a protest is not settled, the Superintendent, or designee, will promptly issue a written decision on the protest. Judicial review of this decision will be available if provided by statute.
- f. **Award.** The successful Bidder must promptly execute the Contract after the Award is final. The District will execute the Contract only after it has obtained all applicable required documents and approvals.

22. BID COSTS: The District is not liable for any costs incurred by the Bidder in its Bid preparation

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1. PUBLIC WORKS REQUIREMENTS

This solicitation will result in a Contract for a Public Work subject to ORS 279C.800 to 279C.870 or the Davis-Bacon Act (40 U.S.C. 3141 et seq., if applicable). No Bid will be received or considered by the District unless the Bid contains a statement by the Bidder that the provisions of ORS 279C.800 to 279C.870 (prevailing wage rates paid to employees) or the Davis Bacon Act (40 U.S.C. 3141 et seq, if applicable) are to be complied with (see Bidder Certification).

2. REGISTRATION REQUIREMENTS

Bidders must be currently registered with the Construction Contractors Board as required by ORS 701.021, licensed by the State Landscape Contractors Board, as required by ORS 671.530, or licensed by the Department of Environmental Quality, as required by ORS 468A.710 (Air Quality) , if required, holding the proper registration for the work contemplated herein, at the time of Bid submittal. All Subcontractors participating in the project must be similarly registered with the Construction Contractors Board, State Landscape Contractors Board or Department of Environmental Quality, as required, at the time they propose to engage in subcontract work. The CCB registration requirements apply to all public works contracts unless superseded by federal law.

3. BOLI/PWR REQUIREMENTS

All contractors and subcontractors will abide by the latest determination of the minimum wage rates as scheduled and published for this region by the U.S. Department of Labor and the Oregon Bureau of Labor and Industries and will abide by all amendments, decisions, and related regulations of these agencies. Specifically:

- a. The Contractor is required to pay workers not less than prevailing wage rates for the Region #2 through the contract period.
- b. If the Contractor fails to pay for labor and services the District can pay and will withhold these amounts from payments to the Contractor. OAR 839-025-0020(2)(a).
- c. The Contractor is required to pay weekly, holiday (including weekends) and daily overtime as required. OAR 839-025-0020(2)(b).
- d. The existing 'prevailing rate of wage' as published by the Oregon Bureau of Labor and Industries are the Prevailing Wage Rates for Public Works Contracts in Oregon effective July 1, 2020 and PWR Amendment effective October 1, 2020. They may be found at the following website: http://www.oregon.gov/boli/WHD/PWR/Pages/pwr_state.aspx, and are incorporated herein by this reference.

4. BONDS: PERFORMANCE, PAYMENT AND PUBLIC WORKS

a. Performance and Payment Bonds.

- i. Pursuant to ORS 279C.380, the Contractor must furnish bonds covering the faithful performance of the Contract and payment of obligations arising there under. Bonds are to be obtained through a company that is authorized and licensed by the Oregon Insurance Commissioner. The bonding company must be listed on the most current US Government Treasury list, Department Circular 570 or approved PRIOR TO BID SUBMISSION by the District. The cost of the Bonds must be included in the Contract Sum. The amount of each Bond must be equal to 100 percent of the Contract Sum. Performance and Payment Bonds must be the AIA A312 or as approved by the District.
- ii. Bonds must be effective from the Contract date through the Final Completion of the Contract.
- iii. Failure to adhere to these requirements may be grounds for rejection of the Bid.

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b. Public Works Bond.

- i. Contractors who work on public works projects, subject to the PWR law, are required to file a \$30,000 Public Works Bond to be used exclusively for unpaid wages determined to be due by BOLI. Proof of this bond in effect must be provided to the District prior to Contract signing, after the award of this solicitation.
 - ii. General Contractors are required to verify that subcontractors have filed a public works bond before permitting a subcontractor to start work on a project.
 - iii. ORS 279C.836 provides exemptions from the bond requirements for certified disadvantaged, minority, women, service-disabled veteran owned or emerging small business enterprises. It is the Contractor's responsibility to notify the District if an exemption applies to the Contractor.
 - iv. The Public Works Bond must be furnished by a surety company authorized to do business in Oregon
- c. **Time for Submission.** The apparent successful Bidder must promptly furnish the required performance security upon the District's request. If the Bidder fails to furnish the security as requested, the District may reject the Bid and award the Contract to the Responsible Bidder with the next lowest Responsive Bid, and, at the District's discretion, the Bidder must forfeit its Bid Bond.

5. SUBSTITUTE CONTRACTOR

If the Contractor provided a performance bond, the District may afford the Contractor's surety the opportunity to provide a substitute Contractor to complete performance of the Contract. A substitute Contractor must perform all remaining contract Work and comply with all terms and conditions of the Contract, including the provisions of the performance bond and the payment bond. Such substitute performance does not involve the Award of a new Contract and will not be subject to the competitive procurement provisions of ORS Chapter 279C.

6. FOREIGN CONTRACTOR

If the Contract Price exceeds \$10,000 and the Contractor is a Foreign Contractor, the Contractor must promptly report to the Oregon Department of Revenue on forms provided by the Department of Revenue, the Contract Price, terms of payment, Contract duration and such other information as the Department of Revenue may require before final payment can be made on the Contract. A copy of the report must be forwarded to the District. The District will satisfy itself that the above requirements have been complied with before it issues final payment on the Contract.

7. CERTIFIED PAYROLL WITHHOLDING

- a. If a prime contractor does not file certified payroll as required (at least once per month), the District will withhold 25% of amounts due to the prime contractor, in addition to any other required Retainage.
- b. If a first-tier subcontract does not file certified payroll reports as required, the prime contractor must withhold 25% of amounts due the first-tier subcontractor.
- c. Once certified payroll reports are submitted, the District or prime contractor are to pay amounts withheld within 14 days.
- d. Neither the District nor the prime contractor is required to verify the accuracy of the contents of the certified payroll reports.

8. DRUG TESTING REQUIREMENT

ORS 279C.505(2) requires that all public improvement contracts contain a provision requiring contractors to demonstrate that an employee drug-testing program is in place. Bidders are therefore required to certify that they have an employee drug-testing program in place that applies to all employees and will maintain a drug-testing program at all times during the performance of the awarded Contract. Failure to maintain a

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program will constitute a material breach of contract. The use of drugs, alcohol, or any tobacco products is prohibited on all District property.

9. OTHER TERMS AND CONDITIONS:

The Contractor must understand and agree to comply with the following:

- a. Provide prompt payment to all Persons supplying labor or material for the performance of the work; Pay all contributions or amounts due the Industrial Accident Fund; Not permit any lien or claim to be filed or prosecuted against the District; and Pay to the Department of Revenue all sums withheld from employees. (ORS 279C.505(1));
- b. Demonstrate that an employee drug testing program is in place. (ORS 279C.505(2));
- c. If the Contract calls for demolition Work described in ORS 279C.510(1), the Contractor is required to salvage or recycle construction and demolition debris, if feasible and cost-effective;
- d. If the Contract calls for lawn or landscape maintenance, the Contractor is required to compost or mulch yard waste material at an approved site, if feasible and cost effective (ORS 279C.510(2));
- e. If the Contractor fails, neglects or refuses to pay promptly a person's claim for labor or services provided to the contractor or a subcontractor, the District may pay the amount of the claim to the person that provides the labor or services and charge the amount of the payment against funds due or to become due the contractor, as set forth in ORS 279C.515(1);
- f. If the Contractor or a first-tier subcontractor fails, neglects or refuses to pay a person that provides labor or materials in connection with the public improvement contract within 30 days after receiving payment from the contracting agency or a contractor, the contractor or first-tier subcontractor owes the person the amount due plus interest charges. (ORS 279C.515(2));
- g. If the Contractor or a subcontractor fails, neglects or refuses to pay a person that provides labor or materials in connection with the public improvement contract, the person may file a complaint with the Construction Contractors Board, unless payment is subject to a good faith dispute as defined in ORS 279C.580. (ORS 279C.515(3));
- h. Abide by maximum hours of labor and overtime, as set forth in ORS 279C.520(1);
- i. Provide employer notice to employees of hours and days that employees may be required to work, as set forth in ORS 279C.520(2);
- j. Abide by environmental and natural resources regulations (ORS 279C.525);
- k. Make required payments for medical care and certain services related to sickness and injury to employees, as set forth in ORS 279C.530(1);
- l. Understand all employers, including Contractor, that employ subject workers who work under this Contract in the State of Oregon must comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor must ensure that each of its subcontractors complies with these requirements. (ORS 279C.530(2));
- m. Abide by maximum hours, holidays and overtime (ORS 279C.540);
- n. Abide by time limitation on claims for overtime (ORS 279C.545);
- o. Pay prevailing wage rates, including subcontractors (ORS 279C.800 to 279C.870);
- p. File required BOLI Public Works bond(s) including subcontractors, as set forth in ORS 279C.830(2);
- q. Follow Retainage rules (ORS 279C.550 to 279C.570);
- r. Abide by prompt payment policy, progress payments, rate of interest (ORS 279C.570);
- s. Maintain relations with subcontractors (ORS 279C.580);
- t. Make notice of claim (ORS 279C.605);
- u. Provide Affidavit of Compliance with the Oregon tax laws in accordance with ORS 305.385; and
- v. Certify that all subcontractors performing Work described in ORS 701.005(2) (i.e., construction Work) will be registered with the Construction Contractors Board, licensed by the State Landscape Contractors

SECTION IV – INSTRUCTIONS TO BIDDERS:
PUBLIC WORKS
Solicitation No. ITB 20-0008

Board in accordance with ORS 701.021 to 701.050, or licensed under ORS 468A.720 (Air Quality), if required, before the subcontractors commence Work under the Contract.

- w. Assignment or Transfer Restricted. Unless otherwise provided in the Contract, the Contractor must not assign, sell, dispose of, or transfer rights, or delegate duties under the Contract, either in whole or in part, without the District's prior Written consent. Unless otherwise agreed by the District in Writing, such consent will not relieve the Contractor of any obligations under the Contract. Any assignee or transferee will be considered the agent of the Contractor and be bound to abide by all provisions of the Contract. If the District consents in Writing to an assignment, sale, disposal or transfer of the Contractor's rights or delegation of Contractor's duties, the Contractor and its surety, if any, must remain liable to the District for complete performance of the Contract as if no such assignment, sale, disposal, transfer or delegation had occurred unless the District otherwise agrees in Writing.

SECTION V – ATTACHMENTS
Solicitation No. ITB 20-0008

1. BID PREPARATION:

- a. Bidder must complete and return as its Bid, the required Affidavit, Certifications and Forms included as Attachments to this Solicitation. (See Attached Bid Submission Checklist)
- b. Failure to complete, **sign**, and submit these and any other document(s) as requested or required in accordance with this Solicitation may be grounds to declare the Bid nonresponsive.

2. FORMS

- a. The attached forms are to be included in Bid.
- b. Copies of the included forms (See Attached Bid Submission Checklist) are to be completed and submitted by the Bidder along with other required documents as required by the Instructions to Bidders.
- c. **References.** If the Bidder has performed any project or work with the District in the last ten (10) years, one of the references must be from the Bidder's most recent contract with the District.

3. FORM OF AGREEMENT

The form of construction agreement to be used between the District and the General Contractor for the Project is the AIA Document A101-2017 and AIA Document A201-2017 as issued by the Beaverton School District. Any references and/or requirements of the General Contractor to the District must apply to sub-contractors' requirements to the District and General Contractor. A sample Copy of the AIA Document A101-2017 and AIA Document A201-2017 as issued by Beaverton School District are included herein.

BID SUBMISSION CHECKLIST

ALL AFFIDAVITS, CERTIFICATIONS, FORMS AND BID CONTENT REQUIREMENTS AS SPECIFIED IN SECTION V MUST BE INCLUDED AS PART OF THE BID.

_____ REQUIRED AFFIDAVIT, CERTIFICATIONS AND FORMS

The following affidavit, certifications and forms must be completed **and signed** by the person authorized to represent the Bidder regarding all matters related to the Bid and authorized to bind the Bidder to the agreement. Failure to submit any of the required, completed, **and signed** affidavits/certifications/forms may be grounds to declare the Bid nonresponsive.

- _____ BIDDER CERTIFICATION - This serves as the cover sheet for your Bid. (Attachment A)
- _____ BID SCHEDULE. (Attachment B)
- _____ BID SECURITY (Bid Bond). (Attachment C)
- _____ AFFIDAVIT OF NON-COLLUSION / COMPLIANCE WITH TAX LAWS. (Attachment D)
- _____ NON-CONFLICT OF INTEREST CERTIFICATION. (Attachment E)
- _____ BIDDER RESPONSIBILITY FORM – All Pages. (Attachment F)
- _____ BIDDER REFERENCE FORMS – Include the # specified on the form. See SECTION V Paragraph 2. (Attachment G)
- _____ FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM (Attachment H)

The Bidder is **encouraged** to use the following attachment to identify their Bid. It is provided for the Bidder's convenience and is **NOT** required.

The following attachment(s) are **NOT** to be returned with the Bid. Bidders must review the content of these attachment(s).

- | | |
|--------------|--|
| ATTACHMENT I | Sample AIA A101 Contract and AIA A201 General Conditions |
| ATTACHMENT J | Drawings |
| ATTACHMENT K | Specifications |
| ATTACHMENT L | During Solicitation Substitution Request Form |

This checklist is provided for the Bidder's convenience in assembling their Bid and is NOT required to be returned with the Bid.

BIDDER CERTIFICATION

Respectfully submitted this _____ day of _____, 20____



Signature: _____

Name: _____ **Phone:** _____
(Please type or print)

Title: _____

Email Address: _____

Firm/Company Name: _____

Physical Address: _____

City, State, Zip: _____

1. The Bidder certifies that he or she has read and understands the Drawings, Specifications, Addenda, Contract and all other documents pertaining to this Project.
2. The Bidder, having become completely familiar with the local conditions and legal requirements affecting the cost of Work at the place where Work is to be executed, and having carefully examined the site conditions as they currently exist, agrees to provide all labor, materials, plant, equipment, transportation and other facilities and services as necessary and/or required to execute all of the Work described by the aforesaid documents will be provided and within the time specified.
3. The Bidder acknowledges that the Project Milestones in Section II – STATEMENT OF WORK includes certain specific dates. These dates must be adhered to unless modified by mutual agreement between Contractor and the Owner. All dates indicate 5:00 PM Pacific Time.

The Bidder agrees to complete the work within the number of calendar days as stipulated in the Contract and to meet the Milestones and Specific Dates set forth above and acknowledges that his/her failure to achieve Completion by these stipulated dates, or by any Owner authorized extension thereto, subjects the Bidder to liquidated damages for failure to perform, as further defined in the Contracts.

4. The Bidder agrees to execute the formal Contract within five (5) days from date of Notice of Acceptance of this Bid. In the event the undersigned fails or neglects to execute the Contract and the undersigned is considered having abandoned the Contract by the Owner, the Bid security will be forfeited.
5. The Bidder acknowledges that he or she that signs this Bid is fully authorized to sign on behalf of the firm listed and to fully bind the firm listed to all conditions and provisions thereof.

SECTION V – ATTACHMENTS
 ATTACHMENT A
 Solicitation No. ITB 20-0008

6. The Bidder certifies that Bidder has complied or will comply with all requirements of local, state, and national laws, and that no legal requirement has been or will be violated in making or accepting this Bid.
7. The Bidder is registered with the Construction Contractors Board, or is licensed by the State Landscape Contractors Board, or licensed under ORS 468A.720 (Air Quality), if required.
 License Number _____. (The District will not receive or consider a Bid for a Public Improvement unless the Bidder is registered with the Construction Contractors Board, or is licensed by the State Landscape Contractors Board).
8. The Bidder, pursuant to ORS 279A.120 (1), (check one) is _____/is not _____ a resident Bidder. If not, indicate State of residency _____.
9. The Bidder certifies that the required Statutory Public Works Bond has been filed with the Construction Contractor's Board.
10. The Bidder agrees to be bound by and will comply with the provisions of Prevailing Wage Laws ORS 279C.800 through ORS 279C.870 or the Davis-Bacon Act (40 U.S.C. 3141 et seq., if applicable).
11. The Bidder certifies that it has not discriminated and will not discriminate, in violation of ORS 279A.110, against any disadvantaged business enterprise, minority-owned business, women-owned business, emerging small business, or business that a service-disabled veteran owns in obtaining any required subcontract.
12. The Bidder agrees to comply with Oregon tax laws in accordance with ORS 305.385.
13. Any Bid of a contractor or subcontractor listed on BOLI's List of Ineligibles will be rejected.
14. The Bidder acknowledges receipt of the following Addenda: (List by number and date appearing on Addendum.)

Addendum Number	Date	Addendum Number	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

This solicitation will result in a Contract for a Public Work subject to ORS 279C.800 to 279C.870.

BID SCHEDULE

(Contractor)

TOTAL BASE BID: including the Work as defined in the Project Manual, Drawings and Addenda (if any),
the TOTAL SUM OF:

_____ DOLLARS (\$_____)

NOTES:

- **Contractor will be required to develop a schedule of values for payment and accounting purposes prior to the initial request for payment in a form acceptable to the District.**
- **If any information submitted on this form is contradictory, words prevail over numbers.**

The Contract is intended to be awarded to a single Contractor.

SECTION V – ATTACHMENTS
ATTACHMENT C
Solicitation No. ITB 20-0008

BID BOND

(Contractor)

THIS DOCUMENT HAS IMPORTANT LEGAL CONSEQUENCES: CONSULTATION WITH AN ATTORNEY IS ENCOURAGED WITH RESPECT TO ITS COMPLETION OR MODIFICATION.

KNOW ALL MEN BY THESE PRESENTS, that we _____
(Here insert full name and address or legal title of Contractor)

As Principal, hereinafter called the Principal, and _____
(Here insert full name and address or legal title of Surety)

a Corporation duly organized under the laws of the State of Oregon as Surety, hereinafter called the Surety, are held and firmly bound unto Beaverton School District No. 48J, 16550 SW Merlo Road, Beaverton, OR 97003, as Obligee, hereinafter called the Obligee, in the sum of five percent of dollars (\$) amount Bid (5%), for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a Bid for _____.

NOW, THEREFORE, if the Obligee shall accept the Bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such Bid, and give such bond or bonds as may be specified in the Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said Bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said Bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this _____ day of _____, 20____.

(Witness)

(Principal)

(Seal)

(Title)

(Witness)

(Surety)

(Seal)

(Title)

AFFIDAVIT OF NON-COLLUSION / COMPLIANCE WITH TAX LAWS

(Bidder)

I state that:

- (1) The correct taxpayer identification numbers are:
A. Federal Employer ID Number (EIN): _____ B. Employer's Oregon ID Number: _____
- (2) Bidder is not subject to backup withholding because (i) Bidder is exempt from backup withholding, (ii) Bidder has not been notified by the IRS that Bidder is subject to backup withholding as a result of a failure to report all interest or dividends, or (iii) the IRS has notified Bidder that Bidder is no longer subject to backup withholding;
- (3) The price(s) and amount of this Bid must be arrived at independently and without consultation, communication or agreement with any other Supplier, Bidder or potential Bidder, except as disclosed on the attached appendix.
- (4) That neither the price(s) nor the amount of this Bid, and neither the approximate price(s) nor approximate amount of this Bid, will be disclosed to any other firm or person who is a Bidder or potential Bidder, and they will not be disclosed before Contract award.
- (5) No attempt has been made or will be made to induce any firm or person to refrain from proposing on this Solicitation, or to submit any noncompetitive Bid or other complementary Bid.
- (6) The Bid of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive Bid.
- (7) _____ (name of firm), its affiliates, subsidiaries, officers, directors and employees are not currently under investigation by any governmental agency and have not in the last four years been convicted of or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to proposing on any public contract, except as described in the attached appendix.

I state that _____ (name of firm) understands and acknowledges that the above representations are material and important, and will be relied on by the Beaverton School District in awarding the contract(s) for which this Bid is submitted. I understand and my firm understands that any misstatement in this affidavit is and will be treated as fraudulent concealment from the Beaverton School District of the true facts relating to the submission of Bids for this contract. I am authorized to act on behalf of Bidder, and have authority and knowledge regarding Bidder's payment of taxes, and to the best of my knowledge, Bidder is not in violation of any Oregon tax laws, including, without limitation, those tax laws listed in ORS 305.380(4); the elderly rental assistance program under ORS 310.630 to 310.706; and any local taxes administered by the Oregon Department of Revenue under ORS 305.620.



(Affiant's Signature)

STATE OF OREGON

County of _____

Signed and sworn to before me on _____ by _____
(date) (Affiant's name)

Notary: _____

My Commission Expires: _____

NON-CONFLICT OF INTEREST CERTIFICATION

Issuing Agency: Beaverton School District

I, _____ hereby certify I have read the statement defining conflict of interest as quoted below; that I understand the statement; that no conflict of interest exists as therein defined, which precludes an impartial Bid/Proposal to be submitted by myself or the entity/company for which the Bid/Proposal is submitted, and that if such a conflict should arise, I will immediately notify the Beaverton School District and disqualify my Bid/Proposal.

"NO OFFICER, EMPLOYEE, OR AGENT OF THE BIDDER/PROPOSER HAS ANY PERSONAL FINANCIAL INTEREST, DIRECT OR INDIRECT, IN THE OPERATION OF THE BEAVERTON SCHOOL DISTRICT OR WITH ANY PARTY CONNECTED WITH THE OREGON SCHOOL AND DISTRICT IMPROVEMENT NETWORK, DIRECTLY OR INDIRECTLY."

 Signature: _____

Name: _____
(Please type or print)

Title: _____

Firm/Company Name: _____
(Please type or print)

Date: _____

**BIDDER RESPONSIBILITY FORM
(CONTRACTOR'S QUALIFICATIONS AND FINANCIAL INFORMATION)****DECLARATION AND SIGNATURES**

The undersigned hereby declares that the he or she is duly authorized to complete and submit this Bidder Responsibility Form and that the statements contained herein are true and correct as of the date set forth below. Incomplete, incorrect or misleading information will be reason for a determination by the District of Bidder non-responsibility.

Date: _____

 Signature: _____Name: _____
(Please type or print)Title: _____
(Please type or print)Firm/Company: _____
(Please type or print)

CCB#: _____

Instructions

- 1. The information provided in this form is part of the District's inquiry concerning Bidder responsibility. Please print clearly or type.**
- 2. If you need more space, use plain paper. Submit completed form with Bid response.**
- 3. Answer all questions. Submission of a form with unanswered questions, incomplete or illegible answers may result in a finding that the Bidder is not a responsible Bidder.**

SECTION V – ATTACHMENTS
 ATTACHMENT F
 Solicitation No. ITB 20-0008

CURRENT CONTRACTS IN FORCE

ITEM	CONTRACT 1	CONTRACT 2
A. Work Location		
B. Scope of Work;		
Check box:	<input type="checkbox"/> New Construction <input type="checkbox"/> Re-Construction	<input type="checkbox"/> New Construction <input type="checkbox"/> Re-Construction
C. Contract Amount	\$	\$
D. Change Order Amount	\$	\$
E. % Completed	%	%
F. Est. Completion Date		
G. Owner's Name		
H. Owner Contact		
I. Telephone	()	()
J. E-Mail Address		
ITEM	CONTRACT 3	CONTRACT 4
A. Work Location		
B. Scope of Work;		
Check box:	<input type="checkbox"/> New Construction <input type="checkbox"/> Re-Construction	<input type="checkbox"/> New Construction <input type="checkbox"/> Re-Construction
C. Contract Amount	\$	\$
D. Change Order Amount	\$	\$
E. % Completed	%	%
F. Est. Completion Date		
G. Owner's Name		
H. Owner Contact		
I. Telephone	()	()
J. E-Mail Address		

LARGEST SIMILAR JOBS YOU HAVE COMPLETED IN THE LAST FIVE YEARS AS THE PRIME CONTRACTOR

ITEM	CONTRACT 1	CONTRACT 2
A. Work Location		
B. Scope of Work;		
Check box:	<input type="checkbox"/> New Construction <input type="checkbox"/> Re-Construction	<input type="checkbox"/> New Construction <input type="checkbox"/> Re-Construction
C. Contract Amount	\$	\$
D. Change Order Amount	\$	\$
E. % Completed	%	%
F. Completion Date		
G. Owner's Name		
H. Owner Contact		
I. Telephone	()	()
J. E-Mail Address		

LIST COMPANIES FROM WHOM YOU OBTAIN SURETY BONDS

ITEM	SURETY COMPANY 1	SURETY COMPANY 2
A. Company Name		
B. Contact's Name		
C. Telephone	()	()
D. Fax	()	()
E. E-Mail Address		
PRESENT AMOUNT OF BONDING COVERAGE (\$):	HAS YOUR APPLICATION FOR SURETY BOND EVER BEEN DECLINED <i>(If Yes, please provide detailed information in Remarks)</i> <input type="checkbox"/> YES <input type="checkbox"/> NO	DURING THE PAST 2 YEARS, HAVE YOU BEEN CHARGED WITH A FAILURE TO MEET THE CLAIMS OF YOUR SUBCONTRACTORS OR SUPPLIERS <i>(If Yes, please provide detailed information in Remarks)</i> <input type="checkbox"/> YES <input type="checkbox"/> NO

RELIABILITY

Has your company ever been declared in breach of any contract for unperformed or defective work? ☐ Yes. ☐ No.

If “yes”, explain.

Has any employee or agent of your company ever been convicted of a criminal offense arising out of obtaining, attempting to obtain, or performing a public or private contract or subcontract? ☐ Yes. ☐ No.

If “yes,” explain.

Has any employee or agent of your company been convicted under state or federal law of embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property or any other offense indicating a lack of business integrity or business honesty? ☐ Yes. ☐ No.

If “yes,” explain.

Has your company or any employee or agent of your company been convicted under state or federal antitrust laws? ☐ Yes. ☐ No.

If “yes,” explain.

Has any Officer or Partner of your organization ever been an Officer or Partner of another Organization that failed to complete a construction contract? ☐ Yes. ☐ No.

If “yes,” explain.

FINANCIAL RESOURCES

Indicate the Contractors total bonding capacity amount: \$_____.

What portion of this amount remains available at time of completion of this form? \$_____.

Has your firm ever been at any time in the last ten years the debtor in a bankruptcy case? ☐ Yes. ☐ No.

If “yes,” explain.

Does your firm have any outstanding judgments pending against it? ☐ Yes. ☐ No.

If “yes,” explain.

In the past ten years, has your firm been a party to litigation, arbitration or mediation where the amount in dispute exceeded \$10,000? ☐ Yes. ☐ No.

If “yes,” explain.

(Include court, case number and party names.) _____

In the past ten years, has your firm been a party to litigation, arbitration or mediation on a matter related to payment to subcontractors or work performance on a contract? Check “yes” even if the matter proceeded to arbitration or mediation without court litigation. ☐ Yes. ☐ No.

If “yes,” explain. (Include court, case number and party names.)

Have you or any of your affiliates discontinued business operation with outstanding debts? ☐ Yes. ☐ No.

If “yes,” explain.

KEY PERSONNEL

List the principal individuals of your company, their current job title, the total years of experience they have in the construction industry and their current primary responsibility for your company. Corporations list current officers and those who own 5% or more of the corporation's stock. Limited liability companies list members who own 5% or more of company. Partnerships list all partners. Joint ventures list each firm that is a member of the joint venture and the percentage of ownership the firm has in the joint venture.

ITEM	Principal Individual
A. Name	
B. Position	
C. Years in Construction	
D. Current Primary Responsibility	
ITEM	Principal Individual
A. Name	
B. Position	
C. Years in Construction	
D. Current Primary Responsibility	
ITEM	Principal Individual
A. Name	
B. Position	
C. Years in Construction	
D. Current Primary Responsibility	
ITEM	Principal Individual
A. Name	
B. Position	
C. Years in Construction	
D. Current Primary Responsibility	

List the individuals who will be in the following roles if your company is awarded this Contract:

ITEM	Contractor's Representative	Project Manger	Project Superintendent
A. Name			
B. Position			
C. Years in Position	N/A		
D. Largest Project Supervised	N/A	\$	\$
E. Largest number of employees ever supervised	N/A		

BIDDER REFERENCE FORM

BIDDER REFERENCE FORM FOR _____
(Insert Name of Bidder)

Bidder must provide five (5) references and must use a separate copy of this form for each reference.

Date(s) Work Performed: _____

Name(s) of Project(s): _____

Value of Project(s): \$ _____

Name of Company: _____

Address: _____

Contact Name: _____

Telephone: _____

Email: _____

Method: Subjective Evaluation

Each reference may be checked for, but not limited to, adherence to contract terms and conditions, timelines, quality standards, overall customer service, project being of similar size, scope and complexity.

FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

(Contractor)

PROJECT NAME:	Hiteon HAVC and Controls Upgrades
----------------------	-----------------------------------

BID #:	20-0008	BID CLOSING DATE:	November 24, 2020	BID CLOSING TIME:	2:00 PM Pacific Time
---------------	---------	--------------------------	-------------------	--------------------------	----------------------

DISCLOSURE DEADLINE:	DISCLOSURE DUE DATE:	November 24, 2020	DISCLOSURE DUE TIME:	4:00 PM Pacific Time
-----------------------------	-----------------------------	-------------------	-----------------------------	----------------------

Bidders must submit this First-Tier Subcontractor Disclosure Form *EITHER* with the sealed Bid submission *OR* in a separate envelope no later than the Disclosure Deadline indicated above.

List below the name of each subcontractor that will be furnishing labor or will be furnishing labor and materials and that is required to be disclosed, the category of work that the subcontractor will be performing and the dollar value of the subcontract. Enter "NONE" if there are no subcontractors that need to be disclosed. (ATTACH ADDITIONAL SHEETS IF NEEDED.)

SUBCONTRACTOR'S NAME	CATEGORY OF WORK	DOLLAR VALUE
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

The above listed first-tier subcontractor(s) are furnishing labor or labor and materials with a Dollar Value greater than or equal to:

- a) 5% of the total project Bid, but at least \$15,000 (including all alternates); or
- b) \$350,000 regardless of the percentage of the total project Bid.

FAILURE TO SUBMIT THIS FORM BY THE DISCLOSURE DEADLINE WILL RESULT IN A NON-RESPONSIVE BID. A NON-RESPONSIVE BID WILL NOT BE CONSIDERED FOR AWARD!

Contractor Contact Name: _____ Phone #: _____

Deliver Form To:	contracts@beaverton.k12.or.us	
Person Designated to Receive Form:	Any Purchasing Staff	
Agency's Address:	16550 SW Merlo Road, Beaverton OR 97003	
THIS DOCUMENT <u>MUST NOT</u> BE FAXED. IT IS THE RESPONSIBILITY OF BIDDERS TO SUBMIT THIS DISCLOSURE FORM AND ANY ADDITIONAL SHEETS, WITH THE BID NUMBER AND PROJECT NAME CLEARLY MARKED, AT THE LOCATION INDICATED BY THE SPECIFIED DISCLOSURE DEADLINE. SEE INSTRUCTIONS TO BIDDERS.		

THE DISTRICT MUST REJECT A BID IF THE BIDDER FAILS TO SUBMIT THE DISCLOSURE FORM WITH THIS INFORMATION BY THE STATED DEADLINE (see OAR 137-049-0360).

ATTACHMENT I Sample AIA A101 Contract and AIA A201
General Conditions

DRAFT AIA® Document A101™ – 2017

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

AGREEMENT made as of the date of full execution by the Owner.

BETWEEN the Owner:

Beaverton School District #48J
16550 SW Merlo Road
Beaverton, OR 97003

and the Contractor:

<< >>< >
<< >
<< >
<< >
CCB # _____

for the following Project:

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

The Architect:

<< >>< >
<< >
<< >
<< >
[All references to and responsibilities of Architect are to be completed by Owner or
Owner's contracted Engineering Firm.]

1159322\v7

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

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

The parties should complete A101™-2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201™-2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

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

TABLE OF ARTICLES

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

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

§ 2.1 The Contractor shall fully execute the Work described in the Contract Documents or incidental, necessary, or reasonably inferable therefrom, except as specifically indicated in the Contract Documents to be the responsibility of others.

§ 2.2 THE OWNER'S RELIANCE ON THE CONTRACTOR AND SUBCONTRACTORS

§ 2.2.1 The Contractor accepts the relationship of trust and confidence established by this Agreement and covenants with the Owner to cooperate with the Architect and exercise the Contractor's skill and judgment in furthering the interests of the Owner; to furnish efficient construction administration, management services and supervision; to furnish at all times an adequate supply of workers and materials; and to perform the Work in an expeditious and economical manner consistent with the Owner's interests. The Owner and Contractor acknowledge and agree that (1) all Work performed by the Contractor and the Subcontractors shall be performed in the interests of the Owner and for its benefit, (2) the Contractor and the Subcontractors are authorized by the Owner to exercise their own independent, professional and trade judgments in performing their contractual obligations pursuant to this Section 2.2 on behalf of the Owner, (3) the Owner will be relying on the Contractor and the Subcontractors to perform their obligations consistent with this Section 2.2 and (4), as a result, the Contractor and Subcontractors at all tiers shall owe a duty to the Owner to exercise reasonable care and to avoid negligence in performing their obligations under the Contract and on the Project. The Contractor shall incorporate, and shall cause to be incorporated, into all subcontracts with Subcontractors a provision equivalent to this Section 2.2.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be the date fixed in a notice to proceed issued by the Owner.

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

§ 3.3 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work not later than _____ and Final Completion of the entire Work not later than _____ (collectively, the "Contract Time"). In addition to achieving Substantial Completion and Final Completion by the dates required herein, the Contractor shall achieve sufficient completion of

the Work so that Owner has full access to the Premises for the purpose of Owner's installation of furniture, fixtures, cabling and equipment that are not included in the Work not later than ____ days prior to the earlier of the required or actual Substantial Completion date ("Access Completion"). [ADJUST FOR PHASED DELIVERIES]

§ 3.3.1 The Contractor shall perform the Work diligently and continuously consistent with the Contract Time and Construction Schedule. Time is of the essence in the performance of the Work.

§ 3.4 ACCELERATION OF THE WORK

§ 3.4.1 If during the course of construction the Owner or Architect determines that the performance of the Work has not progressed or reached the level of completion required by the current, approved Construction Schedule, the Owner shall have the right to order the Contractor to take corrective measures as necessary to restore the progress of the construction to the requirements of such schedule, including but not limited to (1) working additional shifts or overtime, (2) finishing additional labor, services, materials, equipment and facilities and (3) other similar acceleration measures. The costs incurred by the Contractor pursuant to this Section 3.4.1 shall be paid by the Contractor.

§ 3.4.2 In the circumstances referenced in Section 3.4.1, and without limiting the Owner's rights under that Section, upon demand by the Owner the Contractor shall prepare and submit to the Owner and Architect a Recovery Schedule, in a form and providing sufficient detail to explain and display how the Contractor intends to reschedule the Work to regain compliance with the Construction Schedule during an agreed Recovery Period.

§ 3.4.2.1 Within seven (7) days after the Contractor's receipt of the Owner's demand for a Recovery Schedule, the Contractor shall present the Recovery Schedule to the Owner and Architect. The Recovery Schedule shall represent the Contractor's best judgment as to how the Work should be made to comply with the Construction Schedule within the agreed Recovery Period. The Recovery Schedule shall be prepared to a similar level of detail as the Contractor's construction schedule.

§ 3.4.2.2 Five (5) days prior to the expiration of the agreed Recovery Period, the Owner, Architect and Contractor shall confer to determine whether the Contractor has regained compliance with the Construction Schedule. If in the opinion of the Owner the Contractor is still not in compliance with the Construction Schedule, the Contractor shall prepare another Recovery Schedule pursuant to Sections 3.4.2 and 3.4.2.1, to take effect during the immediate subsequent agreed Recovery Period. If in the opinion of the Owner the Contractor has regained compliance with the Construction Schedule, the use of the Construction Schedule shall be resumed.

§ 3.5 Nothing in this Article 3 or any other provision of this Agreement shall be construed or applied to prevent or bar the Owner from directing the Contractor to accelerate the Work pursuant to the General Conditions.

ARTICLE 4 CONTRACT SUM

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

§ 4.2 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:

(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)

Unless expressly stated otherwise herein, unit prices cover the entire cost of material, labor, equipment, shipping, insurance, installation, and overhead, fees and profit.

§ 4.4 Allowances included in the Contract Sum, if any:
(Identify allowance and state exclusions, if any, from the allowance price.)

Item	Price

§ 4.5 Liquidated Damages

§ 4.5.1 The Contractor acknowledges that the Owner will incur significant damages if the Project is not completed within the Contract Time, including without limitation, damages in the form of: inability to use the Project and all related facilities (i.e., “loss of use”); delay costs for completion of portions of the Project or related projects to be constructed by the Owner or the Owner’s separate contractors; or costs of extended services of the Owner’s project management staff, outside construction management firms, Architect, any separate contractors and consultants, and others performing work or services related to the Project. In consideration of the factors set out in this Section 4.5.1, the Contractor acknowledges and agrees that time is particularly of the essence in the Contractor’s performance of the Work in accordance with the agreed date of commencement of the Work, the agreed dates of Access Completion, Substantial Completion and Final Completion of the Work, and the approved Construction Schedule. The Owner will incur serious and substantial special, incidental and consequential damages if Access Completion, Substantial Completion and Final Completion of the Work do not occur within the respective specified dates. It would be difficult if not impossible to determine the amount of such damages. Consequently, provisions for liquidated damages as a reasonable estimate of loss are included in the Contract Documents. Such liquidated damages are a reasonable estimate of actual damages from loss of use delay and are not a penalty. The Owner’s right to liquidated damages for delay is not affected by partial completion, occupancy, or beneficial occupancy. If the Work is to be performed in phases, with separate dates set forth elsewhere in the Contract Documents, then the liquidated damages of this Section shall apply separately to each such phase. The liquidated damages provisions herein are intended to be in addition to every other remedy enforceable at law, equity, or under this Contract, including without limitation the right to collect actual damages in any case where liquidated damages are unenforceable or otherwise unavailable. The provisions 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 or under the indemnification and warranty provisions of this Contract, that are not breaches expressly covered by liquidated damages.

§ 4.5.2 Loss of Use Liquidated Damages

§ 4.5.2.1 The Owner and Contractor acknowledge and agree that if Substantial Completion of the Work is not achieved by the Contract Time for Substantial Completion, or Access Completion is not achieved by the required date for Access Completion, the amount of the Owner’s actual loss of use damages (as described in Section 4.5.1 above) will be difficult, impractical or impossible to determine. Accordingly, the parties agree that if Access Completion or Substantial Completion is not achieved by the agreed date of Access Completion or Substantial Completion (as the case may be) as may be adjusted pursuant to the Contract Documents, the Contractor shall pay to the Owner as liquidated damages for the loss of use of the Project the following amounts: the sum of _____ Dollars (\$) for each partial day or full day of delay beyond the deadline for Access Completion or Substantial Completion. [Liquidated damages shall be the greater of the two numbers, so for example if Access Completion is 3 days late and Substantial Completion is 2 days late, 3 days of liquidated damages shall apply.] *Modify as necessary for each Contract. LDs can be different for Access Completion and Substantial Completion based on the project.*

§ 4.5.2.2 The parties further acknowledge and agree that the Contractor’s obligation to pay liquidated damages under this Section 4.5.2 shall be in lieu of the obligation to pay actual delay damages for the loss of use damages in connection with Access Completion and Substantial Completion. The parties agree that the daily rate agreed to above is reasonable in comparison to the approximate scope of actual delay damages for loss of use that the parties anticipate as of the time of execution of this Agreement, and that the payment of such liquidated damages is not intended to be a penalty or forfeiture. The parties further acknowledge that these liquidated damages are meant to reimburse the Owner only for Access Completion and/or Substantial Completion loss of use delay damages and that the Owner reserves the right to claim other types of damages against Contractor resulting from delays, including but not limited to other delay damages. The Contractor’s obligation to pay liquidated damages for the applicable period shall not require Owner’s establishment of any actual damages for such delay.

§ 4.5.2.3 Withholding of Liquidated Damages

The Owner may withhold liquidated damages from any progress or final payment.

ARTICLE 5 PAYMENTS

§ 5.1 PROGRESS PAYMENTS

§ 5.1.1 Based upon Applications for Payment submitted to the Owner and 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. Payments shall be made in accordance with the Oregon Prompt Payment Act, ORS 279C.570.

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

§ 5.1.3 Provided that a complete and correct Application for Payment is received by the Owner and Architect not later than the first (1st) day of a month, the Owner shall make payment of the approved amount to the Contractor not later than the thirtieth (30th) day of the same month. If an Application for Payment is received by the Owner and Architect after the application date fixed above, payment shall be made of the approved amount by the Owner not later than thirty (30) days after the Owner and Architect receive the Application for Payment.

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor and approved by the Owner 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 or the Owner may require. The current schedule of values as approved by the Owner shall be used as a basis for reviewing the Contractor's Applications for Payment.

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

§ 5.1.6 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives that the Owner determines, in the Owner's judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect or the Owner may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Final Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due: five percent (5%) of each progress payment (unless otherwise required by law).

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

§ 5.1.7.2 Upon Final Completion of the Work and fulfillment of all requirements for Final Completion and release of retainage, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7.

§ 5.1.8 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.

§ 5.1.9 In accordance with ORS 279C.570, the Owner and Contractor shall endeavor to agree upon (1) a mutually acceptable procedure for review and approval of payments to Subcontractors and (2) the percentage of retainage held on Subcontracts, and the Contractor shall execute subcontracts in accordance with those agreements. Unless otherwise agreed in writing with the Owner, The Contractor agrees to withhold as retainage from each first-tier Subcontractor five percent (5%) of the amount of each progress payment to such first-tier Subcontractor, until completion of the Work, and to otherwise apply such retainage in accordance with the applicable Subcontract to protect the interests of the Owner.

§ 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 after final payment as provided in Section 12.2.2 of the General Conditions, and to satisfy other requirements, if any, which arise or extend beyond final payment;
- .2 a final Certificate for Payment has been issued by the Architect and approved by the Owner; and
- .3 the Contractor has fully complied with the General Conditions and all other requirements of the Contract Documents for final payment.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than thirty (30) days after the issuance of the Architect's final Certificate for Payment.

§ 5.3 Interest payments due and unpaid under the Contract shall bear interest at the rate required under Oregon law.

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 For any Claim subject to, but not resolved by, mediation pursuant to Section 15.2 of the General Conditions, the method of binding dispute resolution shall pursuant to Section 15.3 of the General Conditions be at the Owner's sole option either (i) arbitration or (ii) litigation in a court of competent jurisdiction.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of the General Conditions.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of the General Conditions.

ARTICLE 8 MISCELLANEOUS PROVISIONS

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

§ 8.2 The Owner's Representative:
(Name, address and other information)

«Larry Pelatt»
«Purchasing Manager»
«Beaverton School District #48J »
«16550 SW Merlo Road»
«Beaverton, OR 97003»
«Telephone: (503) 356-4379»

§ 8.3 The Contractor's Representative:
(Name, address and other information)

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§ 8.4 Either party may change their representative by written notice to the other party. The Contractor's Representative shall not be replaced without ten (10) days written notice to and the consent of the Owner. If the Owner approves replacement of the Contractor's Representative, the Owner shall have the right to approve the replacement Contractor's Representative. The Owner shall have the right, which shall be exercised in a reasonable fashion, to require replacement of the Contractor's Representative. The Owner may replace the Owner's Representative at its discretion.

§ 8.5 Contractor's Project Manager shall be: _____

§ 8.6 Contractor's Project Superintendent shall be: _____

§ 8.5 Insurance and Bonds

§ 8.5.1 The Contractor shall purchase and maintain insurance as set forth in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in the Contract Documents.

§ 8.6 The Owner's Project Manager.

(Name, address and other information)

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§ 8.6.1 The Owner's Representative and the Contractor's Representative shall have authority to bind the Owner and Contractor, respectively, regarding all matters related to the Contract. The Owner's Project Manager shall represent the Owner's interest throughout the Project. The Owner's Project Manager shall not have the authority to bind the Owner regarding any matter relating to the Contract.

§ 8.7 Other Provisions:

§ 8.7.1 The Contractor represents and warrants to the Owner, in addition to the other representations and warranties contained in the Contract Documents and as an inducement to the Owner to execute this Agreement, which representations and warranties shall survive the execution of this Agreement and the Final Completion of the Work, as follows:

- .1 that the Contractor is financially solvent, able to pay its debts as they mature and possessed of sufficient working capital to perform and complete the Work as described in the Contract Documents and to otherwise perform its obligations under the Contract Documents;
- .2 that the Contractor is able to furnish the labor, services, materials, equipment, facilities, supervision, Project management and other services necessary and required to perform and complete the Work and to otherwise perform its obligations under the Contract Documents, and has sufficient experience and competence to do so;
- .3 that the Contractor is authorized to do business in the state where the Project is located and is properly licensed and registered by all necessary governmental and quasi-public authorities having jurisdiction over the Contractor, the Work and the Project; and

- 4 that the Contractor's execution of this Agreement and its performance of the Contract is within its duly authorized powers.

§ 8.7.2 The Contractor hereby agrees that the Project will be completed substantially in accordance with building permits and any other permits related to development of the Project, the Contract Documents and unless otherwise provided in the Contract Documents all manufacturers' or suppliers' recommended installation procedures so as to preserve any warranties with respect thereto, free and clear of all liens or encumbrances and within the time set forth in the Contract Documents. Contractor does further agree that on the date of Substantial Completion, the Project shall comply with all applicable building laws, ordinances, rules and regulations known, or which should in the exercise of reasonable care be known, to Contractor, and that all utility services necessary for the operation of the Project shall have been provided to the Project within the time for completion of construction.

§ 8.7.3 **Interpretation.** The Contract Documents have been carefully reviewed and negotiated by both parties at arm's length, and they shall be given fair and reasonable interpretation in accordance with the words contained in them without any weight being given to whether a provision was drafted by one party or its counsel. Section headings are for convenience only and shall not be a part of the Contract Documents or considered in their interpretation. The Exhibits attached hereto are made a part hereof.

§ 8.7.4 If the Contractor fails, neglects or refuses to make prompt payment for labor, materials, equipment or other services furnished to the Contractor or a Subcontractor by any person in connection with the Project as such claim becomes due, the Owner may pay the claim and charge the amount of the payment against funds due or to become due the Contractor under this Contract. Payment of claims in this manner shall not relieve the Contractor or the Contractor's surety from obligation with respect to any unpaid claims.

§ 8.7.5 This Contract is subject to the State of Oregon Bureau of Labor and Industries Prevailing Wage Rates, and Contractor shall pay or cause to be paid all workers accordingly. For this contract, the 'prevailing rate of wage' as published by the Oregon Bureau of Labor and Industries are the Prevailing Wage Rates for Public Works Contracts in Oregon effective July 1, 2019. Such rates may be found at the Bureau's web site www.boli.state.or.us as in effect on the Publication Date.

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. Any Contractor or subcontractor proposals referenced as part of the Contract Documents are incorporated solely for: (i) any statement of fees and schedule that is otherwise consistent with the terms of this Agreement and (ii) any statement of services and scope of Work that is consistent with the remainder of this Agreement, or that provides additional Work without adjustment to the Contract Sum or Contract Time. No other provisions of any proposal are part of this Agreement, including without limitation any purported limitation on liability. To the extent that a proposal term otherwise conflicts with the other terms of this Agreement, such proposed conflicting terms are void and are expressly and wholly subject to the terms of this Agreement. In the event of overlap or inconsistency between the provisions of such proposals and the other terms of this Agreement, the provision that provides a better quality or quantity of service to Owner shall control.

§ 9.1.1 The Agreement is this executed and modified AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor.

§ 9.1.2 The General Conditions are the General Conditions of the Contract for Construction, as modified herein. References to the AIA Document A201™-2017 mean the General Conditions.

§ 9.1.3 The Specifications will be set out in Exhibit A, Construction Documents List.

§ 9.1.4 The Drawings will be set out in Exhibit A, Construction Documents List.

§ 9.1.5 The Addenda, if any, are set out in Exhibit A, Construction Documents List.

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

Exhibit A: Construction Documents List
Exhibit B: Forms of Claim Waivers and Releases

Exhibit C: Contract Provisions from ORS Chapters 279A and 279C, the Attorney General Model Public Contracting Rules and Other Laws
Exhibit D: Statement of Work-Owner's Solicitation ITB [] including issued Addenda
Exhibit E: Insurance Requirements
Exhibit F: Contractor's Bid dated []

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

Beaverton School District

Contractor

District Representative Date

Signature of Person Authorized to Bind Contractor Date

Department Administrator Date

Printed Name and Title

Executive Administrator for Facilities Date

Telephone Number

Business Services Administrator Date

e-Mail Address

Business Services Purchasing Date

Not a valid contract until all signatures are complete.

DRAFT AIA® Document A201™ – 2017

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

« »
« »

THE OWNER:

(Name, legal status and address)

«Beaverton School District #48J»
«16550 SW Merlo Road »
«Beaverton, OR 97003»

THE ARCHITECT:

(Name, legal status and address)

« »« »
« »

[All references to and responsibilities of Architect are to be completed by Owner or Owner's contracted Engineering Firm.] – Include if there is no Architect on the project.

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ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

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

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™, Guide for Supplementary Conditions.



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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, signed by both parties, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements. Submittals are not Contract Documents unless and until they are formalized as a Change Order.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction (the "Contract"). The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior or contemporaneous negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor.

§ 1.1.2.1 Notwithstanding Section 1.1.2, the Owner is (1) a third-party beneficiary of subcontracts, purchase orders and similar agreements between the Contractor and its Subcontractors and between Subcontractors and their Subcontractors, as set out in Section 5.3, and (2) a contingent assignee of such subcontracts, purchase orders and similar agreements, as set out in Section 5.4.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor and Subcontractors to fulfill the Contractor's obligations. The Work includes all work performed by Contractor and its Subcontractors at any tier on the Project prior to the date of this Contract, if any, and may constitute the whole or a part of the Project. The Work shall consist of all items set forth in, required by or reasonably inferable from Contract Documents in order to fully complete the Project, including, unless otherwise specifically excluded, all demolition and construction services, supervision, administration, coordination, tests, inspections, clean up, repairs and other items that are necessary and appropriate, together with the additional, collateral and incidental work and services required for completion of the Work as set forth in the Contract Documents.

§ 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 (whether work made for hire or otherwise). Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 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. The Work includes, unless specifically excluded, all demolition and construction services, construction supervision, administration, coordination, acquisition of permits and approvals, tests, inspections, clean up, repairs, and other items that are necessary and appropriate to complete construction of the Work together with the additional collateral and incidental work and services required for completion of the Work as set forth in the Contract Documents. Contractor is responsible for performing and completing the Work in a manner that provides a complete and functional Project for the Owner, and the Work includes all materials and labor required for provision of such a Project.

§ 1.2.1.1 If any provision of this Contract at any time is determined to be invalid, void or otherwise unenforceable for any reason, then the remaining provisions or portions of provisions shall remain in full force and effect and the offending provision shall be given the broadest meaning and effect allowed by law. The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.2.4 In the event of conflicts, inconsistencies, discrepancies or ambiguities between or among the Contract Documents, interpretations shall be based on the following order of precedence:

- .1 Modifications of the Contract, with those of later date having precedence over those of earlier date, and with those of the same date having precedence based upon Clauses .2 through .6 of this Section 1.2.4;
- .2 the Agreement;
- .3 these General Conditions;
- .4 addenda, with those of later date having precedence over those of earlier date;
- .5 the Drawings, with those in larger scale having precedence over those in smaller scale, and with notes and schedules thereon having precedence over the remainder; and
- .6 the Specifications.
- .7 Owner's Solicitation

§ 1.2.5 In the event of conflicts, inconsistencies, discrepancies or ambiguities between or among the Drawings, or between or among the Specifications, remaining after application of Section 1.2.4, those Drawings or Specifications of later date shall have precedence over those of earlier date. Drawings govern Specifications for quantity and location and Specifications govern Drawings for quality and performance. In the event of ambiguity in quantity or quality, the greater quantity and the better quality shall govern. Work described in the specifications that is not specifically located on the drawings is nonetheless included in the Work. Items reasonably inferred from the Drawings but not in the Drawings (e.g., missing doorknobs, electrical connections to HVAC, etc.) shall be deemed part of the Drawings. 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. Figured or written dimensions govern scale dimensions, and large scale Drawings govern small scale Drawings; provided that where the Contract Documents provide for different or conflicting standards or requirements as to any portion of the Work, Contractor shall be obligated to provide the better quality, greater quantity, or comply with the more stringent requirements. In the event that work is shown on Drawings but not contained in Specifications or contained in the Specifications and not shown on the Drawings, it will be assumed the work as shown shall be provided at no change in the Contract Sum or Contract Time, according to the Drawings and/or Specifications. The Contractor shall not be entitled to an increase in the Contract Sum or Time arising out of an error or conflict where the Contractor failed adequately to review the Contract Documents and timely report the error or conflict to the Owner and the Architect. If a conflict, inconsistency, discrepancy or ambiguity nonetheless remains, the Contractor shall provide written notice

thereof to the Architect and the Owner. Thereafter, unless otherwise ordered in writing by the Architect, the Contractor shall provide the better quality of, and the greater quantity of, the Work. The provisions of this Section 1.2.5 shall apply only to conflicts, inconsistencies, discrepancies or ambiguities in express requirements of the Drawings and Specifications and not to interpretations thereof by the Owner or the Architect.

§ 1.2.6 Where a conflict in Contract Document requirements occurs between the Specifications and Drawings or between Drawings only and clarification is not secured in writing prior to the Contractor's bid date or execution of this Agreement, whichever is earlier, the Contractor and its subcontractors at all tiers assume the responsibility and bear the risk that the bid assumption differs from the actual requirements of the Project. The Architect shall decide which of the conflicting requirements will govern based upon the most stringent of the requirements, and subject to the approval of the Owner, the Contractor shall perform the Work consistent with the Architect's decision without adjustment of the Contract Sum or Contract Time.

§ 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 and Clauses in the document, or (3) the titles of other documents published by the American Institute of the Architects or by Owner.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Drawings, Specifications and other documents, including those in electronic form, prepared by the Architect and the Architect's consultants are Instruments of Service through which the Work to be executed by the Contractor is described. The Contractor and its Sub-Contractors may retain one record set. Unless otherwise indicated, the Architect and the Architect's consultants shall be deemed the authors of their respective Instruments of Service, including the Drawings and Specifications, and unless otherwise agreed with the Owner will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner (the Contractor acknowledges the Architect's consent also may be required and if so the Contractor shall procure such consent).

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Transmission of Data in Digital Form

If the parties intend to transmit Drawings or Specifications or any other information or documentation in digital form, they shall comply with the Owner's identified protocols or, in the absence of such protocol, shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

§ 1.8 Execution of Contract Documents

The Contract Documents shall be signed by the Owner and Contractor. If either the Owner or Contractor or both do not sign all the Contract Documents, the Contractor is responsible for identifying such unsigned Document prior to initiating the Work.

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. Changes to the Contract involving modifications to the Contract Time or Contract Sum must be signed by an authorized representative of the Owner. The term "the Owner" means the Owner or the Owner's authorized representative. The only entity or person authorized to act for the Owner means the authorized representative outlined above, including any substituted authorized representative. Teachers, staff, a principal, custodians or others at the school who are not the Owner's authorized representatives are not authorized to act for Owner as to any matter regarding this Contract.

§ 2.1.2 Owner shall have the right, but not the obligation, to have a representative on-site (who need not be the Owner's Representative identified above) to observe the progress of the Work. The presence of the Owner's representative shall in no way relieve the Contractor of Contractor's obligations to supervise the Work so that the Work is in conformity with the Contract Documents. The presence of Owner's representative on-site shall not be deemed in any respect to constitute an approval or concurrence by Owner that any portion of the Work has been properly executed, installed or completed in accordance with the Contract Documents, nor an assumption of any duty for the means and methods of performance of the Work. Owner's representative shall be entitled to make notes or audio or video recordings of conditions and activities observed and shall have the right to inspect and review activity reports, Contractor's logs or other information available on-site, or at Contractor's offices, provided that Owner Representative shall not materially delay the progress of the Work in undertaking such activities.

§ 2.2 Information Provided by the Owner

§ 2.2.1 The Owner has furnished the information describing physical characteristics, legal limitations and utility locations for the site of the Project to the extent indicated in the Invitation to Bid. The Contractor shall be entitled to reasonably rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.2.2 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after fourteen (14) days' notice to the Owner, only where disclosure is required by law, by a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information on a need-to-know basis to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project, on condition that they agree, in writing, to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor or Subcontractors under the Contract Documents or applicable law, including those required under Section 3.7.1, the Owner or the Architect shall secure and the Owner shall pay for the building permit, development fees, plan check fees, system development charges, road approach and right-of-way permits, air discharge permits and other similar necessary permits, approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor whose status under the Contract Documents shall be that of the Architect, but who need not be licensed to practice architecture.

§ 2.3.4 Contractor shall confirm the location of each utility, shall excavate and where necessary dispose of each onsite utility and shall cap offsite utility as required by the Work and as may be included in the Specifications. At the Owner's request, Contractor shall make available to the Owner the results of any site investigation, test borings, analyses, studies, or other tests conducted by or in possession of Contractor or any of its agents. The Contractor shall confirm indicated dimensions and other aspects of existing conditions at the Project site as necessary for the proper performance of the Work. The Contractor may rely only on the accuracy of the technical information contained in surveys and other reports furnished by the Owner, and only to the extent Contractor does not have knowledge of information to the contrary. Contractor shall exercise special care in executing the subsurface work in proximity of known subsurface utilities, improvements and easements.

§ 2.3.4.1 The Contractor shall be responsible for determining, prior to commencement of the Work, the locations of all underground utility lines, cables, pipelines and similar such underground public service installations within and serving the Project site, utilizing utility locating services or other means permitted by law. The Contractor shall coordinate with utility and other involved third-party representatives regarding utility locations and related issues, and shall hand excavate or otherwise take special precautions so as to perform the Work in such a manner as to avoid damaging, or interrupting the operation of, all utility lines, cables, pipelines and similar public service installations within and serving the Project site, whether above ground or underground.

§ 2.3.5 The Owner shall furnish to the Contractor one (1) reproducible copy of the Drawings and Specifications at no cost to the Contractor. The Contractor's cost of reproducing or obtaining additional copies of the Drawings and Specifications as are required for the performance of the Work shall be included in the Contract Sum.

§ 2.3.6 The Contractor agrees that the Owner shall have no obligation to deliver copies of notices of right to a lien received by the Owner from parties purporting to be performing or furnishing Work under the Contract or on the Project, and that the Owner's non-delivery of copies of such notices to the Contractor shall have no effect on the obligations of the Contractor to hold harmless and indemnify the Owner for mechanics', material suppliers', design professionals', construction or similar liens as required by the Contract or applicable law.

§ 2.4 The 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 fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity. This right shall be in addition to, and not in restriction of, the Owner's other rights under this Agreement and at law, and its exercise shall not excuse the Contractor from damages caused by breach of this Agreement or its responsibility for full performance of this Agreement.

§ 2.5 The Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to protect or carry out the Work in accordance with the Contract Documents and fails within a seven-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Pursuant to Section 9.5.1, a Certificate for Payment may be withheld or nullified in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies or protecting the Work, including but not limited to the Owner's attorneys' fees and related costs, disbursements and the Owner's expenses and compensation for the Architect's or the Owner's consultants additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. The right of the Owner to protect the Work or correct deficiencies in the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, nor excuse any default by Contractor. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

§ 2.6 Owner's Audit Rights

§ 2.6.1 The Contractor shall keep full and detailed accounts and exercise such controls as may be necessary for proper financial management under this Contract, and the accounting and control systems shall be satisfactory to the Owner. The Contractor shall develop a system of cost control for the Work, including regular monitoring of actual costs for activities in progress and estimates for uncompleted tasks and proposed changes. The Contractor shall identify

variances between actual and estimated costs and report the variances to the Owner and the Architect at regular intervals, using Contractor's job-cost tracking system.

§ 2.6.2 The Contractor's records, which shall include but not be limited to accounting records, written policies and procedures, subcontractor files (including proposals of successful and unsuccessful bidders), original estimates, estimating work sheets, correspondence, change order files (including documentation covering negotiated settlements), and any other supporting evidence necessary to substantiate charges related to the Contract shall be open to inspection and subject to audit and/or reproduction, during normal working hours, by the Owner's agents or authorized representatives. Such records subject to examination shall also include, but not be limited to, those records necessary to evaluate and verify direct and indirect costs (including overhead allocations) as they may apply to costs associated with the Contract and records relating to the performance of the Work. The Contractor shall preserve such records for a period of at least three 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

§ 2.6.3 For the purpose of such audits, inspections, examinations and evaluations, the Owner's agents or authorized representatives shall have access to said records from the commencement of the Contract for the duration of the Work and thereafter.

§ 2.6.4 The Owner's agents or authorized representatives shall have access to all of the Contractor's facilities and databases where such records are located, and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with this section.

§ 2.7 Nonwaiver of Rights By the Owner

No action or inaction on the part of the Owner at any time in the exercise of any right or remedies conferred upon it under this Contract shall be deemed to be a waiver on the part of the Owner of any of its rights or remedies.

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 in the jurisdiction where the Project is located, and shall cause all of its subcontractors at all tiers to be so lawfully licensed when required for performance of their portion of the Work. 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.

§ 3.1.1.1 Unless they leave the employ of the Contractor, the Contractor's Superintendent(s) and Project Manager(s) identified in this Agreement shall serve in these positions throughout the duration of the Contractor's performance of the Contract except as approved otherwise in writing in advance by the Owner. Persons named to replace those set out above shall be approved in writing in advance by the Owner. The Owner's approvals as required by this Clause shall not unreasonably be withheld. The Project Manager and Superintendent shall, among other things, supervise and coordinate all Work on the Project and shall attend and participate in all meetings throughout the Project unless excused from such attendance by the Owner.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

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

§ 3.1.4 The Contractor shall be and operate as an independent contractor under this Contract and in the performance of the Work and shall have complete control over and responsibility for all personnel performing the Work. In no event shall the Contractor be 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. The Contractor accepts the relationship of trust and confidence between Contractor and the Owner and agrees to furnish its best professional skill, judgment and efforts to accomplish the Work in an expeditious manner consistent with the best interests of the Owner. Contractor acknowledges that it has a relationship of special trust with the Owner, and that the Owner is relying on Contractor's expertise in entering into this Contract. Nothing in the Contract Documents is intended or shall be construed as creating any other relationship or designating Contractor as an agent for or joint venturer with the Owner.

§ 3.1.5 The Contractor shall (a) record the progress of the Work; (b) submit to the Owner a written progress report every month; (c) submit to the Owner such reports and notifications as the Owner may reasonably request from time to time; and (d) keep a daily log of information reasonably relevant to the Work.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents before commencing such activities. The Contractor shall prevent the dislocation or destruction of reference points and shall employ a registered land surveyor currently licensed in Oregon for, and be responsible for accuracy of layout and elevations for the Work. The Contractor shall promptly report in writing 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 Architect may require. The Contractor shall do no work without applicable Drawings, Specifications, the Architect's Supplemental Instructions, or written modifications or, where required, approved Shop Drawings, Product Data, or Samples, unless instructed to do so in writing by the Architect and the Owner. Where conflicts that the Contractor knew or reasonably should have known have not been brought to the Architect's attention in a timely manner, the Contractor will be deemed to have elected the method(s) or material (s) necessary in the Architect's opinion to reconcile the conflict as included in the Contract Sum and Contract Time. Any design errors or omissions noted by the Contractor during this review shall be reported promptly by Contractor to the Owner and the Architect but it is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, except for design build Work or lawful orders of public authorities, but the Contractor shall promptly report in writing to the Architect and the Owner any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require. If the Contractor performs Work knowing it to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Architect and the Owner, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner 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 the 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, except for unreported observed deficiencies or those items related to design-build or design-assist Work unless the Contractor recognized or reasonably should have recognized such error, inconsistency, omission, nonconformity or difference and failed to report it to the Architect and the Owner. If the Contractor performs any construction activity it knows or reasonably should have known involves an error, inconsistency or omission in the Contract Documents without such notice to the Architect and the Owner, the Contractor shall be responsible for such performance and shall bear the attributable costs for correction.

§ 3.2.4.1 Contractor shall confirm applicable requirements appearing in any easements, covenants and other record documents and in the event of any discovered conflict between any such requirement and the Drawings and Specifications shall immediately notify the Owner and the Architect.

§ 3.2.4.2 Any investigations of hidden or subsurface conditions have been made for design purposes. The results of these investigations may be bound into or referenced in the Contract Documents for the convenience of the Contractor

and Sub-contractors and are a part of the Contract Documents. There is no guarantee, express or implied, that the conditions indicated are representative of those existing throughout the site or that unforeseen developments not inferable from such investigations may not occur.

§ 3.2.4.3 The Owner shall be entitled to deduct from the Contract Sum amounts paid by the Owner to the Architect for the Architect to evaluate and respond to the Contractor's requests for information, where such information was available to the Contractor from a study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation.

§ 3.2.5 Notwithstanding any other provision of the Contract, the Contractor hereby specifically acknowledges that the Contract Documents are sufficient to have enabled the Contractor to determine the cost of the Work therein in order to enter into the Contract, and that the Drawings, the Specifications and all Addenda and other Contract Documents are sufficient to enable the Contractor to perform the Work outlined therein in accordance with applicable laws, statutes, building codes and regulations and otherwise to fulfill all of its obligations hereunder. The Contractor further acknowledges that (a) it has visited and made a thorough examination of the jobsite and existing documentation, (b) it has examined all conditions affecting the Work, (c) it has reviewed necessary tests, surveys, studies and reports and all other conditions which might reasonably affect the progress of the Work as the Contractor deems advisable, and that it has satisfied itself by such review, (d) having carefully examined the jobsite and all Drawings, Specifications, and documents, the Contractor has satisfied itself that there are no discrepancies or omissions in the Contract Documents that a Contractor exercising professional General Contracting practices, skills, judgment, etc. would have reasonably recognized, (e) the Contract Sum includes payment for all Work that may be necessary to overcome unanticipated conditions that a Contractor exercising professional General Contracting practices, skills, judgment, etc. would have reasonably recognized, and (f) except as otherwise expressly provided for herein, no Claim for unforeseen or unforeseeable conditions or limitations that exist or may arise affecting the Work or difficulties in performing the Work will be accepted, nor shall it give rise to a Claim, nor shall it constitute an excuse or basis for any failure or omission by the Contractor or for extra compensation, or as a basis for an extension of time in which to complete performance of the Contract.

§ 3.2.6 By executing this Contract, the Contractor represents and acknowledges that the Contract Sum is reasonable compensation for all the 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 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 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, 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 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. The Contractor acknowledges that having carefully examined the jobsite and all Drawings, Specifications, and documents, the Contractor has satisfied itself that there are no discrepancies or omissions in the Contract Documents that a Contractor exercising professional General Contracting practices, skills, judgment, etc. would have reasonably recognized.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. The Contractor shall review any such specific instructions and any construction or installation procedure specified in the Contract Documents, shall advise the Architect if following the instruction or procedure will affect any warranties. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be 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 the Architect, and shall propose alternative means, methods, techniques, sequences, or procedures.

Contractor shall not proceed with that portion of the Work without further written instructions from the Owner or the Architect. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures. The Contractor shall perform no portion of the Work without Contract Documents, or, where required, approved Shop Drawings, Product Data or Samples for such portion of the Work, unless authorized to do so by written instructions of the Owner. Where specific instructions are given in a Contract Document, the Contractor shall review the instructions, including those of manufacturers, and promptly notify the Architect and the Owner in writing if the specified instruction or procedure deviates from accepted construction practice, or normal procedure, or will affect warranties, or other responsibilities of the Contractor. The Contractor's notification shall include reasonable alternatives that the Contractor, exercising Professional judgment, believes will accomplish the original intent of the Contract Documents.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors at any tier, design professionals performing services on behalf of the Contractor or Subcontractors, and their respective 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 at any tier. 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 its administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.

§ 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 conditions 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.

§ 3.3.4 Prior to the commencement of construction, the Contractor shall prepare and obtain the Owner's approval of a construction site management plan, which will take into account requirements contained in the Specifications, and the Owner's requirements and restrictions concerning access and parking for construction personnel, staging areas and material delivery times, traffic flow requirements of the Owner and local governmental authorities, and work hours, among other things.

§ 3.3.5 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 latest issue of the Drawings and Specifications. The Contractor shall be responsible for examination, inspection and quality surveillance of all Work performed by any Subcontractor, and for each Subcontractors' performance of such Work itself. The Contractor shall determine when it is necessary to perform and shall perform, or arrange for the performance of, 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. If any of the Work is required to be inspected or approved by any public authority, Contractor shall cause such inspection or approval to be performed. No inspection performed or failed to be performed by the Owner hereunder shall be a waiver of any of Contractor's obligations hereunder.

§ 3.3.6 The Contractor shall plan and lay out all Work in advance of operations so as to coordinate all work without delay or revision. The Contractor shall establish and maintain existing lot lines, restrictions, and bench marks. The Contractor shall establish and maintain all other grades, lines, levels and bench marks necessary for the execution of the Work and take necessary steps to prevent their dislocation or destruction. For new building construction or additions, the Contractor shall employ a professional land surveyor registered in the State of Oregon to establish building corners and floor elevations. The land surveyor shall also provide a stamped and signed drawing certifying the actual location of the building corners in reference to the lot lines and actual floor elevations as constructed. The Contractor shall report errors or inconsistencies to the Owner and the Architect before commencing Work and review placement of the improvements on the site with the Owner and the Architect after all lines are staked out and before foundation work is started.

§ 3.3.7 Should the Specifications and Drawings fail to particularly describe the material or kind of goods to be used in any place, or their method or integration into the Work, Contractor shall have the duty to make inquiry of the Owner and the Architect as to what is required prior to performance of the Work. Absent Specifications to the contrary, the

material that would normally be used to produce finished Work shall be considered a part of the Contract requirements.

§ 3.3.8 If any of the Work is required to be inspected or approved by any public authority, Contractor shall cause such inspection or approval to be performed. No inspection performed or failed to be performed by the Owner hereunder shall be a waiver of any of Contractor's obligations hereunder.

§ 3.3.9 Contractor acknowledges that it is Contractor's responsibility to hire all personnel for the proper and diligent prosecution of the Work, and Contractor shall use its best efforts to maintain labor peace by and/or among its employees and subcontractors for the duration of the project. In the event of a labor dispute related to this project, Contractor shall not be entitled to an increase in the Contract Sum or Contract Time if the dispute was caused by acts or omissions of Contractor, or Contractor's agents, Subcontractors or Suppliers.

§ 3.4 Labor and Materials

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

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.2.1 If prior to performing a certain portion of the Work, the Contractor desires to submit a substitute product or method for that Work in lieu of what has been specified, the Contractor shall provide written notice to the Architect and the Owner setting forth the following information and documents:

- .1 a full explanation of the proposed substitution and a submittal of all supporting data, including technical information, catalog cuts, warranties, test results, installation instructions, operation procedures and other like information necessary for a complete evaluation of the substitution;
- .2 reasons the substitution is advantageous and necessary, including but not limited to the benefits to the Owner and the Work in the event the substitution is accepted;
- .3 the adjustment, if any, in the Contract Sum, in the event the substitution is accepted;
- .4 the adjustment, if any, in the Contract Time and the Contractor's Construction Schedule in the event the substitution is accepted;
- .5 an affidavit stating that (1) the proposed substitution meets all the requirements of the Drawings and Specifications and (2) the Contractor will perform or cause to be performed the warranty and correction of Work obligations with respect to the proposed substitution that would have been performed for the specified product or method; and
- .6 the impact, if any, on the Subcontractors or other contractors performing Work on the Project, in the event the substitution is accepted.

Proposals for substitutions shall be submitted to the Architect and the Owner in sufficient time to allow the Architect and the Owner no less than fourteen (14) days for review.

By making requests for substitutions, the Contractor represents, warrants and certifies that: (1) the Contractor has personally investigated the proposed substitute product; (2) the Contractor will provide the same materials and labor warranty for the substitution that the Contractor would for that specified unless approved otherwise; (3) the substitute product is of equal or better quality and useful life to the originally-specified product; (4) the cost data presented is complete and includes all related costs under the Contract Documents except the Architect's redesign costs, and (5) the Contractor will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be completed in all respects. The Contractor will be responsible for the reasonable costs of any time the Owner and/or the Architect expends in reviewing a Contractor substitution request. Should the Contractor or the

Owner request substitution with a material or system of lesser quality and/or cost, if approved by the Owner, the Contractor shall compensate the Owner for the difference in cost through a deductive Change Order or Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order and civil and appropriate conduct among the Contractor's and Subcontractors' 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. The Contractor shall not permit at the site of the Work the use of alcohol, tobacco or cannabis, vaping, illegal use of drugs or other controlled substances, firearms or other weapons, verbal or other harassment, lewd or obscene language or behavior, or disregard for the property, privacy, or personal or business interests of the Owner or other occupants of adjacent or nearby parcels, or their respective contractors. The Contractor agrees to take prompt and effective corrective action in the event of violations of these standards of conduct. The Owner may require in writing the Contractor to immediately remove from the Work any employee or other person carrying out the Contract that the Owner considers objectionable. To the fullest extent permitted by Law, the Contractor shall not be entitled to any change to the Contract Sum or Contract Time as a result of any such removal required by the Owner.

