#### PROFESSIONAL SERVICES AGREEMENT

This Professional Services Agreement (this "Agreement") is made and entered into effective September 21, 2023 (the "Effective Date") between Grant School District 3 (hereafter "Owner" or "District"), an Oregon special district, whose address is 401 N Canyon City Blvd, Canyon City, OR 97820 and Frontier Consulting Engineers ("Consultant"), a California limited liability company whose address is 2727 Bechelli Lane, Redding, CA 96002.

#### RECITALS:

A. Consultant is a licensed California design firm engaged in the business of providing electrical engineering, electrical design, and related services on a contract basis.

B. Owner desires to make certain improvements on or about that certain real property associated with Grant Jr./Sr. High School located at 911 S. Canyon Blvd, John Day, Oregon (the "Property"). Owner and Consultant desire to enter into this Agreement pursuant to which Consultant will undertake and perform certain electrical engineering and design services concerning or related to the Property.

#### AGREEMENT:

NOW, THEREFORE, for and in consideration of the parties' mutual obligations under this Agreement, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto hereby agree as follows:

#### 1. <u>SERVICES; STANDARDS; SCHEDULE; COMPENSATION</u>

1.1 Description of Services. Consultant will perform and complete the following Project design and related services for and on behalf of Owner concerning or related to the Property (collectively, the "Services"): (a) those design services necessary to provide power to replace or install new HVAC units, specifying a new main switchboard, and replacing the electrical service at Grant Union High School, in accordance with the Plans and Specifications included on the attached Exhibit A; and (b) all other necessary or appropriate services customarily provided by Consultant in connection with its performance of the services set forth in this Agreement and in accordance with Consultant's proposal dated August 29, 2023 included on the attached Exhibit B.

1.2 <u>Standards</u>. Subject to the terms and conditions contained in this Agreement, Consultant will (a) consult with and advise District on all matters concerning the Services reasonably requested by District, (b) communicate all matters and information concerning the Services to District's superintendent (or his or her designee) and perform the Services under the general direction of District's superintendent (or his or her designee), (c) devote such time and attention to the performance of the Services as District deems necessary or appropriate, and (d) perform the Services to the best of Consultant's ability. Consultant acknowledges and agrees that District may cause or direct other persons or contractors to provide services for and on behalf of District that are the same or similar to the Services provided by Consultant under this Agreement.

1.3 <u>Schedule of Services</u>. Timely and proper completion of the Services is of the essence to this Agreement. Consultant will commence performance of the Services promptly after Owner issues Consultant written notice to proceed. Consultant will prosecute completion of the Services diligently and continuously. The Services will be Completed (as defined below) no later than November 30, 2023 (the "Completion Date") unless Owner provides a written extension. For the purposes of this Agreement, the term "Completion" or "Completed" means when Owner determines, in its sole discretion, that the Services is complete in accordance with this Agreement. Consultant will front-load the switch gear sizing and design in order to facilitate Owner's submittal process for those components.

1.4 <u>Compensation</u>. Subject to the terms and conditions contained in this Agreement, in consideration of Consultant's timely completion of the Services in accordance with this Agreement, Owner will pay

Consultant in accordance with the Proposal and Fee Schedule on the attached <u>Exhibit B</u>. Consultant will submit a monthly invoice to Owner concerning the Services (the "Invoice"). Owner will pay the amount due under the Invoice within thirty (30) days after Owner has reviewed and approved the Services. Owner's payment will be accepted by Consultant as full compensation for completing the Services. No compensation will be paid by Owner for any portion of the Services not completed in accordance with this Agreement. Owner will not provide any benefits to Consultant, and Consultant will be solely responsible for obtaining Consultant's own benefits, including, without limitation, insurance, medical reimbursement, and retirement plans. Notwithstanding anything contained in this Agreement to the contrary, Owner's performance of its obligations under this Agreement, including, without limitation, those Consultant obligations described under Section 1.1 and Section 2.1. Total compensation payable under this Agreement shall not exceed \$35,000 without prior written approval.

#### 2. <u>RELATIONSHIP</u>

2.1 Independent Consultant. Consultant is an independent contractor of District. Consultant is not an employee of District. Consultant will be free from direction and control over the means and manner of performing the Services, subject only to the right of District to specify the desired results. This Agreement does not create an agency relationship between District and Consultant and does not establish a joint venture or partnership between District and Consultant. Consultant does not have the authority to bind District or represent to any person that Consultant is an agent of District. Consultant has the authority to hire other persons to assist Consultant in performing the Services (and has the authority to fire such persons).

2.2 <u>Taxes; Licenses</u>. District will not withhold any taxes from any payments made to Consultant, and Consultant will be solely responsible for paying all taxes arising out of or resulting from Consultant's performance of the Services, including, without limitation, income, social security, workers' compensation, and employment insurance taxes. Consultant will be solely responsible for obtaining all licenses, approvals, and certificates necessary or appropriate to perform the Services.

#### 3. <u>REPRESENTATIONS; WARRANTIES; COVENANTS</u>

In addition to any other Consultant representation, warranty, and/or covenant made in this Agreement, Consultant represents, warrants, and covenants to District as follows:

3.1 <u>Authority; Binding Obligation; Conflicts</u>. Consultant is duly organized, validly existing, and in good standing under applicable Oregon law. Consultant has full power and authority to sign and deliver this Agreement and to perform all of Consultant's obligations under this Agreement. This Agreement is the legal, valid, and binding obligation of Consultant, enforceable against Consultant in accordance with its terms. The signing and delivery of this Agreement by Consultant and the performance by Consultant of all of Consultant's obligations under this Agreement will not (a) breach any agreement to which Consultant is a party, or give any person the right to accelerate any obligation of Consultant, (b) violate any law, judgment, or order to which Consultant is subject, or (c) require the consent, authorization, or approval of any person, including, without limitation, any governmental body.

3.2 <u>Quality of Services</u>. Consultant will perform the Services to the best of Consultant's ability, diligently, in good faith, in a professional manner, free from errors and/or deficiencies, and consistent with the terms and conditions contained in this Agreement. The Services will be performed in accordance with the Laws (as defined below). Consultant will be solely responsible for the Services. Consultant will make all decisions called for promptly and without unreasonable delay. All materials and documents prepared by Consultant will be accurate, complete, unambiguous, prepared properly, and in compliance with the Laws.

3.3 <u>Insurance</u>. Consultant will maintain public liability and property damage insurance against death or injury to persons and physical loss or damage to property, which insurance will include perils of fire, theft, vandalism, Acts of God, and malicious mischief; the insurance will include coverage for contractual liability and

"products-completed operations" that will apply for a period of two years from the date the Services is determined Completed. The insurance required under the immediately preceding sentence will be in the form of general liability and property damage insurance (occurrence version) against personal injury claims arising out of Consultant's activities on, or any condition of, the Building with limits of no less than \$1,000,000.00 per occurrence, \$2,000,000.00 in the aggregate. Consultant will obtain and maintain the following insurance: (a) commercial automobile insurance with limits of no less than \$500,000 combined single limit or split limits of \$250,000 per person, \$500,000 per occurrence and \$250,000 property damage, for any and all automobiles used in the prosecution of the Services. Each liability insurance policy will be in form and content satisfactory to Owner and will contain a severability of interest clause. By separate endorsement, each liability insurance policy will name Owner and Owner's Representatives as additional insureds. Consultant's insurance will be primary, and any insurance carried by Owner will be excess and noncontributing. Consultant will provide evidence of the insurance coverage (including applicable endorsements) required to be maintained by Consultant under this Section 3.1 prior to commencement of the Services and upon Owner's demand. All policies of insurance Consultant is required to carry under this Agreement will provide that the insurer waives the right of subrogation against Owner. For purposes of this Agreement, the term "Owner's Representative(s)" means each present and future Owner officer, employee, representative, Consultant, and/or agent.

3.4 <u>Compliance with Laws</u>. Consultant will comply and perform the Services subject to and in accordance with the Laws. Without otherwise limiting the generality of the immediately preceding sentence, Consultant will comply with each obligation applicable to Consultant and/or this Agreement under ORS 279B.220, 279B.225, 279B.230, and 279B.235, which statutes are incorporated herein by reference. Prior to the Effective Date, Consultant obtained all licenses, approvals, and/or certificates necessary or appropriate to perform the Services, including, without limitation, an unexpired certificate issued by the Oregon Department of Administrative Services under ORS 279A.167. For purposes of this Agreement, the term "Law(s)" means all applicable federal, state, and local laws, regulations, restrictions, orders, codes, rules, handbooks, and ordinances related to or concerning Consultant, this Agreement, and/or the Services.

3.5 Indemnification. To the fullest extent permitted by the Laws, Consultant will defend, indemnify, and hold District, and each present and future District officer, employee, agent, and representative (collectively, "District's Representatives"), harmless for, from, and against all claims, actions, proceedings, damages, liabilities, injuries, losses, and expenses of every kind, whether known or unknown, including, without limitation, attorney fees and costs, resulting from or arising out of the following: (a) damage, injury, and/or death to person or property caused directly or indirectly by Consultant (and/or Consultant's directors, officers, shareholders, members, managers, partners, employees, agents, representatives, and/or contractors); (b) Consultant's failure to pay any tax arising out of or resulting from performance of the Services; and/or (c) Consultant's breach and/or failure to perform any Consultant representation, warranty, covenant, and/or obligation contained in this Agreement. Consultant's indemnification obligations provided in this Section 4.5 will survive the termination of this Agreement.

3.6 <u>Assignment of Studies and Reports</u>. Consultant will assign all studies, reports, data, documents, and/or materials of any kind produced under this Agreement (collectively, the "Deliverables") to District upon the earlier of District's request or termination of this Agreement. All copies of the materials provided to District will become the property of District who may use them without Consultant's permission for any proper purpose relating to the Services, including, without limitation, additions to or completion of the Services; provided, however, any District modification and/or use of the Deliverables for any non-Project related purpose will be at District's risk and expense. Consultant will defend all suits or claims for infringement of patent, trademark, and/or copyright for which Consultant is responsible (including, without limitation, any claims which may be brought against District), and Consultant will be liable to District for all losses arising therefrom, including costs, expenses, and attorney fees.

3.7 <u>Records</u>. Consultant will maintain complete and accurate records concerning all Services performed, the number of hours each person spent to perform the Services, and all documents produced under this Agreement for a period of three years after termination of this Agreement. Consultant's records will be

maintained in accordance with sound accounting practices. Consultant will provide, and cause its subcontractors to provide, District, the State of Oregon, the federal government and/or any of their duly authorized representatives access to any Consultant books, documents, papers, and/or records which are pertinent to this Agreement and/or the Services. Consultant will maintain all books, documents, papers, and records generated under this Agreement for a period no less than three years commencing on the date of District's final payment to Consultant under this Agreement.