§ 3.4.4 The Contractor shall coordinate, supervise and otherwise administer the Work so as to maintain labor harmony between and among the trades performing the Work and so as to avoid lockouts, strikes and other labor-related events or circumstances which delay or otherwise impact the Work; provided that the Contractor's obligations under this Section 3.4.4 shall be limited to events and circumstances which occur substantially where the Work is performed or which result substantially from the actions of persons or entities performing the Work.

§ 3.4.5 The Contractor agrees that each of its employees, subcontractors' employees and principals/owners involved in the Work may, at the option of the Owner, be subject to a security check, at any time, through the local police department or other venue. Notwithstanding the foregoing, Contractor, and not the Owner, remains solely responsible for performing background checks on, and screening for public safety all subcontractors at any tier and employees, and, to the extent allowed by law, shall provide such screening methodologies and information to the Owner upon request.

§ 3.4.6 Contractor acknowledges that it is Contractor's responsibility to hire all personnel for the proper and diligent prosecution of the Work, and Contractor shall use its best efforts to maintain labor peace by and/or among its employees and subcontractors at all tiers for the duration of the project. In the event of a labor dispute related to this project, Contractor shall not be entitled to an increase in the Contract Sum or Contract Time if the dispute was caused by acts or omissions of Contractor, or Contractor's agents, subcontractors at any tier or suppliers.

§ 3.4.7 If requested by the Owner, the Contractor and all Subcontractors' employees shall submit to fingerprinting and be subject to criminal background checks and any other rules and procedures of the Owner as a condition of entering the Project site.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and the Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents, will be performed in a good and workmanlike manner in accordance with manufacturer specifications where applicable, and will be free from defects, and that all materials and equipment selected by the Contractor or Subcontractor will be suitable for the purposes indicated in the Contract Documents. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. Notwithstanding the above, the contractor's warranty for all elements of the work shall hold regardless of normal wear and tear. If required by the Architect or the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. This warranty shall be in addition to any other warranties required by the Specifications or provided by law. The Contractor shall assign to the Owner all other warranties at the time of final completion of the Work.

§ 3.5.2 Without limitation of any remedy of the Owner, upon Substantial Completion of the Work or termination of the Contract, the Owner shall be entitled to enforce at its option any and all Subcontractor and manufacturer warranties relating to Work performed and materials and equipment furnished by such Subcontractors. The Contractor agrees to perform the Work in such manner so as to preserve any and all such manufacturer's warranties and Subcontractor

warranties. The Contractor also shall collect, assemble in a binder, and submit to the Owner, in a manner acceptable to the Owner, written Subcontractor warranties, manufacturer warranties and related documents, including without limitation from Subcontractors performing Work and furnishing materials, equipment, appliances and other components of the Project. The Contractor shall assign to the Owner all other warranties at the time of final completion of the Work.

§ 3.5.3 The Contractor shall not be 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. Contractor shall at Contractor's expense promptly pay and perform, to the reasonable satisfaction of the Owner, any repairs required of Contractor in fulfillment of the foregoing warranty obligations. Should Contractor fail to perform any maintenance or repair required of it pursuant to this Section 3.5 within seven (7) days of notice thereof from the Owner (provided no notice shall be required for emergency repairs), the Owner may make such repair and the Owner shall be entitled to recover directly from Contractor the reasonable cost thereof (including attorneys' fees) plus interest at the statutory rate thereon from the date of repair, immediately and upon demand by the Owner therefore.

§ 3.5.4 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use Business & Occupation, income, and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect. Such taxes are either separately stated or included in the Contract Sum. Contractor shall indemnify, defend and hold harmless the Owner from any liability for taxes and relating to the employees of Contractor, any Subcontractor or any Sub-subcontractor, including taxes and contributions required under the Federal Social Security Act and the unemployment compensation law or any similar law of any state. Contractor is advised that income taxes in Beaverton and surrounding areas may include, but not be limited to, taxation by the State of Oregon, by Washington County, and by Tri-Met.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise designated by the Owner, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded. Without limitation to the foregoing, Contractor shall procure all certificates of inspection, use, occupancy, permits and licenses, pay all charges and fees and give all notices necessary and incidental to the due and lawful prosecution of the Work including without limitation street use and street closure permits. Certificates of inspection, use and temporary certificate of occupancy shall be delivered to the Owner by Contractor prior to (and as a condition to) Substantial Completion of the Work of each Phase in sufficient time for occupation of the Phase in accordance with the Contract Documents, and the final certificate of occupancy prior to (and as a condition to) Final Completion. The Owner will reimburse the Contractor for the actual cost, without markup, of the building permit, permanent utility connection permits and fees, and permits required for construction of work in the public right-of-way and associated bonds or assurances outside the Contract Sum. The Owner may, at its election, retain a firm to perform and pay for the permitting jurisdictions required special inspections. Any other required permits including trade permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work shall be the responsibility of the Contractor and are included in the Contract Sum. Contractor shall deliver an electronic copy in a PDF format of the building permit and attachments to the Architect and the Owner as soon as it is issued. Upon final completion, the Contractor shall deliver to the Owner all original permits, licenses and certificates of occupancy with photocopies to the Architect.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, or fails to perform any permit requirements, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction and such other costs and damages to the Owner as would have been avoided if the Contractor had performed its obligations.

§ 3.7.4 In addition to Contractor's indemnification and other obligations set forth in this Agreement, and its confirmation that Contractor is acting as an independent contractor, Contractor will defend, indemnify and save harmless the Owner and its Separate Contractors, consultants, and agents and employees of any of them against any and all settlement amounts and all liabilities, costs, losses, damages, fees (including attorney fees), and expenses in connection with any third-party legal proceeding (including administrative action, enforcement action, or other conduct or allegation by an individual, the Internal Revenue Service, or any state or local government agency or any other court, entity, or agency) asserting or predicated upon an alleged employment relationship or co- or joint employment relationship between any employees of Contractor or subcontractors at any tier (or such individual's or entity's employees or subcontractors) and any of the indemnified parties, or any obligation of the indemnified parties to pay or provide wages, withholding or employee benefits, including but not limited to such claims that assert or are predicated upon wrongdoing or alleged wrongdoing by the indemnified parties.

§ 3.7.5 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than seven (7) days after first observance of the conditions; otherwise Contractor's Claim will be barred. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Owner or 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 Owner or Architect shall promptly notify the Contractor in writing, stating the reasons. If either party disputes the Owner's or Architect's determination or recommendation, that party may submit a Claim as provided in Article 15. No increase to the Contract Sum or Contract Time shall be allowed if the Contractor knew of the concealed conditions prior to its executing the Contract or such conditions were reasonably discernable from the bidding documents or a careful review of the project site. If the Contractor encounters such a condition, and proceeds to perform any additional work or incur any additional jobsite costs in regard to such condition without prior written direction from the Owner, Contractor will be deemed to have acknowledged that such condition does not entitle Contractor to any additional compensation or extension of the Contract Time.

§ 3.7.6 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 the Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

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

§ 3.8.2 The allowances shall cover the entire cost of the Work to perform or furnish the allowance items, including without limitation the following:

- .1 cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 costs for unloading and handling at the site, labor, installation costs, overhead, profit, general conditions and other.

Whenever given costs, as agreed to in writing by the Owner, 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 the difference between such actual agreed costs and the allowances under 3.8. The Contractor shall not perform any Work covered by an allowance before the execution by the Owner of a Change Order or Construction Change Directive incorporating the

Drawings and Specifications related to the allowance item and any adjustment to the Contract Sum. In the event that the Contractor performs Work covered by an allowance before the execution by the Owner of a Change Order or Construction Change Directive, any costs incurred in excess of the allowance amount will be at Contractor's expense and without reimbursement from the Owner. Periodically, during the course of construction, representatives of the Contractor shall advise the Owner of the cost status of each allowance. The Contractor shall provide this information in a timely manner, but always prior to the termination of the allowance Work. The intent of this subparagraph is to identify possible cost overrun exposure and bring same to the attention of the Owner as soon as possible.

§ 3.8.3 Materials and equipment required under an allowance shall be proposed by Contractor and approved in writing by the Owner prior to procurement.

§ 3.9 Project Manager / Superintendent

§ 3.9.1 The Contractor shall employ a competent project manager and superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work as required by this Contract or as otherwise necessary or appropriate. The Project Manager and/or the Superintendent shall represent the Contractor, and communications given to the Project Manager and/or Superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 Unless the Superintendent and Project Manager are already identified in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent and project manager. Within 14 days of receipt of the information, the Owner or the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or project manager; or (2) requires additional time for review. Failure of the Owner or the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 Unless otherwise agreed in writing, the Contractor shall cause the Superintendent to remain on the Project site whenever Subcontractors 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, until Final Completion is attained.

§ 3.9.4 The Contractor shall not employ a proposed superintendent or project manager to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the Superintendent or Project Manager without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.9.5 Within ten (10) days after issuance of the Notice to Proceed, the Contractor shall furnish to the Architect and the Owner a chain-of-command organizational chart which includes all supervisory personnel, including the Project Manager, the project engineer and the Superintendent, that the Contractor intends to use on the Work. The chart shall specify any limits of authority for each person, including but not limited to their 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. The Contractor shall also provide the Owner with a list of telephone numbers for all key personnel of the Contractor and its principal Subcontractors at all tiers for purposes of contacting personnel as the Owner reasonably determines necessary. Contractor shall periodically update the list as necessary to ensure the Owner has the most current information.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly but in any event within twenty (20) days after being awarded the Contract, shall submit for the Owner's and the Architect's information a Contractor's construction schedule for the Work. Contractor shall prepare the schedule using the critical path method (CPM). The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The Contractor shall load his labor resource requirements and constructed value to each task on the schedule unless the Owner elects to waive this requirement in writing. The Contractor shall monitor the progress of the Work for conformance with the requirements of the construction schedule and shall promptly advise the Owner of any delays or potential delays. The construction schedule shall be updated by Contractor to reflect actual conditions on a period described elsewhere herein. In the event any progress report indicates any delays, the Contractor shall propose an affirmative plan to adjust the schedule to correct the delay, including overtime and/or additional labor, if necessary. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project. The schedule shall be related to

the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.1.1 From time to time as appropriate during the performance of the Work but not less often than monthly, the Contractor shall prepare and submit to the Owner and the Architect, for the Owner's approval, a current, updated Contractor's construction schedule reflecting any and all changes and revisions.

§ 3.10.1.2 The Contractor shall take such actions as are necessary to adhere to the approved Contractor's construction schedule then in effect, which actions shall include as appropriate, but not be limited to, providing additional labor, supervision, materials, equipment, tools, Subcontractors and other services and facilities. For purposes of whether any Change Orders or Construction Change Directives extend the contractual dates of Substantial Completion and Final Completion, any "float" or "slack" time for the whole or any part of the Work shall not be for the exclusive use or benefit of either the Owner or the Contractor but shall be reserved and apportioned by the Owner and Contractor in accordance with the needs of the Project. The Contractor shall not be entitled to make a Claim based upon an alleged inability to complete the Project early.

§ 3.10.2 The Contractor, promptly after being awarded the Contract, but no more than twenty (20) calendar days after award, and thereafter as necessary to maintain a current submittal schedule, shall prepare and submit a submittal schedule for the Owner's and the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect and the Owner reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules approved by the Owner and the Architect. The Contractor must include a response time of at least ten (10) days for the Architect's review and at least fourteen (14) days for review by the Architect's consultants. Neither the Owner nor the Architect can guarantee response times from governmental authorities, such as permitting agencies.

§ 3.10.4 In the event the Owner determines that the performance of the Work has not progressed or reached the level of completion required by the current, approved Contractor's construction schedule, the Owner shall have the right to order the Contractor to take corrective measures as necessary to restore the progress of the construction to the requirements of such schedule, including but not limited to (1) working additional shifts or overtime, (2) furnishing additional labor, services, materials, equipment and facilities and (3) other similar acceleration measures. The costs incurred by the Contractor pursuant to this Section 3.10.4 shall be paid by the Contractor.

§ 3.10.5 Without limiting the Owner's rights, upon demand by the Owner the Contractor shall prepare and submit to the Owner and the Architect a "Recovery Schedule," in a form and providing sufficient detail to explain and display how the Contractor intends to reschedule those activities to regain compliance with the Contractor's construction schedule during an agreed Recovery Period.

§ 3.10.5.1 Within seven (7) days after the Contractor's receipt of the Owner's demand for a Recovery Schedule, the Contractor shall present the Recovery Schedule to the Owner and the Architect. The Recovery Schedule shall represent the Contractor's best judgment as to how the Work should be made to comply with the Contractor's construction schedule within the agreed Recovery Period. The Recovery Schedule shall be prepared to a similar level of detail as the Contractor's construction schedule.

§ 3.10.6 **Progress Meetings** The Contractor shall participate in progress meetings held at least once every week or at more or less frequent intervals as may be described in the Contract Documents, with the Architect, the Owner, subcontractors at all tiers and other appropriate consultants. The Contractor shall fully brief the Architect and the Owner on the progress of the Work.

§ 3.10.7 Reports

- .1 Progress Reports: Contractor shall prepare and deliver to the Owner at least monthly a progress report in a form and in sufficient detail as is reasonably acceptable to the Owner approved by the Owner. The progress report shall specify, among other things, an estimated percentage of completion, whether the Project is on schedule, and if not, the reasons therefore and the new proposed schedule, as well as the

number of days worked for each category of labor and the projected Work to be completed in the next succeeding month. The report shall include a listing and the status of all Change Orders, Modifications, bulletins, and other relevant documents, and shall detail any issues challenging completion of the Work on schedule and Contractor's solutions to same.

- .2 Additional Reports: Contractor shall prepare and deliver such additional reports as the Owner may reasonably request.
- .3 Logs: Contractor shall prepare and keep current, for the Architect's and the Owner's approval, logs or schedules reflecting the date the items were submitted, when a response is reasonably due and when receipt occurred of Requests for Information (RFI's), Change Order Requests (COR's), Change Orders (CO's) and submittals which shall be coordinated by Contractor with Contractor's construction schedule and which allows the Architect and the Owner reasonable time to review submittals or other such documents. Contractor shall post all logs to eBuilder or if eBuilder is not used, give the Owner access to such logs and schedules at all times. Logs shall be kept on Excel spread sheets unless other format is approved by the Owner Representative.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site and updated at least weekly, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and otherwise marked to depict the as-built nature and configuration of the Work and the approved Shop Drawings, Product Data, Samples, and similar required submittals. Contractor also shall maintain at the Project site for the Owner and the Architect one current copy of all subcontracts with Subcontractors, RFIs, Requests For Change Proposals and Change Proposals. These shall be in electronic form or paper copy, available to the Architect and the Owner, and delivered to the Architect for submittal to the Owner no later than, and as a condition of, Final Completion of the Work as a record of the Work as constructed.

§ 3.11.1 The marked record Drawings and Specifications referenced shall be marked to show field decisions and selections affecting the Work, including but not limited to information regarding (1) approved or directed deviations from the Drawings and Specifications made during construction, (2) details of Work not previously shown or indicated, (3) changes to existing conditions or existing conditions found to differ from those shown on the Drawings or Specifications and (4) other information that the Architect or the Owner reasonably requests. The final set of marked Drawings shall be on drawings in PDF format and in reproducible hardcopy, with each hardcopy sheet stamped "As-Built" and signed by the Contractor. The final act of marked Specifications shall be in PDF format on disk and in reproducible hardcopy, with each hardcopy page stamped "As-Built" and signed by the Contractor.

§ 3.11.2 The location of all existing or new hidden piping, valves, and utilities, as located during the course of construction, shall be appropriately marked on plans. The approved permit set of plans shall also be available to the Architect and the Owner at the site.

§ 3.11.3 Contractor shall submit to the Architect with each Application for Payment an accurate and updated set of field drawings, in such format as the Architect may reasonably request, marked currently to record field changes and selections. Upon final completion of the Work the Contractor shall certify that the record documents reflect complete and accurate "as-built" conditions and shall deliver the documents as well as the approved permit set of plans in good condition to the Architect for submittal to the Owner in accordance with the provisions of the Contract Documents. Contractor shall indicate on the face of each as-built drawing its concurrence that the as-built drawings are accurate. Satisfactory maintenance and submission of up-to-date record drawings will be a requirement and condition for approval of progress payments. Notwithstanding the completion of the as-built drawings and any review and correction of such drawings by Contractor, neither the Architect nor Contractor shall be relieved of any responsibility each has under its contract with District for the execution and completion of Work in compliance with the Contract Documents.

§ 3.12 Shop Drawings, Product Data and Samples

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

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

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

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve (including any approval of conforming with the submittal requirements as specified in the Contract Documents), and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors. The Contractor shall be responsible for all costs associated with Shop Drawings, Product Data and Samples submitted out of sequence through the fault of Contractor. Submittals which are not marked as reviewed and approved by the Contractor for conformance with the submittal requirements of the Contract Documents may be returned by the Architect without action.

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

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

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's or the Owner's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect and the Owner 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. Any corrections or modifications to Shop Drawings requested 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 specifically identifying the deviation and impact before commencing any Work from such Shop Drawings. The Contractor shall make all corrections and modifications requested by the Architect and, when requested by the Architect, provide a corrected Submittal. Notwithstanding the foregoing, 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 and the Owner's approval or review thereof. The Contractor shall be solely responsible for errors or omissions in all submittals and Shop Drawings, whether or not the submittals and Shop Drawings have been reviewed or approved by the Architect or the Owner.

§ 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 of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall 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. Contractor shall cause such portions of the Work to be designed, engineered, and permitted, and to construct such Work in accordance with all such criteria, in accordance with all applicable laws and codes, and in a manner such that these systems are functioning and properly integrated into the remainder of the Work. Any of Contractor's (or any Subcontractor's) design or engineering professionals shall carry errors and omissions coverage of at least \$1,000,000 for the design and engineering of such Work. The premium for errors and omissions coverages is included in the Contract Sum. The Owner will be the Owner of all design and engineering documents so generated for the Work. They are not to be used by Contractor or its Subcontractors on any other project and shall be given to the Owner or destroyed upon completion of the Work, at the Owner's discretion. Contractor shall cause shop drawings and designs for such Work to be submitted in a timely fashion to the Architect for review in accordance with the schedule requirements. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy and completeness of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and the Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect or the Owner will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Contractor shall submit a copy of all design documents prepared by such design professionals to the Owner and to the Architect. The Owner will have an irrevocable, perpetual license to use all design documents generated by Contractor or its Subcontractors at any tier. They are not to be used by Contractor or its Subcontractors on any other project and shall be given to the Owner upon completion of the Work.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

§ 3.12.11 Any corrections or modifications to Shop Drawings and other submittals made by the Architect shall be deemed acceptable by the Contractor, without change in the Contract Sum or Contract Time, unless said changes constitute changes to the Contract Documents and the Contractor provides the Architect with contrary written notice before commencing any such changed Work. In the absence of such notice, the Contractor shall make all corrections requested by the Architect and provide a corrected submittal without change in the Contract Sum or Contract Time.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, permits, rules and regulations, and lawful orders of public authorities, and the Contract Documents, and shall not unreasonably encumber the site with materials or equipment. Portions of the site may be occupied and in use during construction. Contractor shall maintain access and services to minimize disturbance to occupants and to allow the Owner to utilize the occupied portion of the site throughout the construction period. Without limitation, the Contractor shall at all times and at its expense fully comply with the requirements of all applicable laws pertaining to storm water discharges and mitigation requirements.

§ 3.13.1 The Owner shall have the exclusive rights to approve of any signs erected at the Project, including without limitation signs placed on cranes or other equipment, company names, advertising on trailers, or other signs. The Contractor and all Subcontractors shall notify the Owner before signs are erected and shall obtain approval of their placement. No signs or advertising media of any nature shall be permitted on the site of Work or enclosing structures without the written approval of the Owner. Any approved signs shall comply with the applicable laws, ordinances, and/or rules. Contractor shall not use in its external advertising, marketing programs, or other promotional efforts, any data, pictures or other representations of the Owner, except with prior specific written authorization from the Owner.

§ 3.13.2 Prior to the commencement of construction, the Contractor shall prepare and obtain the Owner's approval of a construction site management plan, which will take into account requirements contained in the Specifications, and the Owner's requirements and restrictions concerning access and parking for construction personnel, staging areas and material delivery times, traffic flow requirements of the Owner and local governmental authorities, and work hours, among other things.

§ 3.14 Cutting and Patching

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

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.14.3 Existing structures and facilities, including but not limited to buildings, utilities, topography, streets, curbs, and walks, that are damaged or removed due to excavations or other construction work, 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.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area in a clean condition, free from accumulation of waste materials and rubbish, excavated materials and “tracking” caused by operations under the Contract, on a daily basis or such other period as is acceptable to the Owner. At completion of the Work, the Contractor shall remove from the site, the surrounding area and contiguous roads, streets and sidewalks waste materials, rubbish, the Contractor’s and Subcontractor’s tools, construction equipment, machinery, and surplus materials from and about the Project and clean all surfaces.

§ 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 immediate reimbursement from, or an offset of charges from the Contractor for the costs (internal or external) incurred by the Owner.

§ 3.15.3 The Contractor’s obligations under this Section 3.15 shall include the proper disposal of all such waste materials, rubbish and disposable surplus materials consistent with and in compliance with all applicable laws, statutes, ordinances, codes, rules, regulations and lawful orders of public authorities, including without limitation those relating to hazardous materials and the environment.

§ 3.16 Access to Work

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

§ 3.17 Royalties, Patents and Copyrights

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

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify, protect, defend and hold harmless, and reimburse the Owner, the Architect, the Architect’s consultants, and the members, partners, officers, directors, agents, employees and successors of any of them from, for and against suits, actions, awards, penalties, liabilities, claims, damages, losses, costs, and expenses, direct and indirect, or consequential, whether directly incurred or from third parties, including but not limited to attorneys’ fees, costs, design professional fees, consultant and expert witness fees and other costs incurred on such claims, and in proving the right to indemnification arising out of or resulting from performance of the Work, including but not limited to any such suit, action, award, penalty, liability, claim, damage, loss or expense attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible

property in any event to the extent caused, in whole or in part, by (1) the negligent or other wrongful acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable or (2) the failure of such person or entities to perform in accordance with the Contract. The Contractor's obligation under this Article 3.18 shall include damage to the Owner's own property and the Project itself, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18. Contractor's duty of defense shall arise immediately upon assertion of any claim actually or allegedly covered by this indemnification provision, and, to the fullest extent allowed by law, shall be independent of any limitations upon Contractor's duty of indemnification.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, or Supplier of any tier, their agents and anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

§ 3.18.3 If any provision of this Contract is determined to require either party to indemnify, defend, reimburse, hold harmless or provide insurance to the other party (or that party's insurers or sureties) in a manner that would violate applicable law (including but not limited to ORS 30.140), then the offending provision shall be construed such that it is given the broadest meaning and effect allowed by law.

§ 3.18.4 The indemnities and other covenants of this Section 3.18 shall survive the termination of the Contract.

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement. Nothing herein shall require the Owner to designate the Architect. If no such party is designated, the Owner shall reserve, for itself or a third party under contract with the Owner, the administrative duties, rights, and responsibilities of the Architect herein.

§ 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. Notwithstanding any provision of the Contract to the contrary, the Contractor agrees that any matter which is subject to the review, interpretation, approval, consent or direction of the Architect shall also be subject to the review, interpretation, approval, consent or direction of the Owner, whose opinions(s) shall govern and bind the Contractor in the event of any disagreement between the Owner (on the one hand) and the Architect (on the other hand).

§ 4.1.3 In the event of a termination of the Architect or a restriction of the duties, responsibilities or authority of the Architect as described in the Contract Documents, the Owner or a third party under contract with the Owner may carry out those duties, responsibilities and authority of the Architect; provided that all such duties, responsibilities and authorities that by law must be carried out by a licensed design professional shall be carried out by a licensed design professional.

§ 4.2 Administration of the Contract

§ 4.2.1 At the direction of the Owner, the Architect will provide administration of the Contract as described in the Contract Documents during construction until the date the Owner or the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

- .1 With the Owner's concurrence, the Architect may also provide administration from time to time during the period for correction of Work described in Section 12.2.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or

for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.2.1 The Contractor acknowledges that the Architect is not the Owner's agent and does not have authority to make any decision or give any direction to the Contractor that would impact the Contract Sum or Contract Time without the prior written approval of the Owner.

§ 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, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. 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. 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 at any tier, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Contractor shall endeavor to communicate through the Architect about matters arising out of or relating to the Contract; provided that the Owner and Contractor may communicate directly with each other at any time regarding the Project. Communications by and with the Architect's consultants shall be through the Architect with copies to be given to the Owner's Project Manager. Communications by and with Subcontractors and suppliers shall be through the Contractor, unless at that time the Owner believes it has cause to communicate with them directly or determines the Contractor is in breach of the Contract Documents. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.4.1 The Contractor shall provide the Owner with a direct copy of all written communications to or from the Architect, including all notes, requests, claims and potential changes in the Contract Sum or Time.

§ 4.2.5 Based on the Architect's observations and evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Owner and the Architect, after consultation with the Owner, will have authority to reject Work that is defective or does not conform to the Contract Documents. Whenever the Architect or the Owner considers it necessary or advisable, and after obtaining the Owner's permission in each instance, the Architect will have authority to require inspection or testing of the Work in accordance with Section 13.4, 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 to the Contractor, Subcontractors, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Contractor shall provide submittals for review so as to cause no delay in the Work. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for fabrication, 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 the Contract Documents. The Architect's review is undertaken solely to satisfy its obligations to the Owner and shall not give rise to any claim by the Contractor or Subcontractors against the Architect or the Owner. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component. The Contractor should expect a submittal review cycle time of up to 14 days, although the Owner may in its discretion, at the request of Contractor, request that the Architect accelerate certain submittal reviews where these are shown to Owner to be necessary for the Project schedule. Neither the Owner nor the Architect can guarantee response times from governmental authorities.

§ 4.2.8 With the written approval of the Owner, the Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. At the Owner's request, the Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.5.

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

§ 4.2.10 If the Owner and the Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 At the Owner's written request, the Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which interpretations required of the Architect shall be furnished, then delay shall not be recognized on account of failure by the Architect to furnish such interpretations until at least 15 days after written request is made for them accompanied by sufficient information for the determination.

§ 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.

§ 4.2.13 The Architect's decisions on all matters will be final only if approved by the Owner. The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

§ 4.2.14 In reviewing the quality and progress of the Work and submittals received from the Contractor, the Architect is acting solely for the convenience of the Owner. Neither the Owner nor the Architect has any responsibility to assist the Contractor in the supervision or performance of the Work. No action, approval or omission to act or failure to advise the Contractor as to any matter by the Owner or the Architect shall in any way relieve the Contractor from its responsibility for the performance of the Work in accordance with the Contract Documents. 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. 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.

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 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 the subcontractors of a Separate Contractor. Unless the context indicates otherwise, the term "Subcontractor" also includes subcontractors, suppliers and consultants of the Contractor at all tiers, including subcontractors, suppliers and consultants of other Subcontractors.

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

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

§ 5.2.1 Unless otherwise stated in the Contract Documents or already-submitted first-tier disclosure, the Contractor, as soon as practicable after Notice of Intent of award of the Contract (but not later than ten (10) days after the Notice of Intent), shall notify the Owner and the Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. The Contractor shall organize this list of Subcontractors in the same sequence as the Index of Specifications Sections, 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). 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 the Owner. This list shall be updated monthly as part of the payment process if additional Subcontractors are engaged. No progress payment will become due until this information is so furnished. No action or inaction of the Owner or the Architect in response to receipt of the names of the proposed Subcontractors or Suppliers of any tier shall constitute approval of any Subcontractor or Supplier of any tier or of its performance. Within 14 days of receipt of the information, the Owner may notify the Contractor whether the Owner (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Owner to provide notice within the 14-day period shall constitute notice of no reasonable objection. If the Owner concludes that a proposed Subcontractor has materially failed to perform satisfactorily (such as causing a material delay or an unsafe working environment) on one or more projects for the Owner within three years of the bidding date or that a proposed Subcontractor is otherwise not "responsible", at the Owner's request, objection will be deemed reasonable and the Contractor shall replace the Subcontractor. 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 or the Contract Time, except that the Owner will be responsible for the difference between the original Subcontractor's sub-bid and the replacement Subcontractor's sub-bid including any schedule impact. Notwithstanding the above, if the Owner finds the Subcontractor irresponsible based on past performance which was known to the Contractor or reasonably should have been known to the Contractor, then replacement with another Subcontractor shall not result in any change to Contract Sum and/or Contract Time.

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

§ 5.2.3 If the Owner or the Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or the Architect has no reasonable objection. Similarly, any objection that a proposed Subcontractor or Supplier of any tier is different from an entity listed with the Bid shall be deemed a reasonable objection. If the proposed but unreasonably rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order or Change Directive 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 or the proposed Subcontractor or Supplier of any tier is different from an entity listed with the Bid.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or the 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. Such 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.

§ 5.2.5 Notwithstanding the foregoing procedures, the Contractor may only engage and substitute first tier subcontractors as permitted by ORS 279C370, 279C.585, and 279C.590.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each first-tier Subcontractor, to the extent of the Work to be performed by the first-tier 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 first-tier Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and the Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and the Architect under the Contract Documents with respect to the Work to be performed by the first-tier Subcontractor so that subcontracting

thereof will not prejudice such rights, and shall allow to the first-tier Subcontractor, unless specifically provided otherwise in the subcontract, purchase order, and similar agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. The Contractor shall require each first-tier Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed first-tier Subcontractor, prior to the execution of the subcontract, purchase order, or similar agreement, copies of the Contract Documents to which the first-tier Subcontractor will be bound, and, upon written request of the first-tier Subcontractor, identify to the first-tier Subcontractor terms and conditions of the proposed subcontract, purchase order, or similar agreement that may be at variance with the Contract Documents. First-tier 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.

§ 5.3.1 The Contractor shall pay each Subcontractor, upon receipt of payment from the Owner, an amount equal to the percentage of completion allowed to the Contractor on account of such Subcontractor's work, less the percentage retained. Contractor shall require each Subcontractor to make similar payments to its Sub-subcontractor. The Contractor shall defend, indemnify and hold harmless the Owner from any liens and Subcontractor claims, including all expenses and attorneys' fees.

§ 5.3.2 Each subcontract, purchase order, and similar agreement shall state that the Subcontractor agrees to the contingent assignment of the subcontract, purchase order, or similar agreement to the Owner, consistent with Section 5.4. Each subcontract, purchase order and similar agreement at every tier shall provide that the Owner is and shall be a third-party beneficiary of such subcontract, purchase order and similar agreement, and that the Owner shall have the right, but not the obligation, to assert claims directly against the Subcontractor for breach of contract, breach of express warranties, breach of implied warranties including but not limited to warranties of merchantability and of fitness for a particular purpose, negligence and other claims arising out of or related to the Work or the Project. The Owner and Contractor acknowledge and agree that the purpose of this Section 5.3.2 is to enable the Owner at its discretion, in addition to the Contractor, to assert claims for damages and indemnification directly against Subcontractors that are or may be responsible for breach of the contract, defects in the Work, and other damages incurred by the Owner arising out of or related to the Work or the Project.

§ 5.3.3 Contractor shall include with every Subcontract agreement the following language: "Subcontractor binds itself to Contractor and Owner, and is obligated to Contractor and Owner, in the same manner and to the same extent that Contractor is bound and obligated to Owner under the Prime Contract. In the event of any dispute between the Owner and Contractor, Subcontractor shall be bound by all decisions, directives, interpretations and rulings of the Owner or the Architect, at Owner's option, including Owner's termination or suspension of Contractor."

§ 5.3.4 The Contractor shall schedule, supervise and coordinate the operations of all Subcontractors. No subcontracting of any of the Work shall relieve the Contractor 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.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract, purchase order and similar 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 and only for those subcontracts, purchase orders and similar 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, purchase order, or similar agreement, the Owner assumes the Contractor's rights and obligations under the subcontract, purchase order, or similar agreement.

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

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the

Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

§ 5.5 Subcontractors as Assignees and Third-Party Beneficiaries

§ 5.5.1 Nothing in this Article 5 or elsewhere in the Contract Documents shall be interpreted to (1) constitute an assignment of the Contractor's rights against the Owner to any Subcontractor or (2) make any Subcontractor a third-party beneficiary of the Contract.

§ 5.6 SUBCONTRACTOR CLAIMS

The Contractor shall promptly pay (and secure the discharge of any liens or claims 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). The Contractor shall furnish to the Owner such releases of claims, payment, bond and surety claims, and other documents as required by Section 9.3 and as the Owner may request to evidence such payment and discharge. The Owner, at its option, may withhold payment, in whole or in part, to the Contractor until such documents are furnished.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project and to furnish materials or equipment for the Project with the Owner's own forces, and with Separate Contractors.

§ 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 Unless the Owner elects to do so, the Contractor shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor. The Owner shall require its own forces and Separate Contractors to cooperate with the Contractor with respect to such coordination. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual reasonable agreement. The construction schedules so established shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

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

§ 6.1.5 The cost of any materials or equipment to be provided by the Owner shall not be included in the Contract Sum, and no Contractor Fee (if applicable) shall apply to such cost. The cost of installing such materials or equipment shall be included in the Contract Sum to the extent the Contract Documents require the Contractor to install such materials or equipment as part of the Work. Handling and storage of any such materials or equipment supplied by the Owner and delivered to the site for installation by the Contractor shall be the responsibility of the Contractor.

§ 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 notify the Architect and the Owner in writing of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's

Work. Failure of the Contractor to so notify the Architect and the Owner of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not actually or readily apparent unless reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

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

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may (but shall not be obligated to) clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, only 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 between the Owner and Contractor and at the Owner's discretion the Architect; a Construction Change Directive requires direction by the Owner and at the Owner's discretion the Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone. Change Orders shall be deemed to cover all costs and time impacts associated with the Work change including, but not limited to, all direct and indirect costs, and Contractor shall be entitled to no further compensation or time adjustments related to such Work.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work. Before effectuating a change the Contractor shall propose the amount of change in the Contract Sum, if any, and the amount of change in the Contract Time, if any, arising from a proposed change in the work in the form of a Change Order Proposal. The Contractor shall submit its responsible proposal within no longer than seven (7) days after request from Owner or Architect, and shall in good faith specify the components and amounts by which the Contract Sum and/or Contract Time would change. If the Contractor fails to respond within this time or an agreed to extension thereof, the Contractor shall be liable for any delays or costs to other Work associated with accepting or denying the change. The Owner may accept the proposal in writing, in which case the Owner and Contractor are bound to the terms of the proposal, it will be deemed a Change Order, and the Contractor shall commence the change in the Work immediately in accordance with the proposal. The Owner shall include the accepted proposal in the next available formal Change Order. The Owner may reject the proposal, in which case the Owner may either not effectuate the change or may order the change through a Construction Change Directive or an order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect, the Owner or Contractor and signed by the Owner, Contractor, and (at the Owner's election) the Architect stating their agreement upon all of the following:

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

§ 7.2.2 The form of Change Orders shall be AIA Document G701, Change Order, or as approved by the Owner.

§ 7.2.3 If the Change Order provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation. At a minimum, the Contractor shall submit an itemized breakdown of the cost and/or time required by the Change in the Work, including but not limited to, the following:
 - .a Material quantities and costs.
 - .b Direct labor hours and hourly rates for specific work or operation to be performed.
 - .c Equipment costs or rental charges.
 - .d Specified overhead and profit.
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon; or
- .3 As provided in Section 7.5; or
- .4 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .5 As provided in Section 7.3.5.

§ 7.2.4 Agreement on any Amendment shall constitute a final settlement of all matters relating to the change in the Work that is the subject of the Change Order, including, but not limited to, all direct and indirect costs associated with such change and any and all adjustments to the Contract Sum, the construction schedule, and the Contract Time.

§ 7.3 Construction Change Directives

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

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

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

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4 and 7.5.

§ 7.3.4 Unit prices are inclusive of all costs for the unit price Work, including but not limited to costs of labor, services, materials, equipment, supervision, insurance, bonds and general conditions, as well as applicable taxes and overhead and profit for that Work. If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed 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, the applicable unit prices shall be equitably adjusted.

§ 7.3.5 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Owner shall determine the method and the adjustment on the basis of reasonable cost expenditures and cost savings of those performing the Work attributable to the change, including but not limited to, 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 Item .3 of Section 7.3.3, the Contractor shall keep and present, in such form as the Owner may prescribe, an itemized accounting together with appropriate supporting data.

§ 7.3.5.1 Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.5, shall be limited to the following, subject to the limitations of Section 7.5:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;

- .2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Additional costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5.2 As to CM/GC contracts only, the terms used in Section 7.3.5.1, including but not limited to Items .1 through .5, shall be subject to the provisions of Articles 4 and 5 of the Agreement.

§ 7.3.6 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.7 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved. As soon as possible, but no longer than seven (7) days of receipt, the Contractor shall advise the Owner and the Architect of the Contractor's agreement or disagreement with the cost or the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time. If the Contractor does not timely disagree with the adjustments, the Construction Change Directive will be deemed an agreed "Change Order". The Contractor's notice shall reasonably specify the reasons for its disagreement and the amount or other terms that it proposes. Without such timely written notice, 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 Owner on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, in strict accordance with this Paragraph and other applicable provisions of the Contract Documents.

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

§ 7.3.9 If the Contractor timely disagrees with the proposed method for adjustment in the Contract Sum and the parties do not otherwise come to terms on adjustment, or if cost is to be determined under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Owner and the Architect may prescribe, an itemized accounting together with appropriate supporting data. 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, materials and subcontract costs. Labor and materials shall be itemized in the manner described in Section 7.5. When cost items in excess of \$2,500 arise from Subcontractors, these items shall also be itemized and presented to the Owner. Approval may not be given without such itemization. Failure to provide data within seven (7) days of the Owner's request or approved extension thereof shall constitute waiver of any Claim for changes in the Contract Time or Contract Sum. The Owner shall have the right to audit and copy the books and records of the Contractor and of any Subcontractor or Supplier of any tier seeking a change in the Contract Sum.

§ 7.3.10 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 larger of the reasonable value of the deletion or change, or the actual net decrease in cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase or decrease, if any, with respect to that change.

§ 7.3.11 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.12 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 or Owner will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.3.13 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 progress schedule directly caused thereby.

§ 7.4 Minor Changes in the Work

The Architect and the Owner may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's or Owner's order for minor changes must be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall immediately notify the Architect and Owner, with its identification of the adjustment. If the Contractor performs the Work set forth in the Architect's or Owner's order for a minor change without prior written notice to the Architect and Owner that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

§ 7.5 PRICING COMPONENTS

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

- .1 Basic wages: The hourly wage (without markup, fringe benefits or labor burden) not to exceed that specified in the applicable "Prevailing Wage Publication" for the laborers, apprentices, journeymen, and foremen performing and/or directly supervising the changed Work on the site. The premium portion of overtime wages is not included unless pre-approved by the Owner.
- .2 Fringe benefits: Fringe benefits paid by the Contractor as established by the Oregon Bureau of Labor and Industries or contributed to labor trust funds as itemized fringe benefits, whichever is applicable. Costs paid or incurred by the Contractor for vacations, per diem, bonuses, stock options, or discretionary payments to employees are not reimbursable.
- .3 Workers' insurances: Direct contributions to the State of Oregon as industrial insurance; medical aid; and supplemental pension by class and rates established by the Oregon Bureau of Labor and Industries.
- .4 Federal insurances: Direct contributions required by the Federal Insurance Compensation Act (FICA); Federal Unemployment Tax Act (FUTA); and State Unemployment Compensation Act (SUCA).

§ 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. Discounts and rebates based on prompt payment shall be included.

§ 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, or the actual rate paid to an unrelated third party as evidenced by rental receipts. Actual, reasonable mobilization costs are permitted if the equipment is brought to the Site solely for the change in the Work. If equipment is required for which a rental rate is not established by The Rental Rate Blue Book, an agreed rental rate shall be established for the equipment, which rate and use must be approved by the Architect prior to performing the work. If more than one rate is applicable, the lowest 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. 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. The rate for equipment necessarily standing by for future use on the changed Work shall be 50% of the rate established above. The total cost of rental allowed shall not exceed the cost of purchasing the equipment outright.

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

- .1 Contractors' liability insurance: The cost (expressed as a percentage) of any changes in the Contractor's liability insurance arising directly from the changed Work; and
- .2 Payment and performance bond: The cost (expressed as a percentage) of the change in the Contractor's premium for the Contractor's bond arising directly from the changed Work.

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 Subcontractors. The Subcontractors' cost of changed Work shall be determined as the lesser of the manner stated in their Subcontract, or in the manner as prescribed in this Section 7.5 (and, if this is a CM/GC contract, as further limited pursuant to Sections 4 and 5 of the A133 Agreement). Payments to subcontractors or suppliers that are affiliates of Contractor for change work shall not exceed market rates for the services provided.

§ 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 project manager, project engineers, project foreman, estimator, superintendent and their vehicles), taxes (except for sales tax), warranty, safety costs, quality control/assurance, purchasing, small or hand tool or expendable charges, preparation of as-built drawings, impact on unchanged Work, Claim preparation, and delay and impact costs of any kind, 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. The total aggregate amount of Fee allowed on Work performed by Contractor's own forces shall be limited to Contractor's original Fee percentage of the allowed costs of the change in the Work, but not more than 10% of the allowed costs of the change in the Work. The Contractor also shall receive the Fee identified in clause (2) below (or if less, Contractor's original fee percentage not exceeding 5%) on the amount owed directly to a Subcontractor or Supplier for materials supplied or work properly performed by that Subcontractor or Supplier.

- .1 The Contractor shall receive as Overhead and Profit its Fee percentage of the cost of any materials or work performed by the Contractor's or its Affiliates' own forces or that labor performed or materials supplied by subcontractors; provided total Contractor Overhead and Profit charges cumulatively at all tiers shall not exceed 20%.
- .2 Each Subcontractor at any tier (including lower tier subcontractor involved, but excluding an Affiliates of Contractor) shall receive a maximum of 10% of the cost of any materials or work directly performed by its own forces, and a maximum of 5% of the cost of any materials and labor performed by its sub-tier subcontractors.

If a change in the Work involves both additive and deductive items, the appropriate net Fee allowed will be added to the net positive difference of the items. If the net difference is negative, net negative Fee will be included in the negative figure as a further deduction. .

§ 7.5.7 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 this Section 7.5. Unless otherwise agreed in writing by the Owner, the cost shall not exceed the lower of the prevailing cost of the work in the locality of the Project or the cost of the work in the current editions of R.S. Means Company, Inc. Building Construction cost Data as adjusted to local costs and conditions. The Owner or Architect may confer directly with Subcontractors or Suppliers of any tier concerning any item chargeable to the Owner under this Article to confirm balances due and to obtain statements or lien waivers.

§ 7.6 CHANGE PROPOSALS

Within the time limits set out in this Section 7.6, after receipt of a Request For Change Order Proposal or a Construction Change Directive, the Contractor shall submit to the Owner and the Architect a written Change Order Proposal setting out any proposed adjustment in the Contract Sum or Contract Time, or both, to which the Contractor believes it (1) would be entitled as a result of the change in the Work proposed in the Request For Change Order Proposal or (2) is entitled as a result of the change in the Work directed by the Construction Change Directive. Such Change Order Proposal may be in the form of a lump sum proposal (with adequate cost substantiation as required by the Owner and calculations showing the amount of markups on costs), or a unit price proposal, or a combination thereof, for a proposed increase in the Contract Sum, and in similar form for a proposed extension of the Contract

Time, and otherwise shall be in such form and in such detail as the Owner or the Architect may require. Such Change Order Proposal shall be submitted as soon as practicable after the Contractor's receipt of the Request For Change Order Proposal or the Construction Change Directive, but in no event later than thirty (30) days after the Contractor's receipt of the Request For Change Order Proposal or the Construction Change Directive.

§ 7.7 Contractor shall not be entitled to a Change Order for any change in the Work unless a Change Order has been signed by the Owner, a Construction Change Directive has been issued, a Change Proposal has been approved by the Owner in writing, or a similar written Authorization has been issued by the Owner, prior to initiation of such Work.

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 achievement of Substantial Completion and Final Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date satisfying the requirements of the Architect in Section 9.8.

§ 8.1.4 The date of Final Completion is the date satisfying the requirements of the Architect in Section 9.10.

§ 8.1.5 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined. The term "working day" shall mean any calendar day except Saturdays, Sundays, and Legal Holidays at the place of building.

§ 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 and completing the Work.

§ 8.2.2 The Contractor shall not, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and the Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion and Final Completion within the applicable Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or the Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, not caused or contributed to by Contractor, Subcontractors, or any person or entity for whose acts or omissions any of them are responsible, fire, unusual delay in deliveries beyond the Contractor's reasonable control, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes not reasonably foreseeable on the date the Work commenced and which are beyond the Contractor's control and not caused by the acts or omissions of Contractor or any Subcontractor or Sub-subcontractor; or (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Owner determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Owner may determine. The Contractor shall be required to use best efforts to mitigate both the necessity of the delay and the period of the delay. Extension shall not exceed the change in the actual critical path of the Contractor's Construction Schedule directly caused thereby, but in no circumstance more than a day for day increase due to the number of days of legitimate occurrence as defined above, as the Owner may determine consistent with the provisions of the Contract Documents.

§ 8.3.1.1 No extensions of the Contract Time shall be allowed for delays or suspensions to the extent caused by the negligent or other wrongful acts or omissions of the Contractor, Subcontractors, or anyone for whose acts or omissions any of them are responsible, or by the failure of such persons or entities to perform as required by the Contract.

§ 8.3.1.2 Any such extension of the Contract Time shall be net of any contingency, weather delay, or "float" time allowance included in the Contractor's construction schedule. If more than one event causes concurrent delays, and the cause of at least one of those events is a cause of delay that would not entitle the Contractor to an extension of time, then to the extent of such concurrency, the Contractor shall not be entitled to an extension of time.

§ 8.3.2 All claims for extension of time shall be made in writing to the Owner no more than seven (7) days after the commencement of the delay; otherwise they shall be deemed waived and barred. The Contractor shall provide an estimate of the probable effect of such delay on the progress of the Work and shall notify the Owner within ten (10) days after the event causing the delay has ceased. Claims relating to time otherwise shall be made in accordance with applicable provisions of Article 15. The Owner's or Architect's awareness of the occurrence of the delay through means other than the Contractor's written notification shall not constitute a waiver of a timely or written notice or Claim.

§ 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.

§ 8.3.4 When the Contract Time has been extended (i) such extension of time shall be the Contractor's sole remedy for such delay, and the Contractor shall not be entitled to any delay, equitable adjustment or impact damages or other increase in compensation due to such extension, and (ii) the Contractor agrees to make no monetary claim under any legal theory for delay, interference or hindrance of any kind in the performance of this Contract for any reason, and (iii) agrees that any such claim shall be fully compensated for by an extension of time to complete performance of the Work. This Section 8.3.4 shall not apply to the extent of unreasonable delay occasioned by any act or omission of the Owner or anyone acting by or through the Owner.

§ 8.3.5 To the fullest extent allowed by law, the Contractor may recover an increase in the Contract Sum or Contract Time from the Owner for the Owner-directed changes only if the actions or inactions of the Owner or persons acting therefor were the actual cause of the delay. The Contractor shall not be entitled to 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.

§ 8.3.6 In addition to the other limits stated in Section 8.3, to the fullest extent allowed by law, the Contractor shall not in any event be entitled to damages arising out of actual or alleged loss of efficiency; morale, fatigue, altitude, or labor rhythm; constructive acceleration; home office overhead; expectant underrun; trade stacking; reassignment of workers; concurrent operations; dilution of supervision; learning curve; beneficial or joint occupancy; logistics; ripple; season change; extended overhead; profit upon damages for delay; impact damages; or similar theories of damages.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

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

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect or the Owner. If a schedule of values is attached as an exhibit to this Contract, it shall be considered the schedule of values for the purposes of this Contract. This schedule, unless objected to by the Owner or the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and the Owner and supported by such data to substantiate its accuracy as the Architect or the Owner may require, and unless objected to by the Architect or the Owner, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 Progress payments will be made monthly for work duly certified, approved, and performed during the calendar month preceding the application. At least the number of days before the date established for each progress payment established in this Agreement, The Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, as required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or the Architect require, such as copies of requisitions, and releases and waivers from Contractor, Subcontractors and suppliers in the form of Exhibit B, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 Draft Application: On or about the 25th of each month, the Contractor shall submit to the Architect and the Owner, a report on the current progress of the Work as compared to the Contractor's Construction Schedule, and a draft, itemized Application for Payment for work performed during the prior calendar month. This draft shall not constitute a payment request or formal Application for Payment. The Contractor, the Owner, and the Architect shall confer regarding the current progress of the Work and the amount of payment to which the Contractor is entitled. The Owner or the Architect may request the Contractor to provide data substantiating the Contractor's right to payment, such as copies of requisitions from Subcontractors, 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. 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.

§ 9.3.1.2 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; provided that the Owner may withhold payment of disputed Construction Change Directive amounts.

§ 9.3.1.3 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay. An Application for Payment request shall not be valid unless it complies with the requirements of the Contract Documents.

§ 9.3.1.4 The form of Application for Payment shall be a notarized AIA Document G702, Application and Certification For Payment, supported by AIA Document G703, Continuation Sheet.

§ 9.3.1.5 Each Application for Payment shall be accompanied by the following, all in form and substance satisfactory to the Architect and the Owner:

- .1 Duly executed lien and claim waivers in the forms attached as Exhibit B to the Agreement, executed acknowledged, and sworn by the Contractor, showing: all first-tier Subcontractors with whom the Contractor has entered into subcontracts, the amount of each such subcontract, the amount requested for payment to each such first-tier Subcontractor, and the amounts to be paid to and retained by the Contractor from such progress payment. The waiver and release forms submitted by the Contractor shall be conditional as to the payment sought by the current Application for Payment and shall be unconditional as to the payment received pursuant to the prior Application for Payment.
- .2 Duly executed lien and claim waivers in the forms attached as Exhibit B to the Agreement executed acknowledged, and sworn by all first-tier Subcontractors (and any Sub-subcontractors as required by the Owner) showing: all lower-tier Subcontractors with whom the first-tier Subcontractor has entered into subcontracts, the amount of each such subcontract, the amount requested for payment to each such lower-tier Subcontractor, and the amounts to be paid to and retained by the first-tier Subcontractor from such progress payment. The lien and claim waiver forms submitted by first-tier Subcontractors shall be conditional as to the payment sought by the current Application for Payment and shall be unconditional as to the payment received pursuant to the prior Application for Payment.

§ 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 in advance by the Owner, on such terms as the Owner may require, 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 subject to the Owner's approval and 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 upon physical incorporation into the construction at the site or the time of payment, whichever occurs first. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Applications for payment or Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or

encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within a reasonable period after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and the Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and the Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum. Furthermore, the issuance of a Certificate for Payment will not excuse Contractor from (1) defects in the quality or quantity of the Work, (2) Contractor's responsibility for construction means, methods, techniques, sequences or procedures, (3) deficiencies in requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, (4) Contractor's duty to properly use money previously paid on account of the Contract Sum or (5) any other obligation of Contractor under the Contract Documents.

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

- .1 defective or nonconforming Work not remedied; 150% of the estimated value of such defective Work may be withheld;
- .2 third party claims, including but not limited to construction lien claims and bond claims, filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, services, 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 or third party;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, or that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- .7 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;
- .8 delay by the Contractor and/or its Subcontractor(s), or failure to comply with the Contractor's Construction Schedule requirements;
- .9 failure of the Contractor to submit updates of the Contractor's construction schedule as required by Section 3.10.1.1;
- .10 failure to submit affidavits pertaining to wages paid as required by statute;

- .11 failure of the Contractor to provide satisfactions of claims of mechanics', material suppliers', design professionals', construction or similar liens;
- .12 failure to comply with a requirement of the Contract Documents in which the Owner has reserved the right to withhold payment;
- .13 failure of the Contractor to provide waivers and releases from the Contractor and Subcontractors;
- .14 liquidated damages; or
- .15 any other grounds for withholding under this Contract or at law.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

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

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect the payment in its records. Such payment will not relieve the Contractor or its surety. Contractor shall reflect such payment on its next Application for Payment.

§ 9.5.5 The Owner will have the same rights of withholding as the Architect, under Section 9.5.1, regardless of whether the Architect withholds.

§ 9.5.4 To the fullest extent allowed by law, Contractor shall have no right to stop the Work if Contractor timely is paid for all undisputed invoices, and if so paid, Contractor shall proceed with the performance of its obligations hereunder with reservation of all rights and remedies it may have at law or in equity with respect to disputed invoices.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued and the Owner has approved a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, absent any material breaches by Contractor and/or the Owner's good-faith belief that a withholding of payment is necessary to protect the Owner from Contractor's failure to perform its obligations hereunder.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven (7) days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner. If the Contractor does not receive payment for any cause which is not the fault of a particular subcontractor, but does receive payment for work done by the particular subcontractor, the Contractor shall pay that subcontractor on demand, made at any time after which such payment to the Contractor would have been made, for its satisfactorily completed work of such subcontractor, less the retained percentage.

§ 9.6.2.1 Should the Contractor withhold payment from a first-tier Subcontractor due to a bona fide dispute, the Contractor shall notify the Owner. The Owner may then withhold such funds from the Contractor until the dispute is resolved; provided that this Section 9.6.2.1 shall not be construed or applied to prevent the Contractor from receiving payment from the Owner for Work performed by the Contractor or by another Subcontractor when such Work is the subject of a back-charge by the Contractor against the Subcontractor involved in the bona fide dispute. In accordance with ORS Chapter 279C, unless payment is subject to a good-faith dispute as defined in ORS Chapter 279C, if Contractor or any first-tier Subcontractor fails, neglects, or refuses to make payment to person or entity furnishing labor or materials for this Project within thirty (30) days after receipt of payment from the Owner, the Contractor or first-tier Subcontractor shall owe the person or entity the amount due plus interest charges commencing at end of ten (10) day period that payment is due, unless payment is subject to good faith dispute as defined in ORS Chapter 279C. The rate of interest charged shall be equal to three (3) times the discount rate on ninety (90) day commercial paper in effect at Federal Reserve Bank on the date thirty (30) days after date payment was received from the Owner, but the rate of interest shall not exceed thirty percent (30%). The amount of interest may not be waived. Additionally, if Contractor or any Subcontractor fails, neglects, or refuses to pay person or entity furnishing labor or material for the Project, the person or entity may file a complaint with the Construction Contractors Board, unless payment is subject to a

good-faith dispute as defined in ORS Chapter 279C. The payment of a claim in the manner authorized in this section shall not relieve the Contractor or the Contractor's surety from obligation with respect to any unpaid claims.

§ 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 the Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven (7) days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor the Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

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

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

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

§ 9.6.8 Upon reasonable evidence of the unjustified nonpayment of one or more Subcontractors by the Contractor, the Owner may, after giving ten (10) days' notice and opportunity to cure to the Contractor, make payment of amounts due to Subcontractors by direct payments or by means of multiple-payee checks. Upon request of the Owner, the Contractor shall timely furnish to the Owner such information as the Owner reasonably will need to make such direct or multiple-payee check payments, including but not limited to the names and addresses of the first-tier Subcontractor payees and the amounts due to each.

§ 9.6.9 The Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or Supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner may notify the Contractor. Should any Subcontractor, Supplier or other person make, record or file, or maintain any action on or respecting a claim of construction lien, mechanic's lien, stop notice or lis pendens, relating to the Work, then the Contractor shall immediately and at its sole expense cause the same to be removed, extinguished and expunged.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, Subcontractors, or anyone else for whose acts or omissions any of them are responsible, within ten (10) days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor the required undisputed amount within the earlier of 30 days after receipt of the properly submitted Application for Payment and supporting documents from the Contractor or 15 days after the payment is approved by the Owner the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon fourteen (14) additional days' written notice to the Owner and the Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents. Contractor shall have no right to stop or suspend the Work, withhold services or Work, or terminate this Agreement if Contractor timely is paid all undisputed amounts after applicable withholdings, and if so paid, Contractor shall proceed with the performance of its obligations hereunder with reservation of rights, but subject to the other terms of this Agreement regarding assertion of Claims.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the latest of (a) the stage in the progress of the Work when the Work or designated portion thereof that the Owner agrees to accept separately is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use, including without limitation issuance of a certificate of occupancy or passage of any necessary governmental inspection; or (b) the date of the Owner's receipt of the Certificate of Substantial Completion from the Architect. The Work will be considered not Substantially Complete if the Owner determines that appropriate cleaning has not occurred. The only remaining Work after Substantial Completion shall be minor in nature, so that the Owner could occupy the Project on that date and the completion of the Work by the Contractor would not interfere with or hamper the Owner's or its occupants' normal operations. Without limitation, no building or facility will be considered to have reached Substantial Completion unless all utilities and systems (mechanical, electrical, etc.) are connected, commissioned, and operating as required for normal use including balancing of the HVAC system, any receiving area and areas for loading and unloading are completed, the Contractor has completed all of the building systems training procedures with the Owner and the building or facility is accessible by normal vehicular and pedestrian traffic routes. The fact that the Owner may occupy the Work or designated portion thereof alone does not indicate that the Work is Substantially Complete or is acceptable in whole or in part, nor does such occupation toll or change liquidated damages owed to the Owner and the Owner can perform "move-in" activities without interruption or risk of damages to people or property.

§ 9.8.1.1 For Substantial Completion of the Work or designated portion thereof to be achieved, the Owner also must have received a temporary or final certificate of occupancy (if necessary for occupancy) and all other governmental approvals necessary and required for the Owner to occupy or utilize the Work or designated portion for its intended purpose.

§ 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 and the Owner a comprehensive punch list of items to be completed or corrected prior to final payment. Failure to include an item on such punch 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 punch list, the Owner, Contractor and the Architect will jointly make an inspection to determine whether the Work or designated portion thereof the Owner agrees to accept separately, is substantially complete. If the Owner's and the Architect's inspection discloses any item, whether or not included on the Contractor's punch 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 Owner, Contractor and the Architect to determine Substantial Completion. In the event the Architect is required to make more than two (2) observations to determine Substantial Completion because of the Contractor's fault, the Contractor shall reimburse the Owner for compensation for the Architect's services and expenses incurred in conducting the third (3^d) and subsequent such observations. If upon observation of the Work or designated portion thereof pursuant to this Section 9.8.3 there is not agreement between or among the Owner, Contractor and the Architect as to whether Substantial Completion has been achieved, the stage of the progress of the Work shall be determined by decision of the Architect.

§ 9.8.4 When the Work or designated portion thereof, which the Owner agrees to accept separately, is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the punch 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. With respect to components or portions of the Work for which Substantial Completion is achieved after the date of Substantial Completion of the Work as a whole, such warranties shall commence on the dates of Substantial Completion of such components or portions.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate.

§ 9.8.6 Commissioning of Critical Systems: The following systems of the Work, and any other systems designated in the Contract Documents, are considered "Critical Systems":

- .1 HVAC system;
- .2 Electrical system;
- .3 Data communication system(s);
- .4 Intercom system, the life safety system(s);
- .5 Security system.

When the Contractor considers that the Critical Systems are up and running and ready for normal operation as specified for each phase, the Contractor shall so notify the Architect and Owner in writing a minimum of 14 days prior to the Date of Substantial Completion for that portion or phase as fixed in the Contract Documents. The Architect will then schedule a pre-commissioning inspection of these systems to determine whether the Critical Systems are complete and ready for normal operation. If the Architect's or Owner's inspection discloses that the Critical 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 Substantial Completion, complete or correct such item upon notification by the Architect. The Contractor shall then submit a request for another inspection by the Architect to determine completion of the Critical Systems and pay the costs associated with the re-inspections, including fees of the Architect and its consultants. When the Critical Systems are ready for operation, the Architect will notify the Owner in writing, which shall establish the Date of Commissioning. Warranties on the Critical Systems required by the Contract Documents shall commence on the later of the Date of Commissioning or Date of Substantial Completion, unless otherwise provided in the Contract Documents. The Date of Commissioning shall not have an effect on the duties of the parties at Substantial Completion.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may upon written notice to the Contractor, take possession of, occupy or use any completed or partially completed portion of the Work at any stage and time, when it is legal to do so. 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 any of its obligations under the Contract. If the Contractor fails to complete the Work within the Contract Time, the Owner may take possession of, use or operate all or any part of the Work without an increase in the Contract Sum.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and the 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. A reasonable sum may be withheld by Owner until Contractor delivers to Owner record Drawings, Specifications, Addenda, Change Orders and other Modifications, and the warranties, instructions, and maintenance manuals required by the Specifications, and a final statement of the cost of the Work allocated in accordance with the budget and in a form approved by Owner.

§ 9.9.3 Unless otherwise agreed upon in writing by the Owner, 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, nor start the period for correction of Work mentioned in Section 12.2.2, nor establish Substantial Completion of the 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 any of its obligations under the Contract.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Owner, Contractor and the Architect will jointly and promptly make such inspection. When the Owner and the Architect find the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. In the event the Architect is required to make more than two (2) observations to determine Final Completion, the contractor shall reimburse the Owner for compensation for the Architect's services and expenses incurred in conducting the third (3rd) and subsequent such observations. 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. The Contractor is liable for, and the Owner may deduct from any amounts due the Contractor, all fees and expenses incurred by the Owner for services

performed after the required Final Completion date of all the Work due to the delay of the Contractor, whether or not those services would have been performed prior to that date had Final Completion been achieved in a timely manner.

§ 9.10.1.1 The term “Final Completion” as used in the Contract Documents shall mean that (1) Substantial Completion of the Work or designated portion thereof has been achieved and the punch list work completed, (2) the Owner has received a final certificate of occupancy and all other governmental approvals as necessary and required for the Owner to occupy or utilize the Work for its intended purpose and (3) the Contractor has performed all of its obligations under the Contract except for those obligations that, by their nature, extend beyond Final Completion.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect and the Owner (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner’s property might be responsible or encumbered (less amounts withheld by the Owner) have been paid or otherwise satisfied; (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least thirty (30) days’ prior written notice has been given to the Owner; (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents; (4) consent of surety, if any, to final payment; (5) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner; (6) all warranties, guarantees, manuals, operation instructions, certificates, spare parts, maintenance stock, specified excess material, as-built drawings and other documents or items required by the Contract Documents; (7) originals of all permits, licenses and certificates, together with 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 departments and utility owners, provided to Owner with a copy of all closed or signed off permits; (8) proof satisfactory to Owner that the Contractor has fully complied with the requirements of ORS 279C.845(7); (9) if the Contractor is not domiciled in or registered to do business in the State of Oregon, confirmation the Contractor has complied with the requirements of ORS 279A.120.2; (10) as-built Drawings in CAD format acceptable to the Owner to the extent required by the Specifications or this Agreement; and (11) all other documents and items required by the Contract Documents to be provided as a condition of achieving Final Completion. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Owner may (1) retain 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 (2) accept from the Contractor, a bond or other security satisfactory to the Owner, in its sole discretion, to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including but not limited to all costs, disbursements, expenses and reasonable attorneys’ fees.

§ 9.10.2.1 In addition to other documentation required by the Architect and the Owner as a condition of final payment, the application for final payment shall be accompanied by final waivers and releases of claims, executed by the Contractor and Subcontractors. The forms of the waivers and releases shall be as set out in Exhibit B.

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

§ 9.10.3.1 If the Owner elects to make such payment in advance of Final Completion, the Owner may retain an amount no less than one hundred fifty percent (150%) of the value of such Work for the Contractor to finally complete the Work, as determined by the Architect.

§ 9.10.4 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of

final Application for Payment. 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. General reservations of rights will be deemed waived and void.

§ 9.11 Records

The Contractor shall maintain books, records, documents, and other evidence pertaining to the costs incurred by the Contractor in connection with or related to the Contract (“records”) to such extent and in such detail as will properly reflect and fully support all costs, charges and other amounts of whatever nature for which reimbursement or payment is or may be claimed under the Contract. 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. In the event of a claim or dispute, the Contractor agrees to make available at the office of the Contractor at all reasonable times all records for inspection, audit and reproduction by the Owner and its representatives. These requirements shall be applicable to 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.

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 and the entirety of the Work.

§ 10.1.1 No action or inaction of the Owner or the Architect relating to safety or property protection or a violation thereof will:

- .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 the 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; and
- .3 Impose any continuing obligation upon the Owner or Architect to provide such notice to the Contractor or any other person or entity.

§ 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 and others performing labor or services or furnishing materials or equipment on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated or utilized therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor;
- .3 other property and structures 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; and
- .4 the work, materials, equipment, tools, machinery and facilities of or being utilized by the Owner’s own forces or their separate design professionals, consultants or contractors.

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

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including but not limited to posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel and give the Owner and the Architect reasonable prior notice.

§ 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, 10.2.1.3, and 10.2.1.4

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, 10.2.1.3, and 10.2.1.4. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to the negligent or other wrongful acts or omissions of the Owner or the 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 the Architect.

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

§ 10.2.8 The Contractor shall immediately report to the Owner and the Architect all accidents arising out of or in connection with the Work which cause death, serious personal injury or substantial or significant property damage. The Contractor shall promptly thereafter submit a written report of such accident, giving full details and statements of any witnesses. In addition, if death, serious personal injuries, or serious damages are caused, the accident shall be reported immediately by telephone or messenger to the Owner.

§ 10.2.9 The Contractor shall, and shall require its Subcontractors to: be responsible for the adequate strength and safety of all scaffolding, staging and hoisting equipment and for temporary shoring, bracing and tying; furnish approved hard hats, other personal protective equipment as required, approved first aid supplies, the name of an individual on each shift who has completed the OSHA Supervisory Training Course and a posted list of emergency facilities; take prompt action to correct any hazardous conditions reported; comply with the requirements of the Occupational Safety and Health Act ("OSHA") and all other applicable federal, state and local worker safety laws, rules and regulations, including all standards and regulations which have been promulgated by the governmental authorities which administer such Acts and said requirements, standards and regulations are incorporated herein by reference. The Contractor shall be directly responsible for compliance therewith on the part of its agents, employees, Subcontractors, Sub-subcontractors, and materialmen and shall directly receive and be responsible for all citations, assessments, fines or penalties which may be incurred by reason of the failure of its agents, employees, materialmen, Subcontractors or Sub-subcontractors to so comply. Contractor shall provide adequate fire protection procedures during the use of cutting torches, welding equipment, plumber's torches and other flame and spark producing apparatus and comply with NFPA Standard No. 51B, as amended, or its replacement. The Contractor shall submit its Safety Plan for the Project in hardcopy form as a submittal to the Owner to demonstrate the general level of safety program he will conduct and his general adherence to good safety practices. The Owner's review, comment upon, approval or disapproval of such Safety Plan or any portion thereof shall not relieve Contractor for full responsibility for Project safety.

§ 10.2.10 The Contractor, in all cases, shall comply with OSHA, EPA and all other Governmental Workplace Requirements. The term "Governmental Workplace Requirements" as used in the Contract Documents shall mean building, traffic, environmental, occupancy health, accessibility for disabled and other applicable laws, statutes, ordinances, regulations or decrees, of any federal, state, county, municipal or other governmental or quasi-governmental authority or agency pertaining (a) to the Project, (b) to the use and operation of the Project for their intended purposes, or (c) if the context of the sentence establishes this term is being used in connection with a different subject than those described in clauses (a) or (b), then to the subject matter described in the Section in which the term is used.

§ 10.2.11 Injury or Damage to Person or Property

If the Contractor suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of the injury or damage, whether or not insured, shall be given to the Owner within a reasonable time not exceeding seventy-two (72) hours after discovery. The notice shall provide sufficient detail to enable the Owner to investigate the matter.

§ 10.2.12 Contractor shall protect adjoining private or municipal property and shall provide barricades, temporary fences and covered walkways required to protect the safety of passers-by, as required by prudent construction practices, local building codes, ordinances or other laws, or the Contract Documents.

§ 10.2.13 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 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. Contractor shall maintain Work materials and equipment free from damage from rain, wind, storms, frost or heat. If adverse weather makes it impossible to continue operations safely in spite of weather precautions, Contractor shall cease Work and immediately notify the Owner and the Architect of such cessation. Contractor shall not permit open fires or smoking on the Project site.

§ 10.3 Hazardous Materials and Substances [Not applicable to asbestos/hazardous materials abatement contractors]

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

§ 10.3.1.1 As used in this Article 10, the term "hazardous material" shall mean and include any "hazardous substance" as defined in the federal Comprehensive Environmental Response Compensation Liability Act (CERCLA), any "hazardous waste" as defined in the federal Resource Conservation Recovery Act (RCRA), and similar terms as used in applicable federal, state and local statutes, rules and regulations.

§ 10.3.2 In the event the Contractor ceases the Work under any of the circumstances described in Section 10.3.1, the Owner in consultation with the Architect and Contractor shall arrange at the Owner's cost for such governmental reviews, professional services and laboratory and other analyses as are reasonably necessary to determine the presence or absence of the suspected hazardous material, wetland condition or archeological site. In so doing, the Owner shall inform the Architect and Contractor of the nature of the governmental reviews, professional services and laboratory and other analyses that the Owner intends to arrange, and the identity of the agencies, firms and individuals the Owner intends to involve. If the Contractor has a reasonable objection to the nature of the reviews, services or analyses that the Owner intends to arrange, or to the identity of the agencies, firms or individuals that the Owner intends to involve, the Owner and Contractor shall negotiate in good faith and with expediency to determine alternative means or parties to perform the reviews, services or analyses. The Contractor shall cooperate in good faith with the Owner, the Architect, the Architect's consultants, the Owner's separate consultants and contractors and other agencies, firms and individuals that perform services or work at the Project site to analyze, control, remediate, render harmless or protect the suspected hazardous material, wetland condition or archeological site. Upon a determination based on such completed reviews, services or analyses as are reasonably necessary that the suspected hazardous material in fact does not exist, or has been controlled, remediated, rendered harmless or protected, the Owner shall transmit a written order to the Contractor to resume the construction of the Work in the affected area. Upon receipt of such order, the Contractor shall resume the Work as ordered. The Contractor shall be entitled to an extension of the Contract Time to the extent the Contractor is delayed in the progress of the Work by cessation of the Work under Section 10.3.1. If the Contractor claims additional costs as a result of such cessation of the Work, it shall make a Claim pursuant to Article 15.

§ 10.3.3 The Contractor shall not permit or allow any Hazardous Substance to be deposited, disposed, placed, generated, buried, discharged, manufactured, refined, transported, treated, handled or located on or about the Project. Except as reasonably required for and are in quantities appropriate to the performance of the Work then being done, the Contractor shall exercise oversight over the use and storage of such Hazardous Substances and compliance with Governmental Requirements applicable to such use and storage. The Contractor shall store all hazardous materials safely, whether or not required by the Contract Documents. To the extent required by applicable Governmental Requirements, the Contractor shall have Material Safety Data Sheets (MSDS) for all Hazardous Substances used in the workplace and make them available to employees who are potentially exposed to those Hazardous Substances. The MSDS and other information shall be available at the jobsite with two (2) full copies of all information to be turned over to the Owner as it is received. The Contractor will be solely responsible for compliance with any "Right to Know" law relating to notice to its employees and others concerning Hazardous Substances to which they could be exposed in the course or the conduct of the Work, including the labeling of such materials, the filing of any necessary reports relating thereto, and related requirements. The Owner shall not be responsible under this Section 10.3 for

hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances, or by the failure of Contractor to perform as required by this Section 10.3.

§ 10.3.4 The Contractor shall indemnify and reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.5 If, without negligence on the part of the Contractor, Subcontractor, or anyone for whose acts or omissions any of them are responsible, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act 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 SPILL RESPONSIBILITY

§ 10.5.1 The Contractor is responsible for any and all releases of environmental pollution during performance of the Contract which occur as a result of, or are contributed to by, actions of its agents, employees, or Subcontractors. The Contractor agrees to promptly remediate such releases to satisfaction of the Owner and proper regulatory agencies in a manner that complies with applicable federal, state, and local laws and regulations. Cleanup shall be at no cost to the Owner.

§ 10.5.2 Contractor shall obtain the Owner's written consent prior to bringing onto the Work site any (i) environmental pollutants or (ii) hazardous materials, as the same or reasonably similar terms are used in any applicable federal, state, or local statutes, rules or ordinances. Notwithstanding such written consent from the Owner, the Contractor, at all times, shall:

- .1 properly handle, use and dispose of all environmental pollutants and hazardous materials brought onto the Work site, in accordance with all applicable federal, state, or local statutes, rules, or ordinances;
- .2 be responsible for any and all spills, releases, discharges, or leaks of (or from) environmental pollutants or hazardous materials that the Contractor has brought onto the Work site; and
- .3 promptly clean up, without cost to the Owner, such spills, releases, discharges, or leaks to the Owner's satisfaction and in compliance with all applicable federal, state, or local statutes, rules or ordinances.

§ 10.5.3 The Contractor shall be liable for any and all costs, expenses, damages, claims, and causes of action, or any of them, related to or arising out of a spill, release, discharge, or leak of (or from) any environmental pollutant or hazardous substance or material, to the extent such spill, release, discharge, or leak was caused or contributed to by the Contractor's (i) fault or (ii) failure to perform in accordance with the Contract Documents. Nothing in this Section 10.5 shall limit the Contractor's liability or responsibility under any other provision of the Contract Documents.

§ 10.5.4 The Contractor shall report all reportable quantity releases described in this Section 10.5 to applicable federal, state, and local regulatory and emergency response agencies. Upon discovery, regardless of quantity, the Contractor must telephonically report all releases to the Owner. A written follow-up report shall be submitted to the Owner within forty-eight (48) hours of the telephonic report. Such written report shall contain, at a minimum:

- .1 Description of items released (identity, quantity, manifest number, and all other documentation required by law);
- .2 Whether amount of items released is EPA/DOE reportable and, if so, when it was reported;
- .3 Exact time and location of release, including a description of the area involved;
- .4 Containment procedures initiated;
- .5 Summary of communications about the release the Contractor has had with members of the press or state officials other than the Owner;
- .6 Description of cleanup procedures employed or to be employed at the site, including disposal location of spill residue; and

- .7 Personnel injuries, if any, resulting from, or aggravated by, the release.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase and maintain, and cause Subcontractors to purchase and maintain, insurance as set forth in Exhibit E.

§ 11.2 THE OWNER'S LIABILITY INSURANCE

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

§ 11.3 PERFORMANCE BOND AND PAYMENT BOND

§ 11.3.1 The Contractor shall furnish separate bonds covering the faithful performance of the Contract and the payment of obligations arising thereunder. The amount of each bond shall be equal to one hundred percent (100%) of the Contract Sum. The bonding company must be listed on the most current US Government Treasury list, Department Circular 570 or approved PRIOR TO BID SUBMISSION by Owner. The cost of the bonds shall be included in the Contract Sum. The bonds shall be submitted on the AIA A312 or other form acceptable to Owner and shall name Owner as beneficiary. Failure to adhere to these requirements may be grounds for rejection of the bid or cancellation by Owner of this Agreement.

§ 11.3.2 Any Change Order, Construction Change Directive, order for a minor change in the Work or other modification of the Contractor's obligations under the Contract shall not be subject to inspection or approval by any surety on any required bond. The surety on such bond, by issuing the bond, expressly waives its right to approve any such Change Order, Construction Change Directive or order and consents to any modification of the Contractor's obligations hereunder.

§ 11.3.3 The Contractor shall deliver the required bonds to the Owner prior to or with the signed (by the Contractor) Agreement to the Owner Representative at the address of the first page of this Agreement. The Contract shall not be executed by the Owner until the bonds have been received and validated.

§ 11.3.4 POWER OF ATTORNEY

The Contractor shall require the Attorney-in-fact that executes the required bonds on behalf of the surety to affix thereto a certified and current copy of their power of attorney. The surety on any required bond shall be bound by the arbitration or litigation of any disputes between and among the Owner, Contractor, Subcontractors, Subcontractors' sureties, the Architect, the Architect's consultants, the Owner's separate contractors and consultants, and other third parties in the same way and to the same extent that the Contractor shall be bound. The surety shall be bound by the decisions and award of the arbitrator(s) or court in the same way and to the same extent that the Contractor shall be bound.

§ 11.3.5 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 permit a copy to be made.

§ 11.3.6 If a payment bond and/or performance bond is required by the Owner under the Contract, the Owner may require that the Contractor subcontract only with Subcontractors who agree to file suit against such bond(s) in the event the Contractor fails to meet its payment or performance obligations to the Subcontractor, as the Subcontractor's exclusive remedy against the Owner, the Project or the Land. This requirement shall not apply if Contractor has not made payments to Subcontractors for the sole reason that the Owner has not paid the Contractor per the terms of the Agreement.

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 specifically expressed in the Contract Documents, it must, if requested in writing by the Owner or the Architect, be uncovered for the Owner's or the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time or Contract Sum.

§ 12.1.2 If a portion of the Work has been covered that the Owner or the Architect has not specifically requested to examine prior to its being covered, the Architect or the Owner may request to see such Work and it shall be uncovered

by the Contractor subject to approval of the Owner. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Amendment, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense without reimbursement from the Owner.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or the Owner as defective 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 the Owner's attorneys' fees and related costs, disbursements and expenses made necessary thereby, shall be at the Contractor's expense without reimbursement from the Owner. Roadways, pavements and curbs that are broken, damaged, settled or otherwise defective as a result of receiving, handling, storage of materials or the performance of any Work under the Contract Documents shall be fully restored to the satisfaction of the Owner.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, (i) within one year after the date of Substantial Completion of the entire Work; (ii) within two years after the date of Substantial Completion of the Work, as to those components of the Work that include, alter or affect any portion of the building envelope and penetration components; or (iii) within the period established by the terms of an applicable special warranty required by the Contract Documents or by law; or (iv) after the date for commencement of warranties established under Section 9.9.1, any of the Work is found to be defective or not in accordance with the requirements of the Contract Documents, the Contractor shall correct it at the Contractor's expense without reimbursement from the Owner promptly after receipt of written notice from the Owner to do so. 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 on grounds of breach of warranty. The obligations of Contractor under this Section 12.2 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. If the Contractor fails to correct defective or nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or the Architect, the Owner may correct it in accordance with Section 2.5. If payment of the Contract Sum has already been made by the Owner then upon demand the Contractor shall reimburse the Owner pursuant to Section 2.5. Without voiding specified warranties or relieving the Contractor of its responsibilities under this Section 12.2.2, the Owner reserves the right to make repairs as necessary to maintain the structure and its contents and operability. In addition:

- .1** If, in the Owner's opinion, the nonconforming Work either prevents the use 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.), 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, affects internal security, or limits the use of the facility (e.g. loss of heat in a single classroom, failure of one or more plumbing fixtures, interior door locks not working, etc.), Contractor shall initiate corrective work on site within two working days and shall complete corrective action within 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 14 calendar days and shall complete corrective action within 28 calendar days.

§ 12.2.2.2 The period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion of the Work as a whole by the period of time between Substantial Completion of the Work as a whole and the actual completion of that portion of the Work. For example, if a portion of the Work is completed 15 days after Substantial Completion, the period of correction shall commence as to such Work 15 days after Substantial Completion.

§ 12.2.2.3 The period for correction of Work shall be extended by corrective Work performed by the Contractor pursuant to this Section 12.2, for such corrective Work for that period of time that equals the amount of time after Substantial Completion of the Work as a whole that the corrected portions of the Work were defective or nonconforming. Such extensions shall be applicable only to corrected portions of the Work.

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

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is defective or 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 or applicable law. Establishment of the 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 nor shall otherwise be deemed to limit the time within which the obligation to comply with the Contract Documents or applicable law 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.

§ 12.2.6 Prior to the first anniversary of Substantial Completion, the Contractor shall walk the project together with the Owner to identify items requiring to be corrected by the Contractor. The Contractor shall be responsible for scheduling this meeting, or shall attend such meeting together with relevant Subcontractors if scheduled by the Owner.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is defective or not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made. The Owner shall never be obligated to accept defective or non-conforming Work, or damages for the difference in value between conforming and defective or nonconforming Work, and in all cases the Owner shall be entitled to full removal and correction of defective or non-conforming Work.

§ 12.4 EFFECT OF OBSERVATIONS AND APPROVALS OF THE WORK

§ 12.4.1 The Contractor shall not be relieved from its obligations to perform the Work pursuant to the Contract Documents, or from responsibility for defects or nonconformities in the Work, either by the observations or reviews of the Work by the Owner, the Architect or other persons or entities or by other inspections, tests or approvals of the Work by any agency, entity or person.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. The Contractor shall not assign its rights or obligations under the Contract in whole or in part, for any purpose, except to Subcontractors approved pursuant to the Contract, without the prior written consent of the Owner. If the Contractor makes or attempts to make such an assignment without such consent, the Contractor shall nevertheless remain legally responsible for all obligations under the Contract and such assignment shall be null, void and of no force or effect.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing bonds or construction financing for the Project or to a successor school owner or another government agency. In such event, the Contractor shall execute all consents and other documents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available

by law. 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, is the dispute resolution procedure of Article 15.

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

§ 13.3.3 Notwithstanding any provision in this Contract to the contrary, in the event requirements of the Owner's lender or bond financing source, if any, regarding the conditions, calculation or timing of progress payments differ from those set forth in this Contract, Contractor shall cooperate to comply with such requirements provided the same are not unduly burdensome to Contractor.

§ 13.3.4 If the majority of the Ownership or the control of the 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, determines the Owner cannot itself 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 days written notice of termination and the opportunity for the Contractor to cure prior to termination.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall schedule and make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect and the Owner timely notice of when and where tests and inspections are to be made so that the Architect and the 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 tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded, unless the test, inspection or approval arises from the fault of the Contractor or a Subcontractor or supplier, except as provided in Section 13.4.3. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect, the Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Owner and the Architect of when and where tests and inspections are to be made so that the Owner and the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense. If the Contractor arranges for an inspection and the inspector is required to wait, to leave without inspection, to perform a partial inspection, to return to complete or re-inspect, 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 30 days of billing, the Owner may pay the charges directly and back charge the Contractor on the next progress payment the amount plus a 10% handling fee.

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

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

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.4.7 No acceptance by the Owner of any Work shall be construed to result from any inspections, tests or failure to inspect or test by the Owner, the Owner's representative, 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.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest as specified by ORS 279C.570 from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located for public improvement contracts.

§ 13.6 TIME ACCRUAL OF CLAIMS

For claims by the Owner against Contractor based on the so-called "discovery rule," the applicable period of limitations or claims shall not commence to run and any alleged cause of action shall not be deemed to have accrued, whether such claims or actions involve strict liability, indemnity, intentional tort or other tort, breach of contract, breach of implied or express warranty, or any other legal or equitable theory, unless and until the party making the claim is fully aware of all three (3) of the following: (a) the identity of the party(ies) responsible; (b) the magnitude of the damage or the injury; and (c) the cause(s) of the damage or injury, provided this Section 13.6 shall not act to accelerate the accrual of any claim. The discovery rule provided herein applies in lieu of any other applicable statute or related case law. This provision does not accelerate the accrual of any claim earlier than what accrual would have been in the absence of this provision.

§ 13.7 EXCULPATORY PROVISION No personal liability or personal responsibility is assumed by nor shall at any time be asserted or enforced against any affiliate, partner, member, officer, director, trustee or beneficiary of the Owner on account of any agreement contained in the Agreement or any other Contract Documents, whether expressed or implied. Liability with respect to the entry and performance of this Agreement and all other Contract Documents, however it may arise, with respect to the Owner shall be asserted and enforced only against the Owner, and Contractor shall have no recourse to any assets of any affiliate, partner, member, director, officer, employee, trustee, beneficiary or other representative of the Owner. Any and all personal liability, if any, beyond that which may be asserted against the Owner is expressly waived and released by Contractor and by all persons or entities claiming by, through and under Contractor.

§ 13.8 INTERPRETATION

The Contract Documents have been carefully reviewed by Contractor and its counsel and they shall be given fair and reasonable interpretation in accordance with the words contained in them without any weight being given to whether a provision was drafted by one party or its counsel. Paragraph headings are for convenience only and shall not be a part of the Contract Documents or considered in their interpretation. The Exhibits attached hereto are made a part hereof.

§ 13.9 SURVIVAL

§ 13.9.1 If the full performance of an obligation is not required prior to the termination of this Contract, such obligation shall survive the termination and be fully enforceable thereafter. In addition, except as otherwise waived or barred, all rights and obligations set out in the Contract shall survive completion of the Project or termination of the Contract (1) as to the parties rights and obligations that arose before such completion of the Project or termination and (2) as is necessary to give effect to rights and obligations that arise after such completion of the Project or termination but derive from a breach or performance failure that occurred prior to such completion or termination.

§ 13.10 WAIVER, AMENDMENT AND EXTENSION; RIGHTS

No waiver, amendment, extension or variation in the terms of the Contract Documents shall be valid against a party unless in writing and signed by such party and then only to the extent specifically set forth in the writing. No failure or delay on the part of Owner in exercising any right, power or privilege under the Contract Documents, nor any course of dealing between the parties, will waive, amend or vary the terms of the Contract Documents. The Owner's rights and remedies provided by the Contract are cumulative and the use of any one right or remedy by the Owner shall not preclude or waive the right to use any or all other remedies. The Owner's rights and remedies are given in addition to any other rights the Owner may have by law, statute, ordinance or otherwise.

§ 13.11 EXTENT OF CONTRACT

The terms of the Contract Documents are intended by the parties to be a final expression of their understanding with respect to the Project and may not be contradicted by evidence of any prior or contemporaneous statements or understandings. No addition to, deletion from or modification of any term or provision of the Contract Documents shall be effective unless it is made in a writing signed by the parties hereto.

§ 13.12 SEVERABILITY

§ 13.12.1 This Contract is deemed to incorporate all provisions as required by law. Such incorporated provisions will have priority over any conflicting provision herein. Should any provision of the Contract, at any time, be in conflict with any law, statute, code, ordinance, rule, regulation or lawful order of a public authority, or be unenforceable or inoperative for any reason, then the remaining provisions of the Contract nonetheless shall continue in full force and effect and the court shall give the offending provision the fullest meaning and effect allowed by law.

§ 13.13 COUNTERPARTS

This Contract may be executed in counterparts, a complete set of which shall be considered an original.

§ 13.14 AUTHORITY

The Contractor represents and warrants that he or she or it has the full right, power, legal capacity and authority to enter into and perform the Contractor's respective obligations hereunder, and that such obligations shall be binding upon the Contractor without the requirement of the approval or consent of any other person or entity in connection herewith. Each person signing the Contract on behalf of the Contractor represents and warrants that he or she has the full right, power, legal capacity and authority to sign the Contract on behalf of the Contractor.

§ 13.15 REPRESENTATIONS

Contractor represents that (1) it has sufficient knowledge and expertise to construct the Work in accordance with all applicable codes and regulations; (2) it has reviewed, analyzed, and has current knowledge of the site; and (3) it has reviewed, analyzed, and has found sufficient for completion of the Work the Contract Documents. Contractor acknowledges and warrants that any exceptions to this representation have been specifically identified in the Contract Documents.

§ 13.16 OPERATION AND MAINTENANCE MANUALS

As part of the Work, Contractor shall submit one hard copy and two electronic media copies (on memory stick, CD or DVD and in standard Microsoft or Adobe format) of completed operation and maintenance manuals for review by the Owner's Representative prior to submission of any pay request for more than ninety percent (90%) of the work. No payments beyond ninety percent (90%) will be made by the Owner until the O & M Manual has been received. The O & M Manual shall contain a complete set of all submittals; all product data as required by the specifications; training information; a telephone list of consultants, manufacturers, installer and suppliers; manufacturer's printed data; balance reports; record and shop drawings; schematic diagrams of systems; appropriate equipment indices; warranties; bonds; etc. The Owner's Representative shall review and return one O & M Manual for any modifications or additions required. Prior to submission of its final pay request, complete and approved sets of O & M Manuals shall be delivered to the Owner's Representative by the Contractor.

§ 13.17 Training

As part of the Work, and prior to submission of the request for final payment, the Contractor shall schedule with the Owner's Representative training sessions for all equipment and systems, as required in the individual specifications sections. The Contractor shall schedule training sessions at least two (2) weeks in advance of the date of training to allow the Owner's personnel adequate notice. The O & M Manual shall be used as a basis for training. Training shall be a formal session, held after the equipment and/or system is completely installed and operational in its normal operating environment.

§ 13.18 Compliance with All Governmental Laws and Regulations. The Contractor shall comply with all federal, state and local laws, codes, regulations and ordinances applicable to the Work and this Agreement. ORS Chapters 279A and 279C and the Attorney General's Model Public Contracting Rules (as such rules may have been modified by the Owner) ("Rules") contain certain requirements for public contracts, including but not limited to certain required contract provisions. Required contract provisions are attached as Exhibit C and are incorporated herein by this reference. Furthermore, Contractor and the Owner agree to comply with all requirements of ORS Chapter 297A and 279C, the Rules and all other applicable laws and regulations (collectively "Laws"), whether or not such applicable provisions are included in Exhibit C and whether or not such provisions are excised in Exhibit C. In the event of a

conflict between any applicable Law and the provisions of this Contract, including Exhibit C, the Law shall prevail and control.

§ 13.20 Contractor hereby agrees that the Project will be completed substantially in accordance with building permits and any other permits related to development of the Project, the Contract Documents and unless otherwise provided in the Contract Documents all manufacturers' or suppliers' recommended installation procedures so as to preserve any warranties with respect thereto, free and clear of all liens or encumbrances and within the time set forth in the Contract Documents. Contractor does further agree that on the date of Substantial Completion, the Project shall comply with all applicable building laws, ordinances, rules and regulations known, or which should in the exercise of reasonable care be known, to Contractor, and that all utility services necessary for the operation of the Project shall have been provided to the Project within the time for completion of construction.

§ 13.21 If the Contractor fails, neglects or refuses to make prompt payment for labor, materials, equipment or other services furnished to the Contractor or a Subcontractor by any person in connection with the Project as such claim becomes due, the Owner may pay the claim and charge the amount of the payment against funds due or to become due the Contractor under this Contract. Payment of claims in this manner shall not relieve the Contractor or the Contractor's surety from obligation with respect to any unpaid claims.

§ 13.22 This Contract is subject to the State of Oregon Bureau of Labor and Industries Prevailing Wage Rates, and Contractor shall pay or cause to be paid all workers accordingly.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of [thirty (30) consecutive days (*adjust if there's a prospect for delay between signature and construction*)] through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work 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 and the Owner has not cured such matters within seven (7) days after the date of Contractor's notice to the Owner, or because the Owner has not made payment on an approved Certificate for Payment (other than disputed sums) within the time stated in the Contract Documents.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of entire days scheduled for the Work completion, or [120 days (*adjust if there's a prospect for delay between signature and construction*)] 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 if the Owner fails to cure such reason during the seven (7) day period, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work executed, and costs incurred by reason of such termination. The total recovery of the Contractor shall not exceed the unpaid balance of the Contract Sum.

§ 14.1.4 Notwithstanding any provision of the Contract seemingly to the contrary, to the fullest extent allowed by law, Contractor shall not stop or suspend the Work or terminate this Contract in the event the Owner withholds any disputed payment, so long as the Owner continues to make undisputed payments for which the Architect has issued a Certificate of Payment.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 refuses or fails to supply enough properly skilled workers or proper materials or equipment;

- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 fails to abide by or disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority having jurisdiction;
- .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;
- .5 fails to comply with the current Contractor's construction schedule;
- .6 is adjudged bankrupt, makes a general assignment for the benefit of its creditors, or a receiver is appointed on account of its insolvency;
- .7 submits one or more Applications for Payment that the Contractor overstates the amount to be paid, by the Owner; or
- .8 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, at least one (1) business day's written notice, terminate the Contract in whole or in part and may end employment of the Contractor and may:

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

§ 14.2.3 When the Owner terminates the Contract in whole or in part 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 Owner completes the Work and 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 exceeded the unpaid Contract Sum, such excess shall be paid by the Contractor to the Owner. Contractor shall be responsible and shall pay all the Owners' claims for costs and damages upon demand, pending reconciliation pursuant to this Section 14.2.4. The amount to be paid to the Contractor or the Owner, as the case may be, shall be determined and, at the Owner's option, certified by the Architect upon application by the Owner. This obligation for payment shall survive termination of the Contract.

§ 14.2.5 In the event the Owner terminates the Contract for cause under this Section 14.2 and such termination subsequently is determined in a final arbitrated award or a final judgment to have been wrongful, the termination shall automatically be converted to a termination for the Owner's 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 in the cost and time caused by suspension, delay, or interruption under Section 14.3.1 on all Work executed only. Adjustment of the Contract Sum shall be consistent with the terms of the Contract Documents, provided to the fullest extent allowed by law Contractor waives all claims for additional profit as a result of such suspension. 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 Contract in whole or in part 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, and also except for Work not covered by the termination, terminate all existing subcontracts and purchase orders and similar agreements and enter into no further subcontracts and purchase orders, and similar agreements.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement. 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, the price 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 section 14.5.

§ 14.4.4 If the Owner terminates for cause, the Owner at any time may, by notice to Contractor, convert the termination to a termination for convenience. In the event the Owner terminates for cause and it is determined that the Owner did not have sufficient cause for termination, such termination shall be deemed at the Owner's convenience under this Section. Termination for convenience shall not impair the Owner's other rights, including its rights and remedies for any breach of this Contract. In no event shall Contractor have a claim for damages, lost profits or otherwise on account of the termination of the Contract by the Owner, with or without cause.

§ 14.5 TERMINATION AND SUSPENSION BY THE OWNER

§ 14.5.1 In the event the Owner terminates the Contract in part under Section 14.2 or 14.4 or suspends the Contract in part under Section 14.3, the Contractor shall cooperate with the Owner and all other persons and entities performing work or services on the Project as necessary and required to facilitate the efficient and proper performance and completion of (1) the overall Project, if the Owner completes the entire Project, or (2) the portion of the Project the Owner completes, if the Owner completes less than the entire Project. In the event of a termination, the Owner expressly reserves the right to recover damages arising out of or related to Contractor's performance of the Contract, regardless of whether (a) such performance occurred before or after the effective date of termination or (b) the Owner provided Contractor with the opportunity to cure. 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 such portion of the Work as 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, in which case the Owner shall have the right, in its discretion, to accept such assignments or any of them, and 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 un-fabricated 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 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.

§ 14.5.3 In arriving at any amount due the Contractor after termination, in addition to any other permitted deductions, the following deductions shall be made:

- .1 All un-liquidated advance or other prior payments on account made to the Contractor applicable to the terminated portion of the Contract;
- .2 Any claim pursued under the Contract which the Owner may have against the Contractor, including without limitation liquidated damages;
- .3 An amount necessary to protect the Owner against outstanding or potential liens or claims;
- .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.

§ 14.5.4 If (and only if) the termination pursuant to Section 14.4 is partial, the Contractor may file a claim for 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 thirty days from the effective date of the partial termination or it shall be deemed barred.

§ 14.5.5 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.

§ 14.5.6 The Owner may have costs reimbursable under this Article 14 audited and certified by accountants selected by the Owner, who shall have full access to all the books and records of the Contractor.

§ 14.5.7 To the fullest extent allowed by law, 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, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Claims

Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement. Contractor waives all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor shall be initiated by written notice to the other party. Unless a different period for assertion of particular Claims is specifically identified in this Agreement, Contractor must give written notice of any Claim to the Owner not later than seven (7) days after occurrence of the event giving rise to the Claim or Contractor first becomes aware of the Claim, whichever is sooner, or the Claim shall be deemed forever time barred and waived. Contractor's notice shall provide sufficient detail to enable the Owner to investigate the matter, and shall include a clear description of the Claim, the proposed change in the Contract Sum and/or Contract Time of the Claim, and data supporting the Claim. Failure to properly submit the notice of 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) is entitled. Prior to the initiation of a dispute resolution procedure, the Owner or its representatives shall have the right to audit and copy any Subcontractor or Supplier whose claim is part of or included in the Claim. All Claims shall be addressed to:

«Purchasing Manager»
«Beaverton School District #48J »
«16550 SW Merlo Road»
«Beaverton, OR 97003»
«Telephone: (503) 356-4324»

In addition, a copy of the Claim notice shall be sent concurrently to the Owner's Project Manager and the Owner's Administrator for Facilities Development at the above address. All unresolved Contractor Claims shall be deemed waived and released by Contractor unless Contractor has strictly complied with the time limits of the Contract Documents.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments of undisputed amounts in accordance with the Contract Documents. The Architect will prepare Amendments, Change Orders and issue Certificates for Payment in accordance with the decisions of the Owner.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Notice under Section 15.1.3 shall contain sufficient detail and substantiating data to permit evaluation of the Claim by the Owner. No such Claim shall be valid unless so made. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. Such notice shall include detailed documentation of the cause or event resulting in the need for the extension of time, and a schedule analysis based upon the approved Contractor's construction schedule, showing the impact of the cause or event on the critical path of the approved Contractor's construction schedule. No Claim under this Section 15.1.6 shall be valid unless so made. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the critical path for the scheduled construction in a manner that could not be avoided by rescheduling and that either the Work was on schedule (or not behind schedule through the fault of the Contractor) at the time the adverse weather conditions occurred or the adverse effect on the scheduled construction would have occurred whether or not the Work was on schedule, or by implementing measures to protect against the weather so that the Work could proceed. No claim for additional time will be granted where the scheduled construction adversely affected was not on the critical path or was within the schedule float or contingency (or would have been in float or contingency had Contractor appropriately rescheduled Work on account of weather conditions), or could be avoided by Contractor through temporary weather protection measures. Claims for additional time will not be granted where the delays for which the Contractor is responsible result in moving Work into an adverse weather season. The Contractor shall provide copies of weather reports to the Owner and the Architect, produced from 'NOAA' - National Oceanic & Atmospheric Administration' for dates affected, as well as, a ten (10) year historical average report for same period of time. In addition, the Contractor must submit a revised construction schedule to the Owner and the Architect showing critical path activities affected by the delay. A rain, snow, ice, windstorm, high water, or other natural phenomenon for the specific locality of the Work (a "Weather Event"), which might reasonably have been anticipated from the previous 10-year historical records of the general locality of the Work, shall not be construed as abnormal. The parties agree that only a Weather Event exceeding one-hundred twenty-five percent (125%) of the weekly, 10-year historical average for the general locality of the Work shall be considered abnormal for purposes of this Section 15.1.6.2. The Office of the Environmental Data Service of the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce nearest the Project site shall be considered the official agency of record for weather information.

§ 15.2 Initial Decision

§ 15.2.1 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.

§ 15.2.2 If a claim, dispute or other matter in question relates to or is the subject of a bond, the party asserting such matter may proceed in accordance with applicable Oregon law to comply with the bond notice or filing deadlines prior to resolution of the matter by the Owner. Contractor shall make its employees and principals, as well as its work and project records, available to the Owner upon the Owner's request, in the event that there is any dispute concerning the compliance of the Work with the Agreement or the Contract Documents. The availability of such personnel and documentation shall be provided without the necessity of a subpoena, request for production or similar legal process. In the event that the Owner is required to utilize some form of legal process to obtain such ability, the Owner shall be entitled to recover its reasonable attorney fees and the costs expended in obtaining access to such personnel and documentation, regardless of whether the Owner is the prevailing party in connection with any later dispute resolution, mediation, arbitration, or litigation regarding such matters.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall, at the election of the Owner, be subject to mediation as a condition precedent to binding dispute resolution. If the Owner has given written notice to Contractor requiring mediation of the claim, Contractor may not commence litigation against the Owner until the mediation is concluded, except as is necessary to avoid a time bar from commencement of litigation under this Contract or applicable law the Owner may commence binding dispute resolution at any time.

§ 15.3.2 At the Owner's election, the parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending attempted mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

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

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement (otherwise, litigation shall be the means of binding dispute resolution), any Claim subject to, but not resolved by, mediation (if the Owner elected to mediate) 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. There shall only be one arbitrator regardless of the amount in dispute. The arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.1.2 Any arbitration or other legal proceeding must be initiated by Contractor within the earlier of (a) one hundred twenty (120) days after Substantial Completion as designated in writing by the Owner or (b) sixty (60) days after Final Acceptance, or the Claim will be considered waived and time-barred. This requirement cannot be waived

except by an explicit written waiver signed by the Owner. The pendency of mediation shall toll these deadlines unless and until the Owner terminates mediation.

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

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

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, Owner (and with the Owner's prior written consent, the Contractor) 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). In addition, at the Owner's election, the Contractor agrees to joinder in any arbitration or litigation proceeding in which the Owner is a party with third parties in which the Owner or such third party alleges indemnification or contribution from the Contractor, any of its Subcontractors, any one 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 will, in the subcontracts, similarly stipulate; in the event any does not, the Contractor shall be liable in place of such Subcontractor(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, the Owner (and with Owner's prior written consent, the Contractor) 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 the Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and the Contractor under this Agreement.

§ 15.4.4.4 Notwithstanding the foregoing, the Owner does not agree to joinder in any separate proceeding in which Contractor is a party, without the Owner's written consent. Upon demand by the Owner, claims between the Owner and Contractor, the Owner and the Architect, Contractor and the Architect or Contractor and its subcontractors and suppliers shall be submitted in a single arbitration, and Contractor agrees to joinder in such arbitration.

§ 15.4.4.5 If another involved party will not consent to arbitration or cannot be joined, the Owner, in its sole discretion, has the option to elect consolidated litigation in court to resolve the dispute. The venue for such litigation shall be in the place where the Project is located, and the outcome shall be decided by the judge only (bench trial). Both parties expressly waive their right to a jury trial. If another involved party will not consent to a bench trial, the Owner, in its sole discretion, has the option to elect a consolidated jury trial. The agreements contained in this Section 15.4 shall be specifically enforceable in accordance with applicable law in any court having jurisdiction. Any award rendered by an arbitrator shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction. The arbitrator is specifically empowered to award attorneys' fees and costs to the extent allowed by contract or law. It is understood that the purpose of this Section 15.4.4.5 is to allow the Owner to determine the best means of achieving a single consolidated proceeding that will minimize duplicative processes and minimize the risk of inconsistent results, in the following order of preference: (1) a consolidated arbitration of all significant parties, if possible; or (2) alternatively, a consolidated bench trial of all significant parties, if possible; or (3) alternatively, and as a last resort, a consolidated jury trial of all significant parties.

§ 15.4.4.6 With respect to any claim for allegedly defective work or warranty item asserted against the Owner by any occupant or user of any portion of the Project, or their assignee, successor or subrogee, through court action or arbitration ("Defect Claims"), the Owner shall have the right to join the Contractor in the proceeding. In the event a proceeding under this Agreement is pending relating to a matter of common fact in the Defect Claim proceeding, such

proceeding under this Agreement shall be stayed pending resolution of the Defect Claim proceeding to the extent allowed by law.

§ 15.5 DISPUTE EXPENSES

§ 15.5.1 In the event of any dispute relating to this Agreement the Work or the Project, whether such dispute is resolved through arbitration or through judicial process, the prevailing party shall recover from the other party, the prevailing party's "Dispute Expenses" incurred in arbitration, at trial or on appeal or review from a decision or determination in arbitration or following trial, including without limitation any proceeding under the US Bankruptcy Code. For purposes of this Agreement, the term "Dispute Expenses" shall include a recovery for the following items of expense: reasonable attorney and paralegal fees, reasonable fees for expert witnesses and consultants, costs for providing discovery materials, costs for creation of mediation or trial materials (including, without limitation, photographs, exhibits, analyses, diagrams, or plans) and a reasonable reimbursement for employed staff time incurred with respect to handling any such claim to completion. All the foregoing items shall be in addition to any statutory award of costs and fees provided under Oregon law. The foregoing provisions recognize the significant expenditure of public funds by the Owner under this Agreement and the necessity of the Owner to recoup expenses associated with recovering public money for breaches of this Agreement, for non-complying Work or for warranty or contractual claims.



Business Services
Procurement and Contracting
16550 SW Merlo Road
Beaverton, OR 97003
(503) 356-4324



XX-XXXX Contract Documents in Order of Precedence

1. AIA A101-2017 (modified) Contract
2. AIA A201-2017 (modified) General Conditions
3. [ITB or RFP XX-XXXX] including any Addenda incorporated by reference.
4. Specifications incorporated by reference.
5. Drawings incorporated by reference.
6. [Contractor] Bid.

District Goal: WE empower all students to achieve post-high school success.

The Beaverton School District recognizes the diversity and worth of all individuals and groups. It is the policy of the Beaverton School District that there will be no discrimination or harassment of individuals or groups based on race, color, religion, gender, sexual orientation, gender identity, gender expression, national origin, marital status, age, veterans' status, genetic information or disability in any educational programs, activities or employment.

EXHIBIT B

FORMS OF WAIVERS AND RELEASES

CONDITIONAL RELEASE ON PROGRESS PAYMENT	UNCONDITIONAL RELEASE ON PROGRESS PAYMENT
<p>The undersigned does hereby acknowledge that upon receipt by the undersigned of a check from _____ in the sum of \$_____ for labor, services, equipment and materials, and covering all events, conditions and occurrences, on the above-referenced job, and when the check has been properly endorsed and has been paid by the bank upon which it was drawn, this document shall become effective to release any and all rights of lien and claims of lien, and any and all other claims, including but not limited to, negligence, breach of contract, delay and impact claims, or any other claims, which the undersigned has or may have, whether known or unknown, on the above-referenced job ("Claims"). This release covers full payment for all labor, services, equipment, materials, events, conditions, occurrences and Claims through _____ (Date) only and does not cover unpaid retention or items furnished after that date.</p> <p>Before any recipient of this document relies on it, said party should verify evidence of payment to the undersigned.</p> <p>I CERTIFY UNDER PENALTY OF PERJURY UNDER LAWS OF THE STATE OF OREGON THAT THE ABOVE IS A TRUE AND CORRECT STATEMENT.</p> <p>SIGNATURE: _____</p> <p>_____ (Authorized Corporate Officer/Partner/Owner)</p> <p>(Title) _____</p> <p>Company Name: _____</p> <p>Dated this ____ day of _____, 20__</p> <p>Project Name: _____</p> <p>Project Address: _____</p>	<p>The undersigned does hereby acknowledge that the undersigned has been paid and has received a progress payment in the sum of \$_____ for labor, services, equipment and materials, and covering all events, conditions and occurrences, on the above-referenced job, and does hereby release any and all rights of lien and claims of lien, and any and all other claims, including but not limited to, negligence, breach of contract, delay and impact claims, or any other claims, which the undersigned has or may have, whether known or unknown, on the above-referenced job ("Claims"). This release covers full payment for all labor, services, equipment, materials, events, conditions, occurrences and Claims through _____ (Date) only and does not cover unpaid retention or items furnished after that date.</p> <p>NOTICE: THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.</p> <p>I CERTIFY UNDER PENALTY OF PERJURY UNDER LAWS OF THE STATE OF OREGON THAT THE ABOVE IS A TRUE AND CORRECT STATEMENT.</p> <p>SIGNATURE: _____</p> <p>_____ (Authorized Corporate Officer/Partner/Owner)</p> <p>(Title) _____</p> <p>Company Name: _____</p> <p>Dated this ____ day of _____, 20__</p> <p>Project Name: _____</p> <p>Project Address: _____</p>

CONDITIONAL RELEASE ON FINAL PAYMENT	UNCONDITIONAL RELEASE ON FINAL PAYMENT
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The undersigned does hereby acknowledge that upon receipt by the undersigned of a final payment check from _____ in the sum of \$_____ (representing the agreed full and final payment) for all labor, services, equipment and materials, and covering all events, conditions and occurrences, on the above-referenced job, and when the check has been properly endorsed and has been paid by the bank upon which it was drawn, this document shall become effective to release any and all rights of lien and claims of lien, and any and all other claims, including but not limited to, negligence, breach of contract, delay and impact claims, or any other claims, which the undersigned has or may have, whether known or unknown, on the above-referenced job ("Claims"). This release covers full and final payment for all labor, services, equipment, materials, events, conditions, occurrences and Claims, including but not limited to all retention, through Final Completion of the Work and for the entire project.

Before any recipient of this document relies on it, said party should verify evidence of payment to the undersigned.

I CERTIFY UNDER PENALTY OF PERJURY UNDER LAWS OF THE STATE OF OREGON THAT THE ABOVE IS A TRUE AND CORRECT STATEMENT.

SIGNATURE:

(Authorized Corporate Officer/Partner/Owner)

(Title) _____

Company Name: _____

Dated this ____ day of _____, 20__

Project Name: _____

Project Address: _____

The undersigned does hereby acknowledge that the undersigned has been paid and has received final payment in the sum of \$_____ (representing the agreed full and final payment) for all labor, services, equipment and materials, and covering all events, conditions and occurrences, on the above-referenced job, and does hereby release any and all rights of lien and claims of lien, and any and all other claims, including but not limited to, negligence, breach of contract, delay and impact claims, or any other claims, which the undersigned has or may have, whether known or unknown, on the above-referenced job ("Claims"). This release covers full and final payment for all labor, services, equipment, materials, events, conditions, occurrences and Claims, including but not limited to all retention, through Final Completion of the Work and for the entire project.

NOTICE: THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.

I CERTIFY UNDER PENALTY OF PERJURY UNDER LAWS OF THE STATE OF OREGON THAT THE ABOVE IS A TRUE AND CORRECT STATEMENT.

SIGNATURE:

(Authorized Corporate Officer/Partner/Owner)

(Title) _____

Company Name: _____

Dated this ____ day of _____, 20__

Project Name: _____

Project Address: _____

EXHIBIT C

PROVISIONS FROM THE OREGON PUBLIC CONTRACTING CODE AND PUBLIC CONTRACTING RULES

1. GENERAL

1.1 **INCORPORATION OF ALL CONTRACT PROVISIONS.** The Contract hereby incorporates all contract provisions that are required to be incorporated into contracts with public entities pursuant to (a) the Public Contracting Code (ORS Chapters 279A, 279B and 279C), (b) the Attorney General Model Public Contracting Rules (which are referred to in this Exhibit as the “Rules”) or (c) other applicable law. The provisions incorporated into the Contract under the preceding sentence include, without limitation, any provisions or amendments to provisions that become required after the Contract is executed.

1.2 **DISCLAIMER REGARDING ANY UNLISTED CONTRACT PROVISIONS.** The provisions listed in this Exhibit are not necessarily an exhaustive list of provisions that are required under the Public Contracting Code, the Rules or other applicable law, and the fact that this Exhibit does not list a provision that is required by the Public Contracting Code, the Rules or other applicable law will not (i) prevent or otherwise diminish the incorporation of that unlisted provision into the Contract or (ii) negate or otherwise diminish Contractor’s obligation to comply with applicable laws.

2. PAYMENT.

2.1 **PROMPT PAYMENT.** Contractor shall promptly pay all of its obligations arising out of or in connection with the Work, including, but not limited to, payments (1) to all persons, as due, supplying to Contractor labor, equipment, services or material for the performance of the Work, (2) of all contributions or amounts due the Industrial Accident Fund from Contractor or the Subcontractors incurred in the performance of the Work, and (3) to the Department of Revenue of all sums withheld from employees under ORS 316.167.

2.2 **CONTRACTOR’S OBLIGATIONS TO FIRST-TIER SUBCONTRACTOR.** Contractor shall pay each first-tier Subcontractor for satisfactory performance under its subcontract within 10 days out of amounts the Owner pays to the Contractor under the Contract. Contractor shall provide a first-tier Subcontractor with a standard form that the first-tier Subcontractor may use as an application for payment or as another method by which the Subcontractor may claim a payment due from the Contractor. Contractor shall use this same form and regular administrative procedures for processing payments during the entire term of the Subcontract. Contractor may change the form or the regular administrative procedures the Contractor uses for processing payments if the Contractor notifies the Subcontractor in writing at least 45 days before the date on which the Contractor makes the change and includes with the written notice a copy of the new or changed form or a description of the new or changed procedure.

2.3 **PROMPT PAYMENT POLICY.** It is the policy of the State of Oregon that all payments due on a public improvement contract and owed by a contracting agency shall be paid promptly. No public contracting agency is exempt from the provisions of ORS 279C.570.

2.4 **CONTRACTOR’S FAILURE TO MAKE PROMPT PAYMENT.** If the Contractor has failed, neglected or refused to pay promptly a person’s claim for labor, equipment, services or materials that the person provides to the Contractor or a Subcontractor in connection with the Project as such claim becomes due, the Owner may pay such claim to the person that provides the labor, equipment, services or materials and charge the amount of the payment against funds due or to become due the Contractor under the Contract. Owner reserves the right to make payments directly or by multiple-payee check and Contractor hereby consents to such direct and multiple-payee check payments. Upon Owner’s request, Contractor

shall furnish to Owner the information required to facilitate such payments with each application for payment, including (1) names, addresses, and telephone numbers of persons making any such claim for labor, equipment, services or material, and (2) a complete listing of outstanding amounts owed to all such persons.

2.5 CONTRACTOR'S AND FIRST-TIER SUBCONTRACTOR'S FAILURE TO MAKE PAYMENT AFTER PAYMENT FROM OWNER; INTEREST PENALTY. If the Contractor or a first-tier Subcontractor fails, neglects or refuses to pay a person that provides labor, equipment, services or materials in connection the Contract within thirty (30) days after receiving payment from the Owner or the Contractor, the Contractor or first-tier Subcontractor owes the person the amount due plus interest charges that begin at the end of the 10-day period that payment is due under ORS 279C.580(4) and that end upon final payment, unless payment is subject to a good faith dispute as defined in ORS 279C.580. The rate of interest on the amount due is nine percent per annum. The amount of interest may not be waived.

2.6 CONSTRUCTION CONTRACTORS BOARD COMPLAINT. If the Contractor or a Subcontractor fails, neglects or refuses to make payment to a person that provides labor, equipment, services or materials in connection with the Contract, the person may file a complaint with the Construction Contractors Board, unless payment is subject to a good faith dispute as defined in ORS 279C.580.

2.7 CONTINUING LIABILITY OF CONTRACTOR AND SURETY. Payment by the Owner of a claim in the manner authorized in this Section 2 does not relieve the Contractor or the Contractor's surety from obligation with respect to any unpaid claims.

2.8 RETAINAGE. Retainage shall be subject to the applicable requirements of ORS 279C.550 through 279C.570C.570. The Owner may elect to make early release of some or any portion of the retainage as allowed therein. The Contractor may withhold payment of not more than 5% from the moneys earned by any 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 the retainage and interest due a Subcontractor.

3. PUBLIC WORKS PROJECT.

3.1 PREVAILING RATE OF WAGE. The Project is a public works project subject to the prevailing wage rate requirements in ORS 279C.800 to 279C.870. Contractor and the Subcontractors shall comply with ORS 279C.840. Workers in each trade or occupation required for the Work of the Project shall not be paid less than the minimum hourly rate of wage for such workers as detailed in the Specifications for the Contract. For CM/GC contracts, the "prevailing rate of wage" shall mean the prevailing wage rate in effect at the time the CM/GC contract "becomes a public works contract" as defined in OAR 839-025-0020(6), which prevailing rates shall be incorporated by attachment or reference in Guaranteed Maximum Price Amendment or, if applicable, the Early Work Amendment to the CM/GC contract. Pursuant to ORS 279C.840, the Contractor shall keep the prevailing wage rate for the Project posted in a conspicuous and accessible place in or about the Project. Copies of these wage rates are available from the Commissioner of the Bureau of Labor and Industries without charge. The Contractor shall also post a description of provided health and welfare and/or pension plans in the same place. In addition to the description of the plans, the notice shall contain information on how and where to make claims and where to obtain further information. The Contractor shall, and shall cause all subcontractors at all tiers to, timely comply with the requirements of ORS 279C.845. Contractor shall indemnify, defend, protect and hold harmless the Owner from any violation of or noncompliance with the prevailing wage laws (ORS 279C.800 et seq) by Contractor or any subcontractor at any tier.

3.2 PUBLIC WORKS BOND. Before starting the Work, Contractor and every Subcontractor shall file with the Construction Contractors Board a public works bond in accordance with ORS 279C.836, unless the Contractor or Subcontractor has elected not to file a public works bond under ORS 279C.836(7) or (8) or is exempt under ORS 279C.836(4) or (9). Before permitting a Subcontractor to start the Work, Contractor shall verify that the Subcontractor has filed a public works bond as required by ORS 279C.836, has elected not to file a public works bond under ORS 279C.836(7) or (8) or is exempt under ORS

279C.836(4) or (9). Contractor shall also ensure that each subcontract entered into by a Subcontractor for the Project shall include a clause obligating each Subcontractor to comply with the requirements of this Section 3.2, such that all subcontracts at all tiers include a requirement to comply with this Section 3.2.

4. **COMPLIANCE WITH LAWS/TAX LAWS.** Contractor shall comply with all applicable federal, state, and local laws, statutes, codes, regulations, rules, orders and rulings as well as all applicable construction industry standards, including without limitation those governing labor, materials, equipment, construction procedures, safety, health, sanitation and the environment. Contractor agrees to indemnify, hold harmless, reimburse, and defend Owner from and against any penalties or liabilities arising out of violations of such obligations by Contractor or its Subcontractors at any tier. Contractor must also comply with all Oregon tax laws and shall submit a certification of such compliance in accordance with ORS 305.385(6).

5. **CONTRACTOR'S EMPLOYEES AND SUBCONTRACTORS.**

5.1 **EMPLOYEE DRUG TESTING PROGRAM.** The Contractor shall demonstrate to the Owner, in a manner acceptable to the Owner, that the Contractor has initiated, and shall maintain through the completion of the Work of the Project, an employee drug testing program.

5.2 **WORK DAY/WORK WEEK.** No person shall be required or permitted to labor more than 10 hours in any one day, or 40 hours in any one week, except in cases of necessity or emergency or when the public policy absolutely requires it, in which event, the person so employed for excessive hours shall receive at least time and a half pay for (1) all overtime in excess of eight hours in any one day or 40 hours in any one week when the work week is five consecutive days, Monday through Friday; or (2) all overtime in excess of 10 hours in any one day or 40 hours in any one week when the work week is four consecutive days, Monday through Friday; and (3) all work performed on Saturday and on any legal holiday specified in ORS 279C.540.

5.3 **NOTICE OF REQUIRED WORK HOURS.** The Contractor and each Subcontractor must give notice to its employees in writing, either at the time of hire or before commencement of Work, or by posting a notice in a location frequented by its employees, of the number of hours per day and days per week that the employees may be required to work.

5.4 **CLAIMS FOR OVERTIME.** Any worker employed by the Contractor shall be foreclosed from the right to collect for any overtime provided in ORS 279C.540 unless a claim for payment is filed with the Contractor within 90 days from the completion of the Contract, provided the Contractor has: (1) caused a circular clearly printed in boldfaced 12-point type and containing a copy of this Section 5.4 to be posted in a prominent place alongside the door of the timekeeper's office or in a similar place that is readily available and freely visible to any or all workers employed on the Work; and (2) maintained such circular continuously posted from the inception to the completion of the contract on which workers are or have been employed.

5.5 **WORKERS' COMPENSATION.** All employers, including Contractor, that employ subject workers who work under the Contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its Subcontractors complies with these requirements.

5.6 **PROMPT PAYMENT FOR MEDICAL SERVICES.** The Contractor shall promptly, as due, make payment to any person, co-partnership, association or corporation furnishing medical, surgical and hospital care services or other needed care and attention, incident to sickness or injury, to the employees of the Contractor, of all sums that the Contractor agrees to pay for the services and all moneys and sums that the Contractor collected or deducted from the wages of employees under any law, contract or agreement for the purpose of providing or paying for the services.

5.7 **PROMPT PAYMENT BY SUBCONTRACTORS; INTEREST PENALTY.** Contractor shall include in each subcontract entered into by the Contractor (including contracts with material suppliers) the following:

(a) A payment clause that obligates the Contractor to pay the first-tier subcontractor for satisfactory performance under the subcontract within 10 days out of amounts the Owner pays to the Contractor under the Contract.

(b) A clause that requires the Contractor to provide a first-tier subcontractor with a standard form that the first-tier subcontractor may use as an application for payment or as another method by which the subcontractor may claim a payment due from the Contractor.

(c) A clause that requires the Contractor, except as otherwise provided in this paragraph, to use the same form and regular administrative procedures for processing payments during the entire term of the subcontract. The Contractor may change the form or the regular administrative procedures the Contractor uses for processing payments if the Contractor:

(A) Notifies the subcontractor in writing at least 45 days before the date on which the Contractor makes the change; and

(B) Includes with the written notice a copy of the new or changed form or a description of the new or changed procedure.

(d) An interest penalty clause that obligates the Contractor, if the Contractor does not pay the first-tier subcontractor within 30 days after receiving payment from the Owner, to pay the first-tier subcontractor an interest penalty on amounts due in each payment the Contractor does not make in accordance with the payment clause included in the subcontract under paragraph (a) of this Section. The Contractor or first-tier subcontractor is not obligated to pay an interest penalty if the only reason that the Contractor or first-tier subcontractor did not make payment when payment was due is that the Contractor or first-tier subcontractor did not receive payment from the Owner or Contractor when payment was due. The interest penalty:

(A) Applies to the period that begins on the day after the required payment date and that ends on the date on which the amount due is paid; and

(B) Is computed at the rate specified in ORS 279C.515 (Conditions concerning payment of claims by public officers, payment to persons furnishing labor or materials and complaints).

(e) a clause requiring the first-tier subcontractor to include a payment clause and an interest penalty clause that conforms to the standards of this section in each of the first-tier subcontractor's subcontracts and to require each of the first-tier subcontractor's subcontractors to include such clauses in the first-tier subcontractors' subcontracts with each lower-tier subcontractor or supplier.

5.8 LICENSING WITH CONSTRUCTION CONTRACTORS BOARD AND LANDSCAPE CONTRACTORS BOARD. Before commencing the Work, Contractor shall ensure that the Subcontractors are duly registered with the Oregon State Construction Contractors Board (and the State Landscape Contractors Board, if applicable), and that no Subcontractor has been declared ineligible to work on a public contract.

5.9 FIRST-TIER SUBCONTRACTORS. the Contractor may only engage and substitute first tier subcontractors as permitted by ORS 279C.370, 279C.585, and 279C.590.

5.10 NO DISCRIMINATION. Pursuant to ORS 279A.100 to ORS 279A.110, the Contractor shall not discriminate against minority, women, or emerging small business enterprises in the awarding of subcontracts. The Contractor covenants and agrees not to discriminate against any qualified employee or qualified applicant for employment because of race, creed, color, sex or national origin, and that similar provisions shall also be included by said party in any subcontract. The Contractor shall comply with the prohibition set forth in ORS 652.220 (Prohibition of discriminatory wage rates based on sex). Compliance is a material element of the Contract and a failure to comply is a breach that entitles the Owner to terminate the contract for cause.

5.11 NO PROHIBITION. The Contractor may not prohibit any of the Contractor's employees from discussing the employee's rate of wage, salary, benefits or other compensation with another employee or another person and may not retaliate against an employee who discusses the employee's rate of wage, salary, benefits or other compensation with another employee or another person.

6. MATERIAL SALVAGE. To the extent the scope of the Work for the Contract requires demolition, Contractor must salvage or recycle construction and demolition debris, if feasible and cost-effective.

7. COMPOSTING. To the extent the scope of the Work for the Contract requires lawn and landscape maintenance, the Contractor must compost or mulch yard waste material at an approved site, if feasible and cost-effective.

8. RECYCLED MATERIALS. The Contractor, in performance of the Work, shall give preference to the procurement of goods manufactured from recycled materials.

9. ENVIRONMENTAL AND NATURAL RESOURCES LAWS. Pursuant to ORS 279C.525, the following is a list of Federal, State, and Local agencies that have enacted ordinances, rules or regulations dealing with the prevention of environmental pollution and the preservation of natural resources that may affect the performance of the Contract. The following list may not include all such agencies that have enacted ordinances, rules or regulations relating to the environmental pollution and preservation of natural resources.

Federal Agencies:

Agriculture, Dept. of
Forest Service
Natural Resource Conservation Service
Defense, Dept. of
Army Corps of Engineers
Coast Guard
Environmental Protection Agency
Interior, Dept. of
U.S. Fish and Wildlife Service
Bureau of Land Management
Bureau of Indian Affairs
Bureau of Reclamation
Labor, Dept. of
Occupational Safety and Health Administration
Transportation, Dept. of
Federal Highway Administration

State Agencies:

Agriculture, Dept. of
Consumer and Business Services Dept.
Oregon Occupational Safety and Health Division
Environmental Quality, Dept. of
Fish and Wildlife, Dept. of
Forestry, Dept. of
Geology and Mineral Industries, Dept. of
Human Services, Dept. of
Land Conservation and Development, Dept. of
Natural Resources, Dept. of
State Fire Marshall
State Lands, Dept. of
Water Resources Department

Local Agencies:

City Councils
Circuit Courts
County Commissioners, Boards of
Fire Districts
Planning Commissions

10. CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

Contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act of 1970 (42 U.S.C. 1867 et seq.) and the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.) as amended. Violations shall be reported as required by law.

11. RETAINAGE. The withholding of retainage by the Contractor or Subcontractor shall be in accordance with ORS 279C.550 to ORS 279C.570.

12. LIENS. The Contractor shall not permit any lien or claim to be filed or prosecuted against the state, county, school district, municipality, municipal corporation or subdivision thereof, on account of any labor or material furnished.

13. NONRESIDENT. If the Contractor is a "nonresident bidder" as defined in ORS 279A.120, the Contractor shall comply with the reporting requirements of that statute.

14. NOTICE OF CLAIM ON BOND. The notice of claim required by ORS 279C.600 must be sent by registered or certified mail or hand delivered no later than 180 days after the day the person last provided labor or furnished materials or 180 days after the worker listed in the notice of claim by the Commissioner of the Bureau of Labor and Industries last provided labor. The notice may be sent or delivered to the Contractor or Subcontractor at any place the Contractor or Subcontractor maintains an office or conducts business or at the residence of the Contractor or Subcontractor. If the claim is for a required contribution to a fund of any employee benefit plan, the notice required by ORS 279C.600 must be sent or delivered within 200 days after the employee last provided labor or materials. The notice shall be in writing substantially as follows:

To (here insert the name of the Contractor or Subcontractor and the name of the Owner):

Notice hereby is given that the undersigned (here insert the name of the claimant) has a claim for (here insert a brief description of the labor or materials performed or furnished and the person by whom performed or furnished; if the claim is for other than labor or materials, insert a brief description of the claim) in the sum of (here insert the amount) dollars against the (here insert public works bond or payment bond, as applicable) taken from (here insert the name of the principal and, if known, the surety or sureties upon the public works bond or payment bond) for the work of (here insert a brief description of the work concerning which the public works bond or payment bond was taken). Such material or labor was supplied to (here insert the name of the Contractor or Subcontractor).

_____(here to be signed)

[15. ADD ANY NECESSARY CONTRACTOR COMPLIANCE/REPORTING PROVISIONS FOR AGENCY'S WMBE GOALS PROGRAM UNDER ORS 200.090]

EXHIBIT E

INSURANCE REQUIREMENTS

1. Insurance Coverages. The Contractor shall procure and maintain (and, unless the Owner permits otherwise in writing, shall cause all Subcontractors to procure and maintain) at the Contractor's expense during the period of performance and thereafter as required below the following insurance from one or more companies authorized to do business in the State of Oregon with a policyholder's rating of not less than A-IX in the most recent edition of *Best's Rating Guide*. Except as approved otherwise by the Owner in advance, such insurance shall protect against claims which arise out of or relate to all of the Contractor's (and such Subcontractors') services under the Agreement, whether performed by the Contractor or a Subcontractor or consultant or a person or entity for which either of them may be responsible. The insurance coverages required by this Paragraph 1 shall be written on an occurrence basis, except the Professional Liability Insurance.

1.1 Workers' Compensation Insurance, if required by law, with statutory limits.

1.2. Employer's Liability Insurance, if employees are employed for other than secretarial or bookkeeping services, with a limit of not less than \$500,000.

1.3. Commercial General Liability Insurance, applicable to all premises and operations, including Bodily Injury, Property Damage, Personal Injury, Contractual Liability, Independent Contractors, Products and Completed Operations, Broad Form Property Damage (including Completed Operations), Pollution Liability (coverage shall apply to both sudden and gradual pollution conditions), and coverage for explosion, collapse and underground hazards, with limits of not less than \$1,000,000 per occurrence, \$2,000,000 aggregate applicable specifically to the Project, \$1,000,000 personal and advertising injury and \$1,000,000 Products and Completed Operations.

1.4. Business Automobile Liability Insurance, applicable to owned, non-owned and hired automobiles, with a limit of not less than \$1,000,000 combined single limit each accident; .

1.5. Professional Liability Insurance, covering performance of professional services by the Contractor or any Subcontractor or professional firm at any tier (e.g. for bidder-design or design-build components), whether or not performed by a licensed architect or engineer, with policy limits of not less than \$1,000,000 per claim and \$2,000,000 in the aggregate.

1.6 Pollution Liability Insurance, covering the Contractor's liability for a third-party bodily injury and property damage arising from pollution conditions caused by the Contractor while performing their operations under the contract. The insurance coverage shall apply to sudden and accidental pollution events. Any coverage restriction as to time limit for discovery of a pollution incident and/or a time limit for notice to the insurer must be accepted by the Owner. The insurance coverage shall also respond to cleanup cost. This coverage may be written in combination with the commercial general liability insurance or professional liability insurance. The policy's limits shall not be less than \$1,000,000 each loss / \$1,000,000 aggregate. The policy shall be endorsed to state that the general aggregate limit of liability shall apply separately to this contract. Any self- insured retention / deductible amount shall be submitted to the Owner for review and approval.

1.7 Asbestos/hazardous materials Abatement (only applicable to Asbestos/hazardous materials abatement Contractors): General Liability policy shall be written on a form that meets the following criteria, and must be ASBESTOS SPECIFIC as follows:

- (a) A full occurrence form, or
- (b) A limited occurrence form with at least a three (3) year tail, or
- (c) A claims made form with a three (3) year tail.

1.8 True Umbrella Policy, which provides excess limits over the primary layer, in an amount not less than \$5,000,000.

1.9 Subcontractors: The Contractor shall require all subcontractors to provide and maintain General Liability, Auto Liability, Professional Liability (as applicable), and Workers' Compensation insurance with coverage's equivalent to those required of the General Contractor in this Agreement. The Contractor shall require certificates of insurance from all subcontractors as evidence of coverage.

1.10 Exceptions or Waivers: Any exception of waiver of these requirements shall be subject to review and written approval from the Owner.

2. Deductibles. The Contractor shall pay all deductibles on all policies required by Paragraph 1.

3. Waivers of Subrogation Re Liability Insurance. The Workers' Compensation and Employer's Liability policies shall be subject to a waiver of subrogation in favor of Owner and its members, partners, officers, directors, agents and employees, and the successors in interest of the foregoing.

4. Cross-Liability Coverages. The Commercial General Liability and Automobile Liability policies shall provide cross-liability coverages as would be achieved under the standard International Organization for Standardization ("ISO") separations of insureds clause.

5. Additional Insureds. The Commercial General Liability and Automobile Liability policies shall name the Owner and its officers, directors, agents and employees, and the successors in interest of the foregoing, as additional insureds, using ISO additional insureds endorsement CG 20 10 11 85 or a substitute providing equivalent coverages. Such coverages provided to the additional insureds shall (a) be primary and noncontributory with respect to any insurance or self-insurance retention of the additional insureds, including but not limited to any Excess Liability coverage maintained by the additional insureds, (b) provide the same types and extents of coverages as the coverages provided to the primary insured, and shall not be limited to the "vicarious liability" of the additional insureds, (c) waive all rights of subrogation against the additional insureds, (d) cover all additional insureds that are a partnership or joint venture, if any, as "Named Insureds" as expressly stated in endorsements and (e) be maintained for the same durations as the coverages provided to the primary insured, including but not limited to the continuation of the Products and Completed Operations coverage until three (3) years after final payment to the Owner's prime contractor on the Project, and shall not be limited to "ongoing operations". Notwithstanding the foregoing, this Paragraph shall not be construed to require the Contractor to provide insurance coverage of the additional insureds in a way or to an extent that results in a violation of ORS § 30.140.

6. Duration of Coverages. The insurance coverages required by Paragraph 1 shall be written on an occurrence basis, except the Professional Liability Insurance. The Professional Liability policy shall provide for a retroactive date of placement prior to or coinciding with the date of commencement under the Agreement. All other policies shall be in effect as of the date of commencement of the Contractor's services under the Agreement. All policies shall be maintained and remain in effect until one (1) year after Final Completion and thereafter when the Contractor is assisting or advising the Owner regarding the correction of defective or nonconforming Work; provided that the Products and Completed Operations policy and the Professional Liability policy shall remain in effect until three (3) years after final payment to the Owner's prime contractor on the Project. The Contractor shall notify the Owner of any claims against the Professional Liability policy, in which event the Owner shall have the right to require the Contractor at its expense to obtain additional Professional Liability Insurance in order to restore the required coverage available for the Project.

7. Builder's Risk Insurance.

The Contractor shall obtain Builder's Risk Insurance as described below:

(1) The Contractor shall purchase and maintain in force during the term of this Contract, at its own expense, Builder's Risk insurance in an amount equal to the Contract Amount, including any subsequent modifications for the entire project at the site on a replacement cost basis, including covering all costs needed to repair the structure or work based on the value figured at the time of rebuilding or repairing, not at the time of loss. Such coverage shall be maintained, unless otherwise provided in the Contract Documents, or otherwise agreed to in writing by all persons and entities who are beneficiaries of such insurance, until final

payment has been made or until no person or entity other than the Owner has insurable interest in the property to be covered, whichever is earlier. The Builder's Risk insurance shall include interests of the Owner, the Contractor, Subcontractors and sub-tier contractors in the project.

(2) **Special Covered Cause of Loss Form.** The Contractor's Builder's Risk Coverage shall be on a special covered cause of loss form and shall include theft, vandalism, malicious mischief, collapse, false-work, temporary buildings and debris removal including demolition, increased cost of construction, architect's fees and expenses, flood and earthquake coverage, materials and equipment in transit, and all below and above ground structures, water and sewer mains. Other coverage may be required if provided in contract documents. Coverage shall be written for 100% of the completed value (replacement cost basis) of the work being performed.

(3) **Amendments and Provisions.** The Contractor's Builder's Risk shall also include the following amendments and provisions.

a. **Waiver of Subrogation.** Waiver of subrogation against all parties named as insured, to the extent the loss is covered;

b. **Beneficial Occupancy Clause.** The policy shall specifically permit partial or beneficial occupancy at or before substantial completion or final acceptance of the entire work. The Contractor shall take reasonable steps to obtain any necessary consent of the insurance company or companies and agrees to take no action, other than upon mutual written consent, with respect to occupancy or use of the work that could lead to cancellation, lapse or reduction of insurance;

c. **Equipment Breakdown Coverage.** Equipment breakdown coverage (aka boiler & machinery coverage) shall be provided that specifically covers insured equipment during installation and testing;

d. **Interior Damage.** Any clause that excludes recovery of damage to the interior of building shall be deleted. The Builder's Risk policy shall provide for recovery for damage to the interior of a building if caused by perils insured against in the Builder's Risk Policy;

e. **Design Error.** The Builder's Risk policy shall not exclude coverage of damages caused by design error;

f. **Settlement, Cracking, Etc.** The Builder's Risk policy shall cover settling, cracking, shrinking or expansion (including coverage for loss resulting from settling, cracking, shrinking or expansion) of foundation walls, floors and other parts of the structure; and

g. **Deductible.** Any deductible shall not exceed \$50,000 for each loss.

(4) **Builder's Risk Installation Floater.** If approved in writing by the Owner's Risk Manager, the Contractor may obtain a Builder's Risk Installation Floater in lieu of Builder's Risk Insurance at the Contractor's expense. The Contractor shall keep the Builder's Risk Installation Floater in effect during the term of this Contract for the value of materials and equipment, on a replacement cost basis, including covering all costs needed to repair the structure or Work (including overhead and profit) based on the values figured at the time of rebuilding or repairing, not at the time of loss. Such coverage shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed to in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Owner has an insurable interest in the property to be covered, whichever is earlier. The Builders' Risk Installation Floater shall include interest of the Owner, The Contractor, Subcontractors and sub-tier Contractors in the project. The Builders' Risk Installation Floater shall be on a Special Covered Cause of Loss Form and shall include theft, vandalism, malicious mischief, faulty workmanship, labor, materials and equipment to be installed. Other coverages may be required if provided in the Contract Documents. The Builders' Risk Installation Floater shall also provide a Waiver of Subrogation against all parties named as insured, but only to the extent the loss is covered. Coverages shall be written for 100% of the completed value (replacement cost basis including labor and materials) of the work being performed or other limit as specified in the Contract Documents. Coverage shall extend to when project materials are in off-site storage and while in transit.

(5) **Insured Loss.** The owner shall have sole power and authority to adjust and settle a loss with insurers. A loss insured under the Builder's Risk Insurance or Builder's Risk Installation Floater shall be adjusted by the Owner and any payments or settlements shall be made payable to the Owner for the insureds, as their interests may appear. The Owner shall be entitled to full payment of its loss from the insurance proceeds before payment of the remainder to any other beneficiaries of the policy. The Contractor shall pay Subcontractors their just share of remaining insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors make payments to the Sub-subcontractors in similar manner.

(6) **Deductible.** Payment of the deductible on the Builders Risk policy claims is the responsibility of the Contractor and is not subject to reimbursement by the Owner. The Contractor promptly shall pay the deductible (or if the claim is less than the deductible, the amount of the claim) promptly and without offset or deduction. If the Contractor does not do so, the Owner may, in addition to other remedies, deduct and offset the amount of the deductible from the Contract Sum.

8. **Proof of Insurance.** The Contractor shall file with Owner, upon execution of the Agreement, certificates of insurance acceptable to the Owner as well as copies of all insurance policies, with all riders and endorsements, all separate exclusions, conditions and waivers, and all other amendatory documents attached, evidencing the insurance required of the Contractor by this Exhibit E. No progress payment will be due until all such Certificates and policies are furnished. All policies and certificates must be signed copies and shall contain a provision that coverages afforded under the policies cannot be materially altered (i.e., the coverage's reduced, the limits decreased, or the additional insured removed), allowed to expire, or cancelled without first giving 30 days' prior written notice to the Owner. The Contractor shall furnish to the Owner copies of any subsequently issued endorsements amending, modifying, altering, or restricting coverage of limits. Furthermore, such policies or certificates shall verify that the policy contains coverage for blanket contractual liability including both oral and written contracts and acknowledge the indemnification provisions and liability coverages called for by this Agreement. If any of the required coverages are to renew during the period when such coverage is to remain in effect, or are required to remain in force after final payment to the Owner's prime contractor on the Project, an additional certificate evidencing continuation of such coverage shall be submitted upon renewal or with the Contractor's final invoice.

9. **Effect of No or Insufficient Insurance.** The Contractor's failure to comply with the requirements of this Exhibit E shall constitute a material breach of the Agreement entitling the Owner to terminate the Agreement for cause. In the alternative, the Owner in its sole discretion may purchase the insurance required of, but not obtained or maintained, by the Contractor pursuant to this Exhibit E and charge such costs thereof to the Contractor or deduct the costs thereof from the Contract Sum. The Owner's rights under this Paragraph shall be in addition to, and without waiver of, its other rights and remedies under the Agreement or applicable law.

10. **Waivers of Subrogation.** The Owner and the Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or the Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, the Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

1. **Limitation of This Exhibit E.** Nothing in this Exhibit E shall negate, abridge or reduce the Contractor's responsibilities or liabilities under the Agreement or applicable law, the meaning and effect of the provisions of this Exhibit E being limited to setting out the Contractor's express obligations with respect to

insurance. By requiring insurance, the Owner does not guarantee that the insurance is sufficient to cover all the risks the Contractor may face. The Contractor's liability is not limited to insurance.

2. The Contractor shall obtain, at its own expense, the minimum insurance coverage described in this Exhibit and maintain that coverage until final acceptance of the entire Project, and through the stated completed operations period as applicable. By requiring such minimum insurance, the Owner does not guarantee that the insurance is sufficient to cover all the risks the Contractor may face. The Contractor's liability is not limited to insurance. The insurance carried by the Contractor shall be the primary coverage and non-contributory, and any insurance maintained by the Owner is excess and in any event solely for damages or losses for which the Owner is responsible.

3. The Owner's specification or approval of the insurance in this Contract or of its amount shall not relieve or decrease the liability of the Contractor under the Contract documents or otherwise. Coverage's 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.

4. Contract Sum. The Contract Sum includes the cost of any insurance required by the Contract Documents.

CONSTRUCTION DEVELOPMENT SET
BEAVERTON SCHOOL DISTRICT
OCTOBER 08, 2020
MECHANICAL UPGRADE: HITEON ELEMENTARY SCHOOL
13800 SW BROCKMAN RD.; BEAVERTON, OREGON 97008

CONTACTS

OWNER

BEAVERTON SCHOOL DISTRICT
16550 SW MERLO ROAD
BEAVERTON, OREGON 97006
503.591.4575 FAX: 503.591.4469

MECHANICAL

SYSTEM DESIGN CONSULTANTS, INC
333 SE SECOND AVENUE, SUITE 100
PORTLAND, OREGON 97214
503.248.0227 FAX: 503.248.0240

ELECTRICAL

SYSTEM DESIGN CONSULTANTS, INC
333 SE SECOND AVENUE, SUITE 100
PORTLAND, OREGON 97214
503.248.0227 FAX: 503.248.0240

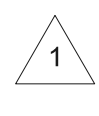
GENERAL NOTES

- COORDINATE ALL WORK WITH THE DRAWINGS AND SPECIFICATIONS.
- DO NOT SCALE DRAWINGS.
- CONTRACTOR AND SUB-CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS, LOCATIONS, AND PROJECT REQUIREMENTS PRIOR TO SUBMITTING A BID.
- CONTRACTOR AND SUB-CONTRACTORS SHALL FIELD VERIFY DIMENSIONS, AND FAMILIARIZE THEMSELVES WITH PROJECT REQUIREMENTS PRIOR TO COMMENCING WITH THE WORK. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO ARCHITECT.
- WORK SHALL INCLUDE ALL REQUIRED TRADE PERMITS, LABOR, MATERIALS, AND EQUIPMENT TO COMPLETE ALL WORK INDICATED ON DRAWINGS AND SPECIFICATIONS.
- PROVIDE TEMPORARY DUST-PROOF PARTITIONS AS REQUIRED TO PROTECT ALL EXISTING AREAS AND EQUIPMENT FROM DAMAGE DUE TO DEMOLITION OR NEW CONSTRUCTION ACTIVITIES, COORDINATE LOCATIONS AND REQUIREMENTS WITH OWNER.
- GENERAL CONTRACTOR TO PATCH, REPAIR AND PAINT (REFINISH) SURFACES AND BUILDING ELEMENTS DAMAGED BY MECHANICAL, ELECTRICAL, AND PLUMBING WORK AND WHERE ITEMS ARE REMOVED, RELOCATED OR ADDED.
- REPAIR FLOORS WHERE DAMAGED BY THE WORK OF THIS PROJECT.
- PATCH AND REPAIR ALL SURFACES TO MATCH EXISTING WHERE ITEMS ARE REMOVED OR ALTERED - FIELD VERIFY EXTENT REQUIRED.
- CONTRACTOR IS RESPONSIBLE FOR FINAL CLEANUP OF WORK AREA AND ALL EXPOSED BUILDING SURFACES AT SUBSTANTIAL COMPLETION.
- ALL TRASH AND TOOLS SHALL BE REMOVED FROM PREMISES EACH DAY AND THE AREA LEFT CLEAN WHENEVER UNATTENDED. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP. COORDINATE WITH OWNER IF SECURE STORAGE IS NEEDED ONSITE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO FINISHED SURFACES, EQUIPMENT, FURNITURE, EXISTING MATERIALS OR FINISHES, CAUSED AS A RESULT OF HIS WORK. REPAIR OR REPLACE DAMAGED ITEMS AS DIRECTED BY BEAVERTON SCHOOL DISTRICT
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS.
- WORK SHALL BE DONE BY THOSE SKILLED AND EXPERIENCED IN THEIR RESPECTIVE TRADES. WORK SHALL BE OF THE HIGHEST QUALITY WORKMANSHIP.