3.8 Confidential Information. During the term of this Agreement, and at all times thereafter, Consultant will maintain all Confidential Information (as defined below) in the strictest confidence and will not directly or indirectly use, communicate, and/or disclose any Confidential Information to any person, or remove or make reproductions of any Confidential Information, except that Consultant may (a) use Confidential Information to perform the Services to the extent necessary, and (b) communicate or disclose Confidential Information in accordance with a judicial or other governmental order or as required by applicable law, but only if Consultant promptly notifies the superintendent of the order and complies with any applicable protective or similar order. Consultant will promptly notify the superintendent of any unauthorized use, communication, and/or disclosure of any Confidential Information and will assist District in every way to retrieve any Confidential Information that was used, communicated, and/or disclosed by Consultant and will exert Consultant's best efforts to mitigate the harm caused by the unauthorized use, communication, and/or disclosure of any Confidential Information. Upon the earlier of District's request or termination of this Agreement, Consultant will immediately return to District all documents, instruments, and/or materials containing any Confidential Information accessed or received by Consultant, together with all copies and summaries of such Confidential Information. If requested by District, Consultant will execute a written certification satisfactory to District pursuant to which Consultant will represent and warrant that Consultant has returned all Confidential Information to District in accordance with the terms of this Agreement. Notwithstanding anything contained in this Agreement to the contrary, the terms of this Agreement do not operate to transfer any ownership or other rights in or to the Confidential Information to Consultant or any other person. For purposes of this Agreement, the term "Confidential Information" means all documentation, information, and/or materials identified by District as confidential and/or any documentation, information, and/or materials relating to or concerning District's future plans, business affairs, employment, legal, and litigation matters that need to be protected from improper disclosure, in whatever form (e.g., hard and electronic copies, etc.), that is received or accessed by Consultant; provided, however, the term "Confidential Information" does not include District's public records which are non-exempt public records under applicable federal, state, and/or local laws.

#### 4. TERMINATION AND DAMAGES

4.1 <u>Termination</u>. Subject to the terms and conditions contained in this Agreement, the term of this Agreement commenced on the Effective Date and will remain in full force and effect until Consultant's completion of the Services, unless sooner terminated or extended as provided in this Agreement. Notwithstanding anything contained in this Agreement to the contrary, (a) this Agreement may be terminated at any time by the mutual written agreement of District and Consultant, and/or (b) District may terminate this Agreement for convenience and without cause by giving ten (10) days' prior written notice of such termination to Consultant. Upon receipt of the notice of termination, except as explicitly directed by District, Consultant must immediately discontinue performing any Services..

4.2 <u>Termination for Cause</u>. Notwithstanding anything contained in this Agreement to the contrary, District may terminate this Agreement immediately upon notice to Consultant upon the happening of any of the following events: (a) Consultant fails to perform the Services within the time specified in this Agreement or by District-approved extension; (b) Consultant engages in any form of dishonesty or conduct that reflects adversely on the reputation or operations of District; (c) Consultant fails to comply with any applicable law related to Consultant's independent contractor relationship with District; (d) problems occur in connection with the performance of the Services; and/or (e) Consultant breaches and/or otherwise fails to perform any Consultant representation, warranty, covenant, and/or obligation contained in this Agreement. The determination as to whether any of the aforementioned events have occurred will be made by District in District's sole discretion. 4.3 <u>Consequences of Termination</u>. Upon termination of this Agreement, District will not be obligated to reimburse or pay Consultant for any continuing contractual commitments to others or for penalties or damages arising from the cancellation of such contractual commitments. Notwithstanding anything contained in this Agreement to the contrary, termination of this Agreement by District will not constitute a waiver or termination of any rights, claims, and/or causes of action City may have against Consultant. Within a reasonable period of time after termination of this Agreement (but in no event later than five days after termination), Consultant will deliver to District all materials and documentation, including raw or tabulated data and work in progress, related to or concerning the Services. District agrees to make just and equitable compensation to Consultant for satisfactory Services completed up through the date that the termination notice is delivered to Consultant harmless for errors or omissions in documents that are incomplete as a result of the termination action under this clause.

4.4 <u>Remedies</u>. If a party breaches or otherwise fails to perform any of its representations, warranties, covenants, and/or obligations under this Agreement, the non-defaulting party may, in addition to any other remedy provided to the non-defaulting party under this Agreement, pursue all remedies available to the non-defaulting party at law or in equity. All available remedies are cumulative and may be exercised singularly or concurrently.

#### 5. <u>MISCELLANEOUS</u>

5.1 <u>Severability; Assignment; Binding Effect</u>. Each provision contained in this Agreement will be treated as a separate and independent provision. The unenforceability of any one provision will in no way impair the enforceability of any other provision contained herein. Any reading of a provision causing unenforceability will yield to a construction permitting enforcement to the maximum extent permitted by applicable law. Consultant will not assign this Agreement to any person without District's prior written consent. Subject to the immediately preceding sentence, this Agreement will be binding on the parties and their respective heirs, personal representatives, successors, and permitted assigns, and will inure to their benefit. This Agreement may be amended only by a written agreement signed by each party.

5.2 <u>Attorney Fees; Dispute Resolution</u>. If any arbitration or litigation is instituted to interpret, enforce, and/rescind this Agreement, including, without limitation, any proceeding brought under the United States Bankruptcy Code, the prevailing party on a claim will be entitled to recover with respect to the claim, in addition to any other relief awarded, the prevailing party's reasonable attorney fees and other fees, costs, and expenses of every kind, including, without limitation, costs and disbursements specified in ORCP 68 A(2), incurred in connection with the arbitration, the litigation, any appeal or petition for review, the collection of any award, or the enforcement of any order, as determined by the arbitrator or court. If any claim, dispute, or controversy arising out of or related to this Agreement occurs (a "Dispute"), District and Consultant will exert their best efforts to seek a fair and prompt negotiated resolution of the Dispute and will meet at least once to discuss and seek a resolution of the Dispute. If the Dispute is not resolved by negotiated resolution, either party may initiate a suit, action, arbitration, or other proceeding to interpret, enforce, and/or rescind this Agreement.

5.3 <u>Governing Law; Venue</u>. This Agreement is governed by the laws of the State of Oregon, without giving effect to any conflict-of-law principle that would result in the laws of any other jurisdiction governing this Agreement. Any action or proceeding arising out of this Agreement will be litigated in courts located in Grant County, Oregon. Each party consents and submits to the jurisdiction of any local, state, or federal court located in Grant County, Oregon.

5.4 <u>Attachments; Further Assurances; Notices</u>. Any exhibits, schedules, instruments, documents, and other attachments referenced in this Agreement are part of this Agreement. The parties will sign other documents and take other actions reasonably necessary to further effect and evidence this Agreement. Time is of the essence with respect to Consultant's performance of its obligations under this Agreement. All notices or other communications required or permitted by this Agreement must be in writing, must be delivered to the parties at the addresses set forth above, or any other address that a party may designate by notice to the other party, and

are considered delivered upon actual receipt if delivered personally, by fax or email transmission (with electronic confirmation of delivery), or by a nationally recognized overnight delivery service, or at the end of the third business day after the date of deposit if deposited in the United States mail, postage pre-paid, certified, return receipt requested.

5.5 <u>Waiver; Entire Agreement</u>. No provision of this Agreement may be modified, waived, or discharged unless such waiver, modification, or discharge is agreed to in writing by District and Consultant. No waiver of either party at any time of the breach of, or lack of compliance with, any conditions or provisions of this Agreement will be deemed a waiver of other provisions or conditions hereof. This Agreement contains the entire agreement and understanding between the parties with respect to the subject matter of this Agreement and contains all the terms and conditions of the parties' agreement and supersedes any other oral or written negotiations, discussions, representations, or agreements. Consultant has not relied on any promises, statements, representations, or warranties except as set forth expressly in this Agreement.

5.6 Person; Interpretation; Execution. For purposes of this Agreement, the term "person" means any natural person, corporation, limited liability company, partnership, joint venture, firm, association, trust, unincorporated organization, government or governmental agency or political subdivision, or any other entity. All pronouns contained herein and any variations thereof will be deemed to refer to the masculine, feminine, or neutral, singular or plural, as the identity of the parties may require. The singular includes the plural and the plural includes the singular. The word "or" is not exclusive. The words "include," "includes," and "including" are not limiting. The titles, captions, or headings of the sections herein are inserted for convenience of reference only and are not intended to be a part of or to affect the meaning or interpretation of this Agreement. The parties may execute this Agreement in separate counterparts, each of which when executed and delivered will be an original, but all of which together will constitute one and the same instrument. Facsimile or email transmission of any signed original document will be the same as delivery of an original. At the request of either party, the parties will confirm facsimile or email transmitted signatures by signing and delivering an original document.

IN WITNESS WHEREOF, the undersigned have caused this Agreement to be executed and effective for all purposes as of the Effective Date.

OWNER: Grant School District 3 an Oregon special district CONSULTANT: Frontier Consulting Engineers a California limited liability company

By: Mark Witty, Superintendent

By:

#### Exhibit A Plans and Specifications

[Enclosed]

SCOPE OF WORK

- PROVIDE EQUIPMENT AS SCHEDULED AND AS SHOWN ON THE PLANS

- PROVIDE COMMISSIONING REPORT BY AN INDEPENDANT AGENT, O&Ms, SUBMITTALS, AS-BUILTS AND BALANCE REPORT TO OWNER AT CLOSEOUT.

- 3 DUCT LAYOUT AND EQUIPMENT LOCATION IS DIAGRAMATIC. CORRIDINATE WITH OWNER AND OTHER TRADES FOR EXACT PLACEMENT. 4 - R12 INSULATION ON OSA DUCTS AND DUCTS OUTSIDE THE BUILDING ON HRU'S AND PACKAGED HEAT PUMPS. PROVIDE DUCT LINER ON PACKAGED HEAT PUMPS. - BREAK EXERIOR DUCT TO FACILITATE WATER RUNOFF.
- 3 EVERY DUCT AND PLENUM WHICH IS A PORTION OF THE COMFORT HEATING AND OR COOLING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE 2019 OREGON MECHANICAL SPECIALITY CODE AND/OR ASHRAE AND/OR SMACNA.
- ' ROUND AND RECTANGULAR DUCTWORK ARE INTERCHANGABLE IF THE CROSS SECTIONAL AREAS ARE EQUIVALENT AT NO ADDITIONAL CHARGE. - THERMOSTATS SHALL BE PROGRAMMABLE WITH 7 DAY TYPES, OFF HOUR SETBACKS, 5 DEGREE DEADBAND.
- 9 EXTERIOR DUCTWORK TO BE SEALED AND LINED W/R12. DUCT DIMENSIONS ARE INSIDE CLEAR.
- 10 ALL DUCTWORK IS LOW PRESSURE

1 - ECONOMIZERS TO PROVIDE PARTIAL COOLING AND TO GO TO FULL OSA MODE WHERE CONDITIONS ALLOW FOR FREE COOLING. INTERLOCK RELIEF MOTORIZED DAMPER WITH ECONOMIZER FUNCTION TO PROVIDE BAROMETRIC RELIEF.