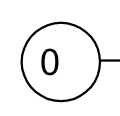
STANDARD SYMBOLS



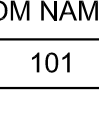
NORTH ARROW



REVISION TAG



GRID BUBBLE & GRID LINE



FLOOR PLAN ROOM LABEL & NUMBER

DRAWING INDEX

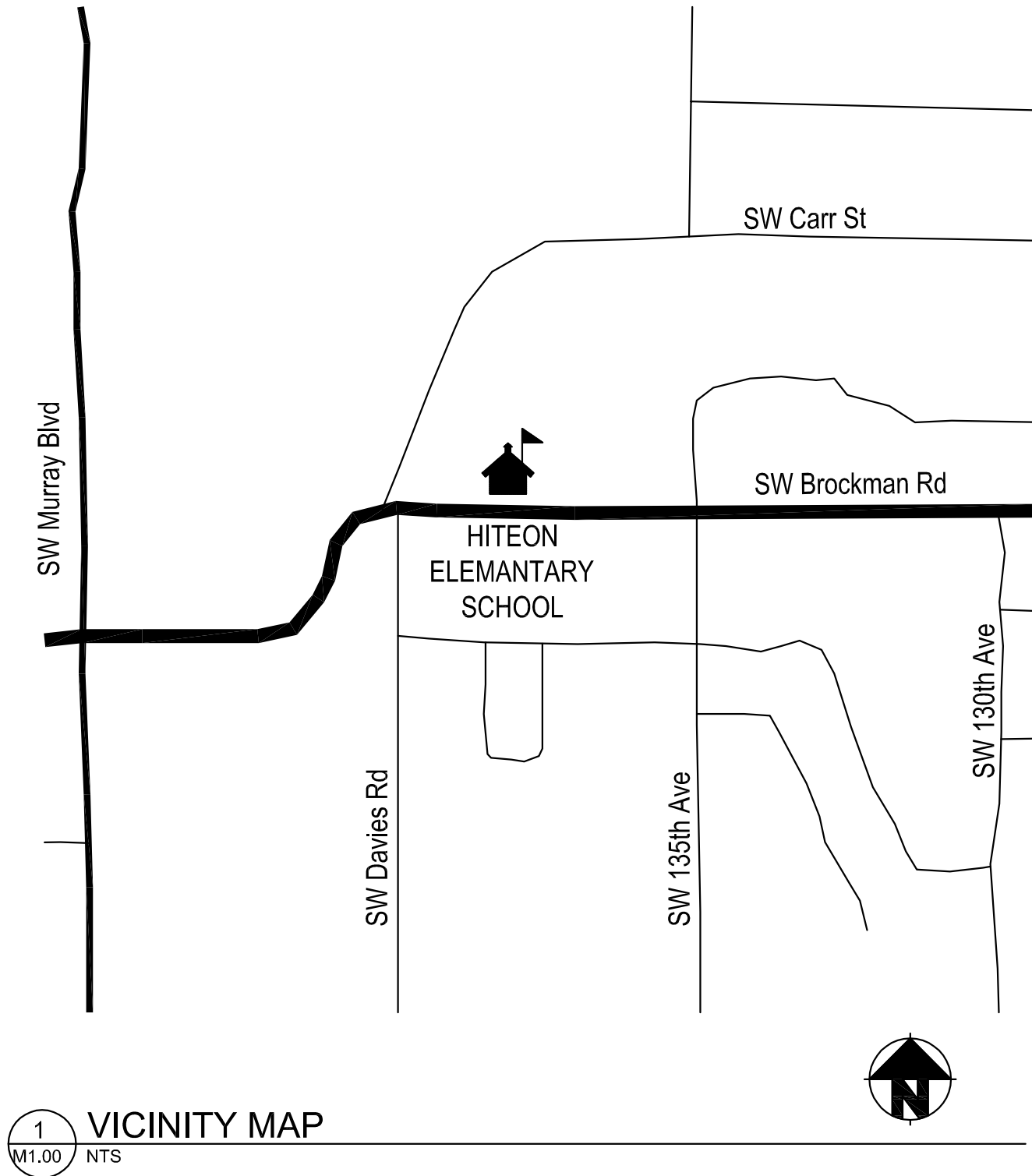
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MECHANICAL SCHEDULES

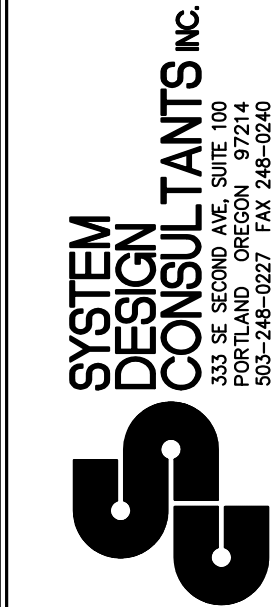
- M1.00 MECHANICAL SCHEDULE, DETAILS AND CONTROLS
- M1.01 MECHANICAL SCHEDULE, DETAILS AND CONTROLS
- M1.02 MECHANICAL SCHEDULE, DETAILS AND CONTROLS
- M2.00 A-WING FLOOR PLAN
- M2.01 B-WING FLOOR PLAN
- M2.02 C-WING FLOOR PLAN

ELECTRICAL SCHEDULES

- E2.00 A-WING FLOOR PLAN - ELECTRICAL
- E2.01 B-WING FLOOR PLAN - ELECTRICAL
- E2.02 C-WING FLOOR PLAN - ELECTRICAL



BEAVERTON SCHOOL DISTRICT
2020 MECHANICAL UPGRADE HITEON ELEMENTARY SCHOOL



BEAVERTON SCHOOL DISTRICT
HITEON ELEMENTARY SCHOOL - CONTROLS UPGRADE
13800 SW BROCKMAN STREET, BEAVERTON, OR 97007

Drawn:
Date: 10.09.2020
Check:
Job No: BSD2001

REVISIONS		
NO.	DESCRIPTION	DATE

Sheet Title
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CONSTRUCTION

C0.00
CONSTRUCTION
DEVELOPMENT

EQUIPMENT CONTROL FUNCTIONS

EQUIPMENT	CONTROL FUNCTION	BSD SYMBOL	DI	DO	AI	AO	ALARM
ASU-1, ASU-2 (2 UNITS TOTAL)	SPACE TEMPERATURE	ZN-T			X		X
	HIGH TEMPERATURE ALARM						X
	LOW TEMPERATURE ALARM						X
	DISCHARGE AIR TEMPERATURE	DA-T			X		
	SMOKE DETECTOR ALARM	SA-SMK	X				
	SMOKE DETECTOR ACTIVATED	SF-O		X			X
	SUPPLY FAN START / STOP	SF-C	X				
	SUPPLY FAN STATUS						X
	RUN STATUS						
	SUPPLY FAN SPEED	SF-S				X	
	OUTSIDE AIR DAMPER POSITION	DPR-O				X	
	MIN. OSA AIR DAMPER POSITION	DPR-O		X			
	RETURN AIR DAMPER POSITION	DPR-O				X	
	EXHAUST AIR DAMPER POSITION	DPR-O				X	
ASU-1 ONLY	RETURN FAN START / STOP	SF-O		X			
	RETURN FAN STATUS	SF-C	X				
	RUN STATUS						X
	RETURN FAN SPEED	SF-S				X	
	CO2 SENSOR	CO2-LVL			X		
	HIGH CO2 LEVEL						X
	SMOKE DETECTOR ALARM	RA-SMK	X				
	SMOKE DETECTOR ACTIVATED						X
SF-1 / RF-1	SPACE TEMPERATURE	ZN-T			X		X
	HIGH TEMPERATURE ALARM						X
	LOW TEMPERATURE ALARM						X
	CO2 SENSOR	CO2-LVL			X		
	HIGH CO2 LEVEL						X
	DISCHARGE AIR TEMPERATURE	DA-T			X		
	SMOKE DETECTOR ALARM	SA-SMK	X				
	SMOKE DETECTOR ACTIVATED	SF-O		X			X
	SUPPLY FAN START / STOP	SF-C	X				
	SUPPLY FAN STATUS						X
	RUN STATUS						
	SUPPLY FAN SPEED	SF-S				X	
	COOLING VALVE POSITION	CLG-O				X	
	DRAIN PAN OVERFLOW SWITCH		X				X
	HEATING VALVE POSITION	HTG-O				X	
	MIXED AIR LOW LIMIT (FREEZE)	MA-LL	X				X
	LOW TEMPERATURE						X
	OUTSIDE AIR DAMPER POSITION	DPR-O				X	
	RETURN AIR DAMPER POSITION	DPR-O				X	
	EXHAUST AIR DAMPER POSITION	DPR-O				X	
	RETURN FAN START / STOP	SF-O		X			
	RETURN FAN STATUS	SF-C	X				
	RUN STATUS						X
	RETURN FAN SPEED	SF-S				X	
	SMOKE DETECTOR ALARM	RA-SMK	X				
	SMOKE DETECTOR ACTIVATED						X
SF-2, SF-4 (2 UNITS TOTAL)	SPACE TEMPERATURE	ZN-T			X		X
	HIGH TEMPERATURE ALARM						X
	LOW TEMPERATURE ALARM						X
	DISCHARGE AIR TEMPERATURE	DA-T			X		
	SMOKE DETECTOR ALARM	SA-SMK	X				
	SMOKE DETECTOR ACTIVATED	SF-O		X			X
	SUPPLY FAN START / STOP	SF-C	X				
	SUPPLY FAN STATUS						X
	RUN STATUS						
	SUPPLY FAN SPEED	SF-S				X	
	COOLING VALVE POSITION	CLG-O				X	
	DRAIN PAN OVERFLOW SWITCH		X				X
	HEATING VALVE POSITION	HTG-O				X	
	MIXED AIR LOW LIMIT (FREEZE)	MA-LL	X				X
	LOW TEMPERATURE						X
	OUTSIDE AIR DAMPER POSITION	DPR-O				X	
	RETURN AIR DAMPER POSITION	DPR-O				X	
	CO2 SENSOR	CO2-LVL			X		
SF-7, SF-8 (2 UNITS TOTAL)	HIGH CO2 LEVEL						X
	SMOKE DETECTOR ALARM	RA-SMK	X				
	SMOKE DETECTOR ACTIVATED						X
	RELIEF AIR DAMPER POSITION	DPR-O		X			

EQUIPMENT	CONTROL FUNCTION	BSD SYMBOL	DI	DO	AI	AO	ALARM
SF-5, RF-3	SPACE TEMPERATURE	ZN-T			X		X
	HIGH TEMPERATURE ALARM						X
	LOW TEMPERATURE ALARM						X
	CO2 SENSOR	CO2-LVL			X		
	HIGH CO2 LEVEL						X
	DISCHARGE AIR TEMPERATURE	DA-T			X		
	SMOKE DETECTOR ALARM	SA-SMK	X				
	SMOKE DETECTOR ACTIVATED	SF-O		X			X
	SUPPLY FAN START / STOP	SF-C	X				
	SUPPLY FAN STATUS						X
	RUN STATUS						
	COOLING VALVE POSITION	CLG-O				X	
	DRAIN PAN OVERFLOW SWITCH		X				X
	HEATING VALVE POSITION	HTG-O				X	
SF-6	MIXED AIR LOW LIMIT (FREEZE)	MA-LL	X				X
	LOW TEMPERATURE						X
	OUTSIDE AIR DAMPER POSITION	DPR-O				X	
	EXHAUST AIR DAMPER POSITION	DPR-O				X	
	RETURN FAN START / STOP	SF-O		X			
	RETURN FAN STATUS	SF-C	X				
	RUN STATUS						X
	SMOKE DETECTOR ALARM	RA-SMK	X				
	SMOKE DETECTOR ACTIVATED						X
SF-7, SF-8 (2 UNITS TOTAL)	SPACE TEMPERATURE	ZN-T			X		X
	HIGH TEMPERATURE ALARM						X
	LOW TEMPERATURE ALARM						X
	DISCHARGE AIR TEMPERATURE	DA-T			X		
	SMOKE DETECTOR ALARM	SA-SMK	X				
	SMOKE DETECTOR ACTIVATED	SF-O		X			X
	SUPPLY FAN START / STOP	SF-C	X				
	SUPPLY FAN STATUS						X
	RUN STATUS						
	HEATING VALVE POSITION	HTG-O					X

MECHANICAL EQUIPMENT SCHEDULE			
SYMBOL	DESCRIPTION	AREA SERVED	ELECTRICAL
<div><div></div><div>E</div></div> ASU-1	AIR HANDLING UNIT - REPLACE SUPPLY AND RETURN FAN MOTORS WITH HIGH EFFICIENCY VFD COMPLIANT MOTORS AND ADD VARIABLE SPEED DRIVES TO BOTH FANS SUPPLY FAN: 8,030 CFM RETURN FAN: 7,830 CFM EEM #5	A-WING SOUTH	SUPPLY FAN 5 HP 208 V, 3 PH RETURN FAN 3 HP 208 V, 3 PH
<div><div></div><div>E</div></div> ASU-2	AIR HANDLING UNIT - REPLACE SUPPLY AND RETURN FAN MOTORS WITH HIGH EFFICIENCY VFD COMPLIANT MOTORS AND ADD VARIABLE SPEED DRIVES TO BOTH FANS SUPPLY FAN: 10,650 CFM RETURN FAN: 9,450 CFM EEM #5	A-WING NORTH	SUPPLY FAN 7-1/2 HP 208 V, 3 PH RETURN FAN 3 HP 208 V, 3 PH
<div><div></div><div>E</div></div> SF-1 <div><div></div><div>E</div></div> RF-1	AIR HANDLING UNIT - REPLACE SUPPLY AND RETURN FAN MOTORS WITH HIGH EFFICIENCY VFD COMPLIANT MOTORS AND ADD VARIABLE SPEED DRIVES TO BOTH FANS SUPPLY FAN: 21,300 CFM RETURN FAN: 19,000 CFM EEM #3	C-WING	SUPPLY FAN 15 HP 208 V, 3 PH RETURN FAN 5 HP 208 V, 3 PH
<div><div></div><div>E</div></div> SF-2	AIR HANDLING UNIT - REPLACE SUPPLY FAN MOTOR WITH HIGH EFFICIENCY VFD COMPLIANT MOTORS AND ADD VARIABLE SPEED DRIVE SUPPLY FAN: 9,400 CFM EEM #3	B-WING GYM	SUPPLY FAN 5 HP 208 V, 3 PH
<div><div></div><div>E</div></div> SF-4	AIR HANDLING UNIT - REPLACE SUPPLY FAN MOTOR WITH HIGH EFFICIENCY VFD COMPLIANT MOTORS AND ADD VARIABLE SPEED DRIVE SUPPLY FAN: 4,200 CFM EEM #3	B-WING CAFETERIA	SUPPLY FAN 3 HP 208 V, 3 PH

NOTE - ALL PNEUMATIC VALVE ACTUATORS, DAMPER ACTUATORS AND ASSOCIATED PNEUMATIC DEVICES AND CONTROL POINTS ARE TO BE REPLACED WITH DDC CONTROL DEVICES / POINTS - COORDINATE WITH THE CONTROL SCHEMATIC DIAGRAMS

EQUIPMENT	CONTROL FUNCTION	BSD SYMBOL	DI	DO	AI	AO	ALARM
TERMINAL UNITS	SPACE TEMPERATURE	ZN-T			X		X
	HIGH SPACE TEMPERATURE						X
	LOW SPACE TEMPERATURE						X
	CO2 SENSOR	CO2-LVL			X		
	HIGH CO2 LEVEL						X
	SUPPLY AIR DAMPER POSITION	DPR-O				X	
HOT WATER CONVECTOR	SPACE TEMPERATURE	ZN-T			X		X
	HIGH SPACE TEMPERATURE						X
	LOW SPACE TEMPERATURE						X
	HEATING VALVE POSITION	HTG-O				X	
ELECTRIC CONVECTOR	SPACE TEMPERATURE	ZN-T			X		X
	HIGH SPACE TEMPERATURE						X
	LOW SPACE TEMPERATURE						X
	ENERGIZE COIL RELAY	HTG-O				X	
SPLIT SYSTEM	SPACE TEMPERATURE	ZN-T			X		X
	HIGH SPACE TEMPERATURE						X
	LOW SPACE TEMPERATURE						X
	DISCHARGE AIR TEMPERATURE	DA-T			X		
	4 UNITS TOTAL						
	SYSTEM STATUS	SF-S	X				X
	RUN STATUS						
	SYSTEM FAN START / STOP	SF-C		X			X
	DRAIN PAN OVERFLOW SWITCH		X				
	4 UNITS TOTAL						
EXHAUST FAN -TIME SCHEDULE	EXHAUST FAN START / STOP	SF-C		X			
	EXHAUST FAN STATUS	SF-S	X				X
	RUN STATUS						
EXHAUST FAN -THERMOSTAT	SPACE TEMPERATURE	ZN-T			X		X
	HIGH SPACE TEMPERATURE						
	EXHAUST FAN STATUS	SF-S	X				X
	RUN STATUS						

ABBREVIATIONS

8Ø	ROUND DUCT DIAMETER, INCHES	OSA	OUTSIDE AIR
12X8	RECTANGULAR DUCT SIZE, INCHES	PLEN	PLENUM
M	MOTORIZED DAMPER	RA	RETURN AIR
DN	DOWN	SA	SUPPLY AIR
EA	EXHAUST AIR	TYP	TYPICAL
N.C.	NORMALLY CLOSED	W.C.	WATER COLUMN
N.O.	NORMALLY OPEN	MAV	MANUAL AIR VENT
OBD	OPPOSED BLADE DAMPER		

SYMBOLS

<div><div></div><div>A</div></div>	ABANDON	<div><div></div><div>P</div></div>	CAP OR PLUG
<div><div></div><div>C</div></div>	CONNECT TO EXISTING	<div><div></div><div>X</div></div>	REMOVE EXISTING
<div><div></div><div>E</div></div>	EXISTING TO REMAIN		

CONTROL SCHEMATIC LEGEND

GENERAL NOTE - PROVIDE ALL DEVICES AND POINTS REQUIRED IN ADDITION TO THOSE NOTED TO ACCOMPLISH THE SEQUENCE OF OPERATION NOTED IN THE SPECIFICATIONS

<div><div></div><div>M</div></div>	MOTORIZED DAMPER ACTUATOR	<div><div></div><div>T</div></div>	WALL SENSOR / THERMOSTAT
<div><div></div><div>D</div></div> <div><div></div><div>I</div></div>	A / D - ANALOG / DIGITAL 1 / O - INPUT / OUTPUT	<div><div></div><div>T</div></div>	CEILING SENSOR / THERMOSTAT
<div><div></div><div>Ms</div></div>	MOTOR STARTER	<div><div></div><div>S</div></div>	DDC TEMPERATURE SENSOR
<div><div></div><div>R</div></div>	RELAY	<div><div></div><div>CV</div></div>	CONTROL VALVE
<div><div></div><div>Ct</div></div>	CURRENT TRANSFORMER	<div><div></div><div>MD</div></div>	MOTORIZED DAMPER
SF	SUPPLY FAN	<div><div></div><div>SEN</div></div>	SENSOR
RF	RETURN FAN	<div><div></div><div>SMK</div></div>	DUCT MOUNTED SMOKE DETECTOR
EF	EXHAUST FAN	<div><div></div><div>CO2</div></div>	CARBON DIOXIDE SENSOR

TERMINAL UNIT
SCHEDULE

SYMBOL	DESIGN AIR VOLUME (CFM)	DESIGN AIR MINIMUM VOLUME (CFM)
A-WING		
TU-1	1230	XXX
TU-2	670	XXX
TU-3	1750	XXX
TU-4	580	XXX
TU-5	830	XXX
TU-6	1750	XXX
TU-7	580	XXX
TU-8	1230	XXX
TU-C1	1100	XXX
TU-D2	1025	XXX
TU-B3	470	XXX
TU-C4	825	XXX
TU-B5	490	XXX
TU-D6	980	XXX
TU-D7	910	XXX

TERMINAL UNIT
SCHEDULE

SYMBOL	DESIGN AIR VOLUME (CFM)	DESIGN AIR MINIMUM VOLUME (CFM)
A-WING		
TU-C8	UNIT DELETED	
TU-C9	740	XXX
TU-B10	580	XXX
TU-D11	1100	XXX
TU-D12	1160	XXX
TU-B13	580	XXX
TU-D14	1100	XXX
C-WING		
TU-1 2 TOTAL	1500	XXX
TU-2 2 TOTAL	1000	XXX

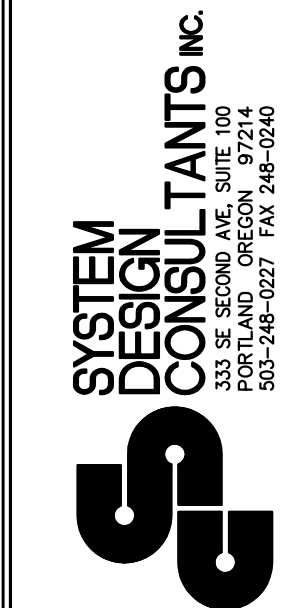
NOTES

ALL TERMINAL UNITS ARE EXISTING

ALL PNEUMATIC VALVE ACTUATORS, DAMPER ACTUATORS AND ASSOCIATED PNEUMATIC DEVICES AND CONTROL POINTS ARE TO BE REPLACED WITH DDC CONTROL DEVICES / POINTS - COORDINATE WITH THE CONTROL SCHEMATIC DIAGRAMS

① VERIFY AT SITE

BEAVERTON SCHOOL DISTRICT
HITEON ELEMENTARY SCHOOL - CONTROLS UPGRADE
13800 SW BROCKMAN STREET, BEAVERTON, OR 97007



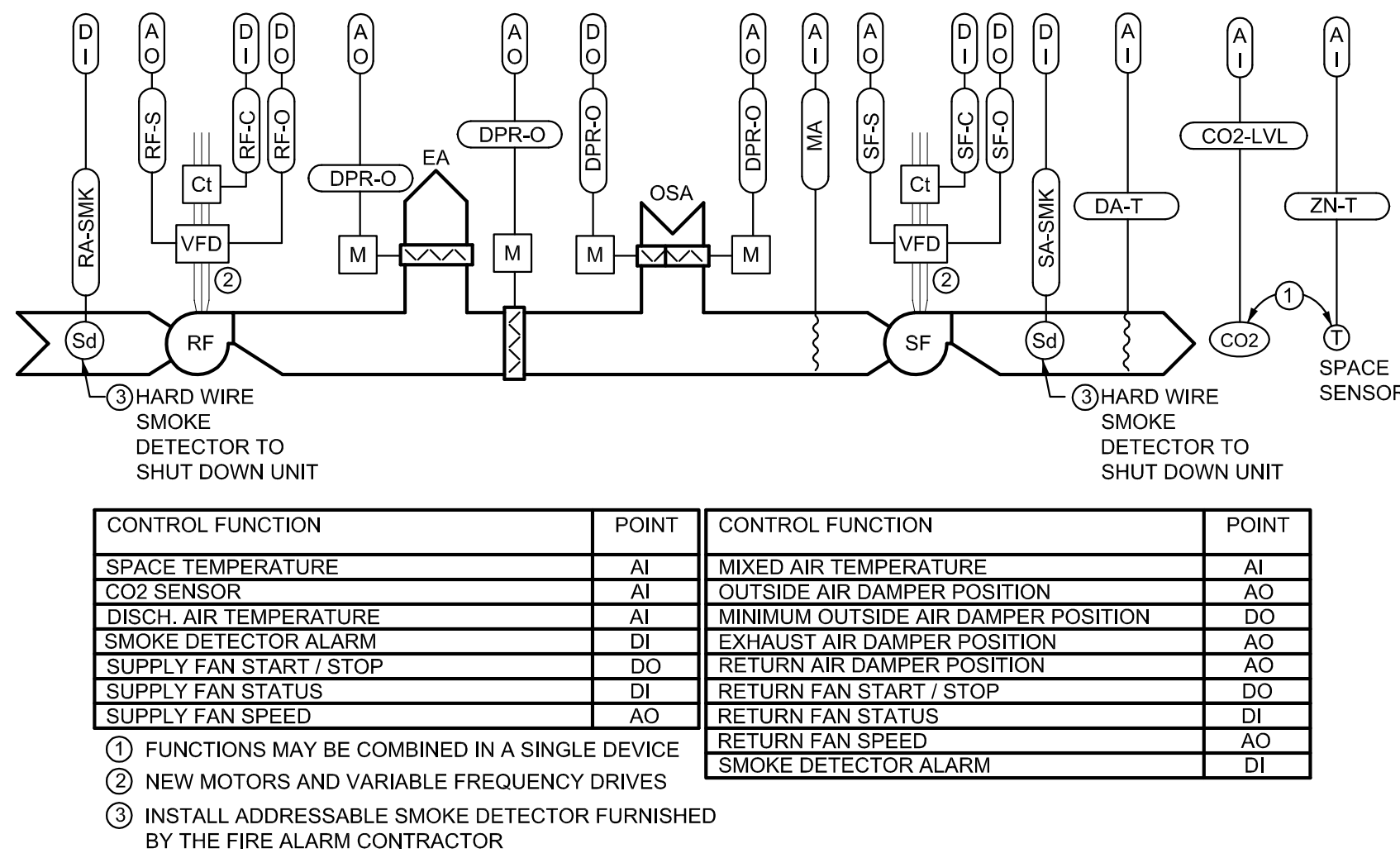
Drawn:	GCB
Date:	10.09.2020
Check:	GCB
Job No:	BSD2001

REVISIONS		
NO.	DESCRIPTION	DATE

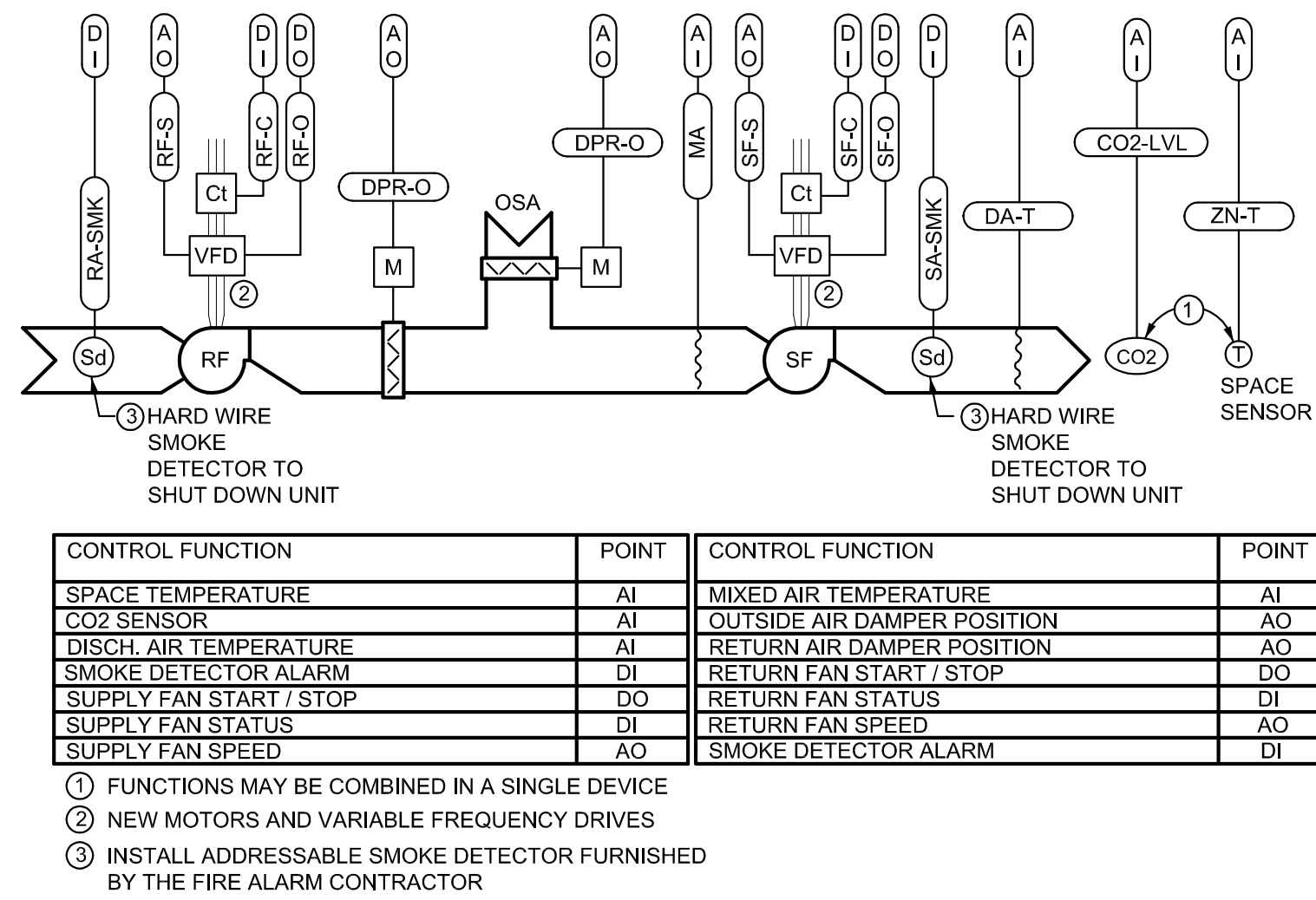
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MECHANICAL
SCHEDULE,
DETAILS AND
CONTROLS

NOT FOR
CONSTRUCTION

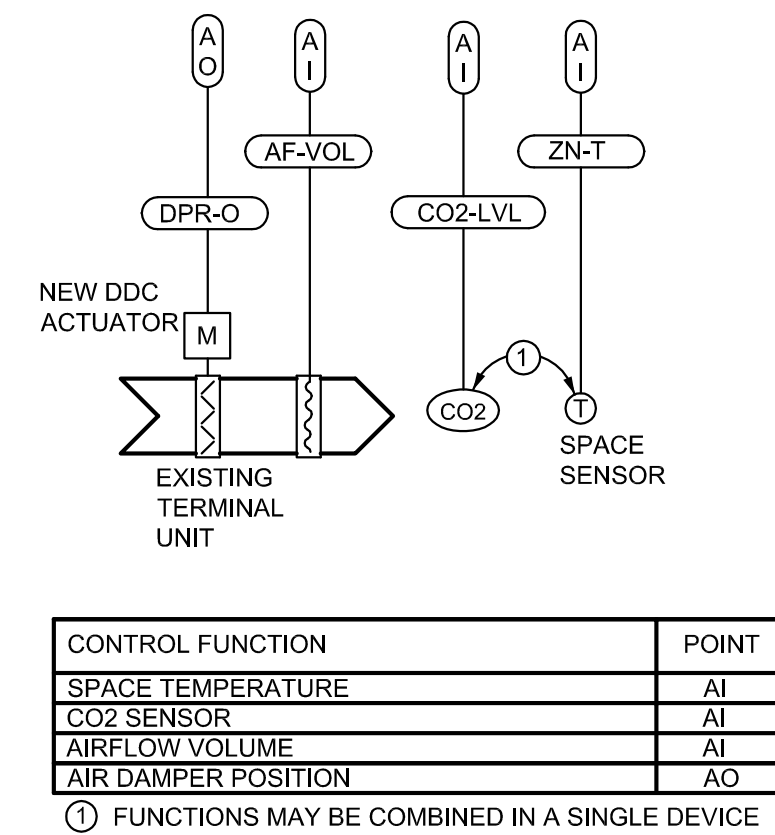
M1.00
CONSTRUCTION
DEVELOPMENT



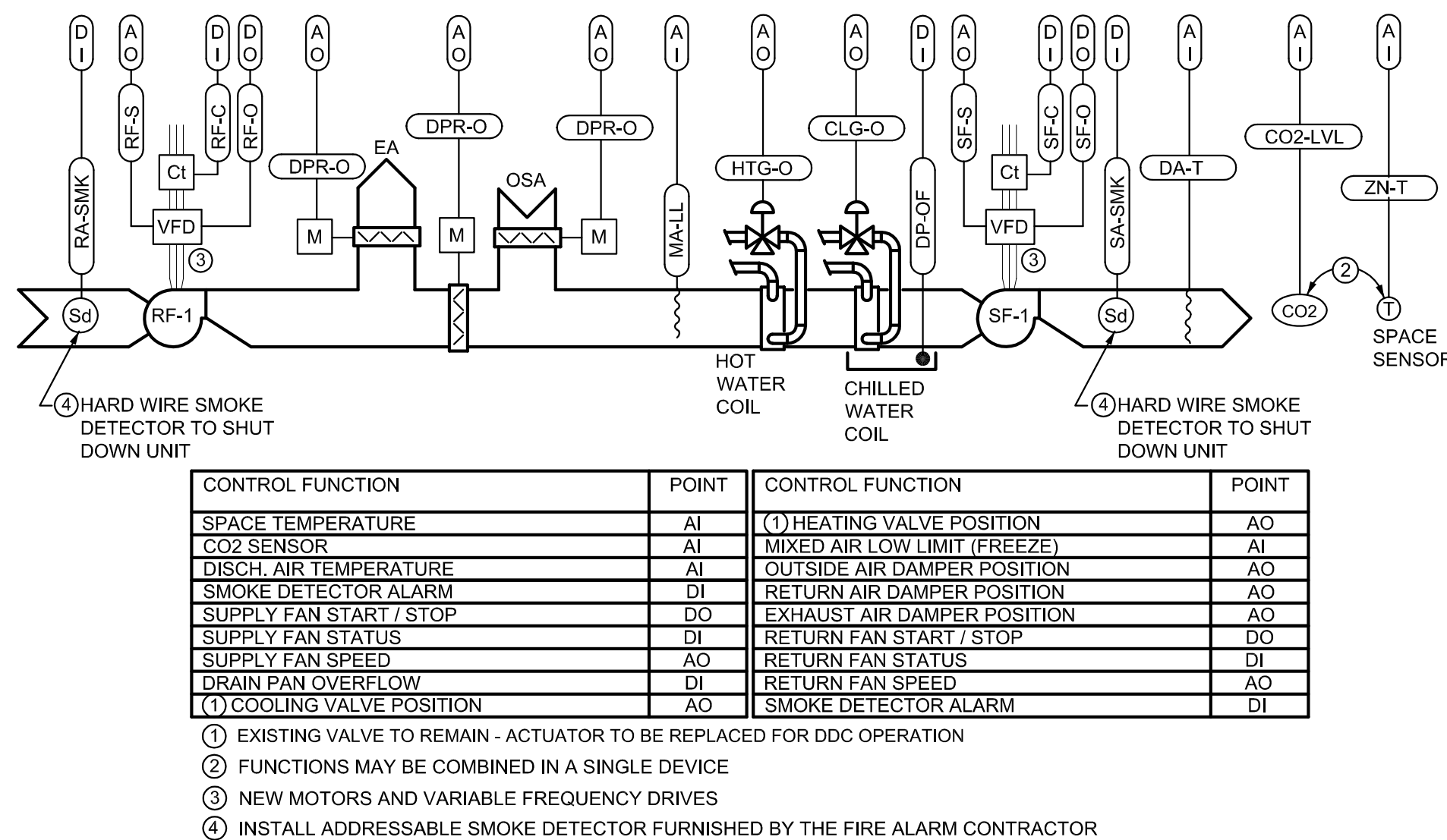
1 ASU-1 CONTROL SCHEMATIC
M1.01 DIAGRAMMATIC



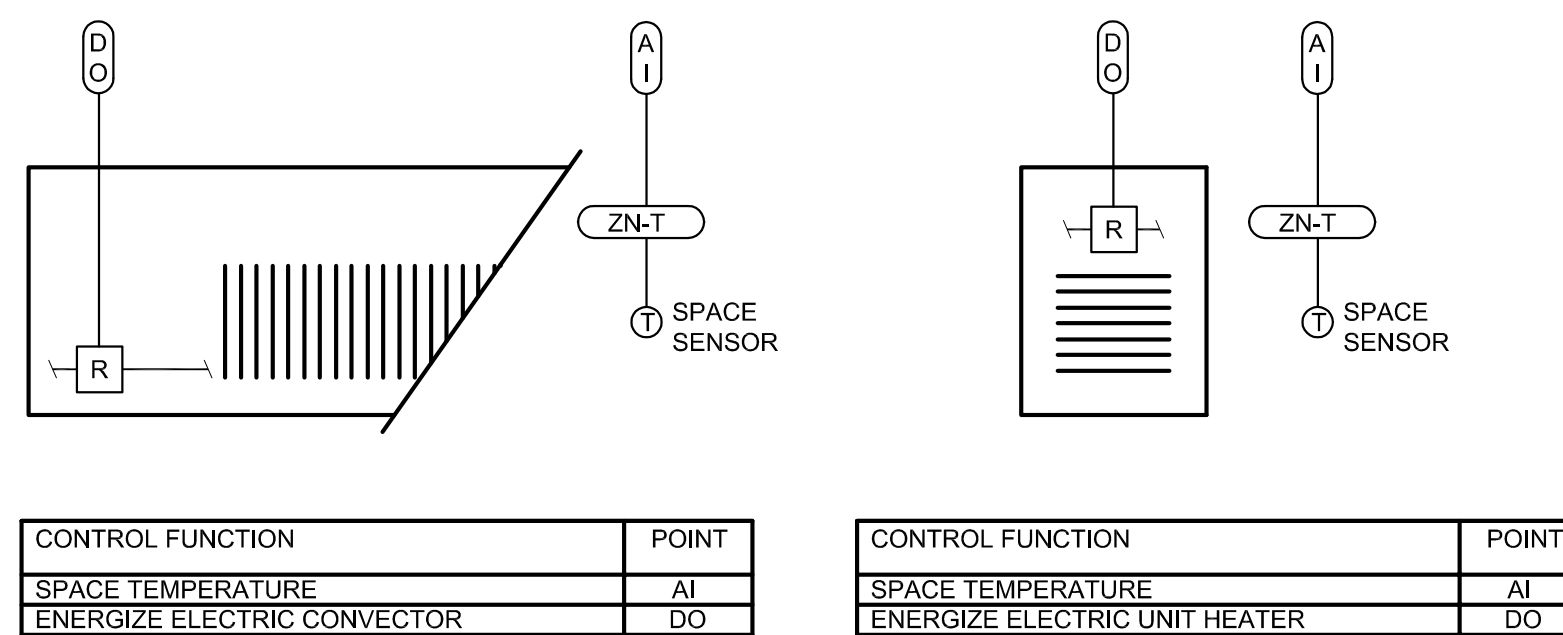
2 ASU-2 CONTROL SCHEMATIC
M1.01 DIAGRAMMATIC



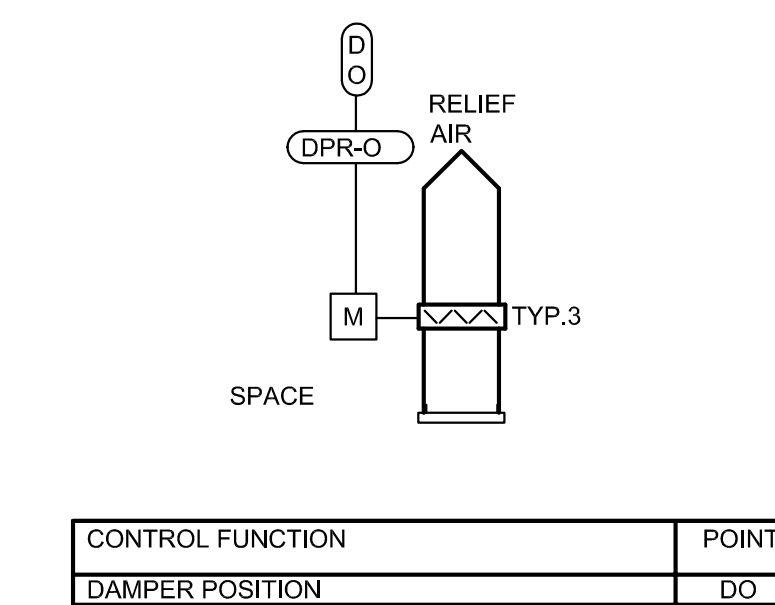
3 VAV TERMINAL UNIT CONTROL SCHEMATIC
M1.01 DIAGRAMMATIC TYPICAL FOR EXISTING TERMINAL UNITS



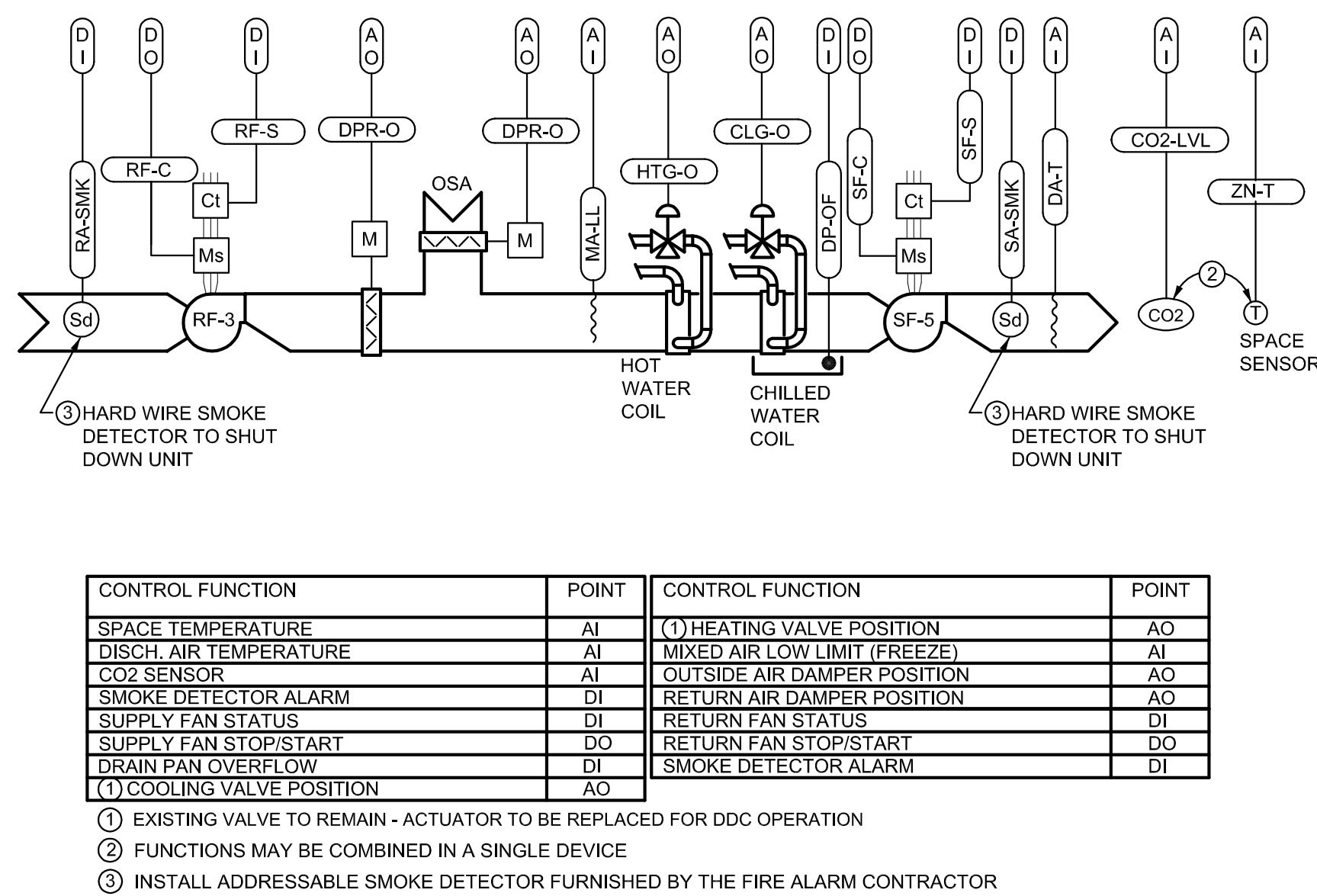
4 SF-1, RF-1 (CLASSROOMS) CONTROL SCHEMATIC
M1.01 DIAGRAMMATIC



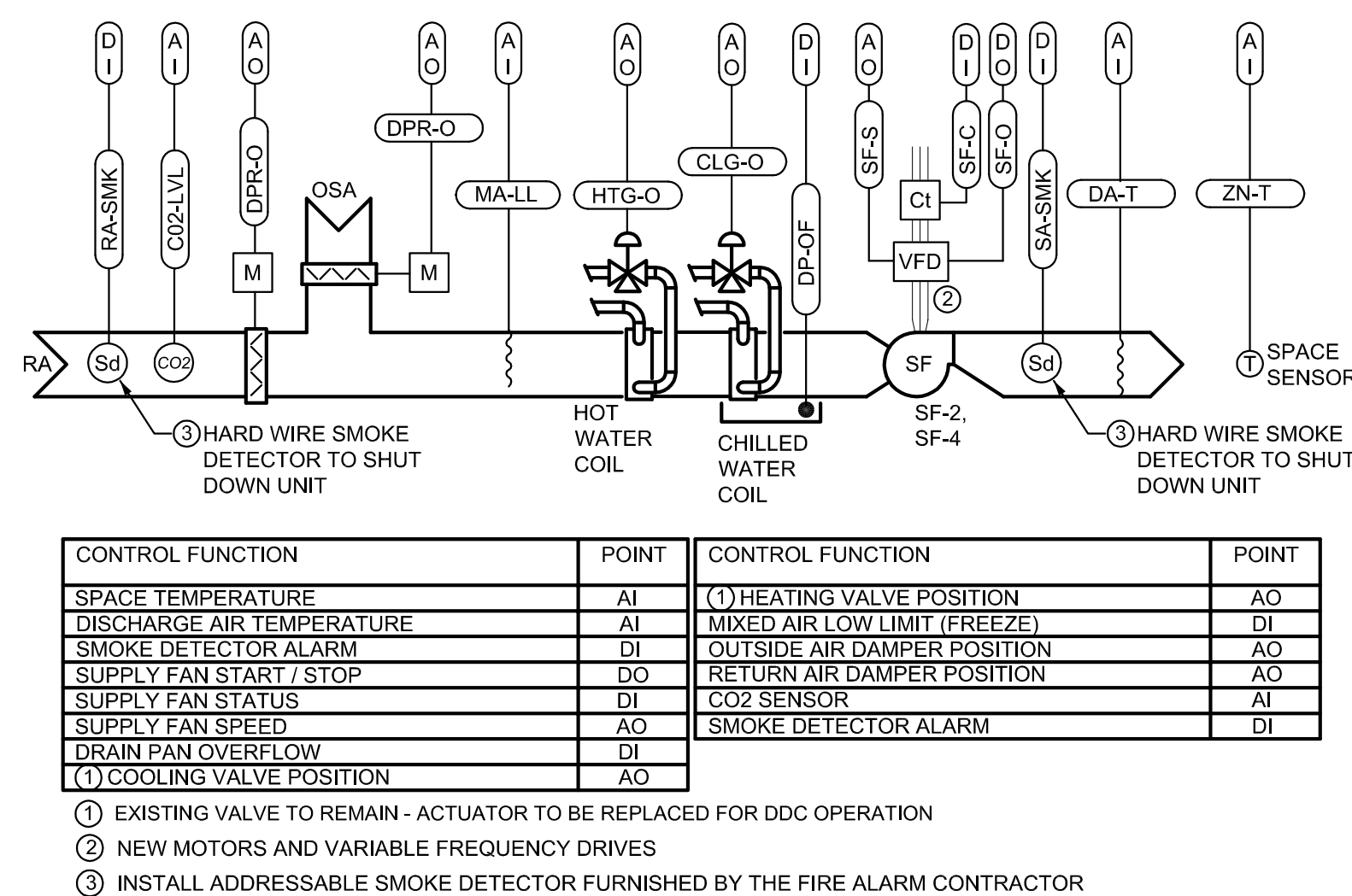
5 ELECTRIC CONVECTOR / UNIT HEATER CONTROL SCHEMATIC
M1.01 DIAGRAMMATIC TYPICAL - ALL ELECTRIC BASEBOARD / CONVECTORS / UNIT HEATERS



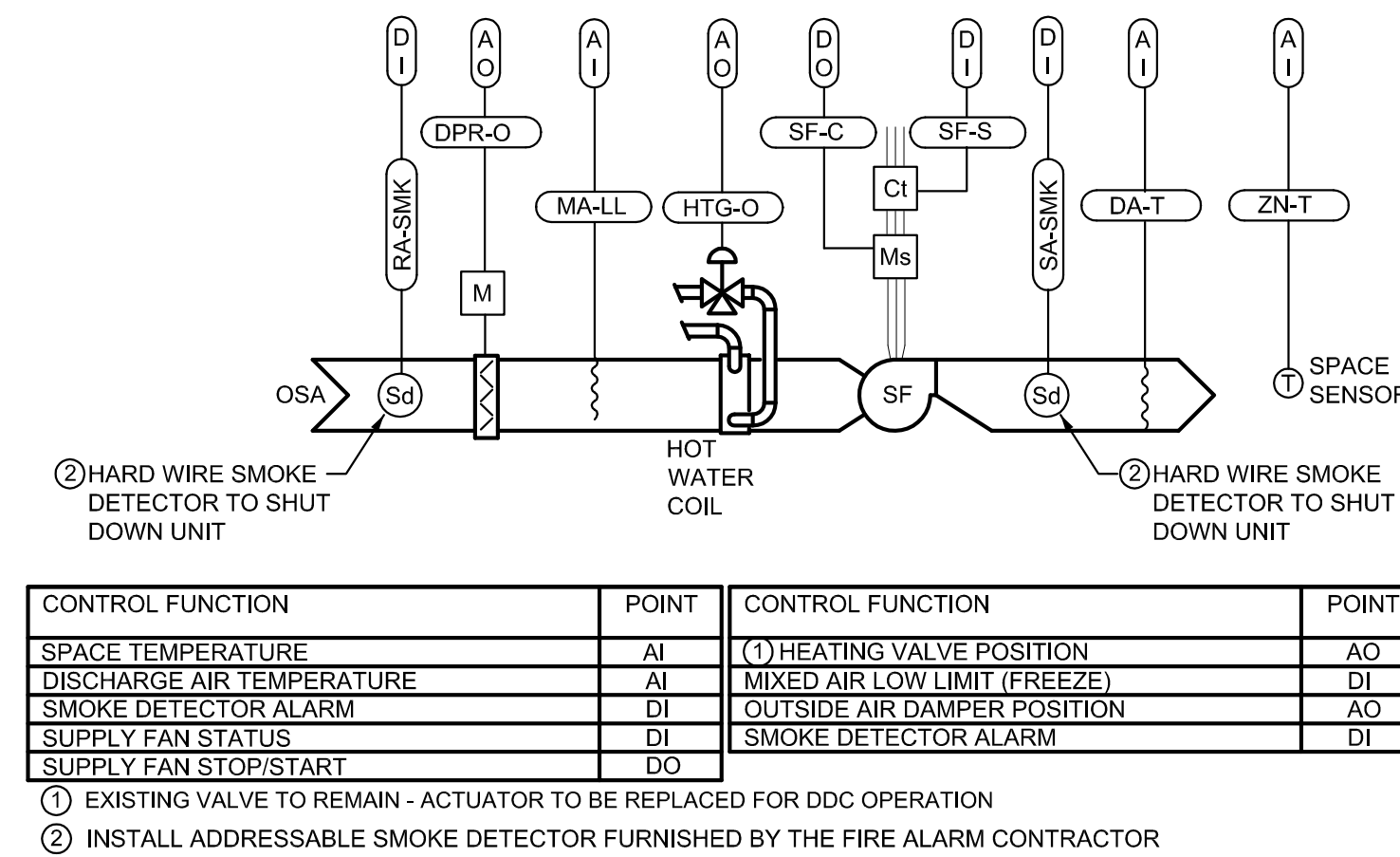
6 ROOF RELIEF VENT CONTROL SCHEMATIC
M1.01 DIAGRAMMATIC



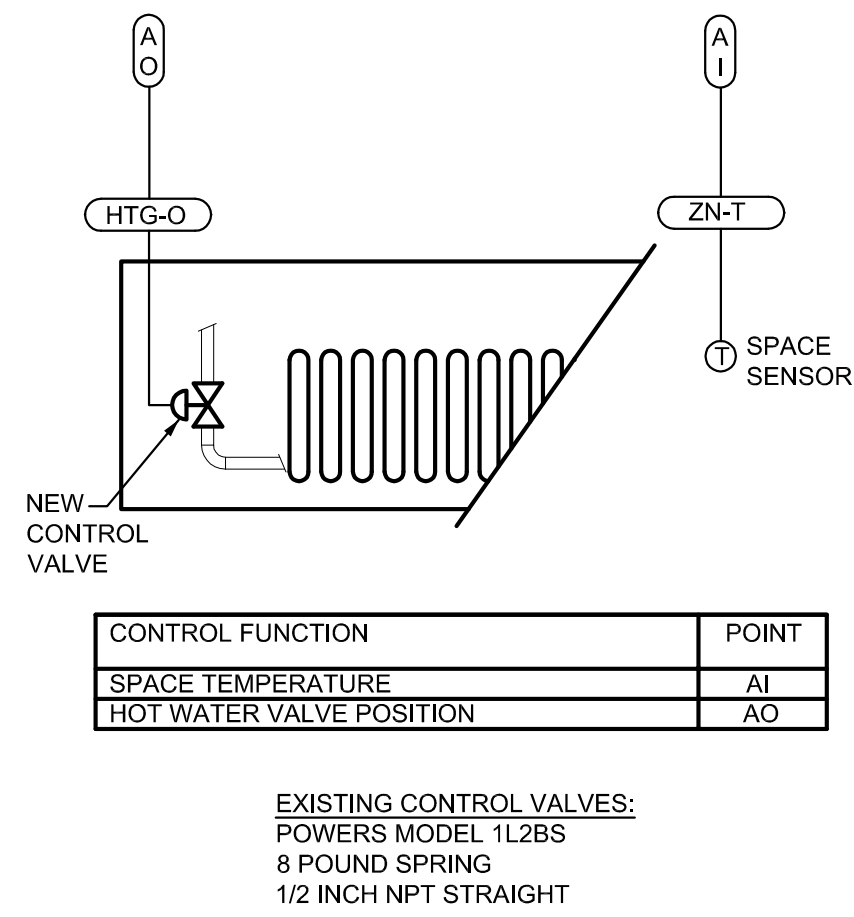
7 SF-5, RF-3 (MUSIC ROOM) CONTROL SCHEMATIC
M1.01 DIAGRAMMATIC



8 SF-2 (GYMNASIUM), SF-4 CAFETERIA) CONTROL SCHEMATIC
M1.01 DIAGRAMMATIC



9 SF-6 (KITCHEN) CONTROL SCHEMATIC
M1.01 DIAGRAMMATIC

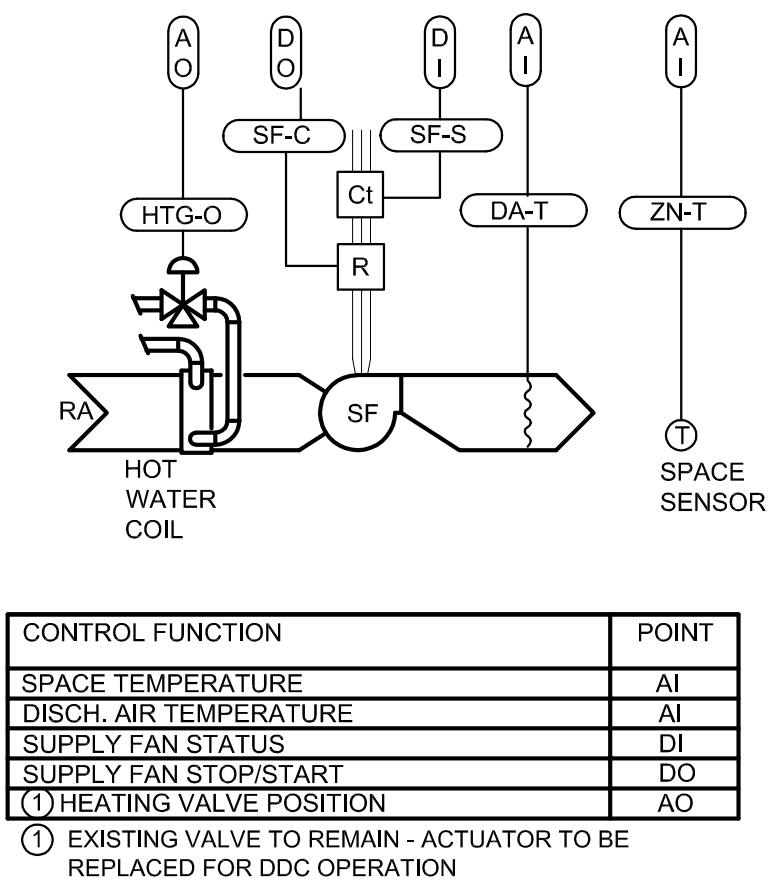


1
M1.02

**HOT WATER
CONVECTOR CONTROL SCHEMATIC**

DIAGRAMMATIC

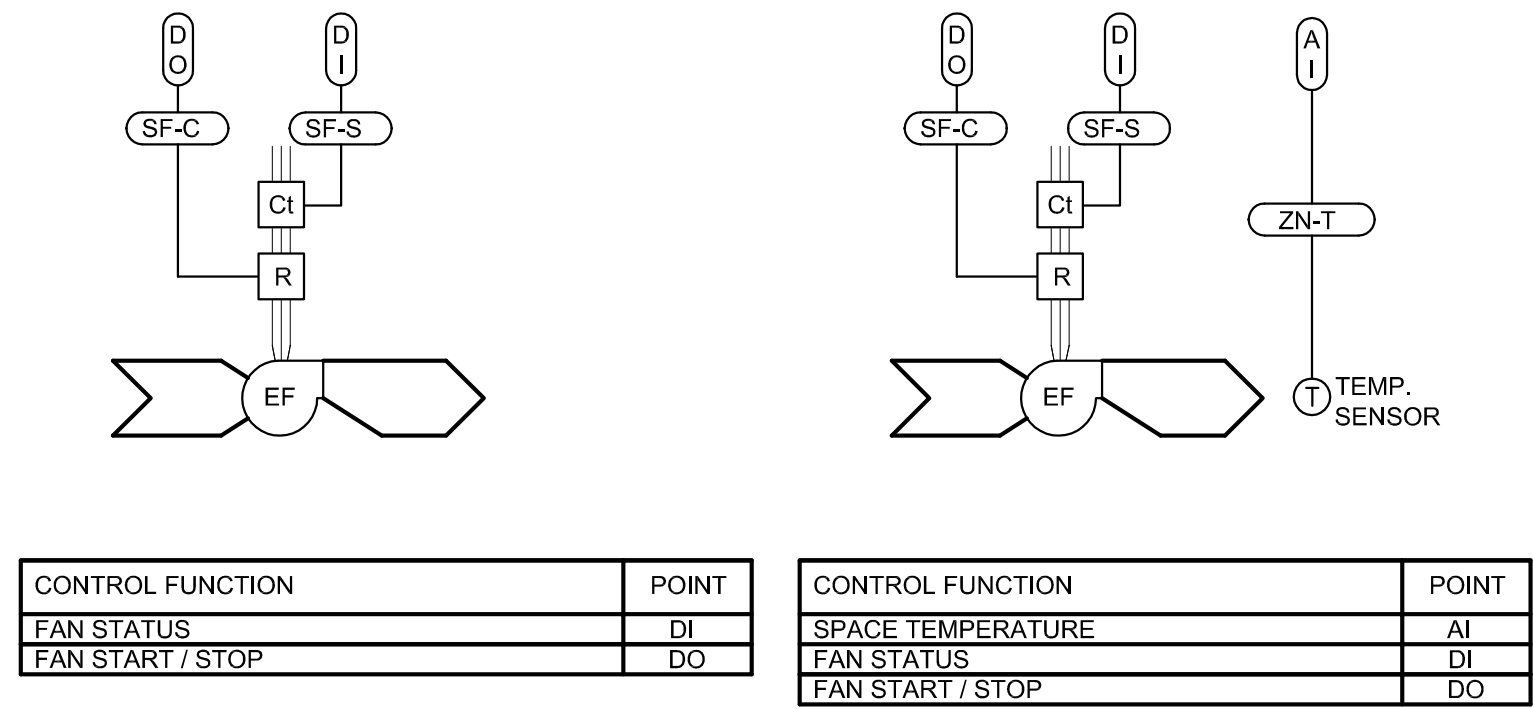
TYPICAL - ALL HOT WATER CONVECTORS / FIN PIPE



2
M1.02

**SF-7 (BOYS2),
SF-8 (GIRLS2) CONTROL SCHEMATIC**

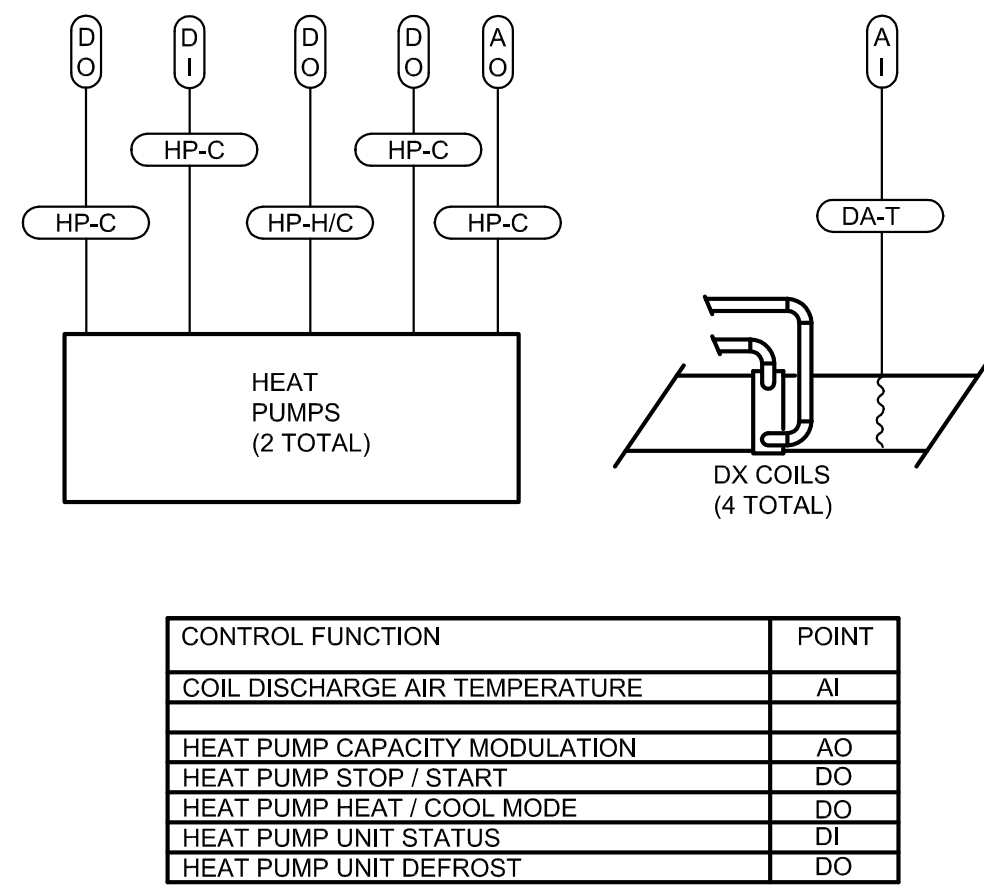
DIAGRAMMATIC



3
M1.02

EXHAUST FAN CONTROL SCHEMATICS

DIAGRAMMATIC



4
M1.02

HEAT PUMP / COIL CONTROL SCHEMATIC

DIAGRAMMATIC

TYPICAL HEAT PUMP / DX COILS



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Job No:	BSD200

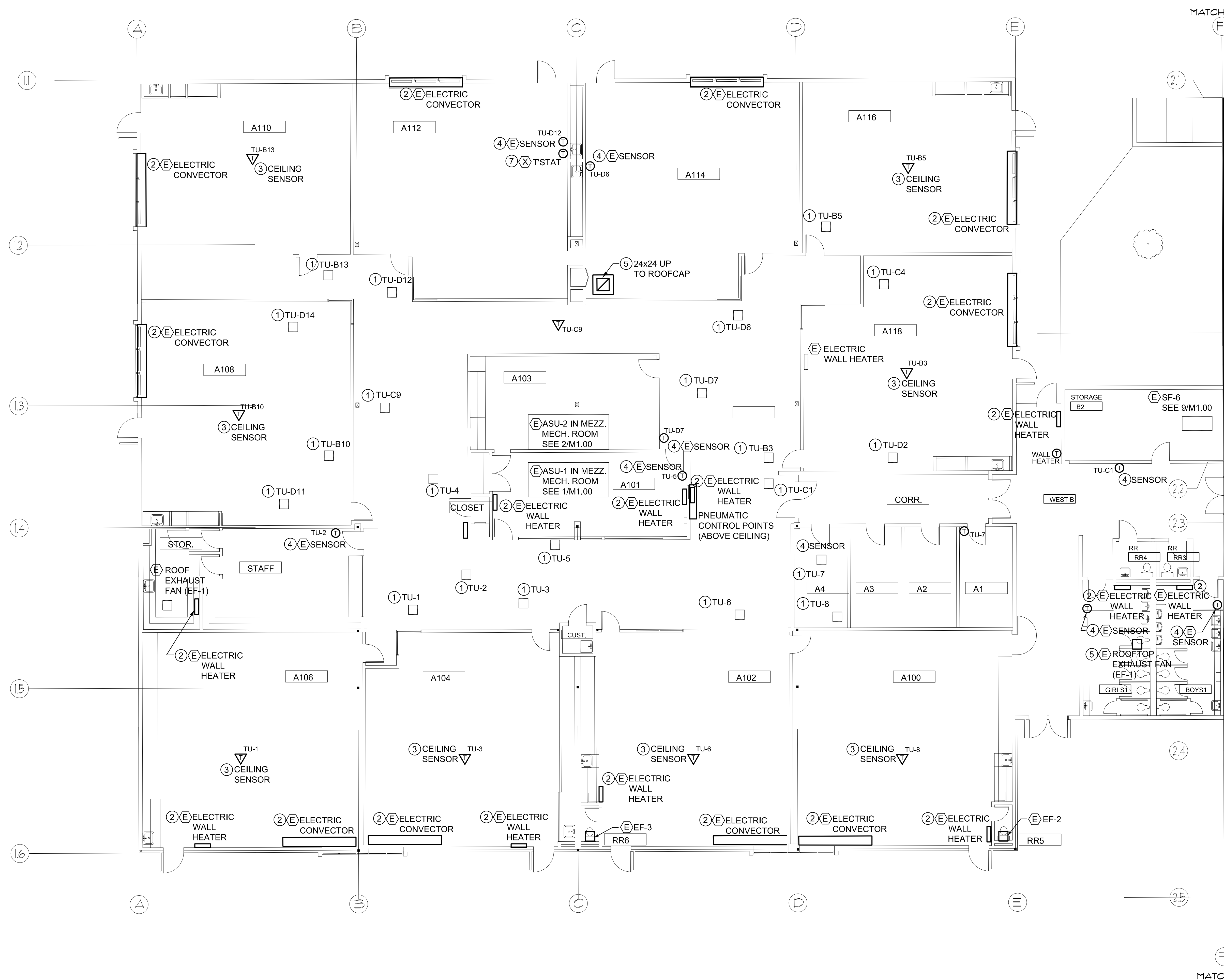
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Sheet Title
A-WING
FLOOR PLAN

NOT FOR
CONSTRUCTION

M2.00

CONSTRUCTION DEVELOPMENT



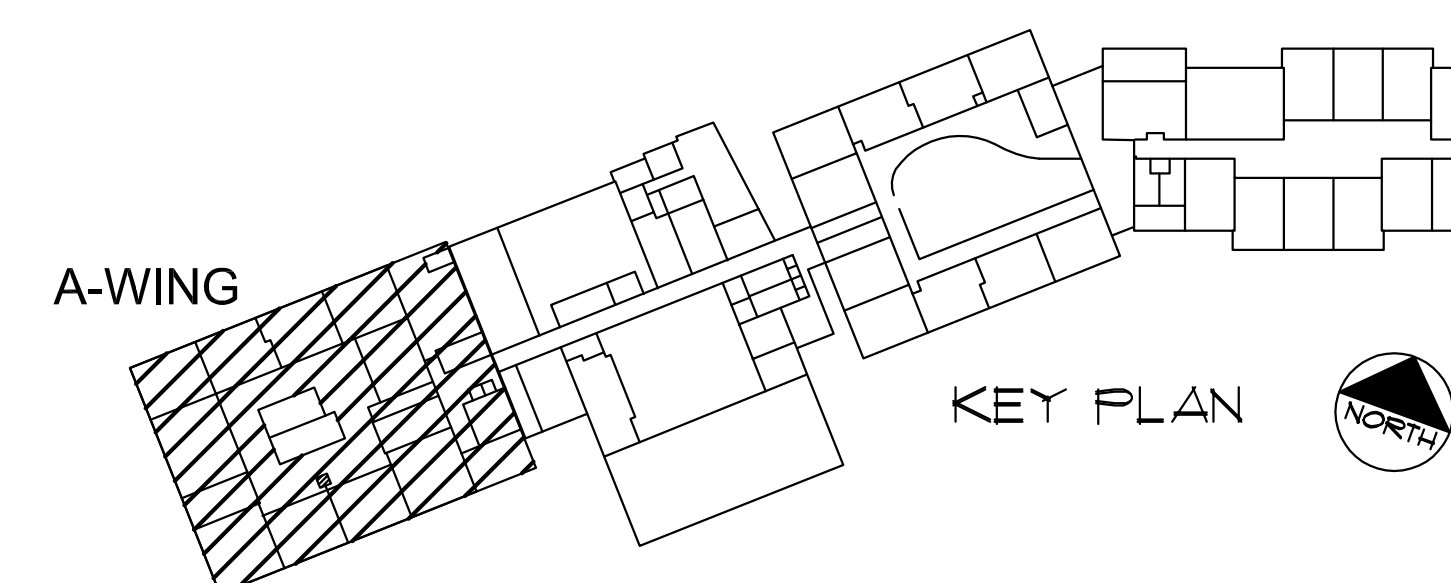
1 A-WING FLOOR PLAN
SCALE: 1/8"=1'-0"

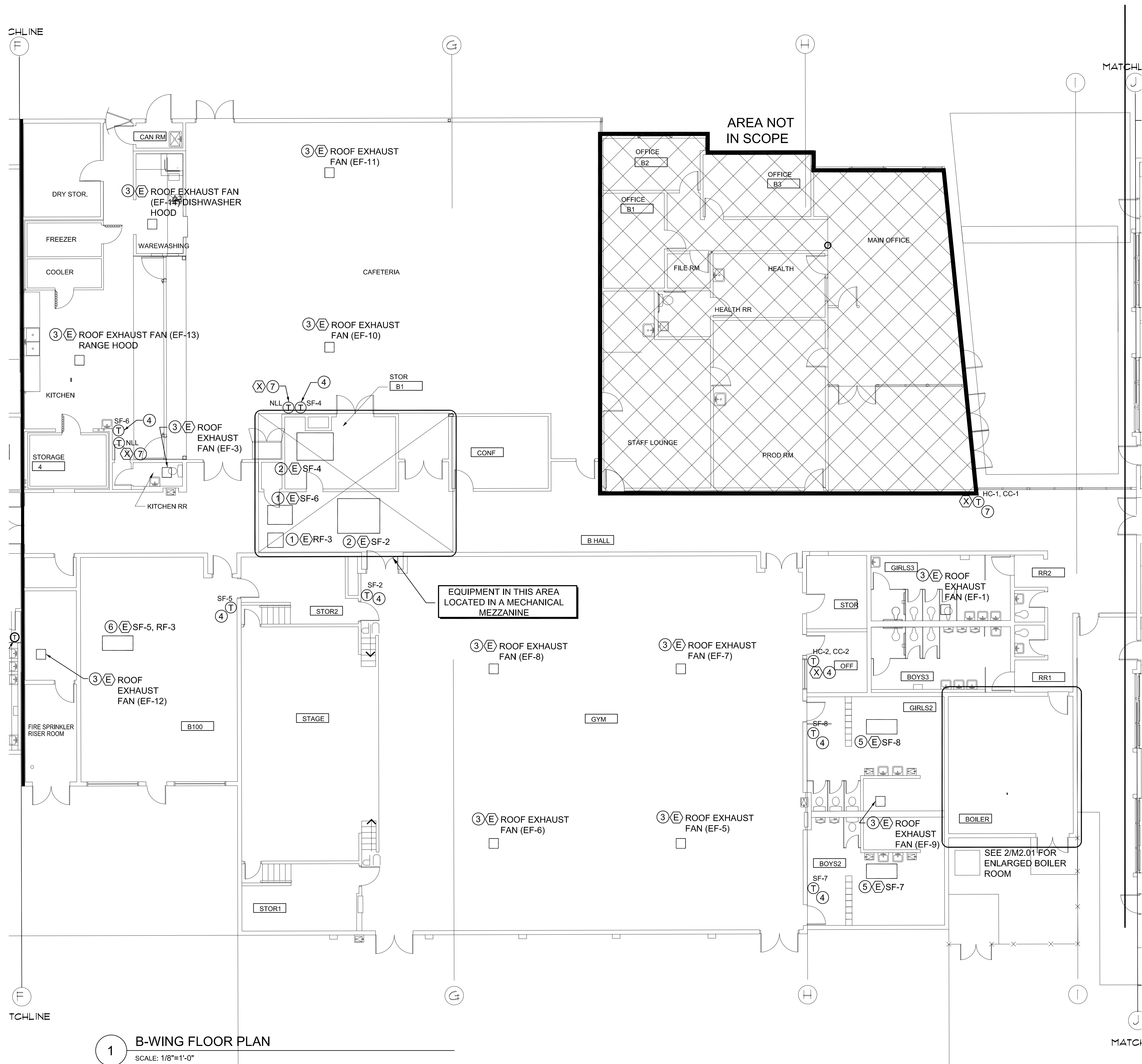
GENERAL NOTES

ALL SENSORS LOCATED IN HALLWAYS, CORRIDORS, TOILET ROOMS AND OTHER COMMON SPACES TO HAVE METAL PROTECTIVE PLATES

SHEET NOTES

- ① REPLACE EXISTING TERMINAL UNIT CONTROL ACTUATOR WITH DDC ACTUATOR - SEE DETAIL 3/M1.01 AND THE TERMINAL UNIT SCHEDULE ON SHEET M1.00
- ② SEE DETAIL 5/M1.01 FOR DDC CONTROL SCHEMATIC
- ③ REPLACE EXISTING CEILING THERMOSTAT WITH DDC PENDANT TYPE CEILING SENSOR
- ④ REPLACE EXISTING WALL THERMOSTAT WITH DDC WALL SENSOR
- ⑤ SEE DETAIL 6/M1.01 FOR DDC CONTROL
- ⑦ REMOVE EXISTING CONTROL DEVICE AND PATCH WALL TO MATCH EXISTING CONDITIONS