- 12 HEAT PUMPS TO COME WITH FAULT DIAGNOSTICS 13 - DRAIN CONDENSATE TO APPROVED LOCATION
- 14 HANG UH-2'S PER STRUCTURAL DETAIL.
- 15 PROVIDE LOCKING COVERS ON THERMOSTATS AND CO2 SENSORS.
- 16 HEAT TAPE, INSULATE AND WRAP WITH PVC PROTECTIVE COVER THE 3" DRAIN OFF THE HEAT PUMP SECONDARY DRAIN PAN BUILT INTO HEAT PUMP STAND. 17 - CONTRACTOR TO PROVIDE ASBESTOS CERTIFIED WORKERS, AND TESTING RESULTS BEFORE AND AFTER WORK IS PREFORMED FOR EACH ROOM WHERE CEILING TILES ARE CUT, DRILLED OR OTHERWISE DISTURBED.
- 18 PROVIDE SENSOR UNDER KITCHEN HOOD TO ENERGIZE FAN AT 90 DEGREES.
- 19 COORDINATE WITH OWNER FOR LOCATION OF THERMOSTATS. LOCATE MORE THAN 10' FROM AN EXTERIOR WALL. 20 - LOCATE CO2 SENSORS NEAR THERMOSTAT TO CONTROL ECONOMIZERS AND HRU OPERATION.
- 21 COORDINATE WITH OWNER FOR EXACT LOCATION OF FAN COILS. OBTAIN APPROVAL FROM ENGINEER WHERE MOVED MORE THAN 10 FEET FROM LOCATION SHOWN. 22 - CONTRACTOR TO PROVIDE AND LOCATE CURBS ON ROOF STAGED WITH THE RE-ROOF PROJECT STARTING LATE JUNE.
- 23 PIPE 3/4" PROPANE FROM TANK TO EACH UNIT HEATER. COORDINATE ROUTING WITH OWNER.
- 24 ELECTRICIAN TO REPAIR OPERATION OF FANS THAT PROVIDE OSA IN GYMNASIUM
- 25 INSULATE PIPE PER CODE.
- 26 LOCATE ROOF TOP EQUIPMENT MORE THAN 10'-0" OFF ROOF EDGE OR PROVIDE GUARDRAIL 27 - INTERLOCK OSA FANS IN GYMNASIUM WITH CO2 SENSOR AND MOTORIZED DAMPERS IN RELIEF. PROVIDE ECONOMIZER CONTROL OF THE FANS.
- 28 14X14 SUPPLY AIR OFF HRU. DUCT HEATER, 14X14X10" CAN W/10X8 GRILLES ON THREE SIDES TO THROW AIR AWAY FROM EXHAUST DROP.
- 29 THESE PLANS ARE PREPARED FOR GRANT UNION HIGH SCHOOL. THE CONTRACTOR SELECTED SHALL HAVE 5 YEARS EXPERIENCE INSTALLING SIMILAR EQUIPMENT AND SHALL TAKE RESPONSIBILITY FOR FIELD VERIFICATION AND ASSOCIATED ACCOMMODATIONS, INCLUDING CUT, PATCH AND REPAIR. 30 - PROVIDE CONTROLS FOR MODULATING ECONOMIZER DAMPERS ON UH-2'S TO CONTROL CO2 LEVELS BELOW 600 PPM.
- 31. SET CO2 SENSORS TO 600 PPM.

# VENTILATION SCHEDULE

MENS LOCKER (EXISTING)         920           LADIES LOCKER (EXISTING)         945           GYMNASIUM (EXISTING)         11,664           KITCHEN - Z2         880           CAFETERIA - Z3-EAST         1,276           CAFETERIA - Z3-WEST         1,276           CLASSROOM 4         1,056           MUSIC - Z5         1,512           CLASSROOM 6         1,512           WOOD SHOP - Z7         3,240           CLASSROOM 8         1,260           CLASSROOM 9         800           CLASSROOM 10         1,280           ADMIN OFFICES - Z11         1,513           DETENTION OFFICES - Z12         1,520           LIBRARY - Z13         2,000           CLASSROOM 14         1,050           CLASSROOM 15         660           CLASSROOM 16         625           CLASSROOM 17         720           CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	EA REQ (OSSC 1203.1)	NATURAL VENTILATION AREA PROVIDED	NATURAL VENTILATION PROVIDED PERCENT	P/1000 SF	# PEOPLE	CFM/P	CFM/SF	DERATE FOR CLG SUPPLY	MECH OSA CFM REQD	MIN OSA CFM PROVIDED
GYMNASIUM (EXISTING)         11,664           KITCHEN - Z2         880           CAFETERIA - Z3-EAST         1,276           CAFETERIA - Z3-WEST         1,276           CLASSROOM 4         1,056           MUSIC - Z5         1,512           CLASSROOM 6         1,512           WOOD SHOP - Z7         3,240           CLASSROOM 8         1,260           CLASSROOM 9         800           CLASSROOM 10         1,280           ADMIN OFFICES - Z11         1,513           DETENTION OFFICES - Z12         1,520           LIBRARY - Z13         2,000           CLASSROOM 14         1,050           CLASSROOM 15         660           CLASSROOM 17         720           CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	37	0	0%		EXISTING E	XHAUST 1	TO REMAIN	J		-
KITCHEN - Z2         880           CAFETERIA - Z3-EAST         1,276           CAFETERIA - Z3-WEST         1,276           CLASSROOM 4         1,056           MUSIC - Z5         1,512           CLASSROOM 6         1,512           WOOD SHOP - Z7         3,240           CLASSROOM 8         1,260           CLASSROOM 9         800           CLASSROOM 10         1,280           ADMIN OFFICES - Z11         1,513           DETENTION OFFICES - Z12         1,520           LIBRARY - Z13         2,000           CLASSROOM 14         1,050           CLASSROOM 15         660           CLASSROOM 17         720           CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	38	0	0%		EXISTING E	XHAUST 1	TO REMAIN	J		-
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CAFETERIA - Z3-WEST       1,276         CLASSROOM 4       1,056         MUSIC - Z5       1,512         CLASSROOM 6       1,512         WOOD SHOP - Z7       3,240         CLASSROOM 8       1,260         CLASSROOM 9       800         CLASSROOM 10       1,280         ADMIN OFFICES - Z11       1,513         DETENTION OFFICES - Z12       1,520         LIBRARY - Z13       2,000         CLASSROOM 14       1,050         CLASSROOM 15       660         CLASSROOM 16       625         CLASSROOM 18       1,100         STUDENT LOUNGE - Z19       1,680         NURSE OFFICE - Z20       750         CLASSROOM 21       720	35	20	250%	20	0	7.5	0.12	80%	-68	0
CLASSROOM 4         1,056           MUSIC - Z5         1,512           CLASSROOM 6         1,512           WOOD SHOP - Z7         3,240           CLASSROOM 8         1,260           CLASSROOM 9         800           CLASSROOM 10         1,280           ADMIN OFFICES - Z11         1,513           DETENTION OFFICES - Z12         1,520           LIBRARY - Z13         2,000           CLASSROOM 14         1,050           CLASSROOM 15         660           CLASSROOM 17         720           CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	51	36	71%	100	128	7.5	0.18	80%	437	450
MUSIC - Z5         1,512           CLASSROOM 6         1,512           WOOD SHOP - Z7         3,240           CLASSROOM 8         1,260           CLASSROOM 9         800           CLASSROOM 10         1,280           ADMIN OFFICES - Z11         1,513           DETENTION OFFICES - Z12         1,520           LIBRARY - Z13         2,000           CLASSROOM 14         1,050           CLASSROOM 15         660           CLASSROOM 17         720           CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	51	36	71%	100	128	7.5	0.18	80%	437	450
CLASSROOM 6         1,512           WOOD SHOP - Z7         3,240           CLASSROOM 8         1,260           CLASSROOM 9         800           CLASSROOM 10         1,280           ADMIN OFFICES - Z11         1,513           DETENTION OFFICES - Z12         1,520           LIBRARY - Z13         2,000           CLASSROOM 14         1,050           CLASSROOM 15         660           CLASSROOM 16         625           CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	42	12	28%	35	37	10	0.12	80%	444	450
WOOD SHOP - Z7         3,240           CLASSROOM 8         1,260           CLASSROOM 9         800           CLASSROOM 10         1,280           ADMIN OFFICES - Z11         1,513           DETENTION OFFICES - Z12         1,520           LIBRARY - Z13         2,000           CLASSROOM 14         1,050           CLASSROOM 15         660           CLASSROOM 16         625           CLASSROOM 17         720           CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	60	21	35%	35	53	10	0.12	80%	464	500
CLASSROOM 8         1,260           CLASSROOM 9         800           CLASSROOM 10         1,280           ADMIN OFFICES - Z11         1,513           DETENTION OFFICES - Z12         1,520           LIBRARY - Z13         2,000           CLASSROOM 14         1,050           CLASSROOM 15         660           CLASSROOM 16         625           CLASSROOM 17         720           CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	60	18	30%	35	53	10	0.12	80%	499	500
CLASSROOM 9         800           CLASSROOM 10         1,280           ADMIN OFFICES - Z11         1,513           DETENTION OFFICES - Z12         1,520           LIBRARY - Z13         2,000           CLASSROOM 14         1,050           CLASSROOM 15         660           CLASSROOM 16         625           CLASSROOM 17         720           CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	130	36	28%	20	5	10	0.18	80%	454	500
CLASSROOM 10       1,280         ADMIN OFFICES - Z11       1,513         DETENTION OFFICES - Z12       1,520         LIBRARY - Z13       2,000         CLASSROOM 14       1,050         CLASSROOM 15       660         CLASSROOM 16       625         CLASSROOM 17       720         CLASSROOM 18       1,100         STUDENT LOUNGE - Z19       1,680         NURSE OFFICE - Z20       750         CLASSROOM 21       720	50	8	16%	35	44	10	0.12	80%	498	500
ADMIN OFFICES - Z11       1,513         DETENTION OFFICES - Z12       1,520         LIBRARY - Z13       2,000         CLASSROOM 14       1,050         CLASSROOM 15       660         CLASSROOM 16       625         CLASSROOM 17       720         CLASSROOM 18       1,100         STUDENT LOUNGE - Z19       1,680         NURSE OFFICE - Z20       750         CLASSROOM 21       720	32	16	50%	35	28	10	0.12	80%	235	250
DETENTION OFFICES - Z12         1,520           LIBRARY - Z13         2,000           CLASSROOM 14         1,050           CLASSROOM 15         660           CLASSROOM 16         625           CLASSROOM 17         720           CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	51	18	35%	35	45	10	0.12	80%	488	500
LIBRARY - Z13         2,000           CLASSROOM 14         1,050           CLASSROOM 15         660           CLASSROOM 16         625           CLASSROOM 17         720           CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	61	0	0%	5	8	5	0.06	80%	161	200
CLASSROOM 14         1,050           CLASSROOM 15         660           CLASSROOM 15         660           CLASSROOM 16         625           CLASSROOM 17         720           CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	61	0	0%	5	8	5	0.06	80%	162	800
CLASSROOM 15         660           CLASSROOM 15         660           CLASSROOM 16         625           CLASSROOM 17         720           CLASSROOM 17         720           CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	80	21	26%	25	50	10	0.12	80%	546	800
CLASSROOM 16         625           CLASSROOM 17         720           CLASSROOM 17         720           CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	42	18	43%	35	37	10	0.12	80%	353	400
CLASSROOM 17         720           CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	26	18	68%	35	23	10	0.12	80%	123	200
CLASSROOM 18         1,100           STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	25	28	112%	35	22	10	0.12	80%	-44	0
STUDENT LOUNGE - Z19         1,680           NURSE OFFICE - Z20         750           CLASSROOM 21         720	29	32	111%	35	25	10	0.12	80%	-47	0
NURSE OFFICE - Z20750CLASSROOM 21720	44	18	41%	35	39	10	0.12	80%	382	400
CLASSROOM 21 720	67	54	80%	35	59	10	0.12	80%	194	200
	30	0	0%	5	4	5	0.06	80%	80	200
	29	18	63%	35	25	10	0.12	80%	159	200
CLASSROOM 22 1,100	44	18	41%	35	39	10	0.12	80%	382	400
STAGE - Z23 900	36	0	0%	70	63	10	0.06	80%	855	
MAINT. OFFICE - Z24 800	32	48	150%	5	4	5	0.06	80%	-43	5400
AUDITORIUM - Z25 5,400	432	72	17%	150	810	5	0.06	80%	4556	