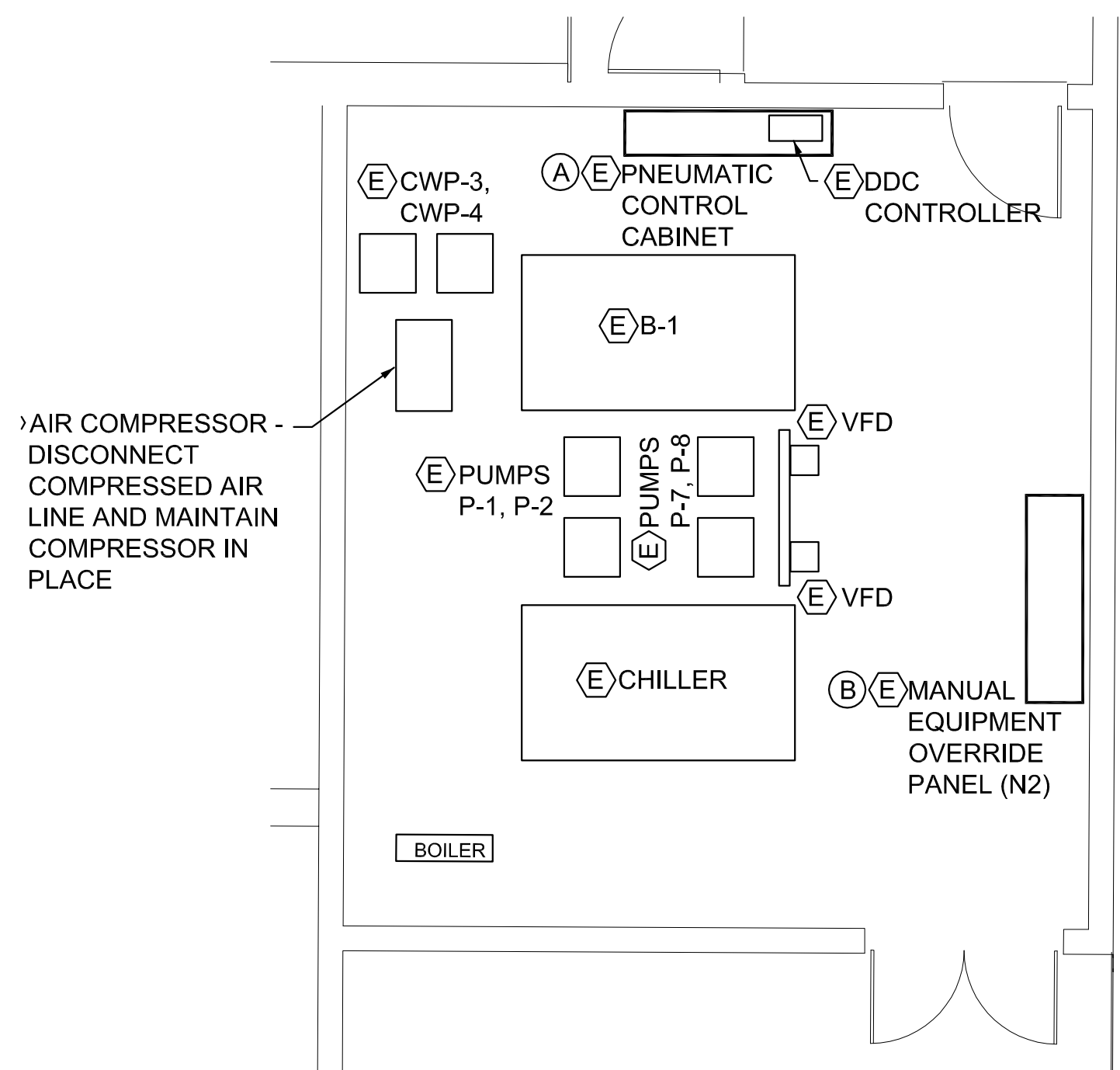
1 B-WING FLOOR PLAN
SCALE: 1/8"=1'-0"

GENERAL NOTES

ALL SENSORS LOCATED IN HALLWAYS, CORRIDORS, TOILET ROOMS AND OTHER COMMON SPACES TO HAVE METAL PROTECTIVE PLATES

SHEET NOTES

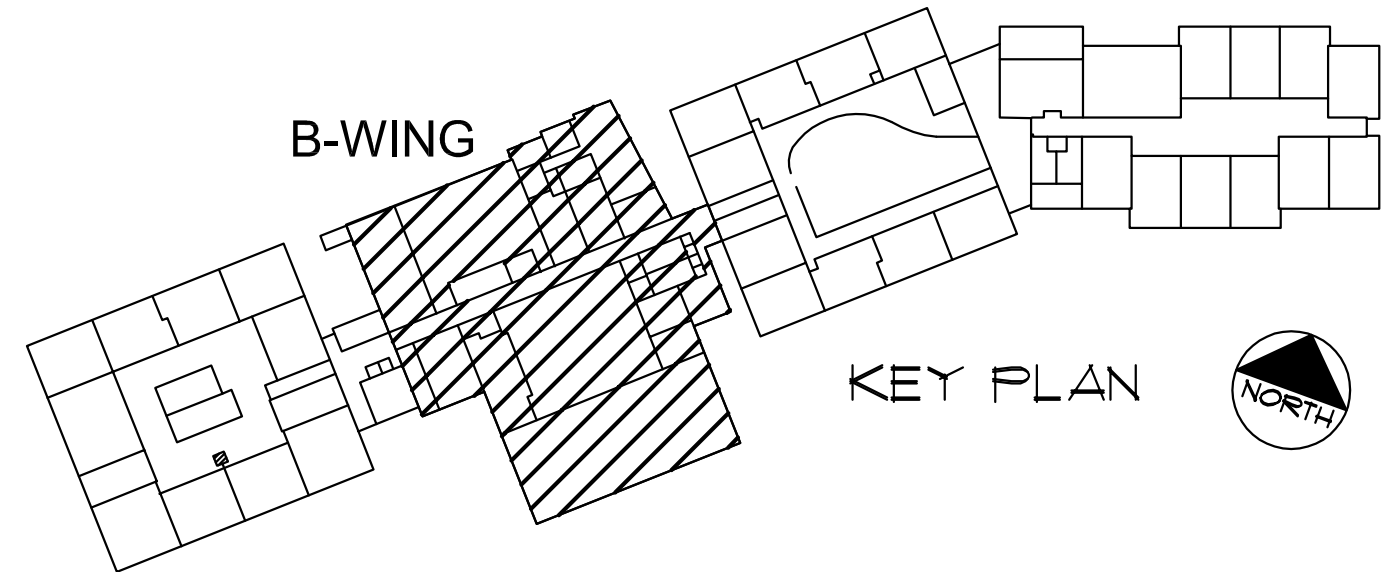
- 1 SEE DETAIL 7/M1.01 FOR DDC CONTROL SCHEMATIC
- 2 SEE DETAIL 8/M1.01 FOR DDC CONTROL SCHEMATIC
- 3 SEE DETAIL 3/M1.02 FOR DDC CONTROL SCHEMATIC
- 4 REPLACE EXISTING WALL THERMOSTAT WITH DDC WALL SENSOR - GYMNASIUM AND CAFETERIA SENSORS TO BE BEHIND PROTECTIVE METAL PLATE
- 5 SEE DETAIL 2/M1.02 FOR DDC CONTROL SCHEMATIC
- 6 SEE DETAIL 7/M1.01 FOR DDC CONTROL SCHEMATIC
- 7 REMOVE EXISTING CONTROL DEVICE AND PATCH WALL TO MATCH EXISTING CONDITIONS



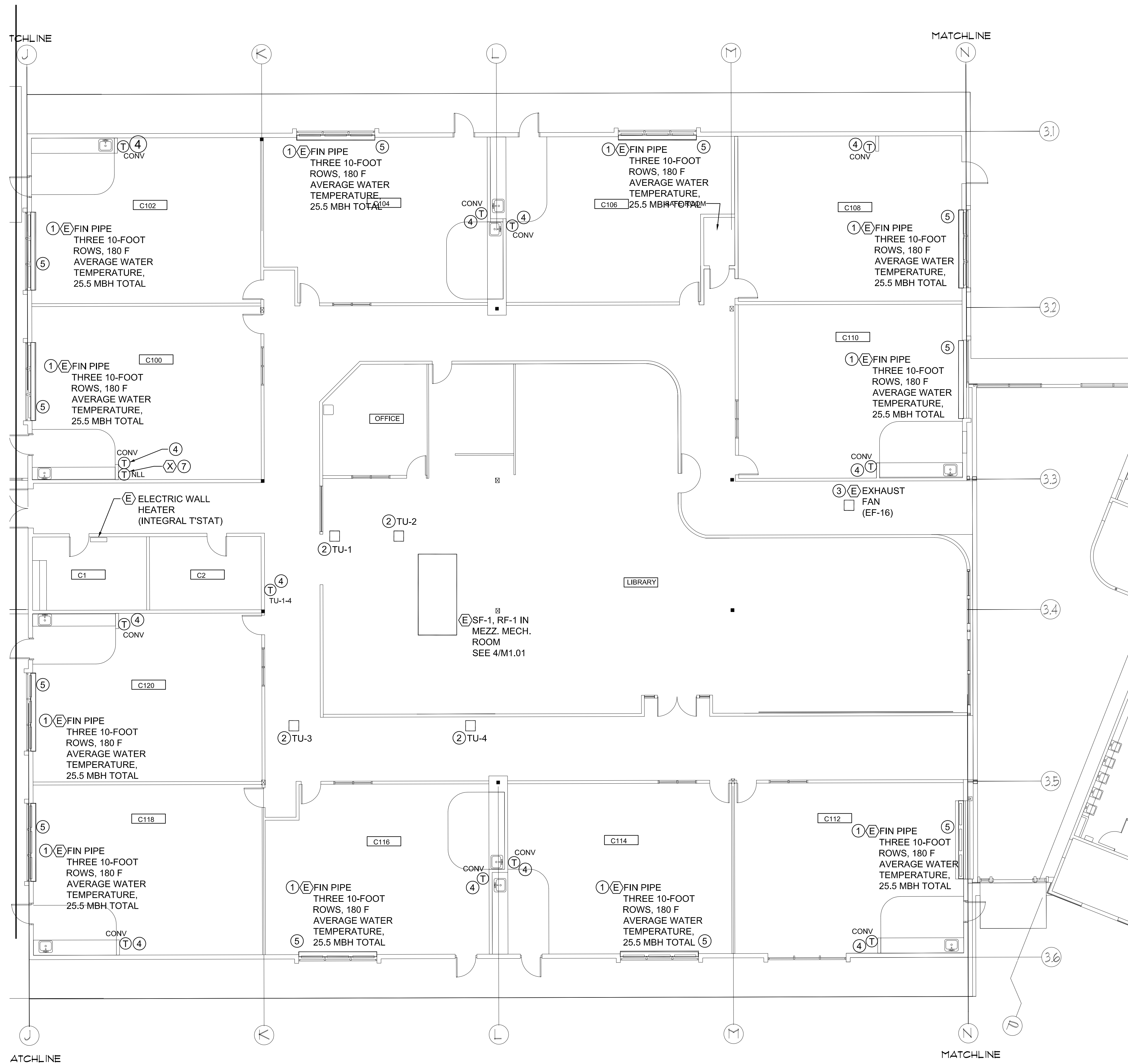
PLAN NOTES

- REMOVE ALL EXISTING PNEUMATIC CONTROL TUBING BACK TO BOILER ROOM WALL AND CAP
- A REMOVE ALL PNEUMATIC CONTROLS AND TUBING FROM CONTROL CABINET - CABINET AND DDC CONTROLLER TO REMAIN IN PLACE AS EXISTING
 - B MAKE CONNECTIONS AS REQUIRED TO THE EXISTING N2 MANUAL OVERRIDE PANEL - VERIFY EXACT REQUIREMENTS AT THE SITE

2 ENLARGED BOILER ROOM
SCALE: 1/4"=1'-0"



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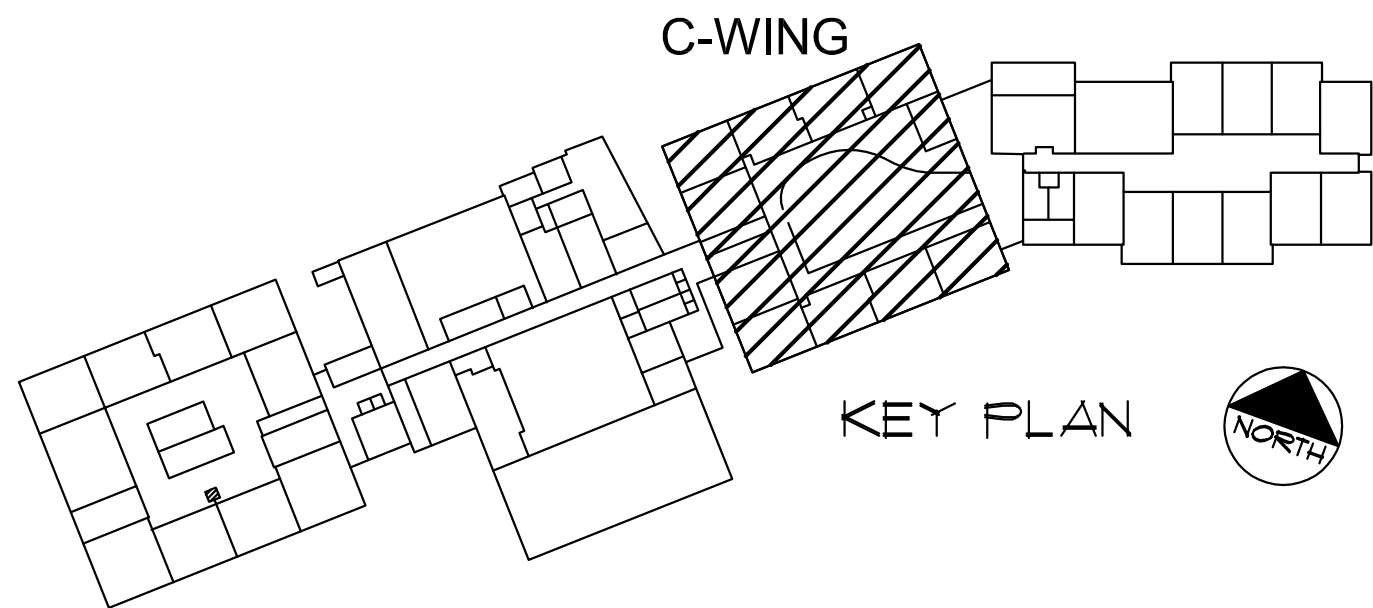
1 C-WING FLOOR PLAN
SCALE: 1/8"=1'-0"

GENERAL NOTES

ALL SENSORS LOCATED IN HALLWAYS, CORRIDORS, TOILET ROOMS AND OTHER COMMON SPACES TO HAVE METAL PROTECTIVE PLATES

SHEET NOTES

- SEE DETAIL 1/M1.02 FOR DDC CONTROL SCHEMATIC
- REPLACE EXISTING TERMINAL UNIT CONTROL ACTUATOR WITH DDC ACTUATOR - SEE DETAIL 3/M1.01 AND THE TERMINAL UNIT SCHEDULE ON SHEET M1.00
- SEE DETAIL 3/M1.02 FOR DDC CONTROL SCHEMATIC
- REPLACE EXISTING WALL THERMOSTAT WITH DDC WALL SENSOR
- PROVIDE A NEW WALL ACCESS PANEL TO REPLACE AND SERVICE THE CONTROL VALVE. PROVIDE A WOOD COVER PLATE SECURED TO THE WALL TO CLOSE OPENING. REMOVE THE EXISTING CONTROL VALVE AND INSTALL THE NEW CONTROL VALVE FURNISHED BY THE DDC CONTROLS CONTRACTOR. VERIFY EXACT LOCATION OF VALVE AT THE SITE
- REMOVE EXISTING CONTROL DEVICE AND PATCH WALL TO MATCH EXISTING CONDITIONS



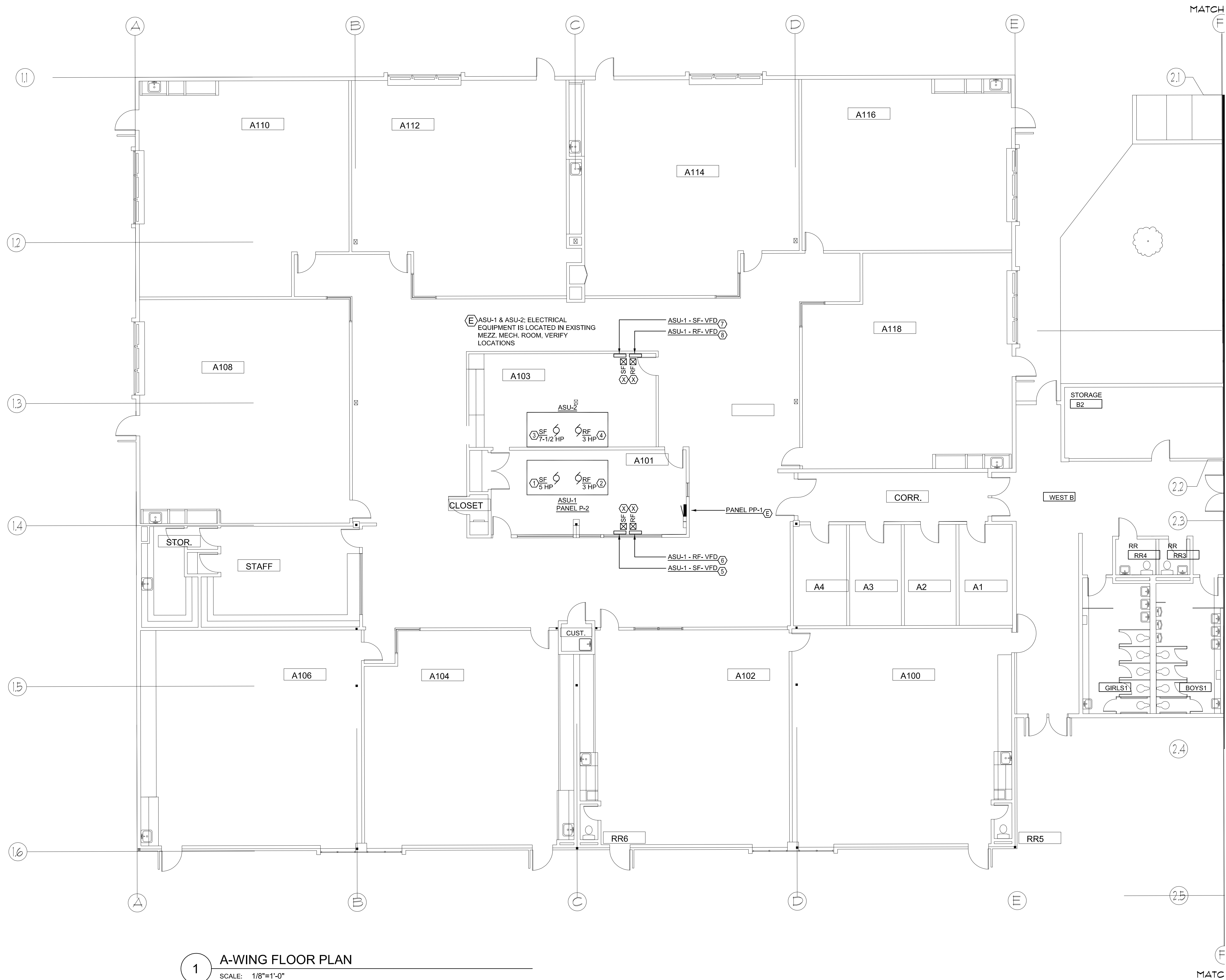
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Job No:	BSD2001

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Sheet Title
C-WING
FLOOR PLAN

NOT FOR
CONSTRUCTION

M2.02
CONSTRUCTION
DEVELOPMENT



1 A-WING FLOOR PLAN
SCALE: 1/8"=1'-0"

SHEET NOTES

- ① ASU-1 - REMOVE SF ELECTRICAL CONNECTION TO MOTOR AS REQUIRED FOR REPLACEMENT. PROVIDE LABOR AND MATERIAL TO REMOVE ELECTRICAL CONNECTION BACK TO PANEL INCLUDING BUT NOT BE LIMITED TO CONDUIT, CONDUCTORS, MOTOR STARTERS AND SUPPORTS. VERIFY PANEL LOCATION IN FIELD PRIOR TO BID.
- ② ASU-1 - REMOVE RF-1 ELECTRICAL CONNECTION TO MOTOR AS REQUIRED FOR REPLACEMENT. PROVIDE LABOR AND MATERIAL TO REMOVE ELECTRICAL CONNECTION BACK TO PANEL INCLUDING BUT NOT BE LIMITED TO CONDUIT, CONDUCTORS, MOTOR STARTERS AND SUPPORTS. VERIFY PANEL LOCATION IN FIELD PRIOR TO BID.
- ③ ASU-2 - REMOVE SF ELECTRICAL CONNECTION TO MOTOR AS REQUIRED FOR REPLACEMENT. PROVIDE LABOR AND MATERIAL TO REMOVE ELECTRICAL CONNECTION BACK TO PANEL INCLUDING BUT NOT BE LIMITED TO CONDUIT, CONDUCTORS, MOTOR STARTERS AND SUPPORTS. VERIFY PANEL LOCATION IN FIELD PRIOR TO BID.
- ④ ASU-2 - REMOVE RF ELECTRICAL CONNECTION TO MOTOR AS REQUIRED FOR REPLACEMENT. PROVIDE LABOR AND MATERIAL TO REMOVE ELECTRICAL CONNECTION BACK TO PANEL INCLUDING BUT NOT BE LIMITED TO CONDUIT, CONDUCTORS, MOTOR STARTERS AND SUPPORTS. VERIFY PANEL LOCATION IN FIELD PRIOR TO BID.
- ⑤ ASU-1 - PROVIDE SF ELECTRICAL CONNECTION TO NEW HIGH EFFICIENCY MOTOR, ROUTE 3 #10, #10 GRD, 1" CONDUIT FROM PANEL TO VFD TO MOTOR. PROVIDE ALL LABOR AND MATERIAL INCLUDING BUT NOT BE LIMITED TO CONDUIT, CONDUCTORS, VFD CONNECTIONS AND SUPPORTS. VERIFY PANEL & VFD LOCATIONS IN FIELD PRIOR TO BID.
- ⑥ ASU-1 - PROVIDE RF ELECTRICAL CONNECTION TO NEW HIGH EFFICIENCY MOTOR, ROUTE 3 #12, #12 GRD, 3/4" CONDUIT FROM PANEL TO VFD TO MOTOR. PROVIDE ALL LABOR AND MATERIAL INCLUDING BUT NOT BE LIMITED TO CONDUIT, CONDUCTORS, VFD CONNECTIONS AND SUPPORTS. VERIFY PANEL & VFD LOCATIONS IN FIELD PRIOR TO BID.
- ⑦ ASU-2 - PROVIDE SF ELECTRICAL CONNECTION TO NEW HIGH EFFICIENCY MOTOR, ROUTE 3 #8, #8 GRD, 1" CONDUIT FROM PANEL TO VFD TO MOTOR. PROVIDE ALL LABOR AND MATERIAL INCLUDING BUT NOT BE LIMITED TO CONDUIT, CONDUCTORS, VFD CONNECTIONS AND SUPPORTS. VERIFY PANEL & VFD LOCATIONS IN FIELD PRIOR TO BID.
- ⑧ ASU-2 - PROVIDE RF ELECTRICAL CONNECTION TO NEW HIGH EFFICIENCY MOTOR, ROUTE 3 #12, #12 GRD, 3/4" CONDUIT FROM PANEL TO VFD TO MOTOR. PROVIDE ALL LABOR AND MATERIAL INCLUDING BUT NOT BE LIMITED TO CONDUIT, CONDUCTORS, VFD CONNECTIONS AND SUPPORTS. VERIFY PANEL & VFD LOCATIONS IN FIELD PRIOR TO BID.

DEMOLITION SCOPE OF WORK

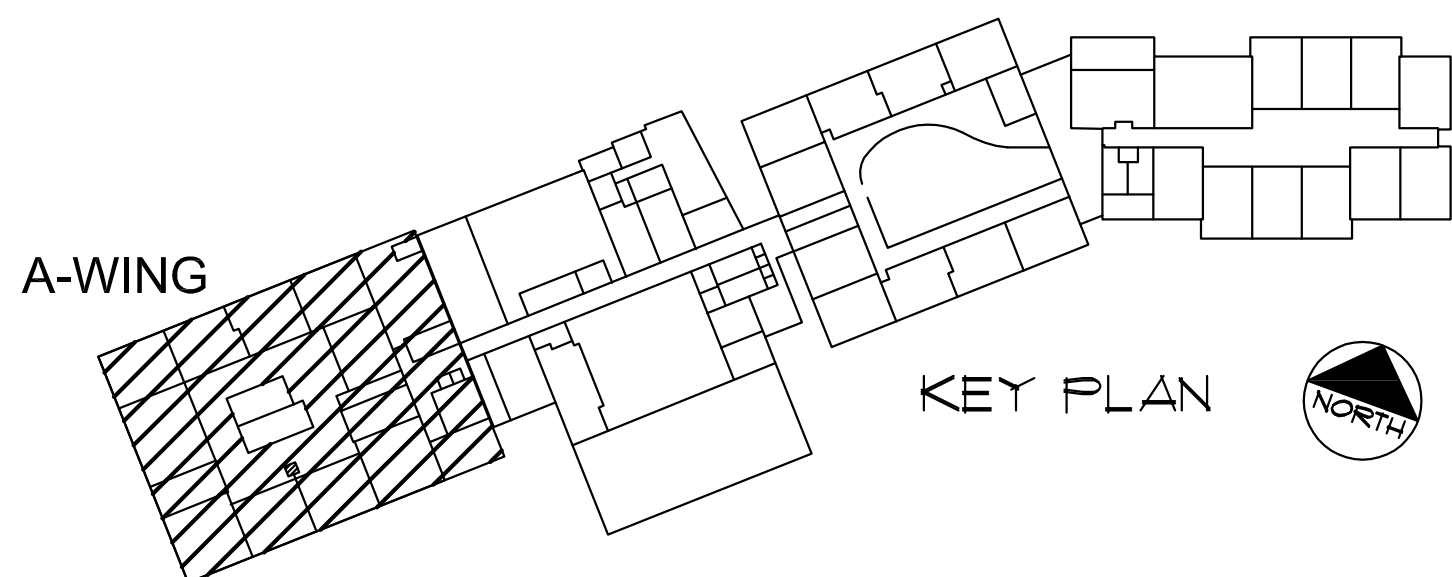
SCOPE: THE SCOPE OF WORK INCLUDES THE REMOVAL OF EXISTING CONNECTIONS TO MOTORS AS NOTED ON THE ELECTRICAL AND MECHANICAL PLANS. THE WORK WILL INCLUDE BUT NOT BE LIMITED TO THE DEMOLITION OF THE SPECIFIC MECHANICAL EQUIPMENT. ELECTRICAL CONTRACTOR COORDINATE WITH MECHANICAL CONTRACTOR FOR LOCATION OF EQUIPMENT.

DEMOLITION: ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. DEMOLITION INFORMATION HAS BEEN SHOWN ON THE CONSTRUCTION DRAWINGS. IN THE SPECIFICATIONS OR INDICATED BELOW, ELECTRICAL DEVICES AND EQUIPMENT ARE FROM EXISTING RECORD DRAWINGS AND / OR SITE OBSERVATIONS. THEIR ACCURACY IS NOT GUARANTEED. IT WILL BE THE ELECTRICAL CONTRACTORS RESPONSIBILITY TO VISIT THE SITE PRIOR TO BID AND VERIFY ALL EXISTING CONDITIONS PRIOR TO BID AND INCLUDE ALL LABOR AND MATERIAL REQUIRED FOR THE WORK INDICATED IN THE CONSTRUCTION SET.

THE PURPOSE OF THE DEMOLITION INFORMATION IS TO OUTLINE A GENERAL DIRECTION OF WHAT NEEDS TO BE REMOVED TO ACCOMPLISH THE RENOVATION WORK. THE WORK IS DIAGRAMMATIC IN NATURE AND IS NOT INTENDED TO BE ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE TO VERIFY EXISTING CONDITIONS AT THE SITE AND INCLUDE ALL WORK EVIDENT BY SITE INSPECTION WHETHER OR NOT SHOWN ON THE DRAWINGS. TO ACHIEVE THE DESIRED RESULTS INDICATED ON THE DOCUMENTS FOR THE FINISHED SPACES.

ELECTRICAL DISTRIBUTION - EXISTING DISTRIBUTION WILL BE REMAIN UNLESS NOTED OTHERWISE ON DRAWINGS. FIELD VERIFY ALL EQUIPMENT LOCATIONS.

MECHANICAL - SEE MECHANICAL PLANS FOR ADDITIONAL DEMOLITION INFORMATION. MECHANICAL EQUIPMENT WILL BE REMOVED AS NOTED UNLESS INDICATED OTHERWISE. REMOVE EXISTING FEEDERS, MOTOR STARTERS AND DISCONNECT SWITCHES INCLUDING BUT NOT BE LIMITED TO CONDUIT, WIRE, AND SUPPORTS BACK TO PANELS.



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Date:	10.09.202
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Job No:	BSD200

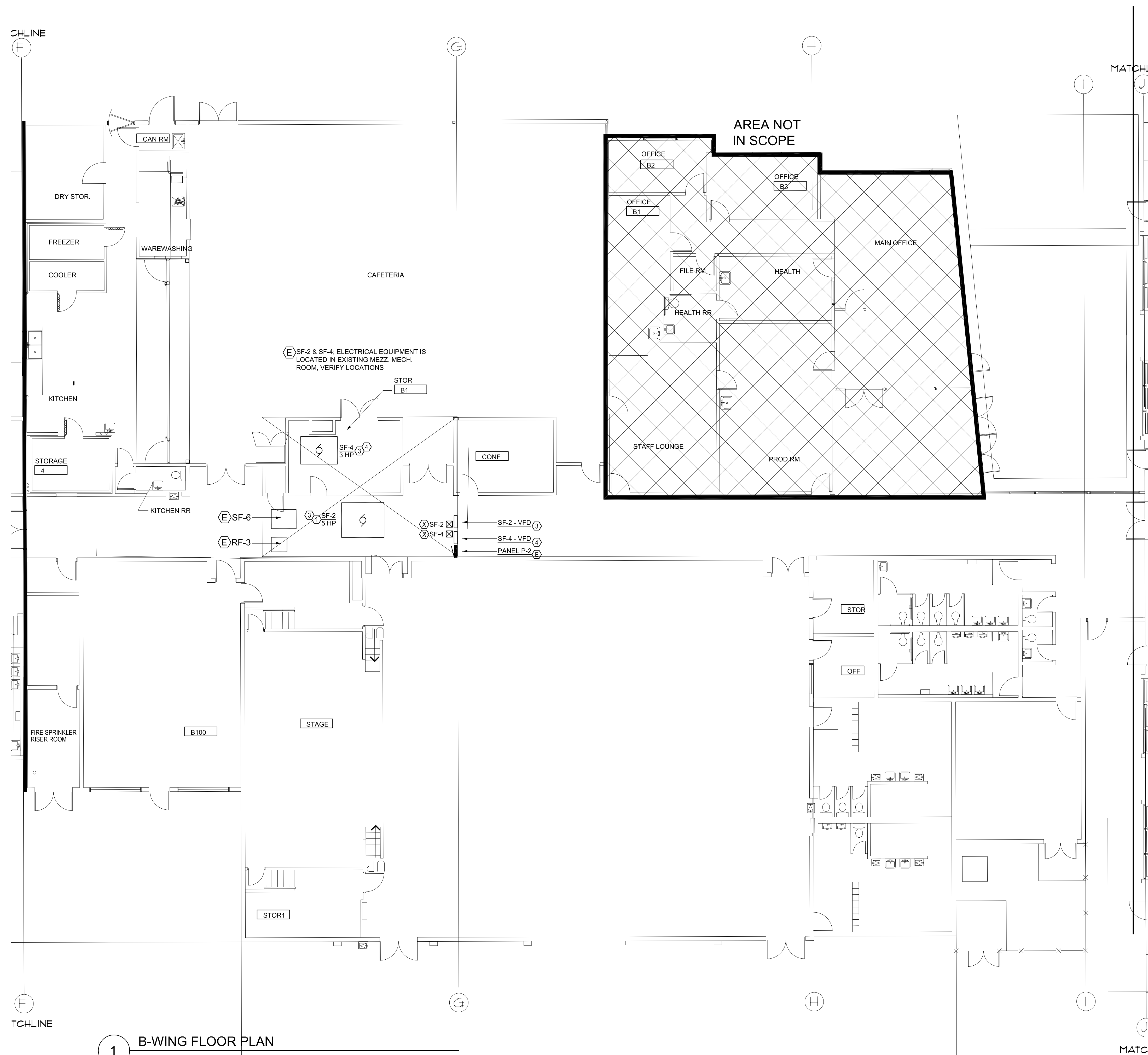
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Sheet Title
B-WING
FLOOR PLAN -
ELECTRICAL

NOT FOR
CONSTRUCTION

E2.01

CONSTRUCTION DEVELOPMENT



B-WING FLOOR PLAN

SCALE: 1/8"=1'-0'

SHEET NOTES

- ① SF-2- REMOVE SF-2 ELECTRICAL CONNECTION TO MOTOR AS REQUIRED FOR REPLACEMENT. PROVIDE LABOR AND MATERIAL TO REMOVE ELECTRICAL CONNECTION BACK TO PANEL INCLUDING BUT NOT BE LIMITED TO CONDUIT, CONDUCTORS, MOTOR STARTERS AND SUPPORTS. VERIFY PANEL LOCATION IN FIELD PRIOR TO BID.
- ② SF-4- REMOVE SF-4 ELECTRICAL CONNECTION TO MOTOR AS REQUIRED FOR REPLACEMENT. PROVIDE LABOR AND MATERIAL TO REMOVE ELECTRICAL CONNECTION BACK TO PANEL INCLUDING BUT NOT BE LIMITED TO CONDUIT, CONDUCTORS, MOTOR STARTERS AND SUPPORTS. VERIFY PANEL LOCATION IN FIELD PRIOR TO BID.
- ③ SF-2, PROVIDE SF-2 ELECTRICAL CONNECTION TO NEW HIGH EFFICIENCY MOTOR, ROUTE 3/10, #10 RND, 1" CONDUIT FROM PANEL TO VFD TO MOTOR, PROVIDE ALL LABOR AND MATERIAL INCLUDING BUT NOT BE LIMITED TO CONDUIT, CONDUCTORS, VFD CONNECTIONS AND SUPPORTS. VERIFY PANEL & VFD LOCATIONS IN FIELD PRIOR TO BID.
- ④ SF-4- PROVIDE SF-4 ELECTRICAL CONNECTION TO NEW HIGH EFFICIENCY MOTOR, ROUTE 3/10, #10 RND, 1" CONDUIT FROM PANEL TO VFD TO MOTOR, PROVIDE ALL LABOR AND MATERIAL INCLUDING BUT NOT BE LIMITED TO CONDUIT, CONDUCTORS, VFD CONNECTIONS AND SUPPORTS. VERIFY PANEL & VFD LOCATIONS IN FIELD PRIOR TO BID.

DEMOLITION SCOPE OF WORK

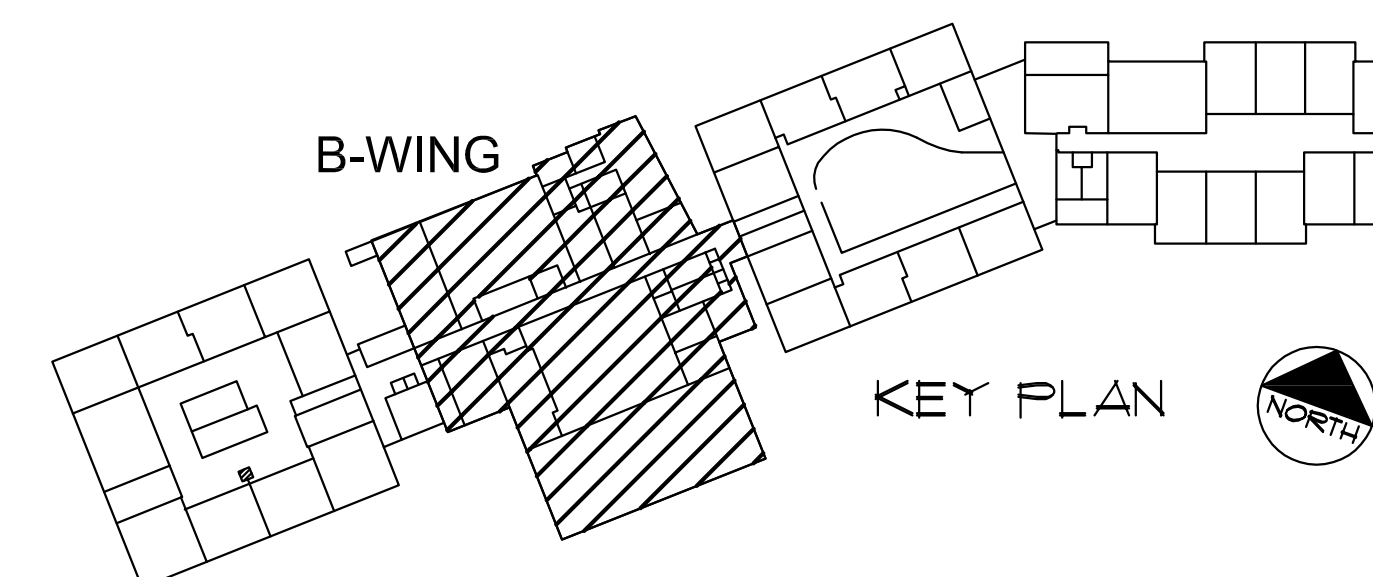
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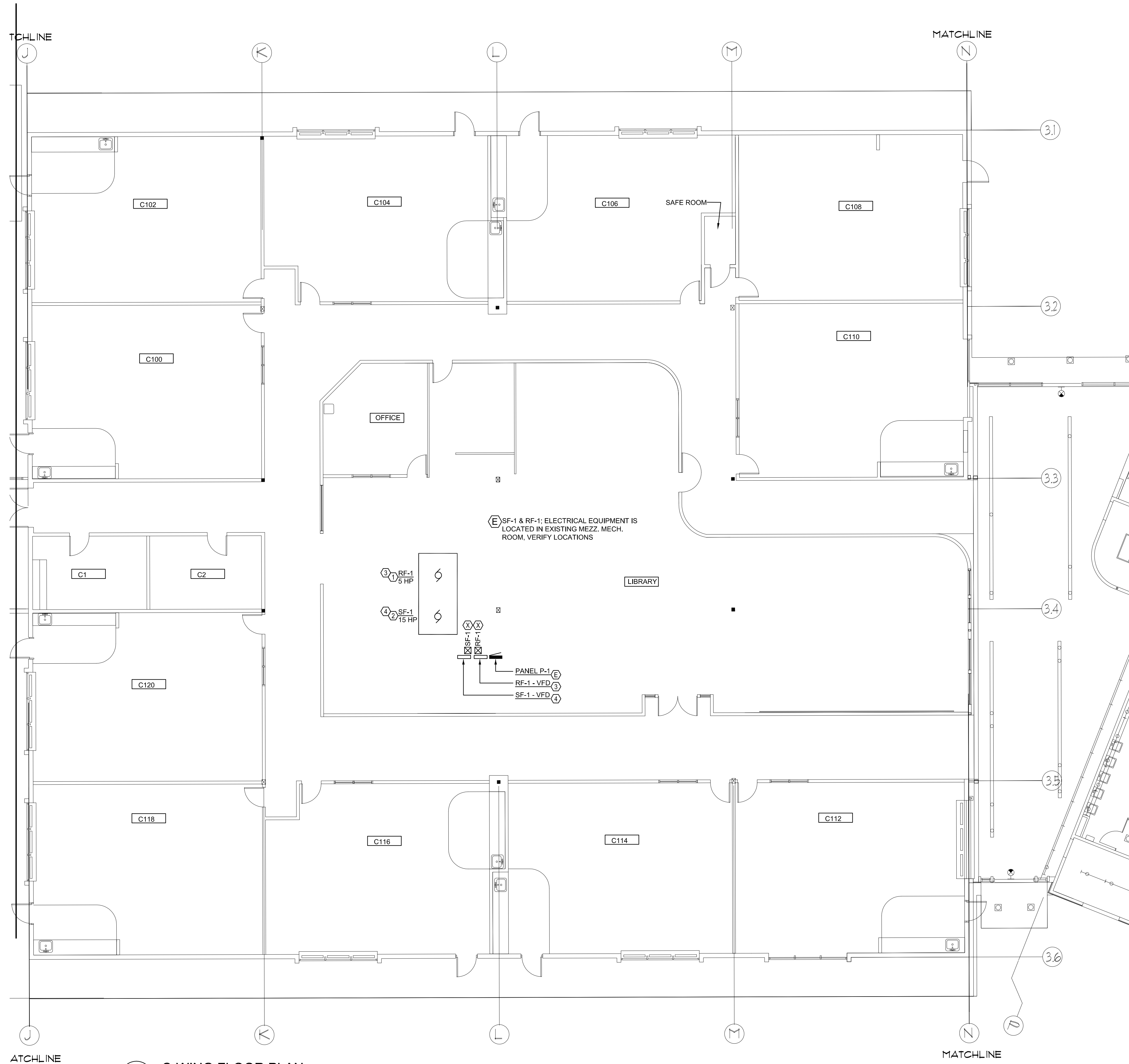
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ELECTRICAL DISTRIBUTION -
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FIELD VERIFY ALL EQUIPMENT LOCATIONS

MECHANICAL - SEE MECHANICAL PLANS FOR ADDITIONAL DEMOLITION INFORMATION, MECHANICAL EQUIPMENT WILL BE REMOVED AS NOTED UNLESS INDICATED OTHERWISE. REMOVE EXISTING FEEDERS, MOTOR STARTERS AND DISCONNECT SWITCHES INCLUDING BUT NOT BE LIMITED TO CONDUIT, WIRE, AND SUPPORTS BACK TO PANELS





1 C-WING FLOOR PLAN
SCALE: 1/8"=1'-0"

SHEET NOTES

- RF-1 - REMOVE RF-1 ELECTRICAL CONNECTION TO MOTOR AS REQUIRED FOR REPLACEMENT. PROVIDE LABOR AND MATERIAL TO REMOVE ELECTRICAL CONNECTION BACK TO PANEL INCLUDING BUT NOT BE LIMITED TO CONDUIT, CONDUCTORS, MOTOR STARTERS AND SUPPORTS. VERIFY PANEL LOCATION IN FIELD PRIOR TO BID.
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- SF-1 - PROVIDE SF-1 ELECTRICAL CONNECTION TO NEW HIGH EFFICIENCY MOTOR. ROUTE 3 #6, #6 GRD. 1" CONDUIT FROM PANEL TO VFD TO MOTOR. PROVIDE ALL LABOR AND MATERIAL INCLUDING BUT NOT BE LIMITED TO CONDUIT, CONDUCTORS, VFD CONNECTIONS AND SUPPORTS. VERIFY PANEL & VFD LOCATIONS IN FIELD PRIOR TO BID.

DEMOLITION SCOPE OF WORK

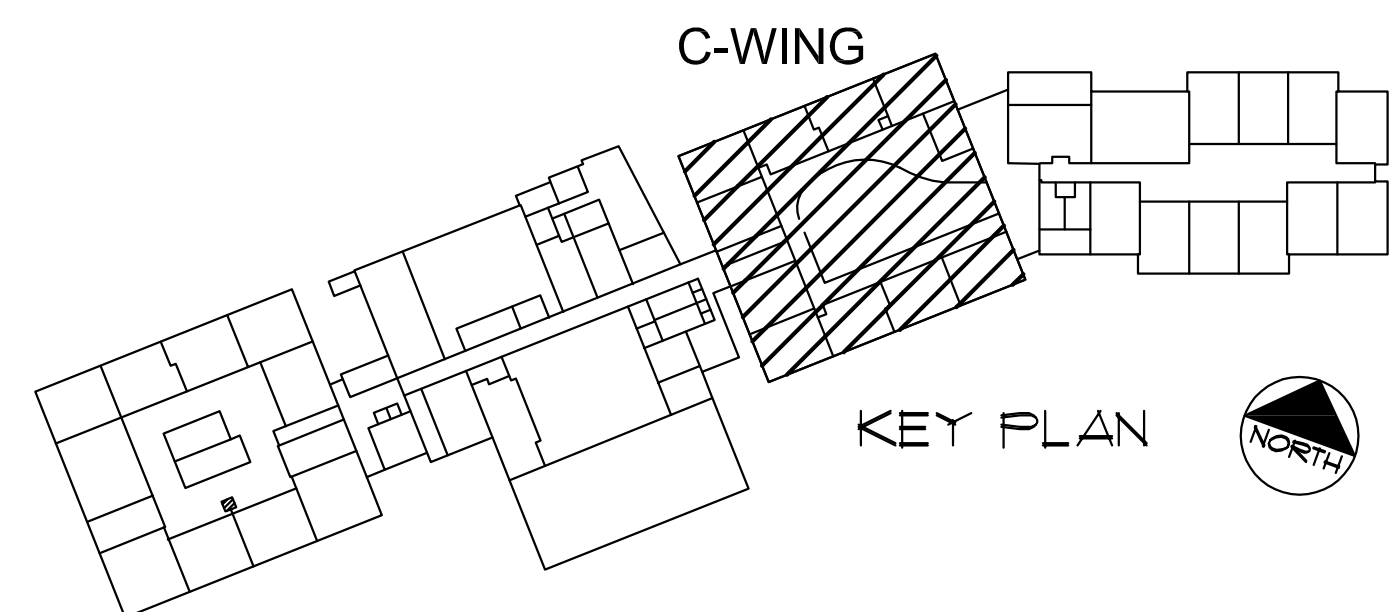
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Drawn: JJD
Date: 10.09.2020
Check: JFR
Job No: BSD2001

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Sheet Title
C-WING
FLOOR PLAN -
ELECTRICAL

NOT FOR
CONSTRUCTION

E2.02
CONSTRUCTION
DEVELOPMENT

ATTACHMENT K SPECIFICATIONS

Hiteon Elementary School HVAC Upgrades

SPECIFICATIONS INDEX

01 10 00	Summary
01 22 00	Unit Prices
01 31 00	Project Management and Coordination
01 31 23	Project Management Database (e-Builder)
01 32 00	Construction Progress Documentation
01 33 00	Submittal Procedures
01 35 53	Security Procedures
23 00 00	Basic HVAC Requirements
23 13 00	Motor Requirements for HVAC Equipment
23 05 29	Hangers and Supports for HVAC Piping and Equipment
23 05 53	Identification for HVAC Piping and Equipment
23 05 93	Testing, Adjusting and Balancing for HVAC
23 07 00	HVAC Insulation
23 09 00	Instrumentation and Control for HVAC
23 20 00	HVAC Piping and Equipment
23 31 00	HVAC Ducts and Casings
23 33 00	Air Duct Accessories
23 36 00	Terminal Units
26 00 00	Electrical General Provisions
26 05 00	Basic Materials and Methods
26 05 19	Conductors and Connectors
26 05 26	Grounding and Bonding
26 05 33	Conduits, Raceways, Boxes and Fittings
26 05 53	Electrical Identification
	Asbestos Abatement Contractor

SUMMARY**PART 1 - GENERAL****1.1 SUMMARY****A. Section includes:**

1. Project information.
2. Work covered by Contract Documents.
3. Access to site.
4. Coordination with occupants.
5. Work restrictions.
6. Specification and drawing conventions.

B. Related Section:

1. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.2 PROJECT INFORMATION**A. Project Identification: Hiteon Elementary School – HVAC & Electrical Upgrade**

1. Project Location: 13800 SW Brockman Street, Beaverton, OR 97225

B. Owner: Hiteon Elementary School**C. Owner's Representative: Beaverton School District**

1. Contact: Jeff Hamman, Project Manager (503) 356-4571
2. Contact: David Mantz, Project Coordinator (503) 356-4576

D. Owner's Commissioning Agent: GLUMAC

1. Contact: Jeremy Braithwaite, PE (503) 345-6216

E. Mechanical and Electrical Engineer: System Design Consultants, Inc..

1. Contact: Kelly Johnson (503) 248-0227

F. Asbestos Abatement: T R C

1. Contact: Ron Landolt (503) 387-3251

G. Construction Manager/ General Contractor (CM/GC): INLINE Commercial Construction, Inc.

1. Contact: Brian Grant (503) 642-5117

1.3 WORK COVERED BY CONTRACT DOCUMENTS**A. The Work of the Project is defined by the Contract Documents and consists of the following:**

1. General upgrade of the building mechanical systems including associated electrical work, structural support and architectural patch and repair work required to accommodate mechanical upgrades.

1.4 ACCESS TO SITE**A. General: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other**

SUMMARY

contractors on portions of Project.

- B. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

1.5 COORDINATION WITH OCCUPANTS

- A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
 - 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
 - 3. Owner reserves the right to occupy and to place and install equipment in completed portions of the Work, prior to Substantial Completion of the Work, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and limited occupancy shall not constitute acceptance of the total Work.

1.6 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and other requirements of authorities having jurisdiction.
 - 2. Comply with noise ordinances of the authorities having jurisdiction.
- B. On-Site Work Hours: Limit work in the existing building and site as follows:
 - 1. Weekdays: 6:00 a.m. to 5:00 p.m. (Custodian until 6:00 p.m.).
 - 2. Saturdays and Sundays: Arrange with Owner's Representative
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 - 1. Obtain Owner's written permission before proceeding with utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
 - 1. Notify Owner not less than two days in advance of proposed disruptive operations.
 - 2. Obtain Owner's written permission before proceeding with disruptive operations.
- E. Controlled Substances: Use of tobacco products and other controlled substances on the Project site is not permitted.

1.7 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

SUMMARY

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on the Drawings are described in detail in the Specifications. One or more of the following are used on the Drawings to identify materials and products:
1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Section:
 - 1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

1.2 DEFINITIONS

- A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. Schedule:
 - 1. A "Schedule of Unit Prices" is included at the end of this section.
 - 2. Include as part of each unit price, miscellaneous devices, appurtenances and similar items incidental to or required for a complete system whether or not mentioned as part of the unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

PROJECT MANAGEMENT AND COORDINATION**PART 1 - GENERAL****1.1 SUMMARY**

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Coordination drawings.
 - 2. Requests for Information (RFIs).
 - 3. Project Web site.
 - 4. Project meetings.

1.2 DEFINITIONS

- A. RFI: Request from Owner, Architect, Consultant or Contractor seeking information from each other during construction.

1.3 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisionsto accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractor's construction schedule.
 - 2. Preparation of the schedule of values.
 - 3. Installation and removal of temporary facilities and controls.
 - 4. Delivery and processing of submittals.
 - 5. Progress meetings.
 - 6. Preinstallation conferences.
 - 7. Project Closeout Conference.
 - 8. Startup and adjustment of systems.
 - 9. Project closeout activities.

1.4 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings in accordance with requirements in individual Sections, where installation is not completely shown on Shop Drawings, where limited space

PROJECT MANAGEMENT AND COORDINATION

availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.

1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
 - a. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
 - b. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Coordination Drawing Organization: Organize coordination drawings as follows:

1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing and electrical Work.
2. Plenum Space: Indicate sub-framing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on Drawings.
3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire protection, fire alarm, and electrical equipment.
4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
5. Review: Architect/Consultant will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are the Contractor's responsibility.

1.5 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
 1. Architect/Consultant will return RFIs submitted to Architect/Consultant by other entities controlled by Contractor with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
 1. Project name.
 2. Project number.
 3. Date.
 4. Name of Contractor.
 5. Name of Architect.
 6. RFI number, numbered sequentially.
 7. RFI subject.
 8. Specification Section number and title and related paragraphs, as appropriate.
 9. Drawing number and detail references, as appropriate.
 10. Field dimensions and conditions, as appropriate.
 11. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 12. Contractor's signature.
 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing

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interpretation.

- C. RFI Forms: Software-generated form with substantially the same content as indicated above, acceptable to the District.
- D. Architect's Action: Architect/Consultant will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect/Consultant after 1:00 p.m. will be considered as received the following working day.
 - 1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Architect's actions on submittals.
 - f. Incomplete RFIs or inaccurately prepared RFIs.
 - 2. Architect's/Consultant's action may include a request for additional information, in which case the allotted time for response will date from time of receipt of additional information.
 - 3. Architect's/Consultant's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect/Consultant and Owner's Representative in writing within seven days of receipt of the RFI response.
- E. On receipt of Architect's/Consultant's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect/Consultant and Owner's Representative within seven days if Contractor disagrees with response.
- F. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Use software log that is part of Project Web site (e-Builder).

1.6 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
 - 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner's Representative and Architect/Consultant of scheduled meeting dates and times.
 - 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 - 3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner's Representative and Architect/Consultant, within three days of the meeting.
- B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.
 - 1. Attendees: Authorized representatives of Owner, Owner's Commissioning Authority, Architect and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with

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- Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for RFIs.
 - g. Procedures for testing and inspecting.
 - h. Procedures for processing Applications for Payment.
 - i. Distribution of the Contract Documents.
 - j. Submittal procedures.
 - k. Sustainable design requirements.
 - l. Preparation of record documents.
 - m. Use of the premises and existing building.
 - n. Work restrictions.
 - o. Working hours.
 - p. Owner's occupancy requirements.
 - q. Responsibility for temporary facilities and controls.
 - r. Procedures for moisture and mold control.
 - s. Procedures for disruptions and shutdowns.
 - t. Construction waste management and recycling.
 - u. Parking availability.
 - v. Office, work, and storage areas.
 - w. Equipment deliveries and priorities.
 - x. First aid.
 - y. Security.
 - z. Progress cleaning.
 3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Pre-installation Conferences: Conduct a pre-installation conference at Project site before each construction activity that requires coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect/ Consultant and Owner's Representative of scheduled meeting dates.
 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Review of mockups.
 - i. Possible conflicts.
 - j. Compatibility problems.
 - k. Time schedules.

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- l. Weather limitations.
 - m. Manufacturer's written recommendations.
 - n. Warranty requirements.
 - o. Compatibility of materials.
 - p. Acceptability of substrates.
 - q. Temporary facilities and controls.
 - r. Space and access limitations.
 - s. Regulations of authorities having jurisdiction.
 - t. Testing and inspecting requirements.
 - u. Installation procedures.
 - v. Coordination with other work.
 - w. Required performance results.
 - x. Protection of adjacent work.
 - y. Protection of construction and personnel.
- 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 - 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
 - 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Progress Meetings: Conduct progress meetings at intervals indicated in Owner/Contractor Agreement.
- 1. Attendees: In addition to representatives of Owner, Owner's Commissioning Authority and Architect/ Consultant, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.

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- 9) Progress cleaning.
 - 10) Quality and work standards.
 - 11) Status of correction of deficient items.
 - 12) Field observations.
 - 13) Status of RFIs.
 - 14) Status of proposal requests.
 - 15) Pending changes.
 - 16) Status of Change Orders.
 - 17) Pending claims and disputes.
 - 18) Documentation of information for payment requests.
3. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
 - a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.
- E. Project Closeout Conference: Conduct conference prior to Substantial Completion
1. Attendees: Owner, Architect/ Consultant, Contractor.
 2. Agenda: Procedures for completing and archiving closeout deliverables in-Building;
 - a. Requirements for preparing Record Documents;
 - b. Requirements for preparing O&Ms;
 - c. Submittal of warranties;
 - d. Requirements for delivery of Maintenance stock;
 - e. Requirements for demonstration and training.

PART 2 - PRODUCTS (Not Used)**PART 3 - EXECUTION (Not Used)****END OF SECTION**

PROJECT MANAGEMENT DATABASE (E-BUILDER)**PART 1 - GENERAL****1.1 1.1 SECTION INCLUDES**

- A. Summary.
- B. General Requirements
- C. System Requirements.
- D. System Access.
- E. System Use.

1.2 SUMMARY

- A. Project Management Communications: The Owner, Contractor and Architect shall use the Internet web based project Management communications tool, E-Builder ASP software and protocols included in that software during this project. The use of project management communications as herein described does not replace or change any contractual responsibilities of the participants.
- B. Purpose: The intent of using e-Builder is to improve project work efforts by promoting timely initial communications and responses and to reduce the number of paper documents while providing improved record keeping by creation of electronic documentfiles.

1.3 General Requirements:

- A. Project management communications is available through e-Builder as provided by “e-Builder” in the form and manner required by the Owner.
- B. The project communications database is on-line and fully functional. User registration, electronic and computer equipment,, and internet connections are the responsibility of each project participant. The sharing of user accounts is prohibited.
- C. Support: e-Builder will provide on-going support through on-line help files and with website’s training documents uploaded to the project folder.
- D. Authorized Users: Access to the web site will be by individuals who are licensed users as required by the Owner.
- E. Licenses Granted by Owner’s Representative: Owner shall pay for and provide licenses/access for the following members of the project team.
 - 1. Lead member of Architect’s/Consultant’s design teamresponsible.
 - 2. Contractor’s project manager or lead member of Contractor’s projectstaff.
 - 3. Others as deemed appropriate by Owner’s Representative.

1.4 SYSTEM REQUIREMENTS:

- A. System Configuration:
 - 1. PC system 500 MHz Intel Pentium III or equivalent AMDprocessor.
 - 2. 128 MB Ram.
 - 3. Display capable of SVGA (1024 x 768 pixels) 256 colors display.
 - 4. 101 key keyboard.

PROJECT MANAGEMENT DATABASE (E-BUILDER)

5. Mouse or other pointing device.
- B. Operating System and software configuration:
1. All software shall be properly licensed with vendors or developers. Use of “e-Builder” does not convey any rights or licensure for use of any software, hardware or internet service provider.
 2. Software Configuration:
 - a. Most current version of Microsoft Internet Explorer (current version is a free distribution for download). This specification is not intended to restrict the host server or client computers provided that industry standard HTTP clients ay access the published content.
 - b. Most current version of Adobe Acrobat Reader (Current version is a free distribution for download).
 - c. Other plug-ins specified by e-Builder as applicable to the system (current versions are a free distribution for download from www.e-builder.net).
 - d. Users are recommended to have a properly licensed version of the standard Microsoft Office Suite (current version must be purchased) or theequivalent.
- 1.5 SYSTEM ACCESS
- A. Minimum Equipment and Internet Connection: In addition to other requirements specified in this Section, the Contractor shall be responsible for providing suitable computer systems for each licensed user at the user’s normal work location with high-speed Internet access, i.e. DSL, local cable company’s Internet connection, or T1 connection.
- B. Authorized users will be contacted directly by the web site provider, e-Builder, who will assign the temporary user password.
- C. Individuals shall be responsible for the proper use of their passwords and access to data as agents of the company in which they are employed.
- 1.6 SYSTEM USE
- A. Owner’s Administrative Users: Owner administrative users have access and control of user licenses and all posted items. **DO NOT POST PRIVATE OR YOUR COMPANY’S CONFIDENTIAL ITEMS IN THE DATABASE!**
- B. Improper or abusive language toward any party or repeated posting of items intended to deceive or disrupt the work of the project will not be tolerated and will result in deletion of the offensive items and revocation of user license at the sole discretion of the Administrative User(s). Costs incurred or associated with such issues shall be the financial responsibility of the party responsible for the transgression.
- C. Communications: Communication for this project for the items listed below shall be solely through e-Builder:
1. RFI, Requests for Information.
 2. Change Order Requests.
 3. Architect’s Supplemental Instructions.
 4. All other communication shall be conducted in an industry standard manner.
 5. Submittals, contracts, meeting minutes, and other projectrecords.
 6. Application for payments.
 7. Project closeout.
- D. Document Integrity and Revisions:
1. Documents, comments, drawings and other records posted to the system shall remain for the project record. The authorship time and date shall be recorded for each document submitted to the system. Submitting a new document or record with a unique ID, authorship, and time stamp shall be the method used to make modifications or corrections.

PROJECT MANAGEMENT DATABASE (E-BUILDER)

2. The system shall identify revised or superseded documents and their predecessors.
 3. Server or Client side software enhancements during the life of the project shall not alter or restrict the content of data published by the system. System upgrades shall not affect access to older documents or software.
- E. Document security: The system shall provide a method for communications of documents. Documents shall allow security group assignment to respect the contractual parties communication except for Administrative Users.
- F. Document Integration: Documents of various types shall be logically related to one another and discoverable,.
- G. Notifications and Distribution: Document distribution to project members shall be accomplished both within the extranet system and via email as appropriate. Project document distribution to parties outside of the project communication system shall be accomplished by secure email of outgoing documents and attachments readable by a standard emailclient.
- H. Ownership of Documents and Information: All documents, files or other information posted on the system shall become the property of the Owner.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION

CONSTRUCTION PROGRESS DOCUMENTATION**PART 1 - GENERAL****1.1 CONSTRUCTION PROGRESS DOCUMENTATION**

- A. Progress Schedules and Reports: The Contractor, within ten calendar days after being awarded the Contract, shall prepare and submit for the information of the Owner's Representative and the Architect/Consultant a Progress Schedule in critical path management ("CPM") format satisfactory to the Owner's Representative for the Work. The Progress Schedule shall conform to any requirements of the Specifications, shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, shall provide for expeditious and practicable execution of the Work and shall be utilized and conformed to by the Contractor and its Subcontractors. Contractor shall comply with the Progress Schedule. The Progress schedule is for the District's benefit, and to the full extent permitted by law, changes to or variations from the Progress Schedule shall not entitle the Contractor to an extension of the Contract Time or increase of Contract Sum.
- B. Meeting Minutes: Contractor shall be responsible for the preparation and distribution of meeting minutes.

END OF SECTION

SUBMITTAL PROCEDURES**PART 1 - GENERAL****1.1 SUMMARY**

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

1.2 QUALITY CONTROL

- A. Submit 3-week work schedule, shop drawings, product data, samples, schedule of values and record documents as follows:
 - 1. Submit to Architect/Consultant and Owner's Representative only through General Contractor.
 - 2. The General Contractor shall provide a set of submittals to the Owner's Representative for review and approval concurrent with review by the Architect and Consultant(s).

1.3 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's/ Consultant's Digital Data Files: Electronic copies of CAD Drawings of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals.
 - 1. Architect/Consultant will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings.
 - a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
 - b. Digital data files are provided for Contractor's convenience and to help expedite the submittal preparation process. Use of the digital data files is at Contractor's risk and does not release the Contractor from verifying and indicating as-built conditions which may or may not be indicated in the digital data files.
 - c. Contractor shall execute a release of Architect's/Consultant's liability for Contractor's use of the digital data files. Release form shall be provided by Architect/Consultant.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect and Consultant reserve the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect/Consultant's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 - 1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect/Consultant or Owner's Representative will advise Contractor when a submittal being processed must be delayed for coordination.
 - 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 - 3. Resubmittal Review: Allow 5 days for review of each resubmittal.

SUBMITTAL PROCEDURES

- D. Identification and Information: Place a permanent label or title block on each paper copy submittal item for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 6 by 8 inches (150 by 200 mm) on label or beside title block to record Contractor's review and approval markings and action taken by Architect/Consultant.
 3. Include the following information for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Construction Manager.
 - e. Name of Contractor.
 - f. Name of subcontractor.
 - g. Name of supplier.
 - h. Name of manufacturer.
 - i. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).
 - j. Number and title of appropriate Specification Section.
 - k. Drawing number and detail references, as appropriate.
 - l. Location(s) where product is to be installed, as appropriate.
 - m. Other necessary identification.
- E. Identification and Information: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.
 - a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).
 3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect/Consultant.
 4. Include the following information on an inserted cover sheet:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name of Construction Manager.
 - e. Name of Contractor.
 - f. Name of firm or entity that prepared submittal.
 - g. Name of subcontractor.
 - h. Name of supplier.
 - i. Name of manufacturer.
 - j. Number and title of appropriate Specification Section.
 - k. Drawing number and detail references, as appropriate.

SUBMITTAL PROCEDURES

- l. Location(s) where product is to be installed, as appropriate.
 - m. Related physical samples submitted directly.
 - n. Other necessary identification.
- F. Options: Identify options requiring selection by the Architect.
- G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked with approval notation from Architect's/ Consultant's action stamp.
- H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- I. Use for Construction: Use only final submittals that are marked with approval notation from Architect's or Consultant's action stamp.

PART 2 - PRODUCTS**2.1 SUBMITTAL PROCEDURES**

- A. General Submittal Procedure Requirements:
1. Post electronic submittals as PDF electronic files directly to e-Builder.
 - a. Architect/Consultant will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
 2. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures." All closeout submittals to be uploaded to e-Builder in format acceptable to the District.
 3. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - a. Provide a digital signature with digital certificate on electronically-submitted certificates and certifications where indicated.
 - b. Provide a notarized statement on original paper copy certificates and certifications where indicated.
 4. Test and Inspection Reports Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements."
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.

SUBMITTAL PROCEDURES

3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before or concurrent with Samples.
 6. Submit Product Data in the following format:
 - a. PDF electronic file.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data without field-verifying as-built conditions which may or may not be indicated at part of the released digital data files.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 2. Submit Shop Drawings in the following format:
 - a. PDF electronic file.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.

SUBMITTAL PROCEDURES

- d. Number and title of applicable Specification Section.
- 3. Disposition: Maintain sets of approved Samples at Project site, available for quality- control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
- 4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect/ Consultant will return submittal with options selected.
- 5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Architect/Consultant will retain two Sample sets; remainder will be returned.
 - 1) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 - 1. Submit product schedule in the following format:
 - a. PDF electronic file.
- F. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- G. Application for Payment: Comply with requirements specified in Division 01 Section "Payment Procedures."
- H. Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
- I. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design.
 - 1. Submit subcontract list in the following format:

SUBMITTAL PROCEDURES

- a. PDF electronic file.
- J. Coordination Drawings: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- K. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- L. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on American Welding Society (AWS) forms. Include names of firms and personnel certified.
- M. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- N. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- O. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- P. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- Q. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- R. Product Test Reports: Submit written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- S. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.
- T. Schedule of Tests and Inspections: Comply with requirements specified in Division 01 Section "Quality Requirements."
- U. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- V. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- W. Field Test Reports: Submit reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

SUBMITTAL PROCEDURES

- X. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."
- Y. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

PART 3 - EXECUTION**3.1 CONTRACTOR'S REVIEW**

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect/Consultant and Owner's Representative.
- B. Project Closeout and Maintenance/Material Submittals: Refer to requirements in Division 01 Section "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S/ CONSULTANT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect/ Consultant will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect or Consultant will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
- C. Incomplete submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- D. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION

SECURITY PROCEDURES**PART 1 - GENERAL****1.1 CONSTRUCTION/ MAINTENANCE BUILDING SECURITY RULES**

- A. The Contractor shall enforce strict discipline and good order among the Contractor's employees, Subcontractors, and other persons carrying out the contract on District property. The District may require that the Contractor immediately remove from the project site and District property any employee or other person carrying out the contract that the District considers objectionable.
- B. District Personnel (i.e., Building Administrator, Custodian, or a building monitor etc.) must be present when a contractor is performing work within an existing school facility.
- C. Only District Personnel will deactivate the security system upon arriving and reactivate the system when they leave the facility.
 1. If the responsible District Personnel for a particular day changes during the day, the District Personnel shall coordinate this change in responsibility and advise the contractor's superintendent.
- D. Contractor personnel will not be furnished District security badges and/or access codes to the Building security system.
- E. The Contractor shall have a responsible party such as a superintendent, foreman, or supervisor on site during any work being performed by either their own forces or that of their subcontractors.
- F. The superintendent shall check in with the responsible District Personnel upon arrival and advise when all work is complete, contract personnel have left, and the area is secure.
- G. The Contractor's superintendent shall be responsible for security in areas where work is being performed as well as ingress and egress to that area.
- H. At the Owner's Representative's discretion, the superintendent may be issued a building key to allow access to areas where work is being performed.
- I. The superintendent shall maintain a daily log defining what areas within the building were accessed by Contractor personnel, which personnel from their firm were in the building, and which subcontracting firms were in the building.,
- J. Each of the Contractor's employees, Subcontractors' employees, and principals/owners involved at the site may, at the option of the District, be subject to a security check, at any time, through the Beaverton Police Department or other authority.
- K. Contractor shall perform or have performed criminal background checks for every employee on all active campus (i.e., children are present) projects prior to that employee's admittance to the project site. Once an employee passes the criminal background check they will receive an ID badge and a hard hat sticker which they must wear while they are on site at all times. Contractor may be fined up to \$500 for every worker working on site without the proper ID badge and a hat sticker. The following are the convicted crimes that may appear on the background check:
 - Aggravated Murder of Murder
 - Assault in the First Degree
 - Kidnapping in the First Degree
 - Rape in the First, Second, or Third Degree
 - Sodomy in the First, Second, or Third Degree
 - Unlawful Sex Penetration in the First or Second Degree
 - Arson in the First Degree

SECURITY PROCEDURES

- Sexual Abuse in the First, Second, or Third Degree
 - Contributing to the Sexual Delinquency of a Minor
 - Sexual Misconduct
 - Public Misconduct
 - Public Indecency
 - Bigamy
 - Incest
 - Child Neglect in the First Degree
 - Endangering the Welfare of a Minor
 - Using Child in Display of Sexually Explicit Conduct
 - Sale or Exhibition of Visual Reproduction of Sexual Conduct by a Child
 - Paying for Viewing of Sexual Conduct Involving a Child
 - Encouraging Child Sex Abuse in First, Second or Third Degree
 - Possession of Materials Depicting Sexual Explicit Conduct of a Child in the First or Second Degree
 - Arson in the First Degree
 - Robbery in the First Degree
 - Treason
 - Abuse of a Corpse in the First Degree
 - Prostitution, Promoting Prostitution, or Compelling Prostitution
 - Sadomasochistic Abuse or Sexual Conduct in a Live Show
 - Furnishing, Sending, or Displaying Obscene Materials to Minors
 - Exhibiting an Obscene Performance to a Minor
 - Disseminating Obscene Materials
 - Publicly Displaying Nudity or Sex for Advertising Purposes
 - Distribution of Controlled Substance to Minors
 - Manufacture or Delivery of Controlled Substance to Minor or Student within 1000 Feet of a School
 - Attempt to Commit Any of the Above-Listed Crimes
- L. Smoking and any use of tobacco products is not allowed within 50 feet of the campus property. Contractor may be fined up to \$500 for each incident of tobacco use within the area of work by the Contractor or Subcontractors.
- M. Firearms are not allowed on campus property. Law enforcement will be contacted if any contractor personnel are in possession of a firearm on site (Including firearms located in a locked vehicle).
- N. Abusive, inappropriate, and/or foul language is strictly prohibited on active campus projects. Employees who abuse this rule will be asked to leave the projectsite.

PART 2 - PRODUCTS (Not Used)**PART 3 - EXECUTION (Not Used)****END OF SECTION**

BASIC HVAC REQUIREMENTS**PART 1 - GENERAL****1.1 OTHER REQUIREMENTS**

- A. The Bidding, General and Supplementary of this project manual and specific section as noted apply to the work specified in Mechanical Division 23 which encompasses Sections 23 00 00 through 23 36 00. This Section 23 00 00 applies to all sections of Mechanical Division 23.

1.2 SCOPE

- A. It is the intent of these specifications and the accompanying drawings to describe complete mechanical systems installations for all building areas, new and renovation.
- B. Furnish and install all material, labor and equipment in accordance with these documents.
- C. Include all incidental items and work not specifically shown or specified but required by good practice in a complete system.
- D. The drawings and specifications are complementary. What is called for in one shall be called for in both.
- E. The drawings are diagrammatic but should be followed as closely as possible. Where required by jobsite conditions, relocate and provide fittings, etc., as required. Provide an allowance in the contract bid to furnish additional pipe and ductwork fittings required for coordination with structure and other construction trades.
- F. Prepare and submit a utility coordination plan noting any disruptions of existing building services for approval by the school district, attaching any sketches, drawing excerpts, or step-by-step sequences / schedules required to fully-explain the proposed activities. Submit the coordination plan 2 weeks in advance of the planned activities.
- G. Immediately notify the school district representative if existing mechanical elements are damaged or have been inadvertently damaged during the course of construction.
- H. Coordinate cost accounting for the items identified in the plans and specifications as SB 1149 EEM measures. Provide separate discrete costs for all labor and materials associated with the installation of those items and appurtenances required for the proper operation as contained within the contract documents.
1. EEM #3 – Install VFD's on selected air handling systems in B-Wing and C-Wing: All labor and materials, including electrical wiring, DDC controls and systems programming directly required for the replacement of existing motors with VFD compliant, high efficiency motors and the addition of variable frequency drives (VFD's).
 - Supply air fans SF-1, SF-2 and SF-4.
 - Return fan RF-1.
 2. EEM #4 – Replacement of existing pneumatic controls with direct digital controls (DDC) in A-Wing, B-Wing and C-Wing. All labor and materials required for the demolition of existing pneumatic controls and installation of new DDC controls including hardware, software, programming and training.
 3. EEM #5 – Install VFD's on air handling systems ASU-1 and ASU-2 and upgrade system components, including rooftop heat pumps with DDC controls: All labor and materials, including electrical wiring, DDC controls and systems programming directly required for the installation of DDC controls and replacement of existing motors with VFD compliant, high efficiency motors and the addition of variable frequency drives (VFD's).

BASIC HVAC REQUIREMENTS**1.3 DEFINITIONS**

- A. Project Manager: The individual(s) designated by Beaverton School District as their authorized representative(s) for the project coordination, construction and closeout phases.
- B. Or approved equal: Requires approval prior to bid date.
- C. Indicated:
1. The term "indicated" is a cross reference to details, notes, or schedules on the drawings, other paragraphs or schedules in the specifications, and similar means of recording requirements in the Contract Documents.
 2. Where terms such as "shown," "noted," "scheduled," and "specified" are used instead of "indicated," it is for the purpose of helping the reader locate the cross reference, and no limitation of location is intended except as specifically noted.
- D. Directed, Requested, Etc.: Where not otherwise explained, terms such as "directed," "requested," "authorized," "selected," "approved," "required," "accepted," and "permitted" mean "directed by the Engineer," "requested by the Engineer," etc. However, no such implied meaning will be interpreted to extend the Engineer's responsibility into the Contractor's area of construction supervision.
- E. Site or Project Site: The space available to the Contractor for the performance of the work, either exclusively or in conjunction with others performing the work as part of the project. The extent of the project site is shown on the project drawings and is not identical with the description of the land upon which the project is to be built.
- F. Approved:
1. Where used in conjunction with the Project Manager's response to submittals, requests, applications, inquiries, reports and claims by the Contractor, the meaning of the term "approved" will be held to the limitations of the Project Manager's responsibilities and duties as specified in the General and Supplementary Conditions.
 2. In no case will "approval" by the Project Manager be interpreted as a release of the Contractor from responsibilities to fulfill requirements of the Contract Documents.
- G. Provide: The term "provide" means to furnish and install, complete and ready for the intended use.