# HEATER SCHEDULE

ID	QUANTITY	SERVES	MANUFACTURER	MODEL	KW	LENGTH	AMPS	V/PH	MOCP	WEIGHT	NOTES
UH-1	6	LOCKER ROOMS, RR	REZNOR	EGHB	10	-	42	208/1	50	45	2
UH-2	4	GYMNASIUM	REZNOR	SCE-6	250 MBH INPUT	-	9	240/3	15	482	2, 3, 4
WH-1	2	OFFICES	REZNOR	ORC0600	0.6	47"	3	208/1	15	40	2
WH-2	8	ENTRANCES	REZNOR	ORC1050	1	83"	4	208/1	15	42	2
AC-1	2	ENTRANCES	BERNER	AEO8E	10.8	48"	29	208/1	40	71	1
AC-2	2	AUDITORIUM ENTRANCE	BERNER	AEO8E	14.4	72"	37	208/1	50	86	1
RH-1	1	WELDING SHOP	REZNOR	VPS-100	100 MBH	30'-0"	5.0	120/1	15	250	1

NOTES:

1 - PROVIDE WITH DOOR SWITCH, WHITE COLOR

2 - WALL STAT AND DISCONNECT BY EC

3 - PROCURE TWO WITH RIGHT HAND ACCESS AND TWO WITH LEFT SIDE ACCESS

4 - PROPANE, MOTOR STARTER AND DISCONNECT, BURNER AIR SHUTTERS, TWO STAGE BURNER, FREEZESTAT, 4" FILTER RACK W/EXTRA CASE OF FILTERS, BOTTOM RETURN, MERV 8, CONCENTRIC VENT, 409 HX, STAINLESS STEEL DRAIN PAN, INTERMITTENT LOCKOUT PILOT RESET AT BREAKER, INTERLOCK WITH CO2 SENSOR, DUCT FLANGE, DRAIN KIT DRAINED TO LANDSCAPE. 7-DAY PROGRAMMABLE STAT, MANUAL SHUTOFF VALVE AND UNION.

# HEAT RECOVERY UNIT SCHEDULE

ID	QUANTITY	SERVES	MANUFACTURER	LOCATION	CFM	HTR KW	MCA	MOCP	V/PH	WEIGHT	NOTES
HRU-3A	1	CAFETERIA - EAST	RENEWAIRE	ROOF	450	3	5	15	208/1	250	1, 2
HRU-3B	1	CAFETERIA - WEST	RENEWAIRE	ROOF	450	3	5	15	208/1	250	1, 2
HRU-4	1	CLASSROOM 4	RENEWAIRE	ROOF	450	3	5	15	208/1	250	1, 2
HRU-5	1	MUSIC CLASSROOM 5	RENEWAIRE	ROOF	500	3	5	15	208/1	250	1, 2
HRU-6	1	CLASSROOM 6	RENEWAIRE	ROOF	500	3	5	15	208/1	250	1, 2
HRU-7	1	WOOD SHOP	RENEWAIRE	ROOF	500	3	5	15	208/1	250	1, 2
HRU-8	1	CLASSROOM 8	RENEWAIRE	ROOF	500	3	5	15	208/1	250	1, 2
HRU-9	1	CLASSROOM 9	RENEWAIRE	ROOF	250	1	5	15	208/1	250	1, 2
HRU-10	1	CLASSROOM 10	RENEWAIRE	ROOF	500	3	5	15	208/1	250	1, 2
HRU-11	1	ADMIN OFFICES 11	RENEWAIRE	ROOF	200	1	5	15	208/1	250	1, 2
HRU-12	1	LIBRARY OFFICES 12	RENEWAIRE	ROOF	300	1	5	15	208/1	250	1, 2
HRU-13	1	LIBRARY13	RENEWAIRE	ROOF	500	3	5	15	208/1	250	1, 2
HRU-14	1	CLASSROOM 14	RENEWAIRE	ROOF	400	3	5	15	208/1	250	1, 2
HRU-15	1	CLASSROOM 15	RENEWAIRE	ROOF	200	1	5	15	208/1	250	1, 2
HRU-18	1	CLASSROOM 18	RENEWAIRE	ROOF	400	3	5	15	208/1	250	1, 2
HRU-19	1	STUDENT LOUNGE 19	RENEWAIRE	ROOF	200	1	5	15	208/1	250	1, 2
HRU-20	1	CLASSROOM 20	RENEWAIRE	ROOF	200	1	5	15	208/1	250	1, 2
HRU-21	1	CLASSROOM 21	RENEWAIRE	ROOF	200	1	5	15	208/1	250	1, 2
HRU-22	1	CLASSROOM 22	RENEWAIRE	ROOF	400	3	5	15	208/1	250	1, 2