1.4 STANDARDS AND CODES

- A. Provide all equipment and material and perform all work in accordance with all local, state and national codes and regulations.
- B. For work on this project, comply with the latest edition of the appropriate standards published by the following:
- | | | |
|-----|---|--------|
| 1. | Air Diffusion Council | ADC |
| 2. | American Gas Association | AGA |
| 3. | Air Movement and Control Association | AMCA |
| 4. | American National Standards Institute | ANSI |
| 5. | Air-Conditioning and Refrigeration Institute | ARI |
| 6. | Acoustical Society of America | ASA |
| 7. | American Society of Heating, Refrigerating and Air-Conditioning | ASHRAE |
| 8. | American Society of Mechanical Engineers | ASME |
| 9. | American Society for Testing and Materials | ASTM |
| 10. | Washington County, Oregon. | |

BASIC HVAC REQUIREMENTS

11.	National Environmental Balancing Bureau	NEBB
12.	National Electrical Manufacturers Association	NEMA
13.	National Fire Protection Association	NFPA
14.	Sheet Metal and Air Conditioning Contractors' National Association	SMACNA
15.	Underwriters' Laboratories	UL
16.	Oregon Structural Specialty Code	OSSC
17.	Oregon Mechanical Specialty Code	OMSC
18.	Oregon Plumbing Specialty Code	OPSC
19.	Oregon Energy Efficiency Specialty Code	OEESC

1.5 APPROVAL OF EQUIPMENT AND MATERIALS

- A. Manufacturer's trade names, catalog numbers and material specifications used in this specification are intended to establish the quality of equipment or materials expected. Materials and manufacturers not listed require approval prior to the bid date.
- B. Approval of substitute equipment or materials will be based upon performance, quality and other factors deemed important by the Project Manager. The Contractor will be responsible for making all changes in this and other associated work required as a result of the substitution. Additional or modified structural calculations and roof penetrations required to accommodate the substitution will be the responsibility of the contractor.

1.6 SUBMITTALS

- A. Submit a digital copy of the submittals to the Project Manager for review
- B. Furnish performance data and technical information on all materials and equipment to be used on the project.
- C. Include shop drawings with the submittals where necessary to determine clearance, where the Contractor proposes alternate equipment or material arrangements, and when requested by the Project Manager.
- D. Review of submittals or shop drawings by the Project Manager does not relieve the Contractor from the requirements of the Contract Documents unless specific approval has been requested for a given deviation.

1.7 QUALITY ASSURANCE

- A. Maintain the highest standards of workmanship throughout the project.
- B. Use the latest editions of applicable and specifically referenced standards.
- C. Inspect all material and equipment upon arrival at the site and return any which is not in new condition.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION**3.1 COORDINATION**

- A. Cooperate with other trades to assure that construction proceeds in an orderly and timely manner. Contract cost increases due to improperly sequenced work with other trades will not be allowed.
- B. Study the architectural, structural, electrical, shop and any specialty drawings as appropriate and specifications to determine required coordination.

BASIC HVAC REQUIREMENTS

- C. Prepare detailed shop drawings where necessary to assure proper fit and necessary clearance.
- D. Refer to electrical drawings to verify voltage and phase of mechanical equipment.

3.2 PERMITS, FEES AND INSPECTIONS

- A. Obtain all required permits and pay for all fees and connection charges.
- B. Schedule any required inspections.

3.3 MATERIALS AND WORKMANSHIP

- A. Furnish all materials and equipment in new condition, free from defects and of size, make, type and quality specified. Installation shall be in a neat and workmanlike manner.
- B. When two or more items of the same kind, type or class are required, use items of a single manufacturer.

3.4 MEASUREMENTS

- A. Take all measurements from reference datums established by the mechanical contractor.

3.5 DELIVERY, HANDLING AND STORAGE

- A. Receive all material and equipment at the jobsite or shop.
- B. Use proper and sufficient equipment to handle all products employed in the project.
- C. Where storage of material or equipment is necessary, it shall be a clean and weatherproof area. Seal any openings and cover the product to assure that there will be no corrosion or foreign matter introduced. Assure that it will be in new condition when placed in service.

3.6 EQUIPMENT INSTALLATION, BRACING AND SUPPORT

- A. All serviceable equipment must be accessible without obstruction or removal of piping or accessories.
- B. Install all equipment in strict accordance with the manufacturer's instructions unless otherwise indicated.
- C. The drawings in general are based upon one of the specific manufacturers listed for a particular equipment item. The other specified manufacturers and additional approved manufacturers of equipment may require deviations from the drawings to properly install the particular equipment in accordance with the manufacturer's recommendations and to provide the system results required. Provide all work necessary in the base bid price to install this equipment.
- D. Where the installation shown or specified is contrary to the manufacturer's instructions, advise the Project Manager in writing of the differences before proceeding with the installation.
- E. Anchorage to Floors, Roofs, Etc., Sway Bracing and Seismic Restraints:
 - 1. The contractor is responsible to determine the means and methods of equipment installation and support.
 - 2. Provide supports for all apparatus as specified, detailed, as required by the manufacturers of specific equipment and the project governing code authorities. Anchor all roof and base/floor mounted equipment with size and spacing of anchor bolts or other attachment means as recommended by the respective equipment manufacturer.
 - 3. Provide seismic restraints on all mechanical equipment in conformance with applicable OSSC sections. Costs for seismic calculations are to be included in the bid price.

BASIC HVAC REQUIREMENTS

4. Provide deferred submittals directly to the governing code jurisdiction for anchorage to floors, roofs, etc., sway bracing and seismic restraints. Submittals to show locations and sufficient support details as required by the governing code jurisdiction.
5. Provide supplementary drawings and calculations as required by governing code jurisdictions noting seismic support data/calculations as required for permit purposes.
6. Mechanical seismic criteria is as follows:

a. Occupancy Classification	III
b. Seismic Design Category	D
c. Component Importance Factor (Ip)	
1) General building HVAC systems	1.5
- F. Maintain a copy of the manufacturer's installation instructions at the jobsite for all equipment.

3.7 SLEEVES AND INSERTS

- A. Provide sleeves at all locations where piping and ductwork passes through building construction.
 1. Sleeves for interior walls and floors shall be 22 gauge galvanized or heavier as required.
 2. Sleeves for exterior walls shall be cast iron, wall thickness as required.
 3. Wall sleeves shall be installed in all exterior walls and all interior masonry or fire-rated walls in a manner that preserves the fire-rated or watertight integrity of the wall.
 4. Interior wall sleeves for uninsulated pipe shall allow minimum 1/4-inch clearance all around pipe for pipe movement. Allow 1-inch clearance around pipe at building expansion joints.
 5. Interior wall sleeves for insulated piping shall be selected to encompass the pipe and insulation and allow minimum 1/4-inch clearance around insulation for pipe movement. Allow 1-inch clearance around pipe and insulation at building expansion joints.
- B. Seal space between pipe and sleeve with Dow Corning Fire Stop System, 3M Brand CP25 or approved equal where piping penetrates firewall or floors. Sealant must be between pipe and sleeve; sealant between insulation and sleeve is not acceptable. Install firestop materials in complete accordance with the manufacturer's instructions and in compliance to applicable UL listings.

3.8 ACCESS DOORS AND PANELS

- A. Manufacturers: CESCO, Milcor, Elmdor. CESCO used as basis of selection.
- B. Non-rated panels: Style W, SR-1, SR-2, P, PX as required for wall or ceiling construction, 12 inch x 12 inch or larger as required for ease of access.
- C. Fire-rated panels: Style FB, U.L. listed for 1-1/2 hr for fire rated stud and masonry wall systems.
- D. Provide access panels where shown on the drawings or as required for proper access to mechanical appurtenances. Coordinate the installation of access panels is with the specific building construction penetrated. Coordinate access panel installation with manufacturer's instructions.
- E. Locate and size access doors to facilitate equipment service and optimize the safety of the maintenance personnel. Minimum access door size to be 18"x 18".

3.9 PROTECTION

- A. Protect all work, material and equipment from loss or damage until the Owner accepts the project.
- B. As the work progresses, keep all equipment covered and cap all ducts and piping that may temporarily be left unconnected.
- C. Notify all other trades of any required precautions necessary to protect the work.

BASIC HVAC REQUIREMENTS**3.10 ACCESSIBILITY**

- A. Provide convenient access by location or access panel to all equipment requiring periodic service.

3.11 ELECTRICAL WORK

- A. See Paragraph 3.20 for materials and work to be provided as a part of this Mechanical Division 23:
- B. Wherever possible, provide all interconnect wiring within or on a piece of equipment with the equipment unless shown or specified otherwise. An electrician licensed to perform this type of work shall perform all field wiring.

3.12 RELATED WORK

- A. The following work and materials are specified elsewhere:
 - 1. Pipe chases, equipment pads and foundations, trenches, painting, air louvers, louvered penthouse and access panels except as otherwise specified in this division.
 - 2. Framed openings, wood grounds and nailing strips, masonry, concrete and other architectural and structural elements.

3.13 CLEANING

- A. Maintain premises and public properties free from accumulations of waste, debris and rubbish during construction.
- B. Clean all mechanical equipment of dust, grease, iron cuttings, unnecessary stamps or shipping labels, etc.
- C. Touch up factory-painted surfaces, as necessary, with paint of matching color.

3.14 RECORD DRAWINGS

- A. Maintain one set of construction drawings at the jobsite for the sole purpose of recording work of the mechanical contract, as actually installed. Upon request, the Project Manager will make the original tracings available to the mechanical contractor for printing the drawings. The Contractor shall pay the reproduction costs.
- B. Deliver record drawings to the Project Manager promptly upon completion of the project.

3.15 OPERATION AND MAINTENANCE MANUALS:

- A. Submit a digital copy of the Operation and Maintenance Manuals to the Project Manager for approval before project completion. Include an index and tabs for major systems and equipment. Operation and Maintenance Manuals shall include the following:
- B. Directories:
 - 1. Supplier Directory: Alphabetical list of principal subcontractors and suppliers of equipment giving names, addresses and telephone numbers.
 - 2. Equipment Directory: List of equipment installed such as fans, air supply units, pumps, heating and cooling equipment, plumbing fixtures, etc., giving drawing reference numbers, location, area served, manufacturer with model number and supplier.
- C. Manufacturer's Literature:
 - 1. Show name, address and phone number of the nearest service facility authorized by the manufacturer.

BASIC HVAC REQUIREMENTS

2. Include illustrations, diagrams, and instructions for installation, startup, operation, inspections, maintenance, parts list, data sheets and other necessary materials.
3. Include complete electrical, schematic and connection diagrams for each equipment item.
4. Include the name, address and phone number of contractor(s) who furnished and who installed equipment and systems.
5. Where the literature covers more than one model, check off neatly in ink correct model number and data for the model number including all specified options.
6. In those instances where the equipment, its mode of control, or both, is job assembled for special functions, then provide written operating and maintenance instructions prepared by the assembler on 8-1/2" x 11" sheets.

D Maintenance Instructions:

1. Where instructions for maintenance are not included in the manufacturer's literature, provide supplemental data to enable proper maintenance of the equipment installed.
2. Include specific lubrication methods and recommended frequencies along with procedures and precautions for inspection and routine service.

E Copy of Written Guarantee.**F. Recommended Spare Parts Stock.****3.16 HVAC SYSTEMS TRAINING**

- A. Training must be on fully operational system, or the training must be repeated when the system is fully operational at no additional cost to the Owner. Training must be scheduled through the Beaverton School District representative at a time that is convenient to district personnel. The Beaverton School District representative must be notified of any changes, re-scheduling or modifications to the training schedule.
1. Provide a written agenda to the attendees outlining the general scope of the training session and the building equipment involved. Submit the written training outline to the district representative prior to the training date.
 2. Maintain a start-up log notebook in the job trailer containing signed copies of the manufacturer's start-up sheets for all equipment.
 3. Training walk-throughs to be performed by a contractor field project manager or technician who is fully knowledgeable with the project specifics and has had continuous involvement during the course of the project. The individual is to be knowledgeable in the specific installation details and maintenance of the project equipment.
 4. All training to be video recorded and provided to Owner.
- B. Maintenance Training: Maintenance training will take place within 30 days after substantial completion. This session to include a detailed review of the HVAC system record drawings and equipment installation instructions. The instructor shall then walk through the building identifying the location of the equipment installed and specific function(s) related to the overall mechanical systems. The training shall include answering maintenance personnel questions, troubleshooting and diagnostics procedures, repair instructions and preventive maintenance. This training will include all maintenance staff per the Beaverton School District.

3.17 CUTTING AND PATCHING

- A. Cut work as required for installation and patch to match original conditions as directed and approved by Project Manager. Do not cut structural portion without Project Manager's approval.
- B. When masonry construction must be penetrated, provide a steel pipe sleeve in opening and grout in place in a neat manner. Leave grout surface to match existing finish.

BASIC HVAC REQUIREMENTS

- C. Prior to cutting any existing work, locate all concealed utilities to eliminate any possible service interruption or damage.
- D. Firestopping penetrations in fire-rated wall/floor assemblies.
 - 1. Contractors shall provide proper sizing when providing sleeves or core-drilled holes to accommodate the through penetrating items.
 - 2. All voids between sleeve or core-drilled hole and pipe passing through, shall be firestopped to meet the requirements of ASTM E-814 (Standard Test Method for Fire Tests of Penetration Firestop Systems).
 - 3. Fire stop penetration systems to be installed in accordance with the U.L. listed assemblies provided by the manufacturers of the products used.

3.18 CHANGE ORDERS

- A. All supplemental cost proposals by the Contractor shall be accompanied with a complete itemized breakdown of labor and materials cost without exception.
- B. Contractor's estimating sheets for the supplemental cost proposals shall be made available to the Project Manager. Labor must be separated and allocated for each item of work.

3.19 VERIFICATION OF EXISTING CONDITIONS

- A. Verify field conditions and measurements prior to the manufacture of shop fabricated materials and equipment.
- B. Produce shop drawings with details as required verifying proper installation of materials & equipment in conformance with applicable codes and the manufacturer's requirements.

3.20 SYSTEMS WIRING AND RELATED DEVICES

	FURNISHED ITEM	BY	INSTALL BY	POWER WIRING	CONTROL WIRING
1.	Division 23 Equipment Motors	Div. 23	Div. 23	Div. 26	Div. 23
2.	Remote Motors Starters, Contactors and Overload Heaters – Integral	Div. 23	Div. 26	Div. 26	Div. 23
3.	Fused & Unfused Disconnect Switches	Div. 26	Div. 26	Div. 26	-----
4.	Manual Operation Switches	Div. 26	Div. 26	Div. 26	Div. 26
5.	DDC Controls, Relays and Sensors	Div. 23	Div. 23	Div. 23	Div. 23

BASIC HVAC REQUIREMENTS

	FURNISHED ITEM	BY	INSTALL BY	POWER WIRING	CONTROL WIRING
6.	Smoke Duct Detectors	Div. 28	Div. 23	Div. 26	Div. 28

3.21 COMMISSIONING

- A. The equipment and systems referenced in this section are to be commissioned.
- B. The contractor has specific responsibilities for scheduling, coordination, startup, test development, testing and documentation. Coordinate all commissioning activities with the Commissioning Authority.

END OF SECTION

MOTOR REQUIREMENTS FOR HVAC EQUIPMENT**PART 1 - GENERAL****1.1 SUMMARY**

- A. Work included: Providing VFD compliant high efficiency motors and variable frequency drives (VFD's) as specified.

1.2 SUBMITTALS

- A. Provide submittals in accordance with Section 23 00 00.
- B. Submittals shall include manufacturer's catalog or technical data substantiating performance required.

1.3 OPERATION AND MAINTENANCE DATA

- A. Provide O&M data in accordance with Section 23 00 00.
- B. O&M data shall include:
 - 1. Manufacturer's literature.
 - 2. Maintenance instructions.

PART 2 - PRODUCTS**2.1 MANUFACTURERS**

- A. Motors: Premium efficiency, VFD compliant – Verify motor compatibility with specified VFD's prior to submittal.
- B. Variable Frequency Drives: ABB AHC Series or owner approved equal.

2.2 DESCRIPTION

- A. Motor Starters
 - 1. Premium efficiency.
 - 2. VFD compliant.
- B. Variable Frequency Drives
 - 1. The VFD package as specified herein shall be enclosed in a UL Listed Type 12 enclosure, completely assembled and tested by the manufacturer in an ISO9001 facility. The VFD tolerated voltage window shall allow the VFD to operate from a line of +30% nominal, and -35% nominal voltage as a minimum. UL Type 12 means the enclosure has been tested by UL Standards, not NEMA.
 - 2. All VFD's shall have the following standard features:
 - a. The VFD shall have integral 5% impedance line reactors to reduce the harmonics to the power line and to add protection from AC line transients. The 5% impedance may be from dual (positive and negative DC bus) reactors, or 5% AC line reactors. VFD's with only one DC reactor shall add AC line reactors. This increased impedance lower harmonic distortion (Vthd) meeting IEEE-519 guidelines.
 - b. The VFD shall include a coordinated AC transient protection system consisting of 4-120 joule rated MOV's (phase to phase and phase to ground), a capacitor clamp, and 5% impedance reactors. MOV's protects against transients that would trip a VFD off line or cause serious damage.

MOTOR REQUIREMENTS FOR HVAC EQUIPMENT

3. All VFD's to have the following adjustments: Two (2) PID Setpoint controllers shall be standard in the drive, allowing pressure or flow signals to be connected to the VFD, using the microprocessor in the VFD for the closed loop control. The VFD shall have 250 ma of 24 VDC auxiliary power and be capable of loop powering a transmitter supplied by others. The PID setpoint shall be adjustable from the VFD keypad, analog inputs, or over the communications bus. There shall be two parameter sets for the first PID that allow the sets to be switched via a digital input, serial communications or from the keypad for night setback, summer/winter setpoints, etc. There shall be an independent, second PID loop that can utilize the second analog input and modulate one of the analog outputs to maintain setpoint of an independent process (i.e. valves, dampers, etc.). All setpoints, process variables, etc. to be accessible from the serial communication network. The setpoints shall be set in Engineering units and not require a percentage of the transducer input. Allows complete control of a system or process.
4. The VFD shall include a fireman's override input. Upon receipt of a contact closure from the fireman's control station, the VFD shall operate at an adjustable preset speed. The mode shall override all other inputs (analog/digital, serial communication, and all keypad commands) and force the motor to run at the adjustable, preset speed. "Override Mode" shall be displayed on the keypad. Upon removal of the override signal, the VFD shall resume normal operation.
5. Serial Communications
 - a. The VFD shall have an RS-485 port as standard. The standard protocols shall be Modbus, Johnson Controls N2 bus, and Siemens Building Technologies FLN. Optional protocols for LonWorks, BACnet, Profibus, Ethernet, and DeviceNet shall be available. Each individual drive shall have the protocol in the base VFD. The use of third party gateways and multiplexers is not acceptable. All protocols shall be "certified" by the governing authority. Use of non-certified protocols is not allowed. If a gateway must be used, each drive must have its own gateway in order to prevent the entire drive system from dropping off line.
 - b. Serial communication capabilities shall include, but not be limited to; run-stop control, speed set adjustment, proportional/integral/derivative PID control adjustments, current limit, accel/decel time adjustments, and lock and unlock the keypad. The drive shall have the capability of allowing the DDC to monitor feedback such as process variable feedback, output speed / frequency, current (in amps), % torque, power (kW), kilowatt hours (resettable), operating hours (resettable), and drive temperature. The DDC shall also be capable of monitoring the VFD relay output status, digital input status, and all analog input and analog output values. All diagnostic warning and fault information shall be transmitted over the serial communications bus. Remote VFD fault reset shall be possible. The following additional status indications and settings shall be transmitted over the serial communications bus – keypad "Hand" or "Auto" selected, bypass selected, the ability to change the PID setpoint, and the ability to force the unit to bypass (if bypass is specified). The DDC system shall also be able to monitor if the motor is running in the VFD mode or bypass mode (if bypass is specified) over serial communications. A minimum of 15 field parameters shall be capable of being monitored.
 - c. The VFD shall allow the DDC to control the drive's digital and analog outputs via the serial interface. This control shall be independent of any VFD function. For example, the analog outputs may be used for modulating chilled water valves or cooling tower bypass valves. The drive's digital (relay) outputs may be used to actuate a damper, open a valve or control any other device that requires a maintained contact for operation. In addition, all of the drive's digital and analog inputs shall be capable of being monitored by the DDC system.

MOTOR REQUIREMENTS FOR HVAC EQUIPMENT

- d. The VFD shall include an independent PID loop for customer use. The independent PID loop may be used for cooling tower bypass value control, chilled water value control, etc. Both the VFD control PID loop and the independent PID loop shall continue functioning even if the serial communications connection is lost. The VFD shall keep the last good set-point command and last good DO & AO commands in memory in the event the serial communications connection is lost.
- 6. EMI / RFI filters. All VFD's shall include EMI/RFI filters. The onboard filters shall allow the VFD assembly to be CE Marked and the VFD shall meet product standard EN 61800-3 for the First Environment restricted level. Complies with 1st Environment and exceeds FCC guidelines with motor cables less than 100 feet (30 meters)
- 7. All VFD's through 50HP shall be protected from input and output power mis-wiring. The VFD shall sense this condition and display an alarm on the keypad. Prevents damage to the VFD when the electrical contractor wires the input power to motor terminals.
- 8. OPTIONAL FEATURES – Optional features to be furnished and mounted by the drive manufacturer. All optional features shall be UL Listed by the drive manufacturer as a complete assembly and carry a UL508 label.
 - a. Door interlocked, padlockable circuit breaker that will disconnect all input power from the drive and all internally mounted options.
 - b. Fused VFD only disconnect (service switch). Fast acting fuses exclusive to the VFD – fast acting fuses allow the VFD to disconnect from the line prior to clearing upstream branch circuit protection, maintaining bypass capability. Bypass designs, which have no such fuses, or that incorporate fuses common to both the VFD and the bypass will not be accepted. Three contactor bypass schemes are not acceptable.
 - c. The drive / bypass shall provide single-phase motor protection in both the VFD and bypass modes.
 - d. The following operators shall be provided:
 - 1) Bypass Hand-Off-Auto
 - 2) Drive mode selector
 - 3) Bypass mode selector
 - 4) Bypass fault reset
 - e. The following indicating lights (LED type) shall be provided. A test mode or push to test feature shall be provided.
 - 1) Power-on (Ready)
 - 2) Run enable (safeties) open
 - 3) Drive mode select damper opening
 - 4) Bypass mode selected
 - 5) Drive running
 - 6) Bypass running
 - 7) Drive fault and bypass fault
 - 8) Bypass H-O-A mode
 - 9) Automatic transfer to bypass selected
 - 10) Safety open
 - 11) Damper opening
 - 12) Damper end-switch made
 - f. The following relay (form C) outputs from the bypass shall be provided:
 - 1) System started
 - 2) System running
 - 3) Bypass override enabled
 - 4) Drive fault
 - 5) Bypass fault (motor overload or underload (broken belt))
 - 6) Bypass H-O-A position
 - g. The digital inputs for the system shall accept 24V or 115VAC (selectable). The bypass shall incorporate internally sourced power supply and not require an external control power source.

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- h. Customer Interlock Terminal Strip – provide a separate terminal strip for connection of freeze, fire, smoke contacts, and external start command. All external safety interlocks shall remain fully functional whether the system is in Hand, Auto, or Bypass modes (not functional in Fireman's Override 2). The remote start/stop contact shall operate in VFD and bypass modes.
- i. Dedicated digital input that will transfer motor from VFD mode to bypass mode upon dry contact closure for fireman's override. Two modes of operation are required.
 - 1) One mode forces the motor to bypass operation and overrides both the VFD and bypass H-O-A switches and forces the motor to operate across the line (test mode). The system will only respond to the digital inputs and motor protections.
 - 2) The second fireman's override mode remains as above, but will also defeat the overload and single-phase protection for bypass and ignore all keypad and digital inputs to the system (run until destruction).
- j. The VFD shall include a "run permissive circuit" that will provide a normally open contact whenever a run command is provided (local or remote start command in VFD or bypass mode). The VFD system (VFD or bypass) shall not operate the motor until it receives a dry contact closure from a damper or valve end-switch. When the VFD system safety interlock (fire detector, freezestat, high static pressure switch, etc) opens, the motor shall coast to a stop and the run permissive contact shall open, closing the damper or valve.
- k. There shall be an internal switch to select manual or automatic bypass.
- l. There shall be an adjustable current sensing circuit for the bypass to provide loss of load indication (broken belt) when in the bypass mode.

PART 3 - EXECUTION**3.1 INSTALLATION**

- A. Motors: Remove and replace existing motors in the air handling fans listed in the Mechanical Equipment Schedule on drawing sheet M1.00 ready for service.
- B. Variable Frequency Drives:
 - 1. Install the drive in accordance with the recommendations of the VFD manufacturer as outlined in the installation manual.
 - 2. Certified factory start-up shall be provided for each drive by a factory authorized service center. A certified start-up form shall be filled out for each drive with a copy provided to the owner, and a copy kept on file at the manufacturer.
 - 3. Perform harmonic measurements at the point where the utility feeds multiple loads (PCC) to verify compliance with the latest revision of IEEE519-1992. Provide a report of the voltage THD and current TDD for Engineer's review prior to substantial completion. Provide labor, materials, and protection as needed to access the test points. The readings shall be taken with all drives and other loads at full load, or as close to this as field conditions allow.

3.2 COMMISSIONING

- A. The equipment and systems referenced in this section are to be commissioned.
- B. The contractor has specific responsibilities for scheduling, coordination, startup, test development, testing and documentation. Coordinate all commissioning activities with the Commissioning Authority.

END OF SECTION

TESTING, ADJUSTING AND BALANCING FOR HVAC

PART 1 - GENERAL

1.1 SUMMARY

- A Work Included: Providing system balance work as specified.

1.2 OPERATION AND MAINTENANCE DATA

- A. Provide O&M data in accordance with Section 23 00 00.
- B. O&M data shall include copies of system balance data.

1.3 QUALITY ASSURANCE

- A. Contract with American Commissioning Consultants, Inc., Neudorfer Engineers Inc., Accurate Balancing Agency Inc., Air Balancing Specialty Inc., Precision Test and Balance Inc., Northwest Engineering Service, Inc., Smarttab, LLC or approved equal to perform the system balance work on this project.
- B. Conduct the systems balance work in accordance with standard procedures and recognized practices outlined by ASHRAE and SMACNA.
- C. Test and balance to be performed by an independent contractor specializing in HVAC systems test and balance.
- D. Balance company to be certified by NEBB or AABC and have 3-years experience of work in the Portland Metro area.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.1 GENERAL

- A. Verify new or clean filter installation in filter assembly before the start of testing and balancing.
- B. Record all actual equipment nameplate and operating data at the site.
- C. Provide ladders, scaffolding, and access to each system for proper testing and balancing.

3.2 PRECONSTRUCTION SYSTEMS TESTING

- A. Coordinate with the controls contractor to operate the systems as required during the systems preconstruction testing.
- B. Air Handling Units – ASU-1, ASU-2, SF-1/RF-1, SF-2, SF-4.
 - 1. Prior to demolition, measure the total existing supply and return (as applicable) air volumes in the fan / air handling unit systems noted in the Mechanical Equipment Schedule on drawing sheet M1.00.
 - 2. Prior to demolition, measure the total existing minimum outside air volume and mark the minimum outside air damper locations adequately to return the outside air volumes to the same value after project completion.

TESTING, ADJUSTING AND BALANCING FOR HVAC

- C. Air Handling Unit SF-5/RF-3: Prior to demolition, measure the total existing minimum outside air volume and mark the minimum outside air damper locations adequately to return the outside air volumes to the same value after project completion.
- D. Terminal Units.
 - 1. Prior to demolition, measure the existing maximum cooling and heating air volumes for the individual terminal units in the Terminal Unit Schedule on drawing sheet M1.00.
- E. Furnish the air handling unit data and terminal unit data to the district project manager prior for review prior to the air handling systems revisions.

3.3 FINAL SYSTEMS TESTING AND BALANCING

- A. Coordinate with the controls contractor to operate the systems as required during the systems balancing.
- B. Air Handling Units - ASU-1, ASU-2, SF-1/RF-1, SF-2, SF-4, SF-5/RF-3.
 - 1. Assure that air filters are clean, if not new, prior to beginning air balance work.
 - 2. Adjust fan speed as required for air volumes to match preconstruction volumes. Speed shall be set to the minimum to provide required air volume at furthest run without excessive static pressure.
 - 3. Adjust minimum outside air volume to the prebalance conditions.
 - 4. Include the following in the logs:
 - a. Supply, return and outside air volumes.
 - b. Supply air temperatures on full heating, cooling (as applicable) and full outside air.
 - c. Static pressure drops across fan, filters and coil.
 - d. Total pressure drops for supply and return system.
 - e. Fan speed or RPM.
 - f. Actual motor voltage, amperage, RPM and overload heater sizes.
- C. Terminal Units:
 - 1. Calibrate the new terminal units per the manufacturer's installation instructions and the direct digital controls system requirements.
 - 2. Adjust cooling (maximum) and heating (minimum) air volumes to values recorded during the preconstruction testing / Terminal Unit Schedule volumes.
 - 3. Include the heating / cooling air volumes and air pressure drops at scheduled maximum (cooling) volumes in the test and balance log.

3.4 COMMISSIONING

- A. The equipment and systems referenced in this section are to be commissioned.
- B. The contractor has specific responsibilities for scheduling, coordination, startup, test development, testing and documentation. Coordinate all commissioning activities with the Commissioning Authority.

END OF SECTION

INSTRUMENTATION AND CONTROL FOR HVAC**PART 1 - GENERAL****1.1 SCOPE DESCRIPTION**

- A. The controls portion of this project is design build based on the project drawings and specifications.
 - 1. Coordinate with the school district project manager to visit the site to become familiar with the existing building conditions and project requirements.
 - 2. Design conduit / cable routing to minimize exposed portions of the systems. Coordinate all exposed conduit / cabling with the district project manager prior to installation.
 - 3. Retain sub-contractors as required to restore exposed building elements – Walls, ceilings, floors to preconstruction condition after project alterations.
- B. Governmental funding sources (SB 1149) requiring cost tracking / documentation will be used to fund portions of this project Coordinate and document project construction costs as noted in specification section 23 00 00, H.
- C. Furnish and install all control hardware and software necessary for a complete DDC control system revision as specified and noted on the drawings.
 - 1. All pneumatic devices are to be removed and replaced as required with DDC control devices.
 - 2. All pneumatically controlled equipment will be converted to DDC control during this project.
 - 3. No pneumatic devices with the exception of control tubing located behind walls or inaccessible ceiling areas are to remain after construction.
 - 4. Cap all pneumatic tubing entering walls and inaccessible ceiling areas behind the architectural element and patch to match the existing wall / ceiling.
- D. Furnish all modules, temperature sensors, flow sensors, control valves, control valve actuators, damper actuators and any other items necessary for a complete system and sequence of control.
 - 1. Coordinate the installation of temperature sensors, dampers and actuators to assure all work required for a complete system is included in the base bid.
 - 2. Add additional control devices not specifically noted in the contract documents required to perform the written sequence of operations. Include the price of these additional components in the base bid.
- E. The final installation will allow all school control components to be monitored / controlled at a single point by district personnel through the existing district interface.
- F. Establish communication to the new equipment through BACnet IP protocol via the MSTP controllers. Bring the system DDC points into the district server and integrate the system graphics to match Beaverton School District (BSD) standards.
- G. Provide cut and patch work as required to restore school architectural elements to existing conditions prior to project start. Include all wall / ceiling repair and paint.

1.2 QUALITY ASSURANCE

- A. Provide control work by a single company with licensed journeymen specialists in the type of work required, so that only one supplier is responsible for all control work for the project.
- B. Provide coordination with other contractors and subcontractors for work required by other trades for control work accomplishment.

INSTRUMENTATION AND CONTROL FOR HVAC**1.3 SUBMITTALS**

- A. In diagrams, show complete piping or ductwork system schematics with DDC, electrical and pneumatic control devices, tubing and wiring superimposed.
- B. Completely identify all control devices with manufacturer's type, number, and functional description.
- C. Uniquely identify all control tubing, wire and conduit on the drawings with a logical numbering system.
- D. Show all electric and hydronic connections of the control system to equipment furnished by others, complete to terminal points specifically identified with manufacturer's terminal designation.
- E. In booklet form, provide a bill of material and catalog data on all control device types, including control operation description, technical parameters and connection identifications. Describe the complete sequence of operation containing all information necessary for clarity and understanding of device function and system sequence of operation.
- F. Furnish a list of connected data points, including connected control unit and input device.
- G. In booklet form, provide catalog data on all description, technical parameters and connection identifications. Describe the complete sequence of operation containing all information necessary for clarity and understanding of device function and system sequence of operation.

1.4 OPERATING AND MAINTENANCE DATA:

- A. O&M Manuals in PDF format.
- B. Include a complete set of control Shop Drawings indicating as built and operating changes.
- C. Include operating and maintenance data on all equipment requiring periodic or incidental services or adjustment. Include a summary schedule for all maintenance tasks. Describe troubleshooting procedures for anticipated problems.
- D. Controls Systems Commissioning:
 - 1. Submit a complete, dated, and initialed record of all system adjustment for components of the control system.
 - 2. Indicate deviations from the specified temperatures, pressures, flows, setpoints, etc.
 - 3. Include a copy of the completed commissioning worksheets in each copy of the Operating and Maintenance Data.

PART 2 - PRODUCTS**2.1 ACCEPTABLE MANUFACTURERS AND SYSTEMS**

- A. Johnson controls by the local factory branch, Northwest Controls Company (NCC), or Automated Controls (Kirkland / Redmond, Washington).

2.2 CONTROL WIRING / COORDINATION WITH LINE VOLTAGE CONTROL

- A. Provide control wiring to all control modules, sensors and actuators required to provide the project sequences of operation.
- B. Provide control interface air handling units, unit ventilators and accessory equipment as required.
- C. All control wiring exposed in occupied areas to be in conduit. Coordinate exposed control wiring in normally occupied spaces with the school district project manager

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- D. Provide all control system related conduit within mechanical room or at equipment locations unless specifically shown to be in other divisions work.
- E. Control wiring in non-accessible ceilings, walls or floors shall be in conduit.
- F. All wiring not in conduit or control cabinets shall be rated for plenum installation.
- G. Provide conduit where required between the zone temperature sensor locations and the zone equipment. Provide all wiring / conduit in the base bid necessary for a complete operating control system.

2.3 AUTOMATION SYSTEM / DDC CONTROL DEVICES

- A. All control devices to be standard products of the specified control system and accessory devices utilized by the controls installer consistent with Beaverton School District standards.
- B. All sensors located in hallways, corridors, toilet rooms and other common spaces to have metal protective plates.

PART 3 - EXECUTION**3.1 INSTALLATION**

- A. Single source responsibility of supplier shall be the complete installation and proper operation of the building automation system and control system and shall include debugging and proper calibration of each component in the entire system.
- B. Provide all controllers to accomplish the control sequences specified herein.
- C. Provide / coordinate the installation of; sensors, pipe wells, relays and any other devices and materials required to accomplish the functions described herein.
- D. Establish communication to the new equipment through BACnet IP protocol via the MSTP controllers. Bring the system DDC points into the district server and integrate the system graphics to match Beaverton School District (BSD) standards.
- E. Furnish all software, device installation, programming, technical assistance to the school district and product licenses required for complete operating control systems throughout the entire facility.
- F. All control identification points and HVAC systems graphics to conform to Beaverton School district naming standards – Verify with BSD project manager prior to initiation of programming and graphics development.
- G. Provide all temperature sensors, flow sensors, humidity sensors, IAQ sensors, control valves, control valve actuators, dampers, damper actuators, programming and other items necessary for a complete system and sequence of control for new equipment as identified in the contract drawings.
- H. All new equipment to have points as noted on Contract Drawings M1.00, M1.01 and M1.02.
- I. Program all control diagrams and sequences of operation into the system graphics to allow visual review of diagrams / sequence when viewing system programming.
- J. Furnishing and installing all control hardware and software necessary for a complete DDC control system as specified.
- K. Final installation will allow all school control components to be monitored / controlled at a single point by district personnel through a single user interface.

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- L. Coordinate the installation of automatic control valves, dry wells for fluid temperature sensors, dampers and actuators with the mechanical contractor to assure all work required for a complete system is included in the base bid.
- M. The Controls Contractor shall be responsible for field verification of site conditions and for gathering all necessary field data for all items to be provided under this contract prior to submitting his or her bid.
- N. Where work specified under other Sections of this Specification connects to equipment or systems that are listed and described in this Section, the Controls Contractor shall coordinate with other trades to provide proper connection(s) to such equipment.
- O. Identification - Provide nameplates identifying all switches, lights and starters, and each control device where the control function is not readily apparent.

3.2 SEQUENCES OF OPERATION

- A. Energy Management System Point Schedule: Provide monitoring and control functions as listed herein for each piece of equipment listed below. Provide a point list that includes each hard wired, calculated and/or resettable point.
- B. Distributed Control – The control system shall observe the concept of distributed control. Modules shall be located at each operating equipment location such that individual systems or zones shall remain functional without communication to other systems on the network.
- C. Energy Compliance:
 - 1. Provide 365 day, 24 hour occupancy scheduling.
 - 2. When controlling both heating and cooling (mechanical), provide a 5-degree deadband in which the heating energy provided to the zone is reduced to a minimum.
 - 3. Provide optimum start controls to enable a morning warm-up cycle capable of varying the unit start time to meet occupied setpoint at scheduled time of occupancy.
 - 4. Close outside air dampers as appropriate to the equipment when the units are off and during the warm-up period.
- D. General: Allow the setpoints referred to in the following sequences to be adjusted at the operator workstation (OWS) or at the local digital controller (DDC). If communication is lost to the DDC, default setpoints in the DDC are used for stand-alone control.
- E. ASU-1, ASU-2, Rooftop Heat Pump (EEM#5).
 - 1. Unoccupied:
 - a. Fans off, outside air, return air and exhaust air dampers (as applicable) indexed to full recirculation.
 - b. Heat Pump not enabled.
 - c. Electric convectors / wall heaters off.
 - d. Unoccupied Low Limit: When the space temperature drops below the night low limit set point (district standard), start the supply fan and enable the heat pump to full heating. Unit to heat until the space is 5-degrees above night low limit set point.
 - e. Roof relief vent damper is closed.
 - 2. Morning Warm-up.
 - a. The zone temperature is used to determine the amount of time needed to preheat the space to the occupied setpoint minus 1 degree F no more than 20 minutes prior to or 10 minutes after the scheduled occupied time.
 - b. The supply fan starts and runs continuously. The outside air damper closes and the return air damper opens. Reversing valve is positioned for heating. Stage on the heating.

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- c. The unit is indexed to occupied control at the scheduled start time. Disable the morning warm-up when the 3-hour rolling average outdoor air temperature, during unoccupied mode, is greater than setpoint (55 degrees F). If the morning warm-up is disabled, switch air handler to occupied mode 10 minutes prior to scheduled occupied time.
 - d. Index terminal units to heating volume.
 - e. Electric convectors / wall heaters enabled.
 - f. Based on the space temperature, the optimum start/stop function starts the air handling system and enables the convectors / wall heaters in warm-up mode so that the space temperature will reach set point at the scheduled occupancy time.
 - g. During warm-up the dampers will remain in full circulation and will cycle to appropriate ventilation mode control at occupancy time regardless of average zone temperature.
 - h. Roof relief vent damper is closed.
3. Occupied Mode.
- a. The supply fan starts and runs continuously.
 - b. Open the roof relief vent damper.
 - c. The occupied sequence of operations for the units shall consist of four separate control modes: heat pump heating, economizer cooling, heat pump cooling and ventilation.
 - d. The supply and return fans run continuously.
 - e. Heating Mode (Heat Pump):
 - 1) Modulate the supply fan VFD to the preset heating speed.
 - 2) Modulate the mixed air to the minimum position allowed by outside air setting and CO2 level, the heat pump shall operate according to the integral controls until the heating setpoint is attained.
 - 3) Modulate the terminal units to the preset heating position.
 - 4) On a continued call for heat enable the electric convectors / wall heaters to meet the heating setpoint.
 - f. Cooling Mode (Economizer cycle) - When the outdoor air is 4 degrees F (adjustable) less than the return air temperature, modulate the outside air damper between the minimum and full open position to maintain the space temperature setpoint.
 - 1) Modulate the supply fan VFD to the preset cooling speed.
 - 2) Modulate the terminal units to the preset cooling position.
 - 3) Actuators shall operate outside air and return dampers in accordance with system operating status, supply air, zone air temperatures, and outside air temperatures.
 - 4) Occupied: Modulate between minimum outside air position and 100% open to meet the cooling requirements of the zone being served.
 - g. Cooling Mode (Heat Pump): On a continued call for cooling, mixed air shall modulate to the minimum position allowed by outside air setting and CO2 level, the heat pump shall operate according to the integral controls until the cooling setpoint is attained.
4. Demand Control Ventilation Mode: The mixed air control shall modulate to control the following in the priority listed:
- a. Mixed air low limit set point (45 deg F)
 - b. CO2 high limit set point: Reset the outside air according to the following adjustable setpoints -
 - 1) 800-ppm CO2 and below - OSA at 5% maximum supply air volume.
 - 2) 1200-ppm CO2 maximum - OSA at 50% maximum supply air volume.
 - c. The mixed air set point shall be reset from (55) deg F at (70) deg F outside air to (65) deg F at (50) deg F based on an outside air temperature reset. If the outside air temperature is above the return air temperature the mixed air should be at minimum position as allowed by the minimum outside air setting and CO2 level.

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5. Occupancy Sensor Control: When space served by unit with occupancy sensor control is sensed as occupied, unit is in occupied mode. If space is occupied for more than 10 minutes (adjustable), close outside air damper and cycle unit to meet occupied space temperature setpoint.
 6. Safeties: The supply and return fan shall stop, the outside and exhaust air dampers shall close and control valves shall go to their normal position and an alarm shall be generated if any of the listed events occur:
 - a. Duct Smoke detector/fire alarm.
 - b. Low temperature alarm (freeze protection).
 - c. High temperature alarm.
 - d. Airflow Interlock Logic - Airflow must be proven in order to operate the compressor(s) and supplemental heat. Anytime flow is lost for more than 5-seconds, the controller will send the compressor and supplemental heat commands to 0.0 percent.
 7. Defrost Mode: Close outside air damper when unit is in defrost mode.
- F. SF-1, RF-1, Hot Water Convectors (EEM#3).
1. Unoccupied:
 - a. Fans off, outside air, return air and exhaust air dampers (as applicable) indexed to full recirculation.
 - b. Convectors hydronic valves closed,
 - c. Unoccupied Low Limit: When the space temperature drops below the night low limit set point (district standard), enable boiler operation and open the convector valves to full heating. Units to heat until the space is 5-degrees above night low limit set point.
 - d. Terminal units remain closed.
 - e. Subject to the boiler outside air lockout temperature (65), when there is a call for night low limit heating, the boiler system will be enabled.
 2. Morning Warm-up.
 - a. The zone temperature is used to determine the amount of time needed to preheat the space to the occupied setpoint minus 1 degree F no more than 20 minutes prior to or 10 minutes after the scheduled occupied time.
 - b. The supply fan starts and runs continuously. The outside air damper closes and the return air damper opens. Reversing valve is positioned for heating. Stage on the heating.
 - c. The unit is indexed to occupied control at the scheduled start time. Disable the morning warm-up when the 3-hour rolling average outdoor air temperature, during unoccupied mode, is greater than setpoint (55 degrees F). If the morning warm-up is disabled, switch air handler to occupied mode 10 minutes prior to scheduled occupied time.
 - d. Index terminal units to heating volume.
 - e. Hot water convectors enabled.
 - f. Based on the space temperature, the optimum start/stop function starts the air handling system and enables the convectors in warm-up mode so that the space temperature will reach set point at the scheduled occupancy time.
 - g. During warm-up the dampers will remain in full circulation and will cycle to appropriate ventilation mode control at occupancy time regardless of average zone temperature.
 3. Occupied Mode.
 - a. The supply and return fans start and run continuously.
 - b. The occupied sequence of operations for the units shall consist of four separate control modes: heating, economizer cooling, chilled water cooling and ventilation.
 - c. The supply and return fans run continuously.

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- d. Heating Mode (Hot Water):
 - 1) Modulate the supply fan VFD to the preset heating speed.
 - 2) Modulate the mixed air to the minimum position allowed by outside air setting and CO2 level, the heat pump shall operate according to the integral controls until the heating setpoint is attained.
 - 3) Modulate the terminal units to the preset heating position.
 - 4) On a continued call for heat enable the hot water convectors to meet the heating setpoint.
 - e. Cooling Mode (Economizer cycle) - When the outdoor air is 4 degrees F (adjustable) less than the return air temperature, modulate the outside air damper between the minimum and full open position to maintain the space temperature setpoint.
 - 1) Modulate the supply and return fan VFD's to the preset cooling speeds.
 - 2) Modulate the terminal units to the preset cooling position.
 - 3) Actuators shall operate outside air and return dampers in accordance with system operating status, supply air, zone air temperatures, and outside air temperatures.
 - 4) Occupied: Modulate between minimum outside air position and 100% open to meet the cooling requirements of the zone being served.
 - f. Cooling Mode (Chilled Water): The mixed air shall modulate to the minimum position allowed by outside air setting and CO2 level, the chiller will enable and the cooling coil valve shall modulate to meet the cooling setpoint.
4. Demand Control Ventilation Mode: The mixed air control shall modulate to control the following in the priority listed:
- a. Mixed air low limit set point (45 deg F)
 - b. CO2 high limit set point: Reset the outside air according to the following adjustable setpoints -
 - 1) 800-ppm CO2 and below - OSA at 5% maximum supply air volume.
 - 2) 1200-ppm CO2 maximum - OSA at 50% maximum supply air volume.
 - c. The mixed air set point shall be reset from (55) deg F at (70) deg F outside air to (65) deg F at (50) deg F based on an outside air temperature reset. If the outside air temperature is above the return air temperature the mixed air should be at minimum position as allowed by the minimum outside air setting and CO2 level.
5. Occupancy Sensor Control: When space served by unit with occupancy sensor control is sensed as occupied, unit is in occupied mode. If space is occupied for more than 10 minutes (adjustable), close outside air damper and cycle unit to meet occupied space temperature setpoint.
6. Safeties: The supply and return fan shall stop, the outside and exhaust air dampers shall close and control valves shall go to their normal position and an alarm shall be generated if any of the listed events occur:
- a. Duct Smoke detector/fire alarm.
 - b. Low temperature alarm (freeze protection).
 - c. High temperature alarm.
- G. SF-5, RF-3 (Music Room).
- 1. Unoccupied:
 - a. Fans off, outside air, return air and exhaust air dampers (as applicable) indexed to full recirculation.
 - b. Unoccupied Low Limit: When the space temperature drops below the night low limit set point (district standard), enable boiler operation and open the unit heating valve to full heating. Unit to heat until the space is 5-degrees above night low limit set point.
 - c. Terminal units remain closed.
 - d. Subject to the boiler outside air lockout temperature (65), when there is a call for night low limit heating, the boiler system will be enabled.

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2. Warm-up:
 - a. At optimum warm up start period, start fans to run continuously. Index outside air, return air and exhaust air dampers (as applicable) to full recirculation. Open the heating coil valve to full heating.
 - b. Based on the space temperature, the optimum start/stop function starts the air handling system and opens the convector valves in warm-up mode so that the space temperature will reach set point at the scheduled occupancy time.
 - c. During warm-up the air handling unit dampers will remain in full circulation and will cycle to appropriate ventilation mode control at occupancy time regardless of average zone temperature.
 3. Occupied:
 - a. The occupied sequence of operations for the units shall consist of four separate control modes: heating, economizer cooling, chilled water cooling and ventilation.
 - b. The Fans run continuously.
 - c. Heating Mode:
 - 1) Modulate the mixed air to the minimum position allowed by outside air setting and CO2 level, the air handling unit heating valve will modulate to maintain the heating setpoint.
 - d. Cooling Mode (Economizer cycle):
 - 1) Actuators shall operate outside air and return dampers in accordance with system operating status, supply air, zone air temperatures, and outside air temperatures.
 - 2) Occupied: Modulate between minimum outside air position and 100% open to meet the cooling requirements of the zone being served.
 - 3) Air handling unit coil valves are closed.
 - e. Cooling Mode (Chilled Water): The mixed air shall modulate to the minimum position allowed by outside air setting and CO2 level, the chiller will enable and the cooling coil valve shall modulate to meet the cooling setpoint.
 4. Demand Control Ventilation Mode: The mixed air control shall modulate to control the following in the priority listed:
 - a. Mixed air low limit set point (45 deg F)
 - b. CO2 high limit set point: Reset the outside air according to the following adjustable setpoints -
 - 1) 800-ppm CO2 and below - OSA at 5% maximum supply air volume.
 - 2) 1200-ppm CO2 maximum - OSA at 50% maximum supply air volume.
 - c. The mixed air set point shall be reset from (55) deg F at (70) deg F outside air to (65) deg F at (50) deg F based on an outside air temperature reset. If the outside air temperature is above the return air temperature the mixed air should be at minimum position as allowed by the minimum outside air setting and CO2 level.
 5. Safeties: The supply and return fan shall stop, the outside and exhaust air dampers shall close and control valves shall go to their normal position and an alarm shall be generated if any of the listed events occur:
 - a. Duct Smoke detector/fire alarm.
 - b. Low temperature alarm (freeze protection).
 - c. High temperature alarm.
- H. SF-2 (Gymnasium), SF-4 (Cafeteria) (EEM#3).
1. Unoccupied:
 - a. Fans off, outside air and return air dampers indexed to full recirculation. Roofcap relief air dampers closed.
 - b. Unoccupied Low Limit: When the space temperature drops below the night low limit set point (district standard), enable boiler operation and open the unit heating valve to full heating. Unit to heat until the space is 5-degrees above night low limit set point.

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- c. Subject to the boiler outside air lockout temperature (65), when there is a call for night low limit heating, the boiler system will be enabled.
2. Warm-up:
 - a. At optimum warm up start period, start fans to run continuously. Index outside air and return air dampers to full recirculation – Relief air damper remains closed. Open the heating coil valve to full heating.
 - b. Based on the space temperature, the optimum start/stop function starts the air handling system and opens the convector valves in warm-up mode so that the space temperature will reach set point at the scheduled occupancy time.
 - c. During warm-up the air handling unit dampers will remain in full circulation and will cycle to appropriate ventilation mode control at occupancy time regardless of average zone temperature.
3. Occupied:
 - a. The occupied sequence of operations for the units shall consist of four separate control modes: heating, economizer cooling, DX cooling and ventilation.
 - b. The Fans run continuously.
 - c. Relief air dampers open.
 - d. Heating Mode:
 - 1) Modulate the mixed air to the minimum position allowed by outside air setting and CO2 level, the air handling unit heating valve will modulate to maintain the heating setpoint.
 - e. Cooling Mode (Economizer cycle):
 - 1) Actuators shall operate outside air and return dampers in accordance with system operating status, supply air, zone air temperatures, and outside air temperatures.
 - 2) Occupied: Modulate between minimum outside air position and 100% open to meet the cooling requirements of the zone being served.
 - 3) Air handling unit coil valves are closed.
 - f. Cooling Mode (Chilled Water): The mixed air shall modulate to the minimum position allowed by outside air setting and CO2 level, the chiller will enable and the cooling coil valve shall modulate to meet the cooling setpoint.
4. Demand Control Ventilation Mode: The mixed air control shall modulate to control the following in the priority listed:
 - a. Mixed air low limit set point (45 deg F)
 - b. CO2 high limit set point: Reset the outside air according to the following adjustable setpoints -
 - 1) 800-ppm CO2 and below - OSA at 5% maximum supply air volume.
 - 2) 1200-ppm CO2 maximum - OSA at 50% maximum supply air volume.
 - c. The mixed air set point shall be reset from (55) deg F at (70) deg F outside air to (65) deg F at (50) deg F based on an outside air temperature reset. If the outside air temperature is above the return air temperature the mixed air should be at minimum position as allowed by the minimum outside air setting and CO2 level.
5. Safeties: The supply and return fan shall stop, the outside and exhaust air dampers shall close and control valves shall go to their normal position and an alarm shall be generated if any of the listed events occur:
 - a. Duct Smoke detector/fire alarm.
 - b. Low temperature alarm (freeze protection).
 - c. High temperature alarm.

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- I. SF-6 (Kitchen):
1. Unoccupied:
 - a. Fan off, outside air closed.
 - b. Unoccupied Low Limit: When the space temperature drops below the night low limit set point (district standard), enable boiler operation, start the unit and open the unit heating valve to full heating. Unit to heat until the space is 5-degrees above night low limit set point.
 - c. Subject to the boiler outside air lockout temperature (65), when there is a call for night low limit heating, the boiler system will be enabled.
 2. Warm-up:
 - a. At optimum warm up start period, start fan to run continuously. Open the hot water heating coil valve to full heating.
 - b. Start EF-13.
 - c. Based on the space temperature, the optimum start/stop function starts the air handling system and operates the unit in warm-up mode so that the space temperature will reach set point at the scheduled occupancy time.
 3. Occupied:
 - a. The Fans run continuously.
 - b. Heating Mode: Modulate the air handling unit heating valve to maintain the heating setpoint.
 4. Safeties: The supply and return fan shall stop, the outside and exhaust air dampers shall close and control valves shall go to their normal position and an alarm shall be generated if any of the listed events occur:
 - a. Duct Smoke detector/fire alarm.
 - b. Low temperature alarm (freeze protection).
 - c. High temperature alarm.
- J. SF-7 (Boys 2), SF-8 (Girls 2):
1. Unoccupied:
 - a. Fan off, outside air closed.
 - b. Unoccupied Low Limit: When the space temperature drops below the night low limit set point (district standard), enable boiler operation, start the unit and open the unit heating valve to full heating. Unit to heat until the space is 5-degrees above night low limit set point.
 - c. Subject to the boiler outside air lockout temperature (65), when there is a call for night low limit heating, the boiler system will be enabled.
 2. Warm-up:
 - a. At optimum warm up start period, start fan to run continuously. Open the heating coil valve to full heating.
 - b. Start EF-9.
 - c. Based on the space temperature, the optimum start/stop function starts the air handling system and operates the unit in warm-up mode so that the space temperature will reach set point at the scheduled occupancy time.
 3. Occupied:
 - a. The Fans run continuously.
 - b. Heating Mode: Modulate the air handling unit heating valve to maintain the heating setpoint.
 - c. Cooling Mode (Chilled Water): The mixed air shall modulate to the minimum position allowed by outside air setting and CO2 level, the chiller will enable and the cooling coil valve shall modulate to meet the cooling setpoint.

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- 4. Safeties: The supply and return fan shall stop, the outside and exhaust air dampers shall close and control valves shall go to their normal position and an alarm shall be generated if any of the listed events occur:
 - a. Low temperature alarm (freeze protection).
 - b. High temperature alarm.
- K. Exhaust Fan (Time Schedule): Fan to run during occupancy hours on its own start-stop time schedule.
- L. Exhaust Fan (Temperature Control): Fan to run on a space temperature sensor to maintain sensor setpoint.
- M. Independent Wall Heaters.
 - 1. Unoccupied:
 - a. Heater off.
 - b. Unoccupied Low Limit: When the space temperature drops below the night low limit set point (district standard), enable heater operation and allow unit to heat until the space is 5-degrees above night low limit set point.
 - 2. Warm-up - At optimum warm up start period, e
 - 3. Occupied- enable heater to maintain the heating setpoint.
 - 4. Safeties:
 - a. Low temperature alarm (freeze protection).
 - b. High temperature alarm.
- N. Chiller (CH):

1. General: Setpoints referred to in the following sequences can be adjusted at the operator workstation (OWS) or at the local digital controller (DOC). If communication is lost to the DOC, default setpoints in the DOC are used for stand-alone control.

Chiller Control: When the outside air temperature is above 70 degrees F, the DOC starts the chilled water pump and enables the chiller. When chilled water flow is proven, the chiller will be allowed to start. The chiller will operate under manufacturer controls and safeties to maintain leaving chilled water temperature. If the outside air temperature decreases below 70 degrees F, disable the chiller.

3.3 FIELD QUALITY CONTROL

- A. Startup: Implement a logical step-by-step startup and checkout of the control system. In addition, startup assistance and coordination shall be provided during startup of the mechanical equipment. Startup shall be considered complete after the entire system is operating properly.

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- B. Self-commission all hardware and software provided for the project.
- C. Completed field commissioning sheets shall be included with the final “as-built” O&M manuals. These sheets shall include validation check fields for all physical and LAN inputs and outputs and graphics for each operating unit or system within the facility. Each system and point shall be listed, using logical names for future reference by the owner.
- D. Commissioning shall include calibration and verification of operation of each I/O and graphic field. Functional commissioning of software programming to meet sequences of operation as submitted and approved shall be verified on the field commissioning sheets.
- E. At the completion of the job, in the presence of an Owner's representative, thoroughly check out the entire control system by simulating each control function and determine that the system performs in accordance with the Contract Specifications.

3.4 INSTRUCTION OF OWNER PERSONNEL

- A. Provide complete list of system generated messages for system operation, including alarm messages.
- B. Modify error message wording as required by the Owner's personnel.
- C. Locate all control components for Operating Engineer.

3.5 RECORD DRAWINGS

- A. Provide complete and accurate record drawings noting all deviations from the information furnished in the original submittals.

3.6 COMMISSIONING

- A. The equipment and systems referenced in this section are to be commissioned.
- B. The contractor has specific responsibilities for scheduling, coordination, startup, test development, testing and documentation. Coordinate all commissioning activities with the Commissioning Authority.

END OF SECTION

HVAC PIPING AND EQUIPMENT**PART 1 - GENERAL****1.1 SUMMARY**

- A. Work included:
 - 1. Remove existing control valves and installing controls contractor furnished control valves.

PART 2 - PRODUCTS**2.1 MANUFACTURERS**

- A. Black Steel Pipe:
 - 1. Pipe: Schedule 40 black steel pipe conforming to ASTM A120-82 or A53-93A.
 - 2. Fittings: 150 psi screwed malleable iron for 2 1/2" and smaller, Schedule 40 weld fittings conforming to ASTM A234 for 3" and larger.
 - 3. Standard product of manufacturer.
- B. Unions: Standard product of manufacturer.

2.2 DESCRIPTION

- A. Heating Water Piping:
 - 1. Black steel – Provide screwed, welded or flanged fittings as required.
- B. Unions: 150 malleable iron, brass to iron seat, ground joint, black or galvanized to match pipe. 200-psi wog bronze, ground joint, solder type for copper tubing. Where dissimilar metals join, dielectric unions, couplings or flanges shall be installed.

PART 3 - EXECUTION**3.1 PREPARATION - MEASUREMENTS, LINES AND LEVELS**

- A. Check dimension at the building site for the work specified in this Division.

3.2 INSTALLATION

- A. Hydronic Piping.
 - 1. Grade mains and runouts to drain.
 - 2. Provide miscellaneous valves and appurtenances as noted on the drawings.
 - 3. Provide shutoff valves at equipment and coil connections.
 - 4. Provide unions in piping at control valves, pressure reducing valves, pumps, coils, etc. if equipment is furnished without flanges for pipe connections.
 - 5. Provide manual air vents at all high points and drain valves at all low points in the piping system.
 - 6. Provide fittings and install automatic temperature control wells provided and located by the automatic temperature control contractor and where shown on the drawings.
 - 7. Provide reducers as required for changes in pipe size, equipment connections and control valves.
- B. Miscellaneous Condensate and Drain Systems:
 - 1. Install condensate system sized in conformance with the drawings.
 - 2. Slope lines in direction of flow.
 - 3. Install indirect waste fittings as shown on the Drawings, providing access as required by code
 - 4. Test piping system per this Section.

HVAC PIPING AND EQUIPMENT

- C. Pressure testing of piping:
 - 1. Piping: Test prior to concealment, insulation being applied, and connection to equipment, fixtures, or specialties. Conduct tests with all valves but those used to isolate the test section 10% closed.
 - 2. Leaks: Repair all leaks or replace defective pipe or fittings and retest until stipulated results are achieved.
 - 3. Notification: Advise the Project Manager 48 hours in advance of each test. Failure to so notify will require test to be rescheduled.
 - 4. Testing Equipment: Provide all necessary pumps, gauges, connections similar items required to perform the tests.
- D. Maintain service clearances for all equipment, valves, etc. per the respective manufacturer's requirements and as required for adequate service.
- E. Provide flexible pipe connections at all piping penetrations through building expansion joints.
- F. Provide shutoff valves at equipment connections.
- G. Install unions in all non-flanged piping connections to apparatus and adjacent to all screwed control valves, traps, and appurtenances requiring removal for servicing, so located that piping may be disconnected without disturbing the general system.
- H. Coils:
 - 1. Install coils where noted on the drawings in accordance with the manufacturer's recommendations.
 - 2. Connect the ductwork when required to the coil casing providing transitions and fittings.
 - 3. Pipe 3/4-inch condensate lines to existing floor drains in the boiler room
- I. Support all piping independently at apparatus so that the equipment shall not carry its weight.
- J. Screwed Joints: Ream pipe ends. Apply dope or tape to male threads only. Brass joints shall be made with Teflon tape only. Make up fitting with not over two threads showing beyond the fitting end.
- K. Provide reducers as required for changes in pipe size, equipment connections and valves

3.3 COMMISSIONING

- A. The equipment and systems referenced in this section are to be commissioned.
- B. The contractor has specific responsibilities for scheduling, coordination, startup, test development, testing and documentation. Coordinate all commissioning activities with the Commissioning Authority.

END OF SECTION

ASBESTOS ABATEMENT CONTRACTOR SPECIFICATIONS

Hiteon Elementary School HVAC Upgrade Project 13800 SW Brockman Road Beaverton, OR 97008

Prepared for:

**Beaverton School District
16550 SW Merlo Road
Beaverton, Oregon 97006**

Submitted: September 22, 2020

Prepared By:



**4105 SE International Way, Suite 505
Milwaukie, OR 97222
503.387.3251**

TRC Project Number: **401824**

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Appendices

Appendix A – LIMITED SUPPLEMENTAL ASBESTOS SURVEY REPORT

ASBESTOS

PART 1 GENERAL - ASBESTOS

1.01 SCOPE OF WORK

- A. The asbestos abatement and disturbance work related to this Project may consist of the removal and disposal of asbestos containing materials (ACM) and presumed asbestos containing materials (PACM) within portions of Hiteon Elementary School located at 13800 SW Brockman Road in Beaverton, Oregon 97008 as part of a planned renovation project. This section is intended to provide instruction for requirements in connection with asbestos abatement or disturbance and is complementary to the other contract documents, which apply to this section by reference.
- B. For Work described in this specification, the Abatement Contractor (Contractor) shall furnish all labor, materials, equipment, tools, and any other resources necessary to complete the work in accordance with regulatory requirements and project contract documents, using best available technology and industry standard methods and procedures. The work shall include but not be limited to the removal and proper disposal of ACM and/or presumed ACM (PACM) materials should they need to be impacted by the scope of the renovation project.

Asbestos Containing Materials

The following table presents the known asbestos containing materials associated with Hiteon Elementary School:

Description	Material Location(s)	Friable / non-Friable
Floor Tile and Mastic	A Hall Area	Non-Friable
12" x 12" Beige and Yellow/Tan Floor Tile and Mastic	B Hall Area	Non-Friable
Chalkboard Mastic, Tan	Throughout	Non-Friable
Transite Panels	Custodial Office	Non-Friable
Window Glazing	Throughout	Non-Friable
Fire Doors	Throughout	Friable

The following table presents the known OSHA regulated materials, containing <1.0% asbestos associated with Hiteon Elementary School:

Description	Material Location(s)	Friable / non-Friable
Gypsum Board and Joint Compound System	Throughout	Non-Friable

Please refer to Appendix A, Limited Supplemental Asbestos Survey Report dated, July 20, 2020, for additional and more detailed information on the additional asbestos materials present at the Site.

- C. The Contractor shall be aware of all conditions of the Project and is responsible for verifying quantities and locations of all Work to be performed. Failure to do so shall not relieve the Contractor of its obligation to furnish all labor, equipment, and materials necessary to perform the Work.

- D. All Work shall be performed in strict accordance with the Project Documents and all governing codes, rules, and regulations. Where conflicts occur between the Project Documents and applicable codes, rules, and regulations, the more stringent requirement shall apply.
- E. Working hours shall be as required and approved by the Owner. ERM abatement activities including, but not limited to, work area preparation, gross removal activities, waste clean-up activities, waste removal, etc. may need to be performed during the specified time period by the Owner. The Contractor shall coordinate and schedule all Work with the facility and Owner's representative.

1.02 PERMITS AND COMPLIANCE

- A. The Contractor shall assume full responsibility and liability for compliance with all applicable Federal, State, and local laws, rules, and regulations pertaining to Work practices, protection of Workers, authorized visitors to the site, persons, and property adjacent to the Work.
- B. Perform asbestos related Work in accordance with Federal, State and Local Regulations (U.S. Environmental Protection Agency (EPA) 40 CFR 61, Occupational Health and Safety (OSHA) 29 CFR 1926 and Oregon Department of Environmental Quality (ODEQ)). Where more stringent requirements are specified, the Contractor shall adhere to the more stringent requirements.

1.03 SUBMITTALS

- A. Pre-Work Submittals: Within 10 calendar days prior to the pre-construction conference, the Contractor shall submit copies of the documents listed below to Beaverton School District's Environmental Consultant for review and approval prior to the commencement of asbestos abatement activities:
 - 1. Asbestos Removal Work Plan which includes the means, methods and protective measures which will be used to comply with all applicable Federal, State and Local rules and regulations. This plan shall be completed and signed by an EPA accredited Asbestos Project Designer.
 - 2. Current worker and contractor/supervisor training records.
 - 3. Insurance Certificates
 - a. All Certificates of Insurance must name Beaverton School District as additional insured and will comply with entities noted in the contract as additional insured. These include the following:
 - Asbestos/Pollution Liability - \$1,000,000;
 - Auto Liability - \$1,000,000 per each vehicle on site;
 - Workman's Compensation and Employers Liability - \$500,000 per accident;
 - Commercial General Liability - \$1,000,000 per occurrence with \$2,000,000 general aggregate per project
 - True Umbrella Policy - \$5,000,000

- b. All insurance will be written through companies having an A.N. rating of at least A VII or with such other companies as may reasonably be approved by Owner. All such liability insurance maintained by the Contractor or any subcontractor will include the condition that it is primary and that any such insurance maintained by Owner or any other additional insured is excess and non-contributory.
- B. On-Site Submittals: Refer to Part 3.01.C for all submittals, documentation, and postings required to be maintained on-site during abatement activities.
- C. Project Close-out Submittals: Within 30 business days of the completion of the project, the Contractor shall submit digital and hard copies of the documents listed below. The documents shall be transmitted to the Environmental Consultant for review and approval prior to the Contractor's final payment.
 - 1. Originals of all waste disposal manifests, seals, and disposal logs.
 - 2. OSHA personal air monitoring results conducted during the Work.
 - 3. Daily progress log describing in detail the areas of work and ACM/PACM affected by the day's work activities and regulated work area entry/exit logs
 - 4. Project Notifications
 - 5. Safety Meeting Logs
 - 6. Insurance Certificates
 - 7. Workers Certifications and Medical Monitoring
 - 8. Contractors Licenses

1.04 PRE-CONSTRUCTION CONFERENCE

- A. Prior to start of preparatory Work under this Contract, the Contractor shall attend a pre-construction conference attended by Owner, Architect and Environmental Consultant.
- B. Agenda for this conference shall include but not necessarily be limited to:
 - 1. Contractor's Asbestos Removal Work Plan
 - 2. Environmental Consultant's duties and functions
 - 3. Contractor's Work procedures including:
 - a. Methods of job site preparation and removal methods
 - b. Respiratory protection
 - c. Disposal procedures
 - d. Cleanup procedures
 - e. Fire exits and emergency procedures

4. Contractor's required pre-work and on-site submittals, documentation, and postings
 5. Contractor's plan for twenty-four (24) hour project security both for prevention of theft and for barring entry of unauthorized personnel into work areas
 6. Temporary utilities
 7. Storage of removed asbestos containing materials
 8. Waste disposal requirements and procedures, including waste manifest and container seals
- C. In conjunction with the conference the Contractor shall accompany the Owner, Architect and Environmental Consultant on a pre-construction walk-through of the Project site.

1.05 APPLICABLE STANDARDS AND REGULATIONS

All asbestos related work must be performed in accordance with EPA and OSHA regulations (40 CFR 61, 29 CFR 1926) and Oregon Department of Environmental Quality. Where more stringent requirements are specified, the Contractor shall adhere to the more stringent requirements.

1.06 NOTICES

- A. The Contractor shall provide notification of intent to commence asbestos abatement activities at least ten (10) working days prior to beginning abatement activities. Written notification shall be sent to the Oregon Department of Environmental Quality Department (DEQ).
- B. The Contractor shall maintain copies of notices, and provide proof of delivery and receipt.
- C. The Contractor shall be responsible for maintaining current project filings with regulatory agencies for the duration of the project.

1.07 ENVIRONMENTAL CONSULTANT

- A. The Owner shall engage the services of an Environmental Consultant (the Consultant) who shall serve as the Owner's Representative in regard to the performance of the asbestos abatement Project and provide direction as required throughout the entire abatement Project period.
- B. The Contractor is required to ensure cooperation of its personnel with the Consultant for the air sampling and Project monitoring functions described in this section. The Contractor shall comply with all direction given by the Consultant during the course of the Project.
- C. The Consultant shall review and approve all Contractor submittals.
- D. The Consultant shall staff the Project with a trained and certified person(s) to act on the Owner's behalf at the job site.
 1. The consultant's representative shall be on-site at all times the Contractor is on-site. The Contractor shall not be permitted to conduct any Work unless the consultant's representative is on-site (except for inspection of barriers and negative air system during non-working days).
 2. The consultant's representative shall have the authority to direct the actions of the Contractor verbally and in writing to ensure compliance with the Project documents and

all regulations. The consultant's representative shall have the authority to Stop Work when gross Work practice deficiencies or unsafe practices are observed, or when ambient fiber concentrations outside the removal area exceed 0.01 f/cc or background level.

- a. Such Stop Work order(s) shall be effective immediately and remain in effect until corrective measures have been taken and the situation has been corrected.
 - b. Standby time required to resolve the situation shall be at the Contractor's expense.
3. The consultant's representative shall provide the following services:
 - a. Inspection of the Contractor's Work, practices, and procedures, including temporary protection requirements, for compliance with all regulations and Project specifications including provisions required by Variances, the Work Place Safety Plan and Asbestos Work Permit.
 - b. Provide abatement Project air sampling as required by applicable regulations and the Owner. Sampling will include background, work area preparation, asbestos handling, final cleaning and clearance air sampling.
 - c. Verify daily that all Workers used in the performance of the Project are certified by the appropriate regulatory agency.
 - d. Monitor the progress of the Contractor's Work, and report any deviations from the schedule to the Owner.
 - e. Monitor, verify, and document all waste load-out operations.
 - f. Verify that the Contractor is performing personal air monitoring daily, and that results are being returned and posted at the site as required.
 - g. The consultant's representative shall maintain a log on site that documents all project related and Consultant and Contractor actions, activities, and occurrences.
4. The following minimum inspections shall be conducted by the consultant's representative. Additional inspections shall be conducted as required by Project conditions. Progression from one phase of Work to the next by the Contractor is only permitted with the written approval of the consultant's representative.
 - a. Pre-Construction Inspection: The purpose of this inspection is to verify the existing conditions of the Work Areas and to document these conditions.
 - b. Pre-Commencement Inspection: The purpose of this inspection is to verify the integrity of each containment system prior to disturbance of any asbestos containing material. This inspection shall take place only after the Work Area is fully prepped for removal.
 - c. Work Inspections: The purpose of this inspection is to monitor the Work practices and procedures employed on the Project and to monitor the continued integrity of the containment system. Inspections within the removal areas shall be conducted by the consultant's representative during all preparation, removal, and cleaning

activities at least twice every Work shift. Additional inspections shall be conducted as warranted.

- d. Pre-Encapsulation Inspection: The purpose of this inspection is to ensure the complete removal of ACM and/or PACM, from all surfaces in the Work Area prior to encapsulation.
 - e. Visual Clearance Inspection: The purpose of this inspection is to verify that: all materials in the scope of work have been properly removed; no visible asbestos debris/residue remains; no pools of liquid or condensation remains; and all required cleanings are complete. This inspection shall be conducted before final air clearance testing.
 - f. Post-Clearance Inspection: The purpose of this inspection is to ensure the complete removal of ACM, including debris, from the Work Area after satisfactory final clearance sampling and removal of all isolation and critical barriers and equipment from the Work Area.
- E. The Consultant shall provide abatement Project air sampling and analysis as required by applicable regulations. Sampling will include background, work area preparation, asbestos handling, and final cleaning and clearance air sampling.
- 1. Unless otherwise required by applicable regulations, the Consultant shall have samples analyzed by Phase Contrast Microscopy (PCM) for daily area and final clearance air monitoring during asbestos removal or disturbance work. Results shall be available at the Project site within 2 hours of completion of sampling. Should TEM analysis be requested/required, results will be provided within 24 hours of receipt of samples by the accredited laboratory.
 - 2. Samples shall be collected as required by applicable regulations and these specifications.
 - 3. If the air sampling during any phase of the abatement project reveals airborne fiber levels at or above .01 fibers/cc or the established background level, whichever is greater, outside the regulated Work Area, Work shall stop immediately and corrective measures required by applicable regulations shall be initiated. Notify all employers and occupants in adjacent areas. The Contractor shall bear the burden of any and all costs incurred by this delay.
 - 4. At the completion of each abatement phase, the Consultant shall prepare an interim certificate of completion for project records.

1.08 PERSONAL AIR SAMPLING

- A. The Contractor shall perform appropriate personal air monitoring in accordance with 29 CFR 1926.1101, every Work shift in each Work Area during which abatement activities occur in order to determine that appropriate respiratory protection is being worn and utilized.
- B. The Contractor shall conduct air sampling that is representative of both the 8-hour time weighted average and 30-minute short-term exposures to indicate compliance with the permissible exposure and excursion limits.
- C. The Contractor's laboratory analysis of air samples shall be conducted by laboratory accredited by the American Industrial Hygiene Association (AIHA) for PCM analysis.

- D. Results of personnel air sample analyses shall be available within 5 business days of sample collection.

1.09 PROJECT SUPERVISOR

- A. The Contractor shall designate a full-time Project Supervisor who shall meet the following qualifications:
 - 1. The Project Supervisor shall hold an Asbestos Hazard Emergency Response Act (AHERA) certification as an Asbestos Contractor/Supervisor.
 - 2. The Project Supervisor shall meet the requirements of a "Competent Person" as defined by OSHA 1926.1101 and shall have a minimum of one year experience as a supervisor.
 - 3. The Project Supervisor must be able to speak, read, and write English fluently, as well as communicate in the primary language of the Workers and immediate community.
- B. The Project Supervisor shall be responsible for the performance of the Work and shall represent the Contractor in all respects at the Project site. The Supervisor shall be the primary point of contact for the Asbestos Project Monitor.

1.10 RESPIRATORY PROTECTION

- A. Select respirators from those approved by the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services.
- B. High Efficiency Particulate Air (HEPA) respirator filters shall be approved by NIOSH and shall conform to the OSHA requirements in 29 CFR 1910.134 and 29 CFR 1926.1101.
- C. A storage area for respirators shall be provided by the Contractor in the clean room side of the personnel decontamination enclosure where they will be kept in a clean environment.
- D. The Contractor shall provide and make available a sufficient quantity of respirator filters so that filter changes can be made as necessary during the work day. Filters used with negative pressure air purifying respirators shall be changed regularly to comply with OSHA.
- E. Any visitor, Worker, or supervisor found in the Work Area not wearing the required respiratory protection shall be removed from the Project site.

1.11 DELIVERY AND STORAGE

- A. Store all materials at the job site in a suitable and designated area.
 - 1. Store materials subject to deterioration or damage away from wet or damp surfaces and under cover.
 - 2. Protect materials from unintended contamination and theft.
 - 3. Storage areas shall be kept clean and organized.
- B. Remove damaged or deteriorated materials from the job site. Materials contaminated with asbestos shall be disposed of as asbestos debris.

1.12 TEMPORARY UTILITIES

- A. Shut down and lock out all electrical power to the asbestos Work Areas.
- B. Provide temporary electric service with Ground Fault Circuit Interrupters (GFCI) for all electric requirements within the asbestos Work Area.
- C. Provide temporary lighting with "weatherproof" fixtures for all Work Areas.
- D. Utilize domestic water service, if available, from Owner's existing system. Provide hot water heaters with sufficient capacity to meet Project demands.

PART 2 PRODUCTS

2.01 MATERIALS

- A. All materials shall be delivered to the job site in the original packages, containers, or bundles bearing the name of the manufacturer, the brand name and product technical description, with Safety Data Sheets (SDSs) as applicable.
- B. No damaged or deteriorating materials shall be used. If material becomes contaminated the material shall be decontaminated or disposed of as asbestos-containing waste material. The cost to decontaminate and dispose of this material shall be at the expense of the Contractor.
- C. Fire retardant polyethylene sheet shall be in roll size to minimize the frequency of joints, with factory label indicating no less than six (6) mil thickness.
- D. Polyethylene disposable bags shall be no less than six (6) mils thick.
- E. A commercial grade duct tape (or equivalent) capable of sealing joints in adjacent polyethylene sheets and for the attachment of polyethylene sheets to finished or unfinished surfaces must be capable of adhering under both dry and wet conditions.
- F. Any planking, bracing, shoring, barricades and/or temporary sheet piling, necessary to appropriately perform work activities shall conform to all applicable federal, state and local regulations.

2.02 TOOLS AND EQUIPMENT

The Contractor shall provide tools and equipment that are suitable for asbestos related activities and in good working order.

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

- A. The following submittals, documentation, and postings shall be maintained on-site by the Contractor during abatement activities:

1. Asbestos worker and contractor/supervisor certification cards for each person employed in the removal, handling, or disturbance of asbestos
 2. Daily OSHA personal air monitoring results
 3. Project documents (specifications and drawings)
 4. Applicable regulations
 5. Safety Data Sheets of supplies/chemicals used on the Project
 6. Approved Abatement Work Plan
 7. List of emergency telephone numbers
 8. Daily Project Log
- B. The following documentation shall be maintained on-site by TRC Environmental Corp. during abatement activities:
1. Air sample results
 2. Project Monitor Daily Log
 3. Asbestos Survey Report
 4. A copy of ASTM Standard E1368 "Standard Practice for Visual Inspection of Asbestos Abatement Projects"
- C. Install emergency exit signage and fire extinguishers throughout the Work Area in accordance with OSHA Construction Industry Standards.
- D. Use the following engineering controls and work practices for all asbestos abatement operations, regardless of measured exposure levels:
1. Vacuum cleaners equipped with HEPA filters to collect all asbestos-containing dust and debris
 2. Wet methods to control exposures during asbestos removal and clean-up, except where proven to be infeasible
 3. Prompt clean-up and disposal of asbestos-contaminated wastes and debris in leak-proof containers
- E. Do not use any of the following equipment or work practices during asbestos abatement operations, regardless of measured exposure levels:
1. High-speed abrasive disc saws not equipped with point-of-cut HEPA ventilation or HEPA filtered exhaust air enclosures
 2. Blowing with compressed air to remove asbestos-containing materials

3. Dry sweeping, shoveling, or other dry methods to clean up asbestos-containing dust and debris
 4. Employee rotation as a means of reducing employee exposure to asbestos
- F. Protect adjacent areas, materials and surfaces from damage due to demolition operations, including but not necessarily limited to the following:
1. Water damage
 2. Dirt, dust and debris
 3. Abrasion
 4. Cuts and scratches
 5. Holes from fasteners for temporary barriers

3.02 PROTECTIVE CLOTHING

- A. Provide personnel utilized during the Project with disposable protective whole body clothing, head coverings, gloves and foot coverings. Provide disposable plastic or rubber gloves to protect hands. Cloth gloves may be worn inside the plastic or rubber for comfort, but shall not be used alone. Make sleeves secure at the wrists and make foot coverings secure at the ankles by the use of tape, or provide disposable coverings with elastic wrists or tops.
- B. Authorized visitors shall be provided with suitable protective clothing, headgear, eye protection, and footwear whenever they enter the Work Area.

3.03 SIGNS AND LABELS

- A. Provide warning signs and barrier tapes at all approaches to asbestos Work Areas. Locate signs at such distance that personnel may read the sign and take the necessary protective steps required before entering the area.
1. Provide danger signs in vertical format conforming to 29 CFR 1926.1101, minimum 20" x 14" displaying the following legend.

ASBESTOS CANCER AND LUNG DISEASE
HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING
ARE REQUIRED IN THIS AREA
 2. Provide 3" wide OSHA-Approved barrier tape printed with black lettered, "DANGER ASBESTOS REMOVAL". Locate barrier tape across all corridors, entrances and access routes to asbestos Work Area. Install tape 3' to 4' Above Finished Floor AFF.
- B. Provide asbestos danger labels affixed to all asbestos materials, scrap, waste, debris and other products contaminated with asbestos.
1. Provide asbestos danger labels of sufficient size to be clearly legible, displaying the following legend:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

2. Provide the following asbestos labels, of sufficient size to be clearly legible, for display on waste containers (bags or drums) which will be used to transport asbestos contaminated material in accordance with United States Department of Transportation 49 CFR Parts 171 and 172: (Note: Include "RQ" for friable asbestos waste only.)

RQ, (WASTE) ASBESTOS, 9, NA2212, PGIII

3. Generator identification information shall be affixed to each waste container indicating the following printed in indelible ink:
 - Generator Name
 - Facility Name
 - Facility Address
 - EPA Generator ID Number

3.04 FRIABLE ACM REMOVAL BY FULL ENCLOSURE METHOD

A. Preparation of the Work Area

1. Install critical barriers over each opening into the regulated area. The following requirements are in addition to, not in lieu of, other indicated surface and object protection requirements:
 - a. Seal each opening between the work area and adjacent areas with not less than 2 layers of 6-mil polyethylene sheeting. Use an expanding-polyurethane foam gun to seal areas with large numbers of pipes, conduits and beams. Openings include, but are not necessarily limited to, windows, skylights, doorways, elevator hoist way openings, corridor entrances, drains, ducts, grills, grates, and diffusers.
 - b. Seal intake and exhaust vents and duct seams within the regulated area with not less than 2 layers of 6-mil polyethylene sheeting.
2. HVAC System Shutdown: Owner's maintenance personnel will shut down heating, cooling, and air conditioning systems when necessary. Coordinate scheduling with Owner's personnel.
3. Protection of Surfaces and Objects: The following requirements are in addition to, not in lieu of, indicated work area sealing requirements. Cover the following surfaces and objects as follows:
 - a. Protect all surfaces beneath all removal activity. Remove moveable objects from the work area, and cover fixed objects with impermeable drop cloths or plastic sheeting with edges securely sealed with tape.
 - b. Provide clean, fresh air to mechanical equipment, where required to maintain proper performance of equipment.
 - c. Fully pre-clean all covered surfaces with amended water and a HEPA vacuum.

- d. Cover walls with not less than 2 layers of 6-mil polyethylene sheeting. Construct free-standing enclosure walls of not less than 6-mil polyethylene sheeting, with supports spaced not more than 3 feet on center.
 - e. Cover floors with not less than 2 layers of 6-mil polyethylene sheeting. Avoid seams where possible. If seams are necessary, overlap not less than 12 inches and tape joints. Extend sheeting 12 inches up the side walls leaving no seams at the wall and floor joint. Immediately repair punctures and leaks, and clean up seepage.
- 4. Cleaning: Do not use cleaning methods that raise dust, such as sweeping or using vacuum cleaners not equipped with HEPA filters. Do not disturb asbestos materials during pre-cleaning phases. Treat water removed from the enclosure as asbestos contaminated waste. Fully seal floor drains.
- 5. Deactivate or install ground-fault circuit interrupters on each electrical circuit within the enclosure.
- 6. Construct a three-chambered decontamination facility that is adjacent to and connected to the regulated area, and that consists of a dirty room, a shower room, and a clean room in series. Construct decontamination facilities that are exposed to weather of lumber and exterior grade plywood. Secure the facility when not in use.
 - a. Supply the equipment room with properly labeled, impermeable bags and containers for the containment and disposal of contaminated protective equipment.
 - b. Construct showers that comply with the requirements of 29 CFR 1910.141 (d) (3), with the shower room adjacent to both the equipment room and the clean room. Filter water waste and shower water through a 5 micron filter, or remove water from site as asbestos waste.
 - c. Equip the clean room with a locker or appropriate storage container for each employee.
- 7. Employee Decontamination Facilities
 - a. Access the work area only through an approved decontamination system. Lock or block other entrances. Seal emergency exits (for use during a fire or accident) with polyethylene sheeting and tape.
 - b. Seal the waste pass-out, except during the removal of asbestos waste from the enclosure.
 - c. Entrance to The Regulated Area: Employees shall enter the decontamination area through the clean room, remove and store clothing, and put on protective clothing and respiratory protection before passing through to the equipment room.
 - d. Exit from The Regulated Area: Employees shall exit the regulated area by removing gross contamination and debris from their protective clothing. The clothing shall be removed and disposed of in the equipment room into labeled impermeable bags or containers. Employees shall then shower and enter the clean room before changing into street clothes.

8. Local Exhaust Ventilation: Maintain portable air filtration units with a HEPA filter in use during asbestos abatement operations requiring enclosures. Units shall conform to OSHA Standard 1926.1101, Appendix F, and shall be designed in accordance with 40 CFR 61, Subpart M, Section 61.153.
 - a. Exhaust directly to building exterior. Provide a backup portable air filtration unit at each removal enclosure. Startup ventilation units prior to initiating asbestos removal operations and run until the Owner's consultant has approved their shut-down after cleaning, visual inspection, clearance sampling and tear-down.
 - b. Direct air movement within the enclosure away from the employees' work area and toward the air filtration device.
 - c. Provide not less than 4 air changes per hour within the enclosure.
 - d. Within the enclosure, through the period of its use, maintain a pressure differential of not less than minus 0.02 water gage with respect to ambient conditions outside the enclosure. Provide continuous measurement of the pressure differential at each negative pressure enclosure.
9. Visually inspect the enclosure for breeches and smoke-test for leaks before work begins, and before the start of each work shift. Make all modifications to the enclosure prior to starting removal work.

B. Work Practices

1. Immediately preceding asbestos removal, apply a fine mist of water to the asbestos materials and the surrounding area. Keep surrounding areas wet by spraying periodically with amended water. Maintain a high humidity environment to assist in fiber settling.
2. Remove asbestos material using two-person teams, on staging platforms, if necessary.
3. Remove the wet asbestos material as intact sections or components. Carefully lower the material to the floor or place directly into container. Never drop or throw asbestos material on the floor.
4. At working heights between 15 and 50 feet above the floor, place removed asbestos materials in containers at the elevated levels and lower to floor, or place onto inclined chutes or scaffolding for subsequent collection and placement into containers. Clean all debris at the completion of each workday.
5. Once the asbestos material is at ground level, pack in labeled 6-mil polyethylene bags, wet and, if appropriate, hold in drums prior to starting the next section.
6. Use 2 sealed and labeled 6-mil thick bags for storage and transportation of asbestos waste. Standing water shall be in each bag
7. Wrap large components removed intact in two layers of 6-mil polyethylene sheeting, label, and secure with tape for transport to the landfill. Comply with all wetting requirements.

8. Treat wires, hangers, steel bands, nails, screws, metal lath, tin sheeting, and similar sharp objects removed with asbestos material as asbestos waste. Place in drums for disposal.
9. Label containerized asbestos waste in accordance with OSHA, EPA, and Department of Transportation regulations, as follows:
 - a. Label each container with OSHA label that contains the following information:

**DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG
DISEASE HAZARD**
 - b. Label each container with Owner's and Asbestos Abatement Firm's names and addresses as required by NESHAP.
 - c. Label each container with Class 9 Label required by DOT and identify waste as "RQ, Asbestos NA 2212."
10. Remove containerized asbestos waste daily from site, or store on site in a locked or secured location until ready for final disposal. Obtain approval of Owner's Representative of the location of disposal containers. Outdoor waste containers shall be fully enclosed and locked. Mark vehicles used to transport waste during the loading and unloading of asbestos waste with a visible sign, as required by NESHAP.

3.05 REMOVAL OF NON-FRIABLE ASBESTOS-CONTAINING MATERIALS

A. Removal of Vinyl Floor Tile (unless rendered Friable)

1. Prior to removal, critical barriers shall be placed over openings to the regulated area.
2. Prior to removal, clean floors of dirt and debris with vacuums equipped with HEPA filter.
3. Sanding the floor or related backing is not permitted.
4. Mechanical chipping of vinyl floor tile is prohibited, except when performed in a negative pressure enclosure.
5. Thoroughly wet vinyl floor tile with water. Use a slip scraper or equivalent to loosen the floor tile from the floor. Remove the floor tile in an intact state. Keep the floor tile wet throughout the removal and cleanup.
6. Place the resilient flooring material and debris in an asbestos disposal bag. Seal the bag and place it in a properly labeled drum. Comply with the disposal and labeling requirements of this document.

B. Asbestos Mastic/Glue Removal

1. Prior to removal, critical barriers shall be placed over openings to the regulated area.
2. Clean the floor of all debris using a HEPA vacuum, wet sweeping, mopping or equivalent.

3. Remove as much mastic as possible using a Consultant approved solvent. Control odors and fumes with engineering controls.
4. Perform scraping of residual adhesive using wet methods.
5. After all debris is removed, thoroughly mop the floor and allow time to dry.
6. Properly dispose of all asbestos and solvent waste according to all applicable regulations, and comply with the disposal and labeling requirements of this Section.

C. Asbestos-Containing Siding and Transite Panels (if applicable)

1. Create a regulated work area and place impermeable drop cloths on surfaces beneath removal activity.
2. Cutting, abrading, or breaking material is not permitted.
3. Wet material with water prior to removal.
4. Carefully disassemble material such a manner as to prevent breakage.
5. Wrap and seal material in two layers 6-mil thick polyethylene, asbestos disposal bags, or equivalent. Seal bags or packages and properly label them with appropriate asbestos warning signs.

D. Non-Friable Asbestos Containing Exterior Sealant, Caulk, Putty and Window Glazing (if applicable)

1. Create a regulated work area and place impermeable drop cloths on surfaces beneath removal activity.
2. Any existing loose material shall be HEPA vacuumed prior to removal.
3. The material shall be thoroughly wetted prior to and during its removal.
4. The material should be removed as intact as possible. Manual methods shall be used.
5. Removed ACM shall be immediately bagged.
6. The removal of windows and other whole building components without disturbing the asbestos is encouraged.
7. If the material becomes friable during the abatement process, comply with the requirements for friable asbestos removal.

3.06 WORK AREA DECONTAMINATION AND CLEARANCE PROCEDURES

- A. The Asbestos Abatement Contractor's representative, in presence of Owner's consultant, shall inspect the entire work area for asbestos.
- B. If any suspect asbestos dust or debris is found, repeat final cleaning operation, until the visual inspection is satisfactory to the Owner's consultant.

- C. After final visual clearance criteria have been achieved in the work areas, the Owner's consultant will notify the Abatement Contractor to encapsulate all walls, floors, ceilings, other exposed surfaces, and decontamination facilities.
- D. Clearance air sampling will be completed by the Owner's consultant after the encapsulant has dried. Any costs associated with re-cleaning due to failed clearance results will be the sole responsibility of the Abatement Contractor. All clearance air samples shall be at or below 0.01 fibers per cubic centimeter as measured using Phase Contrast Microscopy (NIOSH 7400 method) or below 70 structures per square millimeter by Transmission Electron Microscopy (TEM) using the AHERA analytical method.
- E. After abatement clearance is given by the Asbestos Project Monitor the Abatement Contractor may remove the containment, which shall be disposed of as ACM.

3.07 WASTE DISPOSAL

- A. All waste will be transported and disposed of in compliance with DOT requirements and all applicable Federal, State and local regulations. Disposal must occur at an acceptable landfill accompanied by a waste manifest.
- B. A copy of all waste manifests shall be given to Owner upon completion of the project.

APPENDIX A

LIMITED SUPPLEMENTAL ASBESTOS SURVEY REPORT

**Hiteon Elementary School
13800 SW Brockman Road
Beaverton, Oregon 97008
Dated: July 20, 2020**

LIMITED SUPPLEMENTAL ASBESTOS SURVEY REPORT

Hiteon Elementary School

**13800 SW Brockman Road
Beaverton, OR 97008**

Prepared for:

Beaverton School District

**16550 SW Merlo Road
Beaverton, OR 97006**

Inspection Dates: June 29, 2020

Report Prepared: July 20, 2020

Prepared By:



**4105 SE International Way, Suite 505
Milwaukie, OR 97222
503.387.3251**

TRC Project Number: 401824

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Appendices

- Appendix A – Figures
- Appendix B – Laboratory Analytical Data Sheets
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EXECUTIVE SUMMARY

TRC Environmental Corporation (TRC) was contracted by the Beaverton School District to conduct a supplemental asbestos survey, including collection of bulk asbestos samples, laboratory analysis, and preparation of a report for Hiteon Elementary School located at 13800 SW Brockman Road in Beaverton, Oregon 97008. Mr. Matt Cuda and Mr. Jason Stone, AHERA accredited building inspectors performed the survey on June 29th, 2020. The survey activities included the review of prior sampling documentation and reports provided by the District, inspection and assessment of accessible suspect building materials, collection of bulk samples of suspect asbestos containing building materials that had previously not be sampled, and submission of bulk samples for laboratory analysis.

ASBESTOS MATERIAL SUMMARY

Suspect asbestos containing building materials were sampled and submitted under the chain-of-custody (COC) protocol to an accredited laboratory for polarized light microscopy (PLM) bulk sample analysis. Inspection, sampling and analytical procedures were performed in general accordance with the U.S. Environmental Protection Agency's (EPA's) National Emission Standards for Hazardous Air Pollutants (NESHAP) EPA 40 CFR 61 Subpart M, the EPA Asbestos Hazard Emergency Response Act (AHERA) 40 CFR Part 763, and Federal Occupational Safety and Health Administration (OSHA) 29 CFR 1926.1101 guidelines.

The following materials sampled during this investigation and prior investigations were identified as asbestos containing materials:

- Floor Tile and Mastic (Previously Sampled)
- 12" x 12" Beige and Yellow/ Tan Floor Tile and Mastic (Previously Sampled)
- Chalkboard Mastic, Tan (Previously Sampled)
- Window Glazing (Previously Sampled)
- Transite Panels (Previously Sampled)
- Joint Compound (A-Wing, B-Wing and C-Wing)
- Fire Doors (Assumed)

The following materials sampled during this investigation and prior investigations were identified as OSHA Regulated Materials (OSHA):

- Gypsum Board and Joint Compound (Composite - Throughout)

Additionally, any materials uncovered during renovation activities that are not addressed in this inspection report or prior reports for the building are considered presumed asbestos containing materials and must be sampled by an accredited asbestos inspector prior to disturbance, or they must be treated as asbestos containing.

INTRODUCTION

A supplemental asbestos survey was conducted by TRC at Hiteon Elementary School, located at 13800 SW Brockman Road in Beaverton, Oregon. It was reported by the client that this limited hazardous materials survey is being conducted in conjunction with their HVAC renovation project. The survey activities were performed on June 29th, 2020, and included the review of prior sampling documentation and reports as well as the inspection, assessment and bulk sampling of suspect asbestos containing building materials that had not previously been sampled. Sample locations are presented on the Sample Location Diagrams in Appendix A. Laboratory analytical results are presented in Appendix B and Prior Documentation is presented in Appendix C.

Mr. Matt Cuda and Mr. Jason Stone, AHERA accredited building inspector's conducted the survey inspection and sampling activities. Copies of training certificates and state licenses (where applicable) are presented in Appendix D, Inspector Certifications.

BACKGROUND

Asbestos Containing Materials

The United States Environmental Protection Agency (EPA) define an asbestos-containing material (ACM) as any material containing more than one percent (>1.0%) asbestos by weight. In addition, ACMs are designated as:

Friable asbestos - material which can be crumbled, pulverized or reduced to powder by hand pressure, a.k.a. Regulated Asbestos Containing Materials (RACM).

Category I Non-friable - includes resilient floor coverings, asphalt roofing products, gaskets and packing.

Category II Non-friable - any non-friable ACM that is not in Category I (i.e. Asbestos-cement (Transite) siding or roofing material).

OSHA Regulated Materials

The Occupational Safety and Health Administration (OSHA) regulates all materials containing any detectable level of asbestos by weight, including those materials containing 1.0% or less.

Asbestos Sampling and Analytical Procedures

Representative bulk samples of suspect asbestos-containing building materials were randomly collected from the interior of the building. Homogenous material determination was based on the following criteria:

- Similar physical characteristics (same color and texture, etc.),
- Application (sprayed or trowel-on, assembly into a system, etc.),
- Material function (thermal insulation, floor tile, wallboard system, etc.).

The bulk samples were collected, labeled, and shipped to the certified analytical laboratory under proper COC documentation, and condition and approximate quantity assessments were performed by the accredited inspector during the inspection.

Laboratory services were provided by EMC Labs, Inc., in Phoenix, Arizona, a National Voluntary Laboratory Accreditation Program (NVLAP code #101424-0).

Bulk samples were analyzed by PLM utilizing the EPA's Test Methods: Methods for the Determination of Asbestos in Bulk Building Materials (EPA 600/R-93/116, July 1993) and the McCrone Research Institute's The Asbestos Particle Atlas as method references.

Analysis by PLM was performed by visual observation of the bulk sample and slides prepared of the bulk sample for microscopic examination and identification. The samples were analyzed for asbestos (Chrysotile, Amosite, Crocidolite, Anthophyllite, and Actinolite/Tremolite), fibrous non-asbestos constituents (mineral wool, cellulose, etc.) and non-fibrous constituents. Using a stereoscope, the microscopist visually estimates the relative amounts of each constituent by determining the estimated area of the asbestos compared with the area estimate of the total sample.

ASBESTOS FINDINGS & RECOMMENDATIONS

The following table presents the location and quantities of each suspect building material identified and sampled during this survey as well as all applicable analytical results:

Sample No.	Material	Sample Location	Asbestos Content	Approximate Quantity
HES-01A HES-01B HES-01C HES-01D HES-01E HES-01F HES-01G HES-01H HES-01I	Built-up Roofing	Throughout	ND	N/A
HES-02A HES-02B HES-02C	Gray Roof Caulking	Throughout Roof Vents	ND	N/A
HES-03A HES-03B HES-03C	Roofing Felt Paper	Cafeteria Roof	ND	N/A
HES-04A HES-04B HES-04C	Black Roof Caulking	Edge Between Flashing and TPO Roof	ND	N/A
HES-05A HES-05B HES-05C	Gray Roofing Mastic	Roof Edge between TPO and Built-up Roofing	ND	N/A
HES-06A HES-06B HES-06C	HVAC Duct Tape	A Wing Mechanical Mezzanine	ND	N/A

ND = Non-detect

SF = Square feet

LF = Linear Feet

N/A = Not Applicable

Sample No.	Material	Sample Location	Asbestos Content	Approximate Quantity
HES-07A HES-07B HES-07C	Gray HVAC Caulking	A Wing Mechanical Mezzanine	ND	N/A
HES-08A HES-08B HES-08C	Gypsum Board and Joint Compound	Throughout A Wing	G.B. – ND J.C. – ND	N/A
HES-09A HES-09B HES-09C	Gypsum Board and Joint Compound	Throughout C Wing	G.B. – ND J.C. – 3% Chrysotile Comp – 0.5% Chrysotile	8,500 SF
HES-10A HES-10B HES-10C	Hard Fitting	C Wing Mechanical Mezzanine	ND	N/A
HES-11A HES-11B HES-11C	2' x 4' Drop-in Ceiling Tile with Fissures and Pinholes	Throughout C Wing	ND	N/A
HES-12A HES-12B HES-12C	Gray HVAC Duct Mastic	HVAC Ducts Throughout	ND	N/A
HES-13A HES-13B HES-13C	Black Mastic	Above Ceiling	ND	N/A
HES-14A HES-14B HES-14C	2' x 4' Drop-in Ceiling Tile, Pinholes	Throughout B Wing	ND	N/A
HES-15A HES-15B HES-15C	Gypsum Board and Joint Compound	Throughout B Wing	G.B. – ND J.C. – ND	N/A
HES-16A HES-16B HES-16C	2' x 4' Drop-in Ceiling Tile with Long Fissures and Pinholes	Throughout A Wing	ND	N/A
HES-17A HES-17B HES-17C	1' x 1' Ceiling Tile and Glue	Gym, Stage	Tile – ND Glue – ND	N/A

ND = Non-detect

SF = Square feet

LF = Linear Feet

N/A = Not Applicable

Asbestos Containing Materials (ACMs)

Asbestos was detected in the following materials sampled during this and prior investigations:

Material	Approximate Location(s)	Approximate Quantity
Floor Tile and Mastic	A112 (now part of library and hall)	Unknown (Previously Sampled)
12" x 12" Beige and Yellow/Tan Floor Tile and Mastic	B Hall	Unknown (Previously Sampled)
Chalkboard Mastic, Tan	C106 (Behind new whiteboard)	Unknown (Previously Sampled)

Material	Approximate Location(s)	Approximate Quantity
Joint Compound	A-Wing, B-Wing and C-Wing	Unknown (Previously Sampled)
Transite Panels	Custodial Office	40 SF
Window Glazing	Throughout	Unknown (Previously Sampled)
Fire Doors	Throughout	Assumed

OSHA Regulated Materials (<1.0%)

Material	Approximate Location(s)	Approximate Quantity
Gypsum Board and Joint Compound (Composite)	Throughout A-Wing, B-Wing and C-Wing	60,000 SF

Prior sampling data indicated a mix results from the A-Wing and B-Wing and current sample results indicated no asbestos detected in the samples from the A-Wing and B-Wing, therefore all the walls in these three areas are assumed to be OSHA regulated.

Non-Detect Materials (ND)

Asbestos was not detected in the following materials sampled during this investigation:

Material	Location
Built-up Roofing	Throughout
Gray Roof Caulking	Throughout Roof Vents
Roofing Felt Paper	Cafeteria Roof
Black Roof Caulking	Edge Between Flashing and TPO Roof
Gray Roofing Mastic	Roof Edge between TPO and Built-up Roofing
HVAC Duct Tape	A Wing Mechanical Mezzanine
Gray HVAC Caulking	A Wing Mechanical Mezzanine
Gypsum Board and Joint Compound	Throughout A Wing
Hard Fitting	C Wing Mechanical Mezzanine
2' x 4' Drop-in Ceiling Tile with Fissures and Pinholes	Throughout C Wing
Gray HVAC Duct Mastic	HVAC Ducts Throughout
Black Mastic	Above Ceiling
2' x 4' Drop-in Ceiling Tile, Pinholes	Throughout B Wing
Gypsum Board and Joint Compound	Throughout B Wing
2' x 4' Drop-in Ceiling Tile with Long Fissures and Pinholes	Throughout A Wing
1' x 1' Ceiling Tile and Glue	Gym, Stage
Duct Felt Tape	A Wing Penthouse, A103 Restroom
12" x 12" Floor Tile and Mastic, Light Gray and Yellow/Tan	A100, B Hall
Chalkboard Mastic, Brown	A100, A104, A108
Lay-in Ceiling Tile	A103 Restroom, B Hall (West), B Hall Main Corridor, Library
MJP Pipe Fittings	A112 (now part of Library and Hall), Main Entrance, Doors Between West B and A Wing
Cove Base and Mastic	A114 (now part of Library and Hall)
Hard Fitting	Boiler Room

Material	Location
Exterior Boiler Insulation	Boiler Room
Interior Boiler Insulation	Boiler Room
Boiler Door Gasket	Boiler Room
Chalkboard Mastic, Tan	C106
Ceramic Tile and Grout	Kitchen, Boy's Locker Room, Girl's Locker Room
Carpet Mastic and Leveling Compound	Library
Wall and Ceiling Plaster	Boy's Locker Room, Girl's Locker Room
Glued-on Ceiling Tiles	Main Corridor
Brick Mortar	Main Entrance
Sheet Flooring and Mastic, Tan	Restroom 4
Grey Sink Undercoating	Staff Room
Door Insulation, Off White	Doors between West B Hall and A Wing
Hard Fitting on Fiberglass Insulated Lines	Cafeteria Mechanical Loft

Due to the Site being an occupied building at the time of the inspection and sampling, a full destructive investigation for concealed materials was not performed. Hidden building materials (e.g., old floor mastic patches hidden under carpeting, chalkboard mastic, mirror mastic, wood paneling mastic, etc.), other than those discussed in this report, could be uncovered when removing building finishes during renovation activities. Any materials encountered during the renovation activities that are not identified in this report, should either be presumed to be asbestos containing and handled as ACM or be sampled by an accredited asbestos inspector to determine if it contains asbestos.

RECOMMENDATIONS

All identified asbestos containing and OSHA regulated materials from this investigation and previous investigations must be removed by a licensed asbestos abatement contractor prior to them being impacted by any renovation or demolition activities. Additionally, any materials uncovered during renovation or demolition activities that are not addressed in this inspection report or prior reports for the building are considered presumed asbestos containing materials and must be sampled by an accredited asbestos inspector prior to disturbance, or they must be treated as asbestos containing.

DISCLAIMER

The content presented in this report is based on data collected during the site inspection and survey, review of pertinent regulations, requirements, guidelines and commonly followed industry standards, and information provided by the Beaverton School District, their clients, agents, and representatives.

The work has been conducted in an objective and unbiased manner and in accordance with generally accepted professional practice for this type of work. TRC believes the data and analysis to be accurate and relevant, but cannot accept responsibility for the accuracy or completeness of available documentation or possible withholding of information by other parties.

This asbestos survey report is designed to aid the property owner, architect, construction manager, general contractor, and asbestos abatement contractor in locating potential ACMs. This report is not intended for, and may not be utilized as, a bidding document or as an abatement project specification document.

If you have any questions, or need any further clarification regarding this report, please do not hesitate to contact Mr. Ron Landolt at (503) 407-0734.

Sincerely,
TRC Environmental Corporation

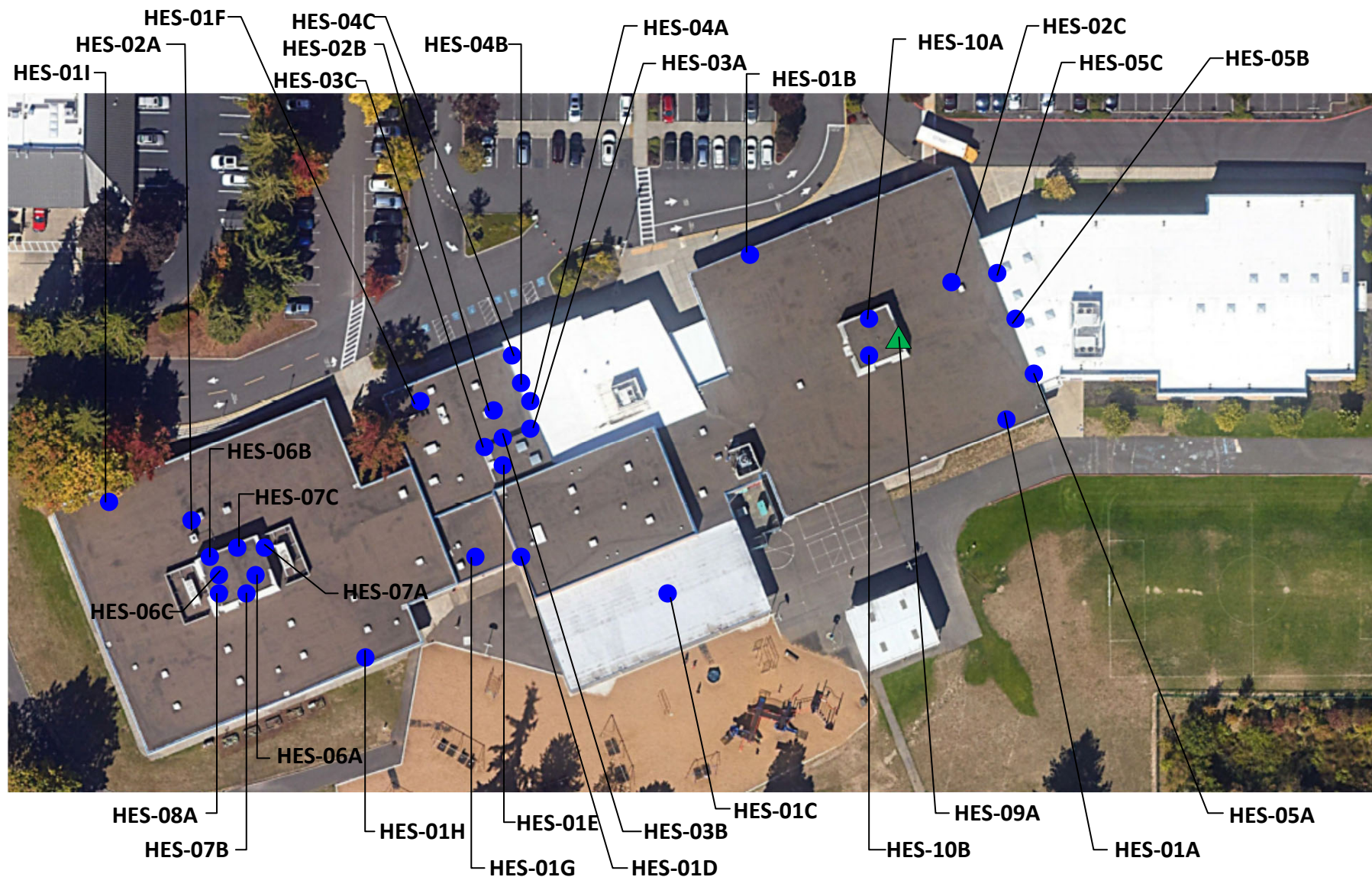


Matthew Cuda
Project Manager



Ron Landolt, CAC
NW Region BSI Practice Manager

Appendix A – Figure(s)



LEGEND

- — Non-Asbestos Sample Location
- ★ — Asbestos-Containing Sample Location
- ▲ — OSHA Regulated Sample Location

ASBESTOS SURVEY REPORT SAMPLE LOCATION DIAGRAM

HITEON ELEMENTARY SCHOOL
13800 SW BROCKMAN STREET
BEAVERTON, OREGON 970005

TRC Project No.: 401824.0001

Figure: 1.1

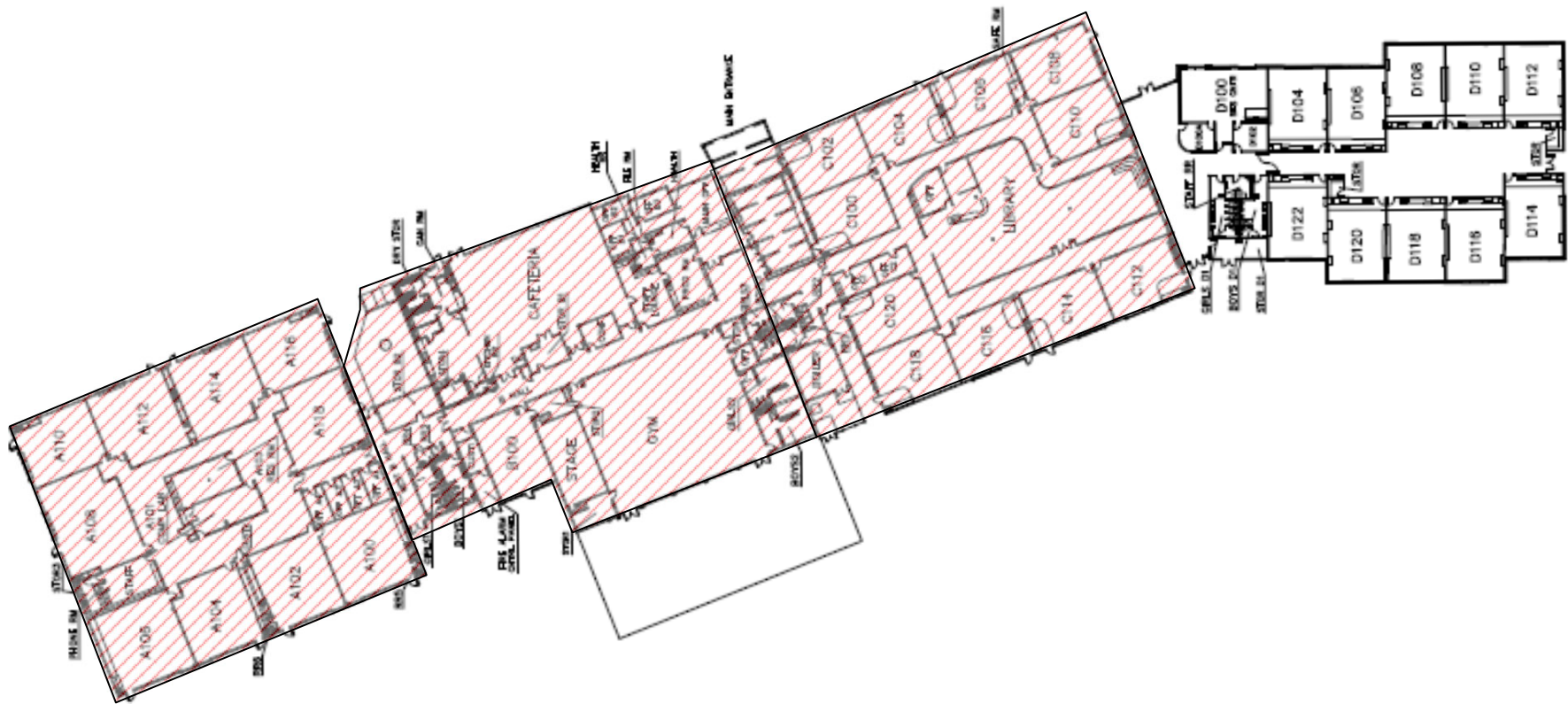
Drawn by: MC

Reviewed by: RAL

Date: July 2020



4105 SE International Way, Suite 505
Milwaukie, Oregon 97222
Phone: (503) 387-3251 Fax: (503) 908-1318



LEGEND



— OSHA Regulated Gypsum Board and Joint Compound (Composite <1%) – Based on a mix of current and prior sampling data.

ASBESTOS SURVEY REPORT OSHA REGULATED MATERIAL LOCATION DIAGRAM

HITEON ELEMENTARY SCHOOL
13800 SW BROCKMAN STREET
BEAVERTON, OREGON 970005

TRC Project No.: 401824.0001

Figure: 1.3

Drawn by: MC

Reviewed by: RAL

Date: July 2020



4105 SE International Way, Suite 505
Milwaukie, Oregon 97222
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Appendix B – Laboratory Analytical Data Sheets

EMC LABS, INC.

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044
Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report

0239577

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	TRC SOLUTIONS	Job# / P.O. #:	401824
Address:	4105 SE INTERNATIONAL WAY, STE 505	Date Received:	07/01/2020
	MILWAUKIE OR 97222	Date Analyzed:	07/02/2020
Collected:	06/29/2020	Date Reported:	07/07/2020
Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-001 HES-01A	THROUGHOUT ROOF	LAYER 1 Roofing, Black	No	None Detected	Fibrous Glass 15% Synthetic Fiber 3% Cellulose Fiber 2% Carbonates Quartz Binder/Filler 80%
		LAYER 2 Roofing, Black/ Tan	No	None Detected	Cellulose Fiber 18% Fibrous Glass 2% Carbonates Quartz Binder/Filler 80%
		LAYER 3 Roofing, Black	No	None Detected	Fibrous Glass 20% Carbonates Quartz Binder/Filler 80%
		LAYER 4 Roofing, Black	No	None Detected	Fibrous Glass 20% Carbonates Quartz Binder/Filler 80%

Please see EMC Labs Sample Number 0239577-058 for Additional Layer(s)

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Collected:	06/29/2020	Date Reported:	07/07/2020
Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-002 HES-01B	THROUGHOUT ROOF	LAYER 1 Roofing, Black	No	None Detected	Cellulose Fiber 18% Fibrous Glass 2% Carbonates Quartz Binder/Filler 80%
		LAYER 2 Roofing, Black	No	None Detected	Cellulose Fiber 10% Fibrous Glass 7% Synthetic Fiber 3% Carbonates Quartz Binder/Filler 80%
		LAYER 3 Roofing, Black/ Tan	No	None Detected	Cellulose Fiber 90% Gypsum Quartz Binder/Filler 10%
		LAYER 4 Roofing, Black	No	None Detected	Fibrous Glass 20% Carbonates Quartz Binder/Filler 80%

Please see EMC Labs Sample Number 0239577-059 for Additional Layer(s)

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	MILWAUKIE OR 97222	Date Analyzed:	07/02/2020
Collected:	06/29/2020	Date Reported:	07/07/2020
Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-003 HES-01C	THROUGHOUT ROOF	LAYER 1 Roofing, Silver	No	None Detected	Cellulose Fiber <1%
					Carbonates
					Quartz
					Binder/Filler 99%
		LAYER 2 Roofing, Black	No	None Detected	Fibrous Glass 17%
					Cellulose Fiber 3%
					Carbonates
					Quartz
					Binder/Filler 80%
		LAYER 3 Roofing, Black/ Tan	No	None Detected	Cellulose Fiber 85%
					Carbonates
					Gypsum
		LAYER 4 Roofing, Black	No	None Detected	Quartz
					Perlite
					Binder/Filler 15%
					Fibrous Glass 20%
					Carbonates
					Quartz
					Binder/Filler 80%

Please see EMC Labs Sample Number 0239577-060 for Additional Layer(s)

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Collected:	06/29/2020	Date Reported:	07/07/2020
Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-004 HES-01D	THROUGHOUT ROOF	LAYER 1 Roofing, Black	No	None Detected	Fibrous Glass 15% Cellulose Fiber 5% Carbonates Quartz Binder/Filler 80%
		LAYER 2 Roofing, Black/ Tan	No	None Detected	Cellulose Fiber 85% Gypsum Quartz Carbonates Perlite Binder/Filler 15%
		LAYER 3 Roofing, Black	No	None Detected	Fibrous Glass 20% Carbonates Quartz Binder/Filler 80%
		LAYER 4 Roofing, Black	No	None Detected	Fibrous Glass 20% Carbonates Quartz Binder/Filler 80%

Please see EMC Labs Sample Number 0239577-061 for Additional Layer(s)

0239577-005 HES-01E	THROUGHOUT ROOF	LAYER 1 Roofing, Black	No	None Detected	Cellulose Fiber 20% Carbonates Quartz Binder/Filler 80%
		LAYER 2 Roofing, Black	No	None Detected	Fibrous Glass 15% Cellulose Fiber 5% Carbonates Quartz Binder/Filler 80%
		LAYER 3 Roofing, Black	No	None Detected	Fibrous Glass 15% Synthetic Fiber 3% Cellulose Fiber 2% Carbonates Quartz Binder/Filler 80%

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Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-006 HES-01F	THROUGHOUT ROOF	LAYER 1 Roofing, Black	No	None Detected	Fibrous Glass 17% Cellulose Fiber 3% Carbonates Quartz Binder/Filler 80%
		LAYER 2 Roofing, Black/ Tan	No	None Detected	Cellulose Fiber 85% Gypsum Quartz Carbonates Perlite Binder/Filler 15%
		LAYER 3 Roofing, Black	No	None Detected	Fibrous Glass 20% Carbonates Perlite Binder/Filler 80%
		LAYER 4 Roofing, Black	No	None Detected	Fibrous Glass 20% Carbonates Perlite Binder/Filler 80%

Please see EMC Labs Sample Number 0239577-062 for Additional Layer(s)

0239577-007 HES-01G	THROUGHOUT ROOF	LAYER 1 Roofing, Black	No	None Detected	Fibrous Glass 15% Synthetic Fiber 3% Cellulose Fiber 2% Carbonates Quartz Binder/Filler 80%
		LAYER 2 Roofing, Black/ Tan	No	None Detected	Cellulose Fiber 85% Gypsum Quartz Carbonates Perlite Binder/Filler 15%

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NVLAP#101926-0

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	MILWAUKIE OR 97222	Date Analyzed:	07/07/2020
Collected:	06/29/2020	Date Reported:	07/07/2020
Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-008 HES-01H	THROUGHOUT ROOF	LAYER 1 Roofing, Black	No	None Detected	Fibrous Glass 15% Synthetic Fiber 3% Cellulose Fiber 2% Carbonates Quartz Binder/Filler 80%
		LAYER 2 Roofing, Black/ Tan	No	None Detected	Cellulose Fiber 85% Gypsum Quartz Carbonates Perlite Binder/Filler 15%
		LAYER 3 Roofing, Black	No	None Detected	Fibrous Glass 20% Carbonates Perlite Binder/Filler 80%
		LAYER 4 Roofing, Black	No	None Detected	Fibrous Glass 20% Carbonates Perlite Binder/Filler 80%

Please see EMC Labs Sample Number 0239577-063 for Additional Layer(s)

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NVLAP#101926-0

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Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents				
0239577-009 HES-011	THROUGHOUT ROOF	LAYER 1 Roofing, Black	No	None Detected	Fibrous Glass 15% Synthetic Fiber 3% Cellulose Fiber 2% Carbonates Quartz Binder/Filler 80%				
		LAYER 2 Roofing, Black/ Tan	No	None Detected	Cellulose Fiber 85% Gypsum Quartz Carbonates Perlite Binder/Filler 15%				
		LAYER 3 Roofing, Black	No	None Detected	Fibrous Glass 20% Carbonates Perlite Binder/Filler 80%				
		LAYER 4 Roofing, Black	No	None Detected	Fibrous Glass 20% Carbonates Perlite Binder/Filler 80%				
		Please see EMC Labs Sample Number 0239577-064 for Additional Layer(s)							
		0239577-010 HES-02A	ROOF	LAYER 1 Caulking, Gray	No	None Detected	Carbonates Quartz Binder/Filler 100%		
				LAYER 2 Coating, Silver	No	None Detected	Carbonates Quartz Binder/Filler 100%		
				0239577-011 HES-02B	ROOF	Caulking, Gray	No	None Detected	Carbonates Quartz Binder/Filler 100%

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Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-012 HES-02C	ROOF	Caulking, Gray	No	None Detected	Carbonates Quartz Binder/Filler 100%
0239577-013 HES-03A	ROOF	Felt, Black	No	None Detected	Fibrous Glass Synthetic Fiber Carbonates Quartz Binder/Filler 30% 10% 60%
0239577-014 HES-03B	ROOF	Felt, Black	No	None Detected	Fibrous Glass Synthetic Fiber Carbonates Quartz Binder/Filler 30% 10% 60%
0239577-015 HES-03C	ROOF	Felt, Black	No	None Detected	Fibrous Glass Synthetic Fiber Carbonates Quartz Binder/Filler 30% 10% 60%
0239577-016 HES-04A	ROOFING AT EDGE OF TPO ROOFING	Caulking, Black	No	None Detected	Carbonates Quartz Binder/Filler 100%
0239577-017 HES-04B	ROOFING AT EDGE OF TPO ROOFING	Caulking, Black	No	None Detected	Carbonates Quartz Binder/Filler 100%

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Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-018 HES-04C	ROOFING AT EDGE OF TPO ROOFING	Caulking, Black	No	None Detected	Carbonates Quartz Binder/Filler 100%
0239577-019 HES-05A	ROOFING AT EDGE OF TPO ROOFING	Roofing Mastic, White/ Gray	No	None Detected	Talc 1% Carbonates Gypsum Quartz Binder/Filler 99%
0239577-020 HES-05B	ROOFING AT EDGE OF TPO ROOFING	Roofing Mastic, White/ Gray	No	None Detected	Talc 1% Carbonates Gypsum Quartz Binder/Filler 99%
0239577-021 HES-05C	ROOFING AT EDGE OF TPO ROOFING	Roofing Mastic, White/ Gray	No	None Detected	Talc 1% Carbonates Gypsum Quartz Binder/Filler 99%
0239577-022 HES-06A	A WING MECHANICAL MEZZANINE, VARIOUS HVAC DUCT COMPONENTS	Duct Tape, White/ Tan	No	None Detected	Cellulose Fiber 20% Carbonates Gypsum Quartz Binder/Filler 80%

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Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0239577-023 HES-06B	A WING MECHANICAL MEZZANINE, VARIOUS HVAC DUCT COMPONENTS	Duct Tape, White/ Tan	No	None Detected	Cellulose Fiber	20%
					Carbonates Gypsum Quartz Binder/Filler	80%
0239577-024 HES-06C	A WING MECHANICAL MEZZANINE, VARIOUS HVAC DUCT COMPONENTS	Duct Tape, White/ Tan	No	None Detected	Cellulose Fiber	20%
					Carbonates Gypsum Quartz Binder/Filler	80%
0239577-025 HES-07A	A WING MECHANICAL MEZZANINE	Caulking, Gray	No	None Detected	Carbonates Quartz Binder/Filler	100%
0239577-026 HES-07B	A WING MECHANICAL MEZZANINE	Caulking, Gray	No	None Detected	Carbonates Quartz Binder/Filler	100%

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		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-027 HES-07C	A WING MECHANICAL MEZZANINE	Caulking, Gray	No	None Detected	Carbonates Quartz Binder/Filler 100%
0239577-028 HES-08A	THROUGHOUT A WING	LAYER 1 Gypsum Board, White/ Brown	No	None Detected	Cellulose Fiber Fibrous Glass Gypsum Quartz Carbonates Mica 88%
		LAYER 2 Joint Compound, Off White	No	None Detected	Carbonates Mica Quartz Binder/Filler 100%
0239577-029 HES-08B	THROUGHOUT A WING	LAYER 1 Gypsum Board, White/ Brown	No	None Detected	Cellulose Fiber Fibrous Glass Gypsum Quartz Carbonates Mica 88%
		LAYER 2 Joint Compound, Off White	No	None Detected	Carbonates Mica Quartz Binder/Filler 100%

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		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-030 HES-08C	THROUGHOUT A WING	LAYER 1 Gypsum Board, White/ Brown	No	None Detected	Cellulose Fiber 10% Fibrous Glass 2% Gypsum Quartz Carbonates Mica 88%
		LAYER 2 Joint Compound, Off White	No	None Detected	Carbonates Mica Quartz Binder/Filler 100%
0239577-031 HES-09A	THROUGHOUT C WING	LAYER 1 Gypsum Board, White/ Brown	No	None Detected	Cellulose Fiber 10% Fibrous Glass 2% Gypsum Quartz Carbonates Mica 88%
		LAYER 2 Joint Compound, Off White	Yes	Chrysotile 3%	Cellulose Fiber <1% Carbonates Mica Quartz Binder/Filler 96%

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		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-032 HES-09B	THROUGHOUT C WING	LAYER 1 Gypsum Board, White/ Brown	No	None Detected	Cellulose Fiber 10% Fibrous Glass 2% Gypsum Quartz Carbonates Mica 88%
		LAYER 2 Joint Compound, Off White	Yes	Chrysotile 2%	Carbonates Mica Quartz Binder/Filler 98%
		LAYER 3 Texture, Off White	No	None Detected	Carbonates Mica Quartz Perlite Binder/Filler 100%
0239577-033 HES-09C	THROUGHOUT C WING	LAYER 1 Gypsum Board, White/ Brown	No	None Detected	Cellulose Fiber 10% Fibrous Glass 2% Gypsum Quartz Carbonates Mica 88%
		LAYER 2 Joint Compound, Off White	Yes	Chrysotile 2%	Carbonates Mica Quartz Binder/Filler 98%

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Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-034 HES-10A	C WING MECHANICAL MEZZANINE THROUGHOUT PLUMBING SYSTEM	LAYER 1 Hard Fitting, Gray	No	None Detected	Cellulose Fiber 15% Mineral Wool 15%
					Carbonates Gypsum Quartz Perlite Binder/Filler 70%
		LAYER 2 Hard Fitting, Beige	No	None Detected	Cellulose Fiber 15% Wollastonite 5%
					Quartz Mica Gypsum Carbonates Binder/Filler 80%
		LAYER 3 Hard Fitting, White	No	None Detected	Cellulose Fiber 95%
					Carbonates Gypsum Binder/Filler 5%
0239577-035 HES-10B	C WING MECHANICAL MEZZANINE THROUGHOUT PLUMBING SYSTEM	LAYER 1 Hard Fitting, Gray	No	None Detected	Mineral Wool 30%
					Carbonates Gypsum Quartz Perlite Binder/Filler 70%
		LAYER 2 Hard Fitting, White	No	None Detected	Cellulose Fiber 95%
					Carbonates Gypsum Binder/Filler 5%

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Client:	TRC SOLUTIONS	Job# / P.O. #:	401824
Address:	4105 SE INTERNATIONAL WAY, STE 505	Date Received:	07/01/2020
	MILWAUKIE OR 97222	Date Analyzed:	07/02/2020
Collected:	06/29/2020	Date Reported:	07/07/2020
Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0239577-036 HES-10C	C WING MECHANICAL MEZZANINE THROUGHOUT PLUMBING SYSTEM	LAYER 1 Hard Fitting, Yellow	No	None Detected	Fibrous Glass	95%
					Carbonates	5%
		LAYER 2 Hard Fitting, Gray	No	None Detected	Mineral Wool	30%
					Cellulose Fiber	5%
					Carbonates	
					Gypsum	
					Quartz	
					Perlite	
					Binder/Filler	65%
0239577-037 HES-11A	THROUGHOUT C WING	2x4 Ceiling Tile, White/ Gray	No	None Detected	Cellulose Fiber	75%
					Mineral Wool	5%
					Carbonates	
					Quartz	
					Perlite	
0239577-038 HES-11B	THROUGHOUT C WING	2x4 Ceiling Tile, White/ Gray	No	None Detected	Binder/Filler	20%
					Mineral Wool	65%
					Cellulose Fiber	15%
					Carbonates	
					Quartz	
0239577-039 HES-11C	THROUGHOUT C WING	2x4 Ceiling Tile, White/ Gray	No	None Detected	Perlite	
					Binder/Filler	20%
					Mineral Wool	65%
					Cellulose Fiber	15%
					Carbonates	

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Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Laboratory Report

0239577

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	TRC SOLUTIONS	Job# / P.O. #:	401824
Address:	4105 SE INTERNATIONAL WAY, STE 505	Date Received:	07/01/2020
	MILWAUKIE OR 97222	Date Analyzed:	07/02/2020
Collected:	06/29/2020	Date Reported:	07/07/2020
Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-040 HES-12A	HVAC DUCTS THROUGHOUT	HVAC Duct Mastic, Gray	No	None Detected	Carbonates Quartz Binder/Filler 100%
0239577-041 HES-12B	HVAC DUCTS THROUGHOUT	HVAC Duct Mastic, Gray	No	None Detected	Carbonates Quartz Binder/Filler 100%
0239577-042 HES-12C	HVAC DUCTS THROUGHOUT	HVAC Duct Mastic, Gray	No	None Detected	Carbonates Quartz Binder/Filler 100%
0239577-043 HES-13A	ABOVE CEILING APPEARS TO BE FROM ROOFING	Mastic, Black	No	None Detected	Carbonates Quartz Binder/Filler 100%
0239577-044 HES-13B	ABOVE CEILING APPEARS TO BE FROM ROOFING	Mastic, Black	No	None Detected	Carbonates Quartz Binder/Filler 100%
0239577-045 HES-13C	ABOVE CEILING APPEARS TO BE FROM ROOFING	Mastic, Black	No	None Detected	Fibrous Glass Carbonates Quartz Binder/Filler 1% 99%

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Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	TRC SOLUTIONS	Job# / P.O. #:	401824
Address:	4105 SE INTERNATIONAL WAY, STE 505	Date Received:	07/01/2020
	MILWAUKIE OR 97222	Date Analyzed:	07/02/2020
Collected:	06/29/2020	Date Reported:	07/07/2020
Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-046 HES-14A	THROUGHOUT B WING	2x4 Ceiling Tile, White/ Gray	No	None Detected	Cellulose Fiber 75% Mineral Wool 5% Carbonates Quartz Perlite Binder/Filler 20%
0239577-047 HES-14B	THROUGHOUT B WING	2x4 Ceiling Tile, White/ Gray	No	None Detected	Cellulose Fiber 75% Mineral Wool 5% Carbonates Quartz Perlite Binder/Filler 20%
0239577-048 HES-14C	THROUGHOUT B WING	2x4 Ceiling Tile, White/ Gray	No	None Detected	Cellulose Fiber 75% Mineral Wool 5% Carbonates Quartz Perlite Binder/Filler 20%
0239577-049 HES-15A	THROUGHOUT B WING	LAYER 1 Gypsum Board, White/ Brown	No	None Detected	Cellulose Fiber 10% Fibrous Glass 2% Gypsum Quartz Carbonates Mica 88%
		LAYER 2 Joint Compound, Off White	No	None Detected	Carbonates Mica Quartz Perlite Binder/Filler 100%

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Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	TRC SOLUTIONS	Job# / P.O. #:	401824
Address:	4105 SE INTERNATIONAL WAY, STE 505	Date Received:	07/01/2020
	MILWAUKIE OR 97222	Date Analyzed:	07/02/2020
Collected:	06/29/2020	Date Reported:	07/07/2020
Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-050 HES-15B	THROUGHOUT B WING	LAYER 1 Gypsum Board, White/ Brown	No	None Detected	Cellulose Fiber 10% Fibrous Glass 2% Gypsum Quartz Carbonates Mica 88%
		LAYER 2 Joint Compound, Off White	No	None Detected	Carbonates Mica Quartz Perlite Binder/Filler 100%
0239577-051 HES-15C	THROUGHOUT B WING	LAYER 1 Gypsum Board, White/ Brown	No	None Detected	Cellulose Fiber 10% Fibrous Glass 2% Gypsum Quartz Carbonates Mica 88%
		LAYER 2 Joint Compound, Off White	No	None Detected	Carbonates Mica Quartz Binder/Filler 100%
0239577-052 HES-16A	THROUGHOUT A WING	2x4 Ceiling Tile, White/ Gray	No	None Detected	Cellulose Fiber 40% Mineral Wool 40% Carbonates Quartz Perlite Binder/Filler 20%
0239577-053 HES-16B	THROUGHOUT A WING	2x4 Ceiling Tile, White/ Gray	No	None Detected	Cellulose Fiber 40% Mineral Wool 40% Carbonates Quartz Perlite Binder/Filler 20%

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Laboratory Report

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Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	TRC SOLUTIONS	Job# / P.O. #:	401824
Address:	4105 SE INTERNATIONAL WAY, STE 505	Date Received:	07/01/2020
	MILWAUKIE OR 97222	Date Analyzed:	07/02/2020
Collected:	06/29/2020	Date Reported:	07/07/2020
Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-054 HES-16C	THROUGHOUT A WING	2x4 Ceiling Tile, White/ Gray	No	None Detected	Cellulose Fiber 40% Mineral Wool 40% Carbonates Quartz Perlite Binder/Filler 20%
0239577-055 HES-17A	GYM STAGE	LAYER 1 1x1 Ceiling Tile, White/ Tan	No	None Detected	Cellulose Fiber 85% Carbonates Gypsum Binder/Filler 15%
		LAYER 2 Glue, Dk. Brown	No	None Detected	Cellulose Fiber 1% Carbonates Quartz Binder/Filler 99%
0239577-056 HES-17B	GYM STAGE	LAYER 1 1x1 Ceiling Tile, White/ Tan	No	None Detected	Cellulose Fiber 85% Carbonates Gypsum Binder/Filler 15%
		LAYER 2 Glue, Dk. Brown	No	None Detected	Cellulose Fiber <1% Carbonates Quartz Binder/Filler 99%
0239577-057 HES-17C	GYM STAGE	LAYER 1 1x1 Ceiling Tile, White/ Tan	No	None Detected	Cellulose Fiber 85% Carbonates Gypsum Binder/Filler 15%
		LAYER 2 Glue, Dk. Brown	No	None Detected	Carbonates Quartz Binder/Filler 100%

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Laboratory Report

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Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	TRC SOLUTIONS	Job# / P.O. #:	401824
Address:	4105 SE INTERNATIONAL WAY, STE 505	Date Received:	07/01/2020
	MILWAUKIE OR 97222	Date Analyzed:	07/07/2020
Collected:	06/29/2020	Date Reported:	07/07/2020
Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents	
0239577-058 HES-01A	THROUGHOUT ROOF - ADDITIONAL LAYERS	LAYER 1 Roofing, Black	No	None Detected	Fibrous Glass	20%
					Carbonates Quartz Binder/Filler	80%
		LAYER 2 Roofing, Black	No	None Detected	Fibrous Glass	20%
					Carbonates Quartz Binder/Filler	80%
		LAYER 3 Insulation, Tan	No	None Detected	Cellulose Fiber	85%
					Gypsum Quartz Perlite Binder/Filler	15%
0239577-059 HES-01B	THROUGHOUT ROOF - ADDITIONAL LAYERS	LAYER 1 Roofing, Black	No	None Detected	Fibrous Glass	20%
					Carbonates Quartz Binder/Filler	80%
		LAYER 2 Roofing, Black	No	None Detected	Fibrous Glass	20%
					Carbonates Quartz Binder/Filler	80%
		LAYER 3 Roofing, Black	No	None Detected	Fibrous Glass	17%
					Cellulose Fiber	3%
					Carbonates Quartz Binder/Filler	80%
		LAYER 4 Insulation, Tan	No	None Detected	Cellulose Fiber	85%
					Gypsum Quartz Perlite Binder/Filler	15%

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Laboratory Report

0239577

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	TRC SOLUTIONS	Job# / P.O. #:	401824
Address:	4105 SE INTERNATIONAL WAY, STE 505	Date Received:	07/01/2020
	MILWAUKIE OR 97222	Date Analyzed:	07/07/2020
Collected:	06/29/2020	Date Reported:	07/07/2020
Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-060 HES-01C	THROUGHOUT ROOF - ADDITIONAL LAYERS	LAYER 1 Roofing, Black	No	None Detected	Fibrous Glass 20%
					Carbonates Quartz Binder/Filler 80%
		LAYER 2 Roofing, Black	No	None Detected	Fibrous Glass 20%
					Carbonates Quartz Binder/Filler 80%
		LAYER 3 Roofing, Black	No	None Detected	Fibrous Glass 20%
					Carbonates Quartz Binder/Filler 80%
		LAYER 4 Roofing, Black	No	None Detected	Fibrous Glass 17%
					Cellulose Fiber 3%
					Carbonates Quartz Binder/Filler 80%

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Laboratory Report

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Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	TRC SOLUTIONS	Job# / P.O. #:	401824
Address:	4105 SE INTERNATIONAL WAY, STE 505	Date Received:	07/01/2020
	MILWAUKIE OR 97222	Date Analyzed:	07/07/2020
Collected:	06/29/2020	Date Reported:	07/07/2020
Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-061 HES-01D	THROUGHOUT ROOF - ADDITIONAL LAYERS	LAYER 1 Roofing, Black	No	None Detected	Fibrous Glass 20%
					Carbonates Quartz Binder/Filler 80%
		LAYER 2 Roofing, Black	No	None Detected	Fibrous Glass 20%
					Carbonates Quartz Binder/Filler 80%
		LAYER 3 Roofing, Black	No	None Detected	Fibrous Glass 20%
					Carbonates Quartz Binder/Filler 80%
		LAYER 4 Roofing, Black	No	None Detected	Fibrous Glass 20%
					Carbonates Quartz Binder/Filler 80%
0239577-062 HES-01F	THROUGHOUT ROOF - ADDITIONAL LAYERS	LAYER 1 Roofing, Black	No	None Detected	Fibrous Glass 20%
					Carbonates Quartz Binder/Filler 80%
		LAYER 2 Roofing, Black	No	None Detected	Fibrous Glass 20%
					Carbonates Quartz Binder/Filler 80%
		LAYER 3 Roofing, Black	No	None Detected	Fibrous Glass 20%
					Carbonates Quartz Binder/Filler 80%

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Laboratory Report
0239577

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	TRC SOLUTIONS	Job# / P.O. #:	401824
Address:	4105 SE INTERNATIONAL WAY, STE 505	Date Received:	07/01/2020
	MILWAUKIE OR 97222	Date Analyzed:	07/07/2020
Collected:	06/29/2020	Date Reported:	07/07/2020
Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:		Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
0239577-063 HES-01H	THROUGHOUT ROOF - ADDITIONAL LAYERS	LAYER 1 Roofing, Black	No	None Detected	Fibrous Glass 20%
					Carbonates Quartz Binder/Filler 80%
		LAYER 2 Roofing, Black	No	None Detected	Cellulose Fiber 15%
					Fibrous Glass 5%
0239577-064 HES-01I	THROUGHOUT ROOF - ADDITIONAL LAYERS	LAYER 1 Roofing, Black	No	None Detected	Carbonates Quartz Binder/Filler 80%
					Fibrous Glass 15%
		LAYER 2 Roofing, Black	No	None Detected	Cellulose Fiber 5%
					Carbonates Quartz Binder/Filler 80%



Analyst - Octavio Gavarreteayestas



Signatory - Lab Director - Kurt Kettler

Distinctly stratified, easily separable layers of samples are analyzed as subsamples of the whole and are reported separately for each discernible layer. All analyses are derived from calibrated visual estimate and measured in area percent unless otherwise noted. The report applies to the standards or procedures identified and to the sample(s) tested. The test results are not necessarily indicated or representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products, nor do they represent an ongoing quality assurance program unless so noted. These reports are for the exclusive use of the addressed client and that they will not be reproduced wholly or in part for advertising or other purposes over our signature or in connection with our name without special written permission. The report shall not be reproduced except in full, without written approval by our laboratory. The samples not destroyed in testing are retained a maximum of thirty days. The laboratory measurement of uncertainty for the test method is approximately less than 1 by area percent. Accredited by the National Institute of Standards and Technology, Voluntary Laboratory Accreditation Program for selected test method for asbestos. The accreditation or any reports generated by this laboratory in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Polarized Light Microscopy may not be consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.

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Laboratory Report
0239866

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	TRC SOLUTIONS	Job# / P.O. #:	401824
Address:	4105 SE INTERNATIONAL WAY, STE 505	Date Received:	07/08/2020
	MILWAUKIE OR 97222	Date Analyzed:	07/10/2020
Collected:	06/29/2020	Date Reported:	07/10/2020
Project Name:	HITEON ELEMENTARY HVAC UPGRADE	EPA Method:	EPA 600/R-93/116
Address:	POINT COUNT LAB #239577	Submitted By:	MATT CUDA
		Collected By:	

Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Type (%)	Non-Asbestos Constituents
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0239866-001 HES-09A	THROUGHOUT C WING	Gypsum Board/ Joint Compound Composite, White/ Brown/ Off White	Yes	Chrysotile	0.5%	Cellulose Fiber Fibrous Glass Gypsum Quartz Carbonates Mica Binder/Filler	8.6% 1.7% 89.2%
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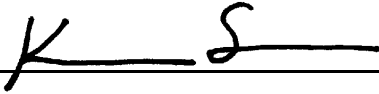
COMPOSITE ANALYSIS; 400 Pt. POINT COUNT

0239866-002 HES-09B	THROUGHOUT C WING	Gypsum Board/ Joint Compound Composite, White/ Brown/ Off White	Yes	Chrysotile	0.3%	Cellulose Fiber Fibrous Glass Gypsum Quartz Carbonates Mica Binder/Filler	8.6% 1.7% 89.4%
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COMPOSITE ANALYSIS; 400 Pt. POINT COUNT

0239866-003 HES-09C	THROUGHOUT C WING	Gypsum Board/ Joint Compound Composite, White/ Brown/ Off White	Yes	Chrysotile	0.4%	Cellulose Fiber Fibrous Glass Gypsum Quartz Carbonates Mica Binder/Filler	8.5% 1.7% 89.4%
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COMPOSITE ANALYSIS; 400 Pt. POINT COUNT



Analyst - Kenneth Scheske



Signatory - Lab Director - Kurt Kettler

Distinctly stratified, easily separable layers of samples are analyzed as subsamples of the whole and are reported separately for each discernible layer. All analyses are derived from calibrated visual estimate and measured in area percent unless otherwise noted. The report applies to the standards or procedures identified and to the sample(s) tested. The test results are not necessarily indicated or representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products, nor do they represent an ongoing quality assurance program unless so noted. These reports are for the exclusive use of the addressed client and that they will not be reproduced wholly or in part for advertising or other purposes over our signature or in connection with our name without special written permission. The report shall not be reproduced except in full, without written approval by our laboratory. The samples not destroyed in testing are retained a maximum of thirty days. The laboratory measurement of uncertainty for the test method is approximately less than 1 by area percent. Accredited by the National Institute of Standards and Technology, Voluntary Laboratory Accreditation Program for selected test method for asbestos. The accreditation or any reports generated by this laboratory in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government. Polarized Light Microscopy may not be consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.

CHAIN OF CUSTODY

EMC Labs, Inc.
9830 S. 51st St., Ste B-109
Phoenix, AZ 85044
(800) 362-3373 Fax (480) 893-1726

LAB#: 239577
TAT: 3 day
Rec'd: JUL 01 AM

COMPANY NAME: **TRC SOLUTIONS**
4105 SE International Way, Suite 505
Milwaukie, Oregon 97222
CONTACT: Ron Landolt **Scan & Excel**
Phone/Fax: (503) 387-3251 / (503) 908-1318
Email: rlandolt@trccompanies.com and mcuda@trccompanies.com

BILL TO: (If Different Location)
Phoenix, AZ

Now Accepting: **VISA – MASTERCARD**

Price Quoted: \$ _____ / Sample \$ _____ / Layers

COMPLETE ITEMS 1-4: (Failure to complete any items may cause a delay in processing or analyzing your samples)

1. TURNAROUND TIME: [4hr rush] [8hr rush] [1-Day] [2-Day] [3-Day] [5-Day] [6-10 Day]

***Prior confirmation of turnaround time is required

***Additional charges for rush analysis (please call marketing department for pricing details)

***Laboratory analysis may be subject to delay if credit terms are not met

2. TYPE OF ANALYSIS: [Bulk-PCM] [Air-PCM] [Lead] [Point Count] [Fungi: AOC, W-C, Bulk, Swab, Tape]

3. DISPOSAL INSTRUCTIONS: [Dispose of samples at EMC] / [Return samples to me at my expense]

(If you do not indicate preference, EMC will dispose of samples 60 days from analysis.)

4. Project Name: Hiteon Elementary HVAC Upgrade

P.O. Number: _____ **Project Number:** 401824

EMC SAMPLE #	CLIENT SAMPLE #	DATE & TIME SAMPLED	LOCATION/MATERIAL TYPE	Samples Accepted Yes / No	AIR SAMPLE INFO / COMMENTS		
					ON	OFF	FLOW RATE
1	HES-01A	6-29-20	See Attached Field Logs	N			
				N			
				N			
				N			
				N			
				N			
				N			
57	HES-17C			N			
58			ADDITIONAL LOGS	N			
59				N			
60				N			
61				N			
62				N			
63				N			
64				N			

SPECIAL INSTRUCTIONS:

Sample Collector: (Print) Matt Cuda (Signature) *[Signature]* 918
Relinquished by: *[Signature]* Date/Time: 6-30-20 1500 Received by: *[Signature]* Date/Time: 7/1/20
Relinquished by: *[Signature]* Date/Time: 7/1/20 Received by: *[Signature]* Date/Time: 7/1/20
Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____

** In the event of any dispute between the above parties for these services or otherwise, parties agree that jurisdiction and venue will be in Phoenix, Arizona and prevailing party will be entitled to attorney's fees and court costs.



4105 SE International Way, Suite 505,
Milwaukie, OR 97222

ASBESTOS BULK SAMPLE CHAIN OF CUSTODY FORM

Client: Beaverton School District	Project Number: 401824	Inspector(s): Jason Stone, Matt Cuda
Project Name: Hiteon Elementary School HVAC Upgrade Project Hiteon Elementary School 13800 SW Brockman Street Beaverton, Oregon 97005	Tracking Number:	Requested TAT: 3 DAY
Email Results to: mcuda@trccompanies.com, rlandolt@trccompanies.com	Analytical Method: PLM EPA 600/R-93/116	Lab Comments:

ASBESTOS BULK SAMPLE INFORMATION

Date Collected	Sample Identification	Material Description	Homogeneous Area	Sample Location	Lab Identification (Lab Use Only)
2020-06-29	HES-01A	Built-up Roofing	Throughout Roof	See Diagram - C Wing roof	
2020-06-29	HES-01B	Built-up Roofing	Throughout Roof	See Diagram - C Wing roof	
2020-06-29	HES-01C	Built-up Roofing	Throughout Roof	See Diagram - play cover	
2020-06-29	HES-01D	Built-up Roofing	Throughout Roof	See Diagram - Gym Roof	
2020-06-29	HES-01E	Built-up Roofing	Throughout Roof	See Diagram - Hall/ Cafeteria Roof	
2020-06-29	HES-01F	Built-up Roofing	Throughout Roof	See Diagram - Cafeteria	
2020-06-29	HES-01G	Built-up Roofing	Throughout Roof	See Diagram - B rooms	
2020-06-29	HES-01H	Built-up Roofing	Throughout Roof	See Diagram - A wing roof	

1
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	Date Collected	Sample Identification	Material Description	Homogeneous Area	Sample Location	Lab Identification (Lab Use Only)
1	2020-06-29	HES-011	Built-up Roofing	Throughout Roof	See Diagram - A Wing Roof	
10	2020-06-29	HES-02A	Gray Roof Caulking		See Diagram - A Roof vent	
11	2020-06-29	HES-02B	Gray Roof Caulking		See Diagram - Cafeteria roof unit	
12	2020-06-29	HES-02C	Gray Roof Caulking		See Diagram - Roof	
13	2020-06-29	HES-03A	Roofing Felt Paper	Roof	See Diagram- Roof	
14	2020-06-29	HES-03B	Roofing Felt Paper	Roof	See Diagram	
15	2020-06-29	HES-03C	Roofing Felt Paper	Roof	See Diagram - Roof	
16	2020-06-29	HES-04A	Black Roof Caulking	Roofing At Edge of TPO roofing	See Diagram - Roof edge	
17	2020-06-29	HES-04B	Black Roof Caulking	Roofing At Edge of TPO roofing	See Diagram - Roof Edge	
18	2020-06-29	HES-04C	Black Roof Caulking	Roofing At Edge of TPO roofing	See Diagram - Roof Edge	
19	2020-06-29	HES-05A	Gray Roofing Mastic	Roof Edge at TPO ROOFING	See Diagram- Roof Edge	
20	2020-06-29	HES-05B	Gray Roofing Mastic	Roof Edge at TPO ROOFING	See Diagram-Roof Edge	
21	2020-06-29	HES-05C	Gray Roofing Mastic	Roof Edge at TPO ROOFING	See Diagram Roof Edge	
22	2020-06-29	HES-06A	HVAC Duct Tape	A wing Mechanical Mezzanine , Various HVAC duct components	See Diagram - A Wing Mechanical Mezzanine	
23	2020-06-29	HES-06B	HVAC Duct Tape	A wing Mechanical Mezzanine , Various HVAC duct components	See Diagram - A wing mechanical mezzanine	
24	2020-06-29	HES-06C	HVAC Duct Tape	A wing Mechanical Mezzanine , Various HVAC duct components	See Diagram - Hallway Outside Storage B2	
25	2020-06-29	HES-07A	Gray HVAC Caulking	A Wing Mechanical Mezzanine	See Diagram - A Wing Mechanical mezzanine	
26	2020-06-29	HES-07B	Gray HVAC Caulking	A Wing Mechanical Mezzanine	See Diagram - A Wing Mechanical Mezzanine	
27	2020-06-29	HES-07C	Gray HVAC Caulking	A Wing Mechanical Mezzanine	See Diagram - A-wing mechanical mezzanine	
28	2020-06-29	HES-08A	Gypsum Board and Joint Compound	Throughout A Wing	See Diagram - A wing Mechanical Mezzanine	

Date Collected	Sample Identification	Material Description	Homogeneous Area	Sample Location	Lab Identification (Lab Use Only)
2020-06-29	HES-08B	Gypsum Board and Joint Compound	Throughout A Wing	See Diagram- A Wing outside room A102	
2020-06-29	HES-08C	Gypsum Board and Joint Compound	Throughout A Wing	See Diagram - Room A112	
2020-06-29	HES-09A	Gypsum Board and Joint Compound	Throughout C Wing	See Diagram - C Wing Mechanical Mezzanine	
2020-06-29	HES-09B	Gypsum Board and Joint Compound	Throughout C Wing	See Diagram - C120	
2020-06-29	HES-09C	Gypsum Board and Joint Compound	Throughout C Wing	See Diagram - C106	
2020-06-29	HES-10A	Hard Fitting	C Wing Mechanical Mezzanine, Throughout Plumbing System	See Diagram - C Wing Mechanical Mezzanine	
2020-06-29	HES-10B	Hard Fitting	C Wing Mechanical Mezzanine, Throughout Plumbing System	See Diagram - C Wing Mechanical Mezzanine	
2020-06-29	HES-10C	Hard Fitting	C Wing Mechanical Mezzanine, Throughout Plumbing System	See Diagram - C106	
2020-06-29	HES-11A	2' x 4' Drop-in Ceiling Tile with fissures and Pinholes	Throughout C Wing	See Diagram - C Wing	
2020-06-29	HES-11B	2' x 4' Drop-in Ceiling Tile with fissures and Pinholes	Throughout C Wing	See Diagram - C112	
2020-06-29	HES-11C	2' x 4' Drop-in Ceiling Tile with fissures and Pinholes	Throughout C Wing	See Diagram - Room C106	
2020-06-29	HES-12A	Gray HVAC Duct Mastic	HVAC ducts throughout	See Diagram - C wing	
2020-06-29	HES-12B	Gray HVAC Duct Mastic	HVAC ducts throughout	See Diagram - Library	
2020-06-29	HES-12C	Gray HVAC Duct Mastic	HVAC ducts throughout	See Diagram - Library	
2020-06-29	HES-13A	Black Mastic	Above ceiling appears to be from roofing	See Diagram - C106	
2020-06-29	HES-13B	Black Mastic	Above ceiling appears to be from roofing	See Diagram	
2020-06-29	HES-13C	Black Mastic	Above ceiling appears to be from roofing	See Diagram	

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Date Collected	Sample Identification	Material Description	Homogeneous Area	Sample Location	Lab Identification (Lab Use Only)
46 2020-06-29	HES-14A	2' x 4' Drop-in Ceiling Tile, Pinholes	Throughout B Wing	See Diagram - Main Corridor	
47 2020-06-29	HES-14B	2' x 4' Drop-in Ceiling Tile, Pinholes	Throughout B Wing	See Diagram - Cafeteria	
48 2020-06-29	HES-14C	2' x 4' Drop-in Ceiling Tile, Pinholes	Throughout B Wing	See Diagram - Main Corridor	
49 2020-06-29	HES-15A	Gypsum Board and Joint Compound	Throughout B Wing	See Diagram - Cafeteria	
50 2020-06-29	HES-15B	Gypsum Board and Joint Compound	Throughout B Wing	See Diagram - Stage	
51 2020-06-29	HES-15C	Gypsum Board and Joint Compound	Throughout B Wing	See Diagram - Hall outside storage B2	
52 2020-06-29	HES-16A	2' x 4' Drop-in Ceiling Tile with Long Fissures and Pinholes	Throughout A Wing	See Diagram - A Wing	
53 2020-06-29	HES-16B	2' x 4' Drop-in Ceiling Tile with Long Fissures and Pinholes	Throughout A Wing	See Diagram - A112	
54 2020-06-29	HES-16C	2' x 4' Drop-in Ceiling Tile with Long Fissures and Pinholes	Throughout A Wing	See Diagram - A116	
55 2020-06-29	HES-17A	1'x1' Ceiling Tile and Glue	Gym, Stage	See Diagram- Gym	
56 2020-06-29	HES-17B	1'x1' Ceiling Tile and Glue	Gym, Stage	See Diagram - Gym	
57 2020-06-29	HES-17C	1'x1' Ceiling Tile and Glue	Gym, Stage	See Diagram - Stage	
Special Instruction to Laboratory:					
N/A					

CHAIN OF CUSTODY INFORMATION

Relinquished By:	Date	Time	Received By:	Date	Time
I. (Print): Matt Cuda	2020-06-30	13:45:52 PDT	I. (Print): <i>Donne</i>	7/1/20	
(Sign): <i>Matt Cuda</i>			(Sign): <i>Donne</i>		
II. (Print): <i>Donne</i>	7/1/20		II. (Print):		
(Sign): <i>Donne</i>			(Sign):		

Appendix C – Prior Documentation

ASBESTOS MATERIALS

The following materials either tested positive or are presumed to be asbestos-containing. Materials that had mixed results are considered positive. Materials not sampled or not listed in this report may contain asbestos and should be tested to verify asbestos content prior to impact, demolition, renovation, etc.

(+) Tested Positive, (M) Mixed Results, (P) Presumed Positive

Hiteon (HIT)			
Result	Material	Location	Quantity
P	MJP Pipe Fittings cmnt: One hard fitting by main hall roof access ragged, patched with duct tape. Continue to monitor - 2018 / [ID: 24749]	Attic	10 ea
M	Gypsum Wallboard/Joint Compound / Mixed Results, Cmmt: Tested <1% Chrysotile (19766.008-0008, -0009, -0010 phase 6) [ID: 27010]	Attic / Cafeteria	999 nq
P	Floor Tile and Mastic / Non-Visible PACM / / HSA 4,9,98,99, (Old Room: Main Building / Level 1 / C300 Commons), Cmmt: Carpeted [ID: 24848]	Level 1 / A Commons	150 sf
P	Floor Tile and Mastic / Visible-Positive / 12x12 / HSA 4,9,98,99, (Old Room: Main Building / Level 1 / C316), Cmmt: Encapsulated with white 12 x 12 tile during summer 2000. [ID: 24856]	Level 1 / A Hall Staff Room	330 sf
P	Floor Tile and Mastic / 12x12 / / , Cmmt: 120 SF visible in storage room. [ID: 27794]	Level 1 / A Hall Staff Room Storage	120 sf
P	Sheet Flooring Material and Mastic / PACM / / , (Old Room: Main Building / Level 1 / C308), Cmmt: 24 sq.ft. visible in restroom, remainder encapsulated with white 12x12 tile during Summer 2000. [ID: 24852]	Level 1 / A100	191 sf
P	Sheet Flooring Material and Mastic / PACM / / , (Old Room: Main Building / Level 1 / C310), Cmmt: 24 sq.ft. visible in restroom, remainder encapsulated with white 12x12 tile during Summer 2000. [ID: 24853]	Level 1 / A102	188 sf
M	Gypsum Wallboard/Joint Compound / Mixed Results, (Old Room: Main Building / Level 1 / C303), Cmmt: Non-Detect (19766.008-0025 phase 4) [ID: 26996]	Level 1 / A103 Restroom	999 nq
P	Sheet Flooring Material and Mastic / PACM / / , (Old Room: Main Building / Level 1 / C312), Cmmt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24854]	Level 1 / A104	160 sf

Hiteon (HIT)			
Result	Material	Location	Quantity
P	Sheet Flooring Material and Mastic / PACM / /, (Old Room: Main Building / Level 1 / C314), Cmmt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24855]	Level 1 / A106	200 sf
P	Sheet Flooring Material and Mastic / PACM / /, (Old Room: Main Building / Level 1 / C318), Cmmt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24857]	Level 1 / A108	258 sf
P	Sheet Flooring Material and Mastic / PACM / /, (Old Room: Main Building / Level 1 / C320), Cmmt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24858]	Level 1 / A110	180 sf
P	Sheet Flooring Material and Mastic / PACM / /, (Old Room: Main Building / Level 1 / C322), Cmmt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24859]	Level 1 / A112	170 sf
M	Gypsum Wallboard/Joint Compound / Mixed Results, Cmmt: Tested <1% Chrysotile (19766.008-0014 phase 4); Abated Summer 2008. [ID: 26986]	Level 1 / A112 - Reconfigured Summer 2008, now part of Library and hall	999 nq
P	Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99, Cmmt: Abated 685 SF - Summer 2008 [ID: 24835]	Level 1 / A112 - Reconfigured Summer 2008, now part of Library and hall	0 sf
+	Floor Tile and Mastic / Tested Positive, Cmmt: Tested 5% and 4% Chrysotile (19766.008-0034 phase 4) [ID: 27005]	Level 1 / A112 - Reconfigured Summer 2008, now part of Library and hall	999 nq
P	Sheet Flooring Material and Mastic / PACM / /, (Old Room: Main Building / Level 1 / C324), Cmmt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24860]	Level 1 / A114	135 sf
P	Sheet Flooring Material and Mastic / Non-Visible PACM / /, Cmmt: Abated 141 SF - Summer 2008 [ID: 24836]	Level 1 / A114 - Reconfigured Summer 2008, now part of Library and hall	0 sf
+	Black Sink Undercoating / Tested Positive, Cmmt: Tested 4% Chrysotile (19766.008-0012 phase 4); Abated Summer 2008. [ID: 26984]	Level 1 / A114 - Reconfigured Summer 2008, now part of Library and hall	0 ea
+	Floor Tile and Mastic / Tested Positive, Cmmt: Tested <1% Chrysotile (19766.008-0010 phase 4); Abated Summer 2008. [ID: 26982]	Level 1 / A114 - Reconfigured Summer 2008, now part of Library and hall	0 sf
P	Sheet Flooring Material and Mastic / PACM / /, (Old Room: Main Building / Level 1 / C326), Cmmt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24861]	Level 1 / A116	165 sf

Hiteon (HIT)			
Result	Material	Location	Quantity
P	Sheet Flooring Material and Mastic / PACM / /, (Old Room: Main Building / Level 1 / C328), Cmmt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24862]	Level 1 / A118	175 sf
+	Floor Tile and Mastic / Beige and Yellow/Tan / 12x12 / Tested Positive, Cmmt: 3% Chrysotile - Beige Tile (0017148-005, 007) Mastic Tested Negative. 12/14 Inspection-Cracked, loose tiles at B100. [ID: 29170]	Level 1 / B Hall	999 nq
P	Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99, (Old Room: Main Building / Level 1 / West Corridor), Cmmt: Abated 447 SF- June 2006 [ID: 24881]	Level 1 / B Hall / West	0 sf
P	Floor Tile and Mastic / Non-Visible PACM / / HSA 4,9,98,99, (Old Room: Main Building / Level 1 / B200), Cmmt: Carpeted [ID: 24844]	Level 1 / B100	860 sf
P	Boiler Insulation / / / HSA 1, Cmmt: new boiler 2008 [ID: 24846]	Level 1 / Boiler	0 sf
P	MJP Pipe Fittings /, Cmmt: 1 fitting removed Fall 2007 [ID: 24847]	Level 1 / Boiler	14 ea
+	Gypsum Wallboard/Joint Compound / Tested Positive, Cmmt: Tested <1% Chrysotile; Abated 9 SF - April 2009 [ID: 28161]	Level 1 / Boiler Room	1030 sf
+	Expansion Tank Insulation / Tested Positive, Cmmt: (19766.008-0028 phase 4); Abated Summer 2008. [ID: 26999]	Level 1 / Boiler Room	0 sf
P	Sheet Flooring Material and Mastic / Non-Visible PACM / /, (Old Room: Main Building / Level 1 / A100), Cmmt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24751]	Level 1 / C100	144 sf
P	Sheet Flooring Material and Mastic / Non-Visible PACM / /, (Old Room: Main Building / Level 1 / A102), Cmmt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24752]	Level 1 / C102	143 sf
P	Covebase/Mastic / Cmmt: Abated all grey cove base/mastic May 2019	Level 1 / C104	0
P	Sheet Flooring Material and Mastic / Non-Visible PACM / /, (Old Room: Main Building / Level 1 / A104), Cmmt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24753]	Level 1 / C104	203 sf

Hiteon (HIT)			
Result	Material	Location	Quantity
P	Covebase/Mastic / Cmnt: Abated all grey cove base/mastic May 2019	Level 1 / C106	0
+	Chalk Board Mastic / Tan / Tested Positive, (Old Room: Main Building / Level 1 / A106), Cmnt: 5% Chrysotile / behind new whiteboard. [ID: 26103]	Level 1 / C106	999 nq
P	Sheet Flooring Material and Mastic / Non-Visible PACM / / , (Old Room: Main Building / Level 1 / A106), Cmnt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24754]	Level 1 / C106	204 sf
P	Sheet Flooring Material and Mastic / Non-Visible PACM / / , (Old Room: Main Building / Level 1 / A108), Cmnt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24833]	Level 1 / C108	138 sf
P	Sheet Flooring Material and Mastic / Non-Visible PACM / / , (Old Room: Main Building / Level 1 / A110), Cmnt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24834]	Level 1 / C110	148 sf
P	Sheet Flooring Material and Mastic / Non-Visible PACM / / , (Old Room: Main Building / Level 1 / A116), Cmnt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24837]	Level 1 / C112	140 sf
P	Sheet Flooring Material and Mastic / Non-Visible PACM / / , (Old Room: Main Building / Level 1 / A118), Cmnt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24838]	Level 1 / C114	152 sf
P	Sheet Flooring Material and Mastic / Non-Visible PACM / / , (Old Room: Main Building / Level 1 / A120), Cmnt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24839]	Level 1 / C116	160 sf
P	Sheet Flooring Material and Mastic / Non-Visible PACM / / , (Old Room: Main Building / Level 1 / A122), Cmnt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24840]	Level 1 / C118	130 sf
P	Sheet Flooring Material and Mastic / Non-Visible PACM / / , (Old Room: Main Building / Level 1 / A124), Cmnt: Encapsulated with white 12 x 12 tile during Summer 2000. [ID: 24841]	Level 1 / C120	130 sf

Hiteon (HIT)			
Result	Material	Location	Quantity
M	Cove Base and Mastic / Mixed Results, Cmmt: Tested <1% Chrysotile (19766.008-0021 phase 4); Abated Summer 2008. [ID: 26993]	Level 1 / Cafeteria	0 sf
P	Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99, Cmmt: Abated 2045 SF Summer 2008 & Winter 2008. [ID: 24863]	Level 1 / Cafeteria	0 sf
+	Floor Tile and Mastic / Tested Positive, Cmmt: Tested 3% and 3% Chrysotile (19766.008-0023 phase 4); Abated Summer 2008. [ID: 26994]	Level 1 / Cafeteria	0 sf
P	Floor Tile and Mastic / Non-Visible PACM / / HSA 4,9,98,99, (Old Room: Main Building / Level 1 / B202), Cmmt: Abated Dec. 2008 [ID: 24845]	Level 1 / Conference Rm	0 sf
P	Transite Panel / / / HSA 55 [ID: 24864]	Level 1 / Custodial Office	40 sf
P	Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99, Cmmt: Some gouging noted at 12/13 inspection. Cracking at doorway noted 6/14 inspection. Broken tile at stage noted 12/14 i	Level 1 / Gym	4259 sf
+	Gypsum Wallboard/Joint Compd.	Level 1 / Gym / Right of stage / under paneling	999
P	Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99, Cmmt: Minor cracking at entrance. [ID: 24866]	Level 1 / Gym Office	95 sf
P	Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99, Cmmt: Minor cracking across from A 128 noted by inspector. [ID: 24750]	Level 1 / Hall	311 sf
P	Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99, (Old Room: Main Building / Level 1 / Restroom Unisex 1), Cmmt: Abated Summer 2008 [ID: 24873]	Level 1 / Health Restroom	0 sf
+	Gypsum Wallboard/Joint Compound / Mixed Results, Cmmt: (19766.008-0020 phase 4); Abated Summer 2008. [ID: 26992]	Level 1 / Health Room - Reconfigured Summer 2008	0 sf
P	Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99, Cmmt: Abated 172 SF - Summer 2008 [ID: 24867]	Level 1 / Health Room - Reconfigured Summer 2008	0 sf
P	Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99, Cmmt: Abated 59 SF - Summer 2005 [ID: 24868]	Level 1 / Kitchen	0 sf

Hiteon (HIT)			
Result	Material	Location	Quantity
P	Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99 [ID: 24869]	Level 1 / Kitchen Storage	180 sf
+	Gypsum Wallboard/Joint Compound / Tested Positive, Cmnt: Tested 2% Chrysotile (19766.008-0003 phase 10); Abated 120 SF - December 2008. [ID: 27954]	Level 1 / Locker Room Boys (Boys 2)	412 sf
+	Gypsum Wallboard/Joint Compound / Tested Positive, Cmnt: Tested 2% Chrysotile (19766.008-0006 phase 10); Abated 120 SF - December 2008. [ID: 27956]	Level 1 / Locker Room Girls (Girls 2)	416 sf
P	Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99, Cmnt: Abated 12 SF - November 2004 / Abated 440 SF- Summer 2006 [ID: 24870]	Level 1 / Main Corridor	810 sf
+	Window Glazing Compound / Tested Positive, Cmnt: Abated 120 SF - Summer 2008 [ID: 27542]	Level 1 / Main Entrance	0 ea
P	Floor Tile and Mastic / Non-Visible PACM / / HSA 4,9,98,99, Cmnt: Abated 375 SF - Summer 2008 [ID: 24871]	Level 1 / Main Office - Reconfigured Summer 2008	0 sf
P	Floor Tile and Mastic / Non-Visible PACM / / HSA 4,9,98,99, (Old Room: Main Building / Level 1 / C302), Cmnt: Carpeted [ID: 24849]	Level 1 / Office A2	143 sf
P	Floor Tile and Mastic / Non-Visible PACM / / HSA 4,9,98,99, (Old Room: Main Building / Level 1 / C304), Cmnt: Carpeted [ID: 24850]	Level 1 / Office A3	146 sf
P	Floor Tile and Mastic / Non-Visible PACM / / HSA 4,9,98,99, (Old Room: Main Building / Level 1 / C306), Cmnt: Carpeted [ID: 24851]	Level 1 / Office A4	146 sf
P	Floor Tile and Mastic / Non-Visible PACM / / HSA 4,9,98,99, (Old Room: Main Building / Level 1 / A126), Cmnt: Carpeted [ID: 24842]	Level 1 / Office C1	187 sf
P	Floor Tile and Mastic / Non-Visible PACM / / HSA 4,9,98,99, (Old Room: Main Building / Level 1 / A128), Cmnt: Carpeted [ID: 24843]	Level 1 / Office C2	216 sf
P	Floor Tile and Mastic / Non-Visible PACM / / HSA 4,9,98,99, Cmnt: Abated 283 SF - Summer 2008 [ID: 24872]	Level 1 / Principal - Reconfigured Summer 2008	0 sf

Hiteon (HIT)			
Result	Material	Location	Quantity
P	Sheet Flooring Material and Mastic / PACM / / [ID: 24875]	Level 1 / Restroom Unisex 3	37 sf
P	Sheet Flooring Material and Mastic / PACM / / , Cmnt: Cracked across entryway and behind toilet. [ID: 24876]	Level 1 / Restroom Unisex 4	19 sf
P	Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99, Cmnt: Abated 359 SF - Summer 2008 [ID: 24877]	Level 1 / Staff - Reconfigured Summer 2008	0 sf
+	Window Glazing / Tested Positive, Cmnt: 19766.008-0016 phase 4); Abated 100 SF - Summer 2008. [ID: 26988]	Level 1 / Staff Room - Reconfigured Summer 2008	0 lf
M	Gypsum Wallboard/Joint Compound / Mixed Results, Cmnt: Tested <1% Chrysotile (19766.008-0032 phase 4) [ID: 27003]	Level 1 / Staff Room - Reconfigured Summer 2008	0 sf
P	Asbestos Insulated Wiring	Level 1 / Stage / White Cloth Wiring From Ceiling outlets to lights at front of stage	4 ea
P	Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99 [ID: 24878]	Level 1 / Storage 2	175 sf
P	MJP Pipe Fittings / [ID: 24880]	Level 1 / Storage 4	4 ea
P	Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99, Cmnt: One damaged tile on hallway side of door noted by inspector. [ID: 24879]	Level 1 / Storage 4	123 sf
+	Pink Sink Undercoating / Tested Positive, Cmnt: 19766.008-0019 phase 4); Abated Summer 2008. [ID: 26991]	Level 1 / Work Room - Reconfigured Summer 2008	0 ea
P	Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99, Cmnt: Abated 273 SF Summer 2008 [ID: 24882]	Level 1 / Work Room - Reconfigured Summer 2008	0 sf
+	Floor Tile and Mastic / Tested Positive, Cmnt: Tested 2% and 10% Chrysotile (19766.008-0029 phase 4); Abated Summer 2008. [ID: 27000]	Level 1 / Work Room - Reconfigured Summer 2008	0 sf
+	Hard Fittings / Tested Positive, Cmnt: 11 fittings removed Nov. 2007 [ID: 26208]	Level 2 / Cafeteria Mezzanine Mechanical Rm	0 ea
+	Transite Panels / Tested Positive, Cmnt: Abated 140 SF- July 2004 [ID: 25980]	Roof	0 sf

MATERIALS THAT TESTED NEGATIVE

The following materials tested negative. Although no asbestos was detected, it is possible that further sampling could indicate asbestos content. It may be prudent to test prior to impact, demolition, renovation, etc.

Hiteon (HIT)	
Material	Location
Duct Felt Tape	A wing; penthouse, thin white duct tape
Mechanical Isolation Cloth / Tested Negative, Cmnt: Non-Detect (19766.008-0011 phase 6) [ID: 27011]	Attic / Cafeteria
Floor Tile and Mastic / Light Gray and Yellow/Tan / 12x12 / Tested Negative, Cmnt: Non Detect (0017148-003, 001) [ID: 29168]	Level 1 / A 100
Sheet Flooring Material / Pebble Pattern and Gray / Tested Negative, Cmnt: Non Detect (0017148-001,002) [ID: 29169]	Level 1 / A 100
Chalk Board Mastic / Brown / Tested Negative, (Old Room: Main Building / Level 1 / C308), Cmnt: Non-Detect [ID: 26101]	Level 1 / A100
Lay-in Ceiling Tile / Tested Negative, (Old Room: Main Building / Level 1 / C303), Cmnt: Non-Detect (19766.008-0024 phase 4) [ID: 26995]	Level 1 / A103 Restroom
Duct Felt Tape / Tested Negative, (Old Room: Main Building / Level 1 / C303), Cmnt: Non-Detect (19766.008-0026 phase 4) [ID: 26997]	Level 1 / A103 Restroom
Chalk Board Mastic / Brown / Tested Negative, (Old Room: Main Building / Level 1 / C312), Cmnt: Non-Detect [ID: 26099]	Level 1 / A104
Chalk Board Mastic / Yellow with Foil / Tested Negative, (Old Room: Main Building / Level 1 / C318), Cmnt: Non-Detect [ID: 26100]	Level 1 / A108
MJP Pipe Fittings / Tested Negative, Cmnt: Non-Detect (19766.008-0033 phase 4) [ID: 27004]	Level 1 / A112 - Reconfigured Summer 2008, now part of Library and hall
Cove Base and Mastic / Tested Negative, Cmnt: Non-Detect (19766.008-0011 phase 4) [ID: 26983]	Level 1 / A114 - Reconfigured Summer 2008, now part of Library and hall
Floor Tile and Mastic / Light Gray and Yellow/Tan / 12x12 / Tested Negative, Cmnt: Non-Detect (00117148-004,006) [ID: 29171]	Level 1 / B Hall
Lay-in Ceiling Tile / Tested Negative, (Old Room: Main Building / Level 1 / West Corridor), Cmnt: Non-Detect (19766.008-0004, -0005, -0006 phase 4) [ID: 26980]	Level 1 / B Hall / West
Lay-in Ceiling Tile / Tested Negative, (Old Room: Main Building / Level 1 / A Hall), Cmnt: Non-Detect (19766.008-0007, -0008, -0009 phase 4) [ID: 26981]	Level 1 / B Hall Main Building / Main Corridor
Hard Fitting / Gray / Tested Negative, Cmnt: Non-Detect (0014473-001 HES-01 Layer 1 and 2) [ID: 28833]	Level 1 / Boiler Room

Hiteon (HIT)	
Material	Location
Exterior Boiler Insulation / Tested Negative, Cmnt: Non-Detect (19766.008-0005, -0006, -0007 phase 6) [ID: 27009]	Level 1 / Boiler Room
Interior Boiler Insulation / Tested Negative, Cmnt: Non-Detect (19766.008-0002, -0003, -0004 phase 6) [ID: 27008]	Level 1 / Boiler Room
Boiler Door Gasket / Tested Negative, Cmnt: Non-Detect (19766.008-0001 phase 6) [ID: 27007]	Level 1 / Boiler Room
Chalk Board Mastic / Compressed Fibers / Tan / Tested Negative, (Old Room: Main Building / Level 1 / A106), Cmnt: Non-Detect [ID: 26102]	Level 1 / C106
New construction summer 2008- Asbestos Free [ID: 27809]	Level 1 / D Hall (All rooms)
Off White Debris / Tested Negative, Cmnt: Non-Detect (H-01 0018116-001) Off White debris on stairs 06/05/14 [ID: 29197]	Level 1 / Gym Storage
Ceramic Tile and Grout / Tested Negative, Cmnt: Non-Detect (19766.008-0030 phase 4) [ID: 27001]	Level 1 / Kitchen
Floor Tile and Mastic / Visible-Positive / 12 x 12 / HSA 4,9,98,99, (Old Room: Main Building / Level 1 / Restroom Unisex 2), Cmnt: Covered by new sheet flooring winter 08-09. [ID: 24874]/ Abated 11/06	Level 1 / Kitchen Restroom
Lay-in Ceiling Tile / Tested Negative, Cmnt: Non-Detect (19766.008-0013 phase 4) [ID: 26985]	Level 1 / Library
Carpet Mastic and Leveling Compound / Tested Negative, Cmnt: Non-Detect (19766.008-0015 phase 4) [ID: 26987]	Level 1 / Library
Ceramic Tile/Grout / Tested Negative, Cmnt: Non-Detect (19766.008-0001 phase 10) [ID: 27952]	Level 1 / Locker Room Boys (Boys 2)
Wall and Ceiling Plaster / Tested Negative, Cmnt: Non-Detect (19766.008-0002 phase 10) [ID: 27953]	Level 1 / Locker Room Boys (Boys 2)
Ceramic Tile/Grout / Tested Negative, Cmnt: Non-Detect (19766.008-0004, -0005 phase 10) [ID: 27955]	Level 1 / Locker Room Girls (Girls 2)
Wall and Ceiling Plaster / Tested Negative, Cmnt: Non-Detect (19766.008-0007 phase 10) [ID: 27957]	Level 1 / Locker Room Girls (Girls 2)
Glued-on Ceiling Tiles / Tested Negative, Cmnt: Non-Detect (19766.008-0001, -0002, -0003 phase 4) [ID: 26979]	Level 1 / Main Corridor
Brick Mortar / Tested Negative, Cmnt: Non-Detect (19766.008-0017 phase 4) [ID: 26989]	Level 1 / Main Entrance

Hiteon (HIT)	
Material	Location
MJP Pipe Fittings / Tested Negative, Cmnt: Non-Detect (19766.008-0035, -0036 phase 4) [ID: 27006]	Level 1 / Main Entrance
New construction summer 2008- Asbestos Free [ID: 27805]	Level 1 / Main Office
New construction summer 2008- Asbestos Free [ID: 27806]	Level 1 / Office B1
New construction summer 2008- Asbestos Free [ID: 27807]	Level 1 / Office B2
New construction summer 2008- Asbestos Free [ID: 27808]	Level 1 / Office B3
Sheet Flooring and Mastic / Tan / Tested Negative, Cmnt: Non-Detect (HES -02 1324313A, HES -02 1324314B) [ID: 28838]	Level 1 / Restroom 4
Sheet Flooring and Mastic / Tan / Tested Negative, Cmnt: Non-Detect (HES -03 1324314A, HES -03 1324314B) [ID: 28839]	Level 1 / Restroom 4
Grey Sink Undercoating / Tested Negative, Cmnt: Non-Detect (19766.008-0018 phase 4) [ID: 26990]	Level 1 / Staff Room - Reconfigured Summer 2008
MJP Pipe Fittings / Tested Negative, Cmnt: Non-Detect (19766.008-031 phase 4) [ID: 27002]	Level 1 / Storage 4
Door Insulation / Off White / Tested Negative, Cmnt: Non-Detect (0017861-001) Doors between West B and A Wing [ID: 28819]	Level 1 / West B Hall / A Wing Doors
Carpet Mastic / Tested Negative, Cmnt: Non-Detect (19766.008-0027 phase 4) [ID: 26998]	Level 1 / Work Room - Reconfigured Summer 2008
Hard Fitting on Fiberglass Insulated Line / Fibrous Powder / Tan / Tested Negative, Cmnt: non-detect (19766.008-0001 - 0006 phase 100) [ID: 28218]	Level 2 / Cafeteria Mech Loft

ASBESTOS SUMMARY

The following shows asbestos activities and projects. For more detailed information or related documents see the individual activity information in the database.

June 2003 to September 2003 - HIT2019-2

Activity: Inspection/Survey - Location: HIT

January 2004 to December 2012 -

Activity: Database Update - Location: HIT

HIT Import Historical Materials without samples

January 2004 to December 2012 - 19766.008 p04

Activity: Database Update - Location: HIT p04

HIT Import Historical materials with Samples

January 2004 to December 2012 - 19766.008 p06

Activity: Database Update - Location: HIT p06

HIT Import Historical materials with Samples

January 2004 to December 2012 - 19766.008 p10

Activity: Database Update - Location: HIT p10

HIT Import Historical materials with Samples

January 2004 to December 2012 - 19766.017 p100

Activity: Database Update - Location: HIT p100

HIT Import Historical materials with Samples

October 2006 to November 2006 - HIT2019-3

Activity: Major Abatement - Location: HIT

Example example example

April 2016 to April 2016 - HITsampling1

Activity: Sampling - Location: Level 1 / gym

February 2017 to February 2017 - PBS23816.133

Activity: Renovation/Repair/Painting - Location: Attic Space adjacent to kitchen & roof penhouse

Abatement Company **PAS**

Daily Log **x**

DEQ Notification

Disposal Manifest

TEM Air Clearance Samples **n/a**

Floor Plan **x**

Area Abated Entered Into Database

Asbestos Abatement Contractor Invoice Received **x**

Asbestos Abatement Consultant Invoice Received **x**

Asbestos Abatement Consultant Close Out Documentation Received **x**

May 2017 to May 2017 - HITabatement2

Activity: O & M - Location: Level 1 / gym

x Floor Plan

x Daily Log

x Contractor Invoice

DEQ Notification

Disposal Manifest

n/a Air clearance samples

x Consultant Close out documentation in Verdant

x Consultant Invoice

April 2018 to April 2018 - 1

Activity: Reinspection - Location: Hiteon

REINSPECTION SUMMARY

The 2018 Asbestos Hazard Emergency Response Act (AHERA) 3-Year Asbestos Reinspection for Hiteon Elementary School was completed on April 5, 2018, in accordance with the requirements of 40 CFR, Part 763, Asbestos-Containing Materials in Schools; Final Rule and Notice.

May 2019 to May 2019 - HIT2019-1

Activity: O & M - Location: C104/C016

Floor Plan X

Daily Log x

Contractor Invoice x

DEQ Notification x

Disposal Manifest

Air clearance samples

Consultant Close out documentation in Verdant x

Consultant Invoice x

February 2020 to February 2020 - HIT2020-1

Activity: Sampling - Location: HIT

- _ Floor plan
- _ Results received
- _ Results in Verdant
- _ Daily log
- _ Consultant Invoice
- _ Contractor Invoice
- _ DEQ Notification
- _ Disposal Manifest
- _ Lab samples in Verdant
- _ TEM Air clearance samples
- _ Consultant Close out documents in Verdant
- _ BOLI Form
- _ Certified Payroll dates

Sampled thin duct taping in A-Wing mechanical penthouse accessible through roof access ladder. All samples negative.

ACTIVITIES

The following shows historic activities and projects. For more detailed information or related documents see the individual activity information in the database.

Activity Type	Location	Start Date	Related Documents
Major Abatement	HIT	03/23/2020	Yes
Sampling	HIT	02/06/2020	Yes
O & M	C104/C016	05/08/2019	Yes
Reinspection	Hiteon	04/05/2018	Yes
O & M	Level 1 / gym	05/27/2017	Yes
Renovation/Repair/Painting	Attic Space adjacent to kitchen & roof penhouse	02/02/2017	Yes
Water Testing	Throughout	06/25/2016	Yes
Sampling	Level 1 / gym	04/01/2016	Yes
Major Abatement	HIT	10/01/2006	Yes
Database Update	HIT	01/01/2004	No
Database Update	HIT p04	01/01/2004	No
Database Update	HIT p06	01/01/2004	No
Database Update	HIT p10	01/01/2004	No
Database Update	HIT p100	01/01/2004	No
Inspection/Survey	HIT	06/01/2003	Yes

Appendix D – Inspector Certification(s)

The Environmental Institute

Matthew Cuda

Social Security Number - XXX-XX-8274

TRC - 4105 SE International Way - Milwaukie, OR 97222

*Has completed 4 hours of coursework and satisfactorily
passed an examination that meets all criteria required for
EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation*

Asbestos in Buildings: Inspector Refresher

January 31, 2020

Course Date

17792

Certificate Number

January 31, 2020

Examination Date

January 30, 2021

Expiration Date


David W. Hogue - Principal Instructor / Training Manager


Rachel G. McCain - Exam Administrator



(Approved by the ABIH Certification Maintenance Committee for 1/2 CM point - Approval #11-577)

(Florida Provider Registration Number FL49-0001342 - Course #FL49-0002805)

TEI - 1395 S. Marietta Parkway SE - Building 100, Suite 124 - Marietta, GA 30067

Phone: 770-427-3600 - Website: www.tei-atl.com

Certificate of Completion

This is to certify that

Jason Stone

has satisfactorily completed
4 hours of refresher training as an
AHERA Building Inspector

to comply with the training requirements of
TSCA Title II, 40 CFR 763 (AHERA)

EPA Provider # 1085

175978

Certificate Number



Dec 9, 2019 Expires in 1 year.

Date(s) of Training

Exam Score: N/A
(if applicable)

Instructor

ARGUS PACIFIC, INC. / 21905 64th AVE W, SUITE 100 / MOUNTLAKE TERRACE, WASHINGTON 98043 / 206.285.3373 / ARGUSPACIFIC.COM

ELECTRICAL GENERAL PROVISIONS**PART 1 - GENERAL****1.1 DESCRIPTION**

- A. The General and Supplemental Conditions apply to this Division, including but not limited to:
1. Drawings and Specifications.
 2. Public ordinances, permits. Including but not limited to electrical and fire alarm permits.
 3. Payments and fees required by governing authorities for work included in this Division.
 4. Change orders.
- B. Division 1, General Requirements apply to this Division, including but not limited to:
1. Summary, Section 01 01 00
 2. Cutting and Patching, Section 01045
 3. Submittals, including Shop Drawings, Product Data and Samples, Section 01 30 00
 4. Construction facilities and Controls, Section 01 50 00
 5. Substitution Request Forms, Section 01 60 01
 6. Closeout Submittals, Section 01 78 00

1.2 MECHANICAL WIRING

- A. The following schedule is intended to summarize the division of work and responsibilities between Division 23 and Division 26

	ITEM	FURNISHED BY	INSTALL BY	POWER WIRING	CONTROL WIRING
1.	Division 23 Equipment Motors	Div. 23	Div. 23	Div. 26	Div. 23
2.	Motor Starters, Contactors and Overload Heaters – Integral	Div. 23	Div. 26	Div. 26	Div. 23
3.	Variable Frequency Drives (VFD's)	Div. 23	Div. 26	Div. 26	Div. 23
4.	Motor Control Centers	Div. 26	Div. 26	Div. 26	Div. 23
5.	Fused & Unfused Disconnect Switches	Div. 26	Div. 26	Div. 26	-----
6.	Manual Operation Switches	Div. 26	Div. 26	Div. 26	Div. 26
7.	Control Relays & Transformers	Div. 23	Div. 23	Div. 26	Div. 23
8.	Energy Management Control Panels	Div. 23	Div. 23	Div. 26	Div. 23
9.	Motorized Solenoid Valves	Div. 23	Div. 23	Div. 26	Div. 23
10.	Duct Mounted smoke Detectors	Div. 28	Div. 23	Div. 26	Div. 23 – Equipment Shutdown Div. 28 – Fire Alarm

ELECTRICAL GENERAL PROVISIONS

ITEM	FURNISHED BY	INSTALL BY	POWER WIRING	CONTROL WIRING
11. Fire/Smoke and Smoke Dampers	Div. 23	Div. 23	Div. 26	Div. 26
Detectors	Div. 28	Div. 23	Div. 26	Div. 28 – Fire Alarm

1.3 CONTRACT DOCUMENTS

- A. The Electrical Drawings and Specifications are complementary and what is called for by one shall be as binding as if called for by both. Items shown on the Drawings are not necessarily included in the Specifications. All directives and instructions to furnish, provide, install, complete, test and methods described in these Specifications and Drawings shall be interpreted as directives to the Electrical Contractor unless clearly specified otherwise. It is the intent of these specifications and the accompanying drawings to describe complete and functional electrical systems. If errors or discrepancies are discovered, notify the Project Manager immediately.

1.4 SITE VISITATION

- A. The contractor shall visit the site prior to bidding to familiarize himself with existing conditions and all other factors which may affect the execution of the work.

1.5 CODES, ORDINANCES AND REGULATIONS

- A. The completed installation shall conform to all applicable Federal, State and Local Codes, Ordinances and Regulations.
- B. Obtain all necessary permits and inspections required by the governing authorities having jurisdiction over this work.
- C. Furnish to the Project Manager a certificate of approval from the inspection authority at the completion of the work, prior to the application for final payment.

1.6 SCOPE OF WORK

- A. The work covered by this Specification shall include furnishing all labor, materials, equipment and services to construct and install the complete electrical system as shown on the Drawings and specified herein. Verify all conditions on the job site and lay out work accordingly.
- B. The work shall include, but is not necessarily limited to, the following systems:
1. Complete power systems
 2. Grounding continuity
 3. Connection of electrical equipment furnished under other Divisions of work
 - a. Mechanical contractor will provide new VFD motors and controls on the HVAC system. Electrical will disconnect selected HVAC equipment shown on mechanical plans.
 - b. Electrical contractor will provide new conduit and wire from panel serving HVAC equipment route to new VFD controller and then to equipment location. Field verify existing feeder prior to bid
 4. Fire alarm system
 - a. Removed existing duct detectors for air handlers indicated on mechanical plans and provide new addressable duct detectors. Match existing fire alarm panel manufacturer.
 5. Demolition as required

ELECTRICAL GENERAL PROVISIONS

- C. The following equipment and work will be furnished under other Divisions of Work:
 - 1. Mechanical equipment motors and heaters, unless otherwise noted on drawings.
 - 2. Equipment control wiring beyond the provisions shown on the Electrical Drawings.

1.7 WARRANTY

- A. Provide a written one-year warranty covering the work done under this Division as required by the General Conditions. Incandescent lamps will be excluded from this warranty.
- B. Systems and Apparatus:
 - 1. Free of defects of material and workmanship and in accord with the Contract Documents.
 - 2. Built and installed to deliver its full rated capacity at the efficiency for which it was designed.
 - 3. Operate at full capacity without objectionable noise or vibration.

1.8 SUBMITTALS

- A. Refer to Division 1 requirements.
- B. Submit all electrical data in electronic PDF format, provide in individual sections, indexed by section numbers, covering all items of equipment and systems. Submit all electrical items at one time.
- C. The installation and Record Drawings called for under submittals shall show all outlets, devices, terminal cabinets, conduits, wiring and connections required for the complete system described. Drawings will be at the same sheet size and scale as the construction documents. Prints of these drawings shall be submitted prior to starting installation. The Contractor submitted drawings, when approved, will then form the basis for installation.
- D. Submittals will not be reviewed unless equipment is specifically indicated. Items not marked with model numbers and all options will be rejected and will need to be resubmitted. SDC will not try to interpret the contractor's intent.

PART 2 - PRODUCTS**2.1 APPROVALS AND SUBSTITUTIONS**

- A. The use of manufacturer's names, models and numbers in this Specification is intended to establish style, quality, appearance and usefulness. If not as specified all Items will require prior approval.
- B. Submit for the Project Manager's approval, manufacturer's detailed specifications and data sheets for all proposed substitutions. Submittals shall consist of a single sheet, or sheets, if required, for each piece of equipment and shall give the specific data needed for consideration of approval. All pertinent data listed in the Specifications and in Schedules shall be furnished, including all special features. See that all submittals are in proper order, and that all equipment will fit in the space provided.
- C. The Project Manager reserves the right to require the submission of an actual sample before the acceptance of any product as an equal to that specified.

2.2 MATERIAL APPROVALS AND SHOP DRAWINGS

- A. Submit all electrical data in electronic PDF format, provide in individual sections, indexed by section numbers, covering all items of equipment and systems. Include wiring diagrams where called for.
- B. Review and recommendations by the Project Manager or Engineer are not to be construed as change authorizations. If discrepancies between the shop drawings submitted and the Contract Documents are discovered either prior to or after the data is processed, the Contract Documents will govern. Shop drawing review will not occur without contract cost data as outline below.

ELECTRICAL GENERAL PROVISIONS**PART 3 - EXECUTION****3.1 CONTRACT COST DATA**

- A. Furnish to the Project Manager a cost breakdown of the Electrical Contract.
- B. The cost breakdown shall include separate amounts for material and labor for each category listed below. Include costs data with the shop drawings submittal.
 - 1. Feeders
 - 2. Disconnects, starters and equipment connections
 - 3. Branch circuit wiring and devices
 - 4. Fire alarm system

3.2 CHANGE ORDERS

- A. All supplemental cost proposals by the Contractor shall be accompanied with a complete itemized breakdown of labor and materials cost without exception. Contractor's estimating sheets for the supplemental cost proposals shall be included. Labor must be separated and allocated for each item of work. Material cost, as used in this section, to be Contractor's actual "invoice" cost. All discounts shall be detailed and shown on the invoice. Labor cost shall be the actual cost per manhour including all taxes and fees. The total estimated cost for any change will be considered a not-to-exceed price. The supplemental cost approval will be based on this estimate but actual change order request for payment will be based on the contractor's actual cost to perform this work and shall be accompanied with a complete itemized breakdown of labor and materials cost with backup invoices, without exception.

3.3 OPERATING AND MAINTENANCE DATA

- A. The Contractor shall provide operating instructions and maintenance data. Submit all electrical data in electronic PDF format; provide in individual sections, indexed by section numbers, covering all items of equipment and systems, for all equipment and materials called for under this Division.
- B. Submit Provide one PDF on flash drive and two (2) hard copies of the operating and maintenance data for review at least four weeks before final review of the Project. Assemble all data in a completely indexed volume or volumes and identify the size, model, and features indicated for each item.
- C. Maintenance instruction manuals shall include complete cleaning and servicing data compiled in clearly and easily understandable form. Data shall show serial numbers of each piece of equipment and complete lists of replacement parts.

3.4 ELECTRONIC INFORMATION

- A. Electronic record information in AutoCAD format will be provided to the general contractor upon request. One (1) copy of the base project construction document files will be made available to the contractor at no charge, each additional request will be provided at a cost of \$250 per request.
- B. All contractors and sub contractors requiring electrical plans will make their request for the construction documents through the general contractor.

3.5 RECORD INFORMATION

- A. Maintain one set of construction documents marked up (red-lined) on a daily basis as the work progresses, showing all changes, deviations, change orders, omissions, or other variations from the contract drawings.
- B. Record all conduits, stubups and equipment by dimensions from gridlines, below grade, above floor, etc. Show location of all access panels, rough-in for future, etc.

ELECTRICAL GENERAL PROVISIONS

- C. Make record documents available to the Project Manager for review or printing during construction.
- D. On acceptance of the contractor record drawings by the Project Manager, the contractor will transfer the record information in "AutoCAD" format to the electronic "AutoCAD" drawing files. Refer to 26 0000-3.4(A) for obtaining documents and applicable charges.
- E. Deliver record drawings files to the Project Manager promptly upon completion of the project. Record information added to the "AutoCAD" drawing files is to have compatible format, linework and lettering as the original files. All new work done by the contractor on the original drawing files is to be on a single layer noted in the revised drawing file as "RECORD".

3.6 PROTECTION OF WORK

- A. Protect all electrical work and equipment installed under this Division against damage by other trades, weather conditions or any other causes. Equipment found damaged or in other than new condition will be rejected as defective.
- B. Switchgear, transformers, panels, light fixtures and all electrical equipment shall be kept covered or closed to exclude dust, dirt and splashes of plaster, cement or paint and shall be free of all such contamination before acceptance. Enclosures and trims shall be in new condition, free of rust, scratches and other finish defects. Properly refinish in a manner acceptable to the Project Manager, if damaged.

3.7 MAINTENANCE OF SERVICE

- A. Electrical service shall be maintained to all functioning portions of the building throughout construction, except as noted below, during all normal working hours of the building occupants. Outages to occupied areas shall be kept to a minimum and be prearranged with the Project Manager or Owner's Representative. This Contractor will be liable for any damages resulting from unscheduled outages or for those not confined to the pre-arranged times.
- B. Signal and communication systems and equipment shall be kept in operation wherever these serve occupied or functional portions of the building. Outages of these facilities shall be treated the same as electrical power outages.
- C. Telephone services where required during the construction work will be maintained by the telephone company. This work shall be coordinated with the telephone company in such a manner that service, as required by the building occupants, can be readily installed and maintained.
- D. Include all costs for temporary facilities, overtime labor and necessary provisions to maintain electrical services in the initial bid proposal. Temporary wiring and facilities, if used, shall be removed and the site left clean before final acceptance.

END OF SECTION

BASIC MATERIALS AND METHODS**PART 1 - GENERAL****1.1 DESCRIPTION**

- A. Conditions of the Contract and Section 26 00 00 apply to this Section.

1.2 COORDINATION OF WORK

- A. Conduct work in a manner to cooperate with all other trades for proper installation of all items of equipment. Consult the Drawings of all other trades or crafts to avoid conflicts with cabinets, counters, equipment, structural members, etc. In general, the architectural drawings govern but conflicts shall be resolved with the Architect prior to rough-in.
- B. Verify the physical dimension of each item of electrical equipment to fit the available space. Coordination of the equipment to fit into the available space and the access routes through the construction shall be the Contractor's responsibility.

1.3 ELECTRICAL DRAWINGS

- A. The Electrical Drawings accompanying these Specifications are design drawings and generally are diagrammatic indicating approximate locations of outlets and wiring. They do not show every offset, bend, junction box, etc., which may be required for installation to complete the system. Minor deviations in methods, circuiting and branch circuit distribution or arrangements to suit construction conditions are permissible.
- B. The intent of the branch circuiting and control shown shall not be changed nor homeruns combined without the approval of the Architect. Feeder runs shall not be combined or changed.
- C. Cross or hash marks on conduit runs indicate quantity of No. 12 copper branch circuit conductors, in addition to a grounding conductor, unless otherwise noted. Where such marks do not appear, provide minimum of two conductors with ground, minimum No. 12, size as required for loads and/or equipment being served. **Contractor is responsible to assure that the maximum voltage drop on any circuit does not exceed 5% at the load.** The contractor shall review panel schedule to verify wire/conduit size required.
- D. Conduit sizes shown or listed on the drawings are for reference only. It is the responsibility of the contractor to provide and install conduit sized per current NEC requirements.

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. Electrical products installed in this project shall be listed by a recognized testing laboratory or approved in writing by the local inspection authority as required by governing codes and ordinances.
- B. Materials shall be new, of the best quality. The materials shall be manufactured in accordance with NEMA, ANSI, UL or other applicable standards.

BASIC MATERIALS AND METHODS**PART 3 - EXECUTION****3.1 INSTALLATION**

- A. Provide a completely properly operating system for each item of equipment called for under this work. Installations shall be in accord with the equipment manufacturer's instructions, the best industry practices and the contract documents. Where a conflict in these guides appear, the Architect shall be requested to provide proper clarification before work is roughed in and his decision will be final. Work installed without such clarification shall be removed and corrected by the Contractor at no cost to the Owner.
- B. Make installation in a neat, finished and safe manner, according to the latest published NECA Standard of Installation under competent supervision.

3.2 NOISE CONTROL

- A. Outlet boxes at opposite sides of partitions shall not be placed back-to-back nor straight through boxes be employed, except where specifically permitted on the Drawings by note, to minimize transmission of noise between occupied spaces.
- B. Contactors, transformers, starters and similar noise producing devices shall not be placed on walls which are common to occupied spaces unless specifically called for on the Drawings. Where such devices must be mounted on walls, common to occupied spaces, they shall be shock mounted or isolated in such a manner as to effectively prevent the transmission of their inherent noise to the occupied space.
- C. Ballasts, contactors, starters, transformers and like equipment which are found to be noticeably noisier than other similar equipment on the project will be deemed defective and shall be replaced.

3.3 EQUIPMENT CONNECTIONS

- A. Provide complete electrical connections for all items of equipment requiring such connections, including incidental wiring, materials, devices and labor necessary for a finished working installation.
- B. Verify the location and method for connecting to each item of equipment prior to roughing-in. Check the voltage and phase of each item of equipment before connecting.
- C. Make motor connections for the proper direction of rotation. Minimum size flex for mechanical equipment shall be 1/2-inch except at small control devices where 3/8-inch may be used. Exposed motor wiring shall be jacketed metallic flex with 6-inches minimum slack loop. Pump motors shall not be test run until liquid is in the system.
- D. Control devices and wiring relating to the HVAC systems will be furnished and installed under Division 15 except for provisions or items specifically shown on the Electrical Drawings or specified herein.
- E. Furnish all code required disconnects under this work, whether specifically shown or not.

3.4 EQUIPMENT SUPPORT

- A. Anchoring and bracing to the building structural elements in accord with all codes and regulations regarding seismic design conditions. The contractor is responsible to determine the means and methods of equipment installation and support. Seismic restraints for electrical and communication equipment shall bear the seal and signature of a structural engineer registered in the state of Oregon, and shall be submitted to the Architect prior to fabrication. Calculations are to be included for all connections to the structure, considering localized effects.

BASIC MATERIALS AND METHODS

- B. Each fastening device and support for electrical equipment, fixtures, panels, outlets and cabinets shall be capable of supporting not less than four times the ultimate weight of the object or objects fastened or suspended from the building structure.
- C. Support all junction boxes, pull boxes or other conduit terminating housings located above the suspended ceiling from the floor above, roof or penthouse floor structure to prevent sagging or swaying.
- D. Conduits:
 - 1. Support suspended conduits 1-inch and larger from the overhead structural system with metal ring or trapeze hangers with threaded steel rod having a safety factor of 4.
 - 2. Conduit installed in poured concrete shall be anchored to the reinforcing steel with No. 14 black iron wire.

3.5 ALIGNMENT

- A. Install panels, cabinets and equipment level and plumb, parallel with structural building lines. Switchgear panels and all electrical enclosures shall fit neatly without gaps, openings or distortion. Properly and neatly close all unused openings with approved devices.
- B. Fit surface panels, devices and outlets with neat, appropriate trims, plates or covers, without overhanging edges, protruding corners or raw edges, to leave a finished appearance.

3.6 CUTTING AND PATCHING

- A. Include cutting, patching and restoration of finishes necessary for this work. Surfaces damaged by this work and spaces around conduits passing through floors and walls shall be neatly patched and finished to match the adjacent construction, including painting or other finishes. Clean up and remove all dirt and debris. This work shall all be performed to the satisfaction of the Architect. Refer to Section 01045.

3.7 FIRESTOPPING PENETRATIONS IN FIRE-RATED WALL/FLOOR ASSEMBLIES

- A. Contractors shall provide proper sizing when providing sleeves or core-drilled holes to accommodate their through penetrating items. All voids between sleeve or core-drilled hole and pipe passing through, shall be firestopped to meet the requirements of ASTM E-814, in accordance with Section 07270 - Firestopping.
- B. Provide properly sized expansion fittings for all conduits crossing over building expansion joints

END OF SECTION

CONDUCTORS AND CONNECTORS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work Included:
 - 1. Deliver conductors to the job site in cartons, protective covers or on reels.
 - 2. Conductors for special systems shall be as recommended by the equipment manufacturer except as noted.

1.2 RELATED WORK

- A. Section 26 00 00: General Provisions
- B. Section 26 05 00: Basic Materials and Methods.

1.3 SUBMITTALS

- A. Shop Drawings.
- B. Product Data

PART 2 - PRODUCTS

2.1 CONDUCTORS - 600 V

- A. Type:
 - 1. No. 12 AWG minimum size unless noted otherwise.
 - 2. No. 8 and larger, stranded, Class B.
- B. Stranding: Copper, concentric or compressed
- C. Insulation: THHN, THWN, XHHW unless noted or specified otherwise.
- D. Through wiring in fluorescent fixtures shall be rated for 90 degree C.
- E. Manufacturers: Southwire, G.E., Hatfield, Anaconda, Rome or approved equal.

2.2 CORD DROPS AND PORTABLE CORDS

- A. Copper type "S" or "SO" heavy duty, rubber insulated unless otherwise noted.

2.3 CONNECTORS

- A. Branch Circuit Conductor Splices: Live spring type, Scotch-Lok, Ideal Wing Nut or self-stripping type, 3M Series 560.
- B. Cable Splices: Compression tool applied sleeves, Kearney, Burndy or approved equal with 600V heat shrink insulation.
- C. Lugs: Conductors no. 6 and larger, except on molded case circuit breakers, two hole, long barrel pressure tool set Thomas & Betts No. 54,000 series, Burndy "Hydent", Anderson Electric VCEL, or approved equal.

CONDUCTORS AND CONNECTORS**PART 3 - EXECUTION****3.1 CONDUCTORS**

- A. Pulling compounds may be used with the residue cleaned from the conductors and raceway entrances after the pull is made.
- B. Pulleys or blocks shall be used for alignment of the conductors when pulling. Pulling shall be in accordance with manufacturer's specifications regarding pulling tensions, bending radii of the cable and compounds.
- C. Conductors entering terminal or junction boxes mounted on hermetically sealed refrigeration compressor motors shall be copper.
- D. Make up and insulate wiring promptly after installation of conductors. Wire shall not be pulled in until all bushings are installed and raceways terminations are completed. Wire shall not be pulled into conduit embedded in concrete until after the concrete is poured and forms are stripped.
- E. Conductor sizes shown on the Drawings are for copper only.

3.2 CONNECTORS

- A. Control and special systems wires shall be terminated with a tool applied spade flared lug when terminating at a screw connection.
- B. All screw and bolt type connectors shall be made up tight and retightened after an eight-hour period.
- C. All tool-applied compression connectors shall be applied per manufacturer's recommendations and physically checked for tightness.

3.3 COLOR CODING

- A. Phase color code to be consistent at all feeder terminations, A-B-C left-to-right or A-B-C top-to-bottom.
- B. Switchlegs, travelers, etc. to be consistent with the phases to which connected or a color distinctive from that listed.
- C. Under 250 Volts Phase-to-Phase:
 - Phase A - Black Neutral – White
 - Phase B - Red Ground – Green
 - Phase C – Blue
- D. Over 250 Volts Phase-to-Phase:
 - Phase A - Brown Neutral - White with tracer
 - Phase B - Orange Ground – Green
 - Phase C - Yellow

END OF SECTION

GROUNDING AND BONDING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work Included:
 - 1. Provide complete building grounding system.
 - 2. Provide ground bus bar at each telephone demarcation and data distribution location.

1.2 RELATED WORK

- A. Section 26 00 00: General Provisions,
- B. Section 26 05 00: Basic Materials and Methods,
- C. Section 26 05 19: Conductors and Connectors
- D. Section 26 27 26: Wiring Devices and Plates

PART 2 - PRODUCTS

2.1 GROUND CONDUCTORS

- A. Bare or green insulated copper.

2.2 GROUND ROD CONNECTORS

- A. Cast, set screw or bolted type.

2.3 ELECTRODES

- A. Copper clad steel minimum 3/4-inch diameter by 8 feet long.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Grounding system will consist of the following:
 - 1. Minimum of 20' bare no. 4 copper concrete-encase grounding conductor.
 - 2. Provide bond to building steel.
 - 3. Provide bond to cold water piping within 5' of building entry.
 - 4. Provide bond to minimum of 2 ground rods.
- B. Establish a ground for each separately derived system, e.g., transformers and generators, per NEC 250-30.
- C. All grounding conductors shall be sized in accord with the National Electrical Code.
- D. Grounding conductor connectors shall be made up tight and located for future servicing and to ensure low impedance.
- E. Ground the electrical system, the cold-water service, structural steel, and transformers to the building ground grid.
- F. All feeder and service raceways shall be grounded.
- G. All plug-in receptacles shall be bonded to the boxes, raceways and grounding conductor.

GROUNDING AND BONDING

- H. Provide equipment-grounding conductor in all branch circuit, feeder and service raceways.
- I. Provide insulated grounding conductor in all branch circuit wiring serving Classrooms, Administration offices and all data locations.
- J. Provide bonding jumper between ground and neutral bus at main service.

END OF SECTION

CONDUITS, RACEWAYS, BOXES AND FITTINGS**PART 1 - GENERAL****1.1 DESCRIPTION**

- A. Work Included:
 - 1. Provide raceways and conduits of specified types for all electrical systems wiring, except where clearly shown or specified otherwise. All fittings, boxes, hangers and appurtenances shall be included.
 - 2. Size raceways and conduits as indicated on the Drawings. Where no size is indicated, conduit may be the minimum code permitted size for the quantity of type THW conductors installed. Minimum size is 3/4".

1.2 RELATED WORK

- A. Section 26 00 00: General Provisions
- B. Section 26 05 00: Basic Materials and Methods

1.3 SUBMITTALS

- A. Shop Drawings.
- B. Product Data.
- C. Operational Instructions and Maintenance Data.

PART 2 - PRODUCTS**2.1 METALLIC CONDUITS**

- A. GRC: Threaded rigid heavy wall galvanized steel.
- B. IMC: Threaded intermediate galvanized steel.
- C. EMT: Zinc coated steel electrical metallic tubing.
- D. ARC: Threaded rigid heavy wall aluminum.
- E. Flex: Flexible metal with polyvinyl chloride jacket, at speakers and no longer than 3'-0".
- F. Liquidtight flexible conduit: Zinc steel core with smooth gray abrasion-resistant, liquid-tight PVC cover with integral ground wire wound in steel core, at speakers and no longer than 3'-0".

2.2 NON-METALLIC CONDUITS

- A. Rigid non-metallic conduit: Type II PVC schedule 40, suitable for use with 90 degrees C rated wire. Conduit shall conform to UL Standard 651 and carry appropriate UL listing for above and below ground use.

2.3 SURFACE RACEWAYS

- A. Acceptable manufacturer(s): Wiremold, Panduit as noted on drawings, or approved equal.
- B. Type, size with quantity and spacing of outlets as shown on drawings. Provide with snap-on cover, connectors, fittings and incidental items required for a complete installation. Raceway shall be in continuous length as indicated on drawings.

CONDUITS, RACEWAYS, BOXES AND FITTINGS**2.4 WIREWAYS**

- A. Troughs: Steel, painted, square in cross section, preformed knock-outs on standard spacing, hinged cover.
- B. Fittings: Tees, elbows, couplings as required for configuration shown on the Drawings.
- C. Supports: U-shaped, 1/4-inch by 1-1/2-inch steel strap, bent and prime painted.

2.5 FITTINGS

- A. GRC, IMC AND ARC:
 - 1. The conduit itself must be threaded, threaded couplings attached by any means are not allowed.
 - 2. Threaded locknuts.
 - 3. Threaded bushings: 1-1/4 inch and larger shall be of the insulated, grounding type as required under Section 26 05 26.
 - 4. Expansion fittings: O-Z/Gedney Electrical Mfg. Co. or approved equal type E expansion coupling with bonding jumper for up to four inches of movement.
- B. EMT:
 - 1. Connectors: Steel set screw or compression ring type for conduit termination, with insulated throat, suitable for conditions used.
 - 2. Couplings: Steel set screw or compression ring type, concrete tight.
- C. Weatherproof Connectors: Threaded pipe connections with waterproofing compound.

2.6 METALLIC BOXES

- A. Flush and Concealed Outlet Boxes: Galvanized stamped steel with screw ears, knock-out plugs, mounting holes, fixture studs if required, RACO or approved equal.
- B. Surface Outlet Boxes: Galvanized stamped steel same as above for use on ceilings; cast steel or aluminum with threaded hubs for use on walls.
- C. Large Boxes: Boxes exceeding 4-11/16 inches square when required shall be welded steel construction with screw cover and painted, steel gauge as required by physical size, Hoffman, Circle AW or approved equal.

2.7 NON-METALLIC BOXES

- A. PVC, molded enclosures, threaded hubs.

2.8 OTHERS

- A. Any conduits, fittings, etc. specifically not mentioned above are not approved for use.

PART 3 - EXECUTION**3.1 INSTALLATION**

- A. Conceal all conduits in finished spaces and elsewhere so far as practicable. Concealed conduits shall run in a direct line with long sweep bends and offsets. GRC and IMC embedded in concrete below grade or in damp locations shall be made water-tight by painting the entire male thread with Rustoleum metal primer, or equal, before assembly.

CONDUITS, RACEWAYS, BOXES AND FITTINGS

- B. Route exposed conduit parallel or at right angles to structural building lines, and neatly offset into boxes. Conduits attached directly to building surfaces shall closely follow the surfaces. Conduit fittings shall be used to "saddle" under beams. ALL EXPOSED CONDUIT MUST HAVE ARCHITECT APPROVAL PRIOR TO INSTALLTION.
- C. Conduits, whether exposed or concealed, shall be securely supported and fastened at intervals of nominally every 8 feet and within 18 inches of each outlet, ell, fitting, panel, etc.
- D. Keep conduit and raceways closed with suitable plugs or caps during construction to prevent entrance of dirt, moisture, concrete or foreign objects. Raceways shall be clean and dry before installation of wire and at the time of acceptance.
- E. Pack spaces around conduits with oakum and seal to prevent entrance of moisture where conduits are installed in sleeves or block-outs penetrating moisture barriers.
- F. Where conduits penetrate fire rated concrete walls or floors, provide non-combustible caulking or putty 3M-fire barrier material of thickness required to equal or exceed the fire rating of wall or floor.

3.2 CONDUIT

- A. Install GRC or IMC galvanized steel conduits for wiring underground, in-cast-concrete construction, in damp locations, in hazardous areas and where subject to mechanical injury, with threaded fittings made up tight.
- B. EMT may be employed in all other dry protected locations.
- C. ARC may be used wherever EMT is acceptable, with no restriction on size.
- D. Flex is required where flexibility is necessary as at motors, transformers and recessed lighting fixtures, etc. Flex shall be jacketed type, except where concealed in dry locations and spaces such as ceiling cavities.
- E. PVC may be used underground, under interior slabs or where noted on the Drawings. Make connections with waterproof solvent cement. Provide GRC at 60 degree and larger bends and where penetrating slabs or elling up above grade in exterior locations. PVC conduit shall not be installed less than 30" under roadways or areas subject to heavy traffic. Provide a ground wire sized per code in all PVC conduits. Conductor quantities indicated in conduits do not include ground wires unless otherwise noted.
- F. Conduit stubbed from a concrete slab or wall to serve an outlet under a table or to supply a machine shall have a rigid conduit coupling flush with the surface of the slab. Provide plug where conduit is to be used in future.
- G. Conduits in above-grade slabs shall be located in the middle of the slab. The maximum size, spacing, and location of conduits in post-tensioned slabs shall be subject to approval by the structural engineer. Conduits larger than one inch shall not be run in slabs. .

3.3 RACEWAYS

- A. Surface metal raceway with snap-in cover may be used in finished spaces only as specified, or shown on Drawings.
- B. Surface metal wireways may be installed at locations to serve motor starters or other control devices where required by a multitude of wiring interconnections or physical layout.
- C. Expansion Joints:

CONDUITS, RACEWAYS, BOXES AND FITTINGS

1. All conduits crossing expansion joints where cast in concrete shall be provided with expansion-deflection fittings, equivalent to OZ/Gedney AXDX, installed per manufacturers recommendations.
 2. All conduits three inches and larger where not cast in concrete shall be rigidly secured to the building structure on opposite sides of a building expansion joint with an expansion-deflection fitting across the joint, equivalent to OZ/Gedney AXDX, installed per manufacturer's recommendations.
 3. All conduits less than three inches where not cast in concrete shall be provided with junction boxes securely fastened on both sides of the expansion joint, connected together with 15 inches of slack (a minimum of 15 inches longer than the straight line length) flexible conduit with copper green ground bonding jumper. In lieu of this flexible conduit, an expansion-deflection fitting, as indicated for conduits three inch and larger, may be installed.
- D. Seismic Joints
1. No conduits cast in concrete shall be allowed to cross a seismic joint.
 2. All conduits shall be provided with junction boxes securely fastened on both sides of the expansion joint, connected together with 15 inches of slack (a minimum of 15 inches longer than the straight line length) flexible conduit with copper green ground bonding jumper. Prior to installation, verify with Architect that the 15 inches is adequate for the designed movement, and if not, increase this length as required.

3.4 SURFACE RACEWAYS

- A. The raceway system shall provide a complete enclosure that protects the wires installed therein against damage.
- B. There shall not be any openings that exceed 1/16 inch (1.59 mm) in width on surfaces that are accessible following installation of the system.

3.5 FITTINGS

- A. Metallic raceways and conduits shall be assembled continuous and secured to boxes, panels, etc., with appropriate fittings to maintain electrical continuity. All conduit joints shall be cut square, reamed smooth with all fittings drawn up tight.

3.6 BOXES

- A. Outlet boxes shall be of code required size to accommodate all wires, fittings and devices. Provide multi-gang boxes as required to accept devices installed with no more than one device per gang. Equip all metallic boxes with grounding provisions.
- B. Flush wall switch and receptacle outlets used with conduit systems shall be 4 inches square, 1-1/2 inches or more deep, with one or two-gang plaster ring mounted vertically. Where three or more devices are at one location, use one piece multiple gang tile box or gang box with suitable device ring.
- C. Wall bracket and ceiling surface mounted lighting fixture outlets shall be 4-inch octagon, 1-1/2-inches deep with 3/8-inch fixture stud where required. Wall bracket outlets to have single gang opening where required to accommodate fixture canopy. Provide larger boxes or extension rings where quantity of wires installed requires more cubic capacity.
- D. Boxes for the special systems shall be suitable for the equipment installed. Coordinate size and type with the system supplier.

CONDUITS, RACEWAYS, BOXES AND FITTINGS

- E. Provide pull boxes where shown, or in conduit runs greater than 100 feet, or where required to limit the number of bends in any conduit to not more than three 90 degree bends or equivalent. Use galvanized boxes of code-required size with removable covers installed so that covers will be accessible after work is completed. Do not locate pull boxes or junction boxes in finished areas unless specifically shown or special permission is obtained from Architect.
- F. Boxes shall be flush with finished surfaces or not more than 1/8-inch below surface and be level and plumb. Long screws with spacers or shims for mounting devices will not be acceptable. No combustible material shall be exposed to wiring at outlets.

END OF SECTION

ATTACHMENT L During Solicitation Substitution Request Form



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SUBSTITUTION REQUEST (During the Bidding Phase)

Project: _____ Substitution Request Number: _____

From: _____
To: _____ Date: _____
A/E Project Number: _____
Re: _____ Contract For: _____

Specification Title: _____ Description: _____
Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitution: _____
Manufacturer: _____ Address: _____ Phone: _____
Trade Name: _____ Model No.: _____

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: _____
Signed by: _____
Firm: _____
Address: _____
Telephone: _____

A/E's REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Specification Section 01330.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01330.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: _____

Date: _____

Supporting Data Attached: ☐ Drawings ☒ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____