NOTES:

1 - PROV IDE 14" CURB, CURB CLIPS, TIME CLOCK, CO2 SENSOR, FUSED DISCONNECT, FILTER ALARMS, DOUBLE WALL CONSTRUCTION, WHITE, MERV 13 FILTERS, AND BACKDRAFT DAMPER ACCESSORIES. 2 - PROVIDE AUX HEATER SET TO MAINTAIN DISCHARGE AIR TEMP TO 70 DEGREES WHEN OSA IS LESS THAN 55 DEGREES. SEPARATE POWER CONNECTION.

# DUCT HEATER SCHEDULE

ID	QUANTITY	SERVES	KW/STAGES	CFM	SIZE	V/PH	WEIGHT	NOTES
DH-1	3	AUDITORIUM	30/2	1800	MATCH OSA	480/3	20	1, 2
DH-2	7	SEE HRU SCHEDULE	1/1	200-399	14X14	208/1	10	3, 4
DH-3	12	SEE HRU SCHEDULE	3/1	400-600	14X14	208/1	10	3, 4

NOTES: 1 - RATED FOR EXTERIOR USE

2 - LOCATE STAT IN MIXED AIR STREAM TO MEASURE THE TEMPERATURE OF AIR HITTING THE COIL. SET THE STAT TO 50 DEGREES

4 - RETURN TO BE EGGCRATE AT CEILING. PROVIDE AIR FLOW SWITCH.

# FAN SCHEDULE

ID	QUANTITY	SERVES	MANUFACTURER	MODEL	TYPE	CFM	ESP	VOLT	AMPS	WEIGHT	NOTES
TF-1	25	TRANSFER FAN	BROAN	FG 12	INLINE	150	0.2	120	1.5	5	1
EF-1	1	LADIES RESTROOM	GREENHECK	CUE-070D	WALL	250	0.2	120	1/30 HP	30	1

NOTES:

1 - INTERLOCK WITH OCCUPANCY SENSOR, BY EC

# PACKAGED HEAT PUMP SCHEDULE

ID	QUANTITY	SERVES	MANUFACTURER	MODEL	CFM	OSA	ESP	TON	SEER	V/PH	MCA	MOCP	WEIGHT	NOTES
HP-26A, B & C	3	AUDITORIUM	TRANE	WSC120H4ROA	4,000	1,800	0.5	10.0	14.1	480/3	25.0	35	850	1, 2
ECONOMIZER AND CO2 CONTROL OF DAMPER POSITIONS														

1 - ECONOMIZER AND CO2 CONTROL OF DAMPER POSITIONS

2 - EQUIPMENT PAD BY OTHERS



3 - LOCATE STAT IN ERV SUPPLY DUCT IN SPACE. SET THE STAT TO 65 DEGREES. 14X14 DUCT DROP INTO SPACE WITH DUCT HEATER IN HORIZONTAL. DROP CAN AN ADDITIONAL 10" WITH 10X8 EGGCRATE GRILLES ON THREE SIDES.

THESE PLANS ARE PREPARED FOR GRANT UNION HIGH SCHOOL. CONTRACTOR SELECTED SHALL HAVE 5 YEARS EXPERIENCE INSTALLING SIMILAR EQUIPMENT AND SHALL TAKE RESPONSIBILITY FOR FIELD VERIFICATION AND ASSOCIATED ACCOMMODATIONS.

M

# FAN COIL SCHEDULE

ID	QUANTITY	SERVES	MFG	STYLE	MODEL	MBH	CFM	V/PH	MCA	МОСР	WEIGHT	NOT
FC-2	1	KITCHEN	MITSUBISHI	WALL HUNG	РКА-А24КА7	24	700	208/1	1.0	15	37	
FC-3A1	1	CAFETERIA - NW	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	
FC-3A2	1	CAFETERIA - SW	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	
FC-3B1	1	CAFETERIA - NE	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	
FC-3B2	1	CAFETERIA - SW	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	
FC-4A	1	CLASSROOM 4 NORTH	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	
FC-4B	1	CLASSROOM 4 SOUTH	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	
FC-5	1	CLASSROOM 5	MITSUBISHI	WALL HUNG	PKA-A36LA7	36	1,050	208/1	1.0	15	37	1
FC-6A	1	CLASSROOM 6 WEST	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	+
FC-6B	1	CLASSROOM 6 SOUTH	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	+
FC-6C	1	OFFICE 5	MITSUBISHI	WALL HUNG	PFKY-P06NLMU-E	6	150	208/1	1.0	15	37	+
FC-7A	1	WOOD SHOP 7 WEST	MITSUBISHI	WALL HUNG	PKA-A36KA7	36	1,050	208/1	1.0	15	37	+
FC-7B	1	WOOD SHOP 7 EAST	MITSUBISHI	WALL HUNG	PKA-A36KA7	36	1,050	208/1	1.0	15	37	+
FC-8A	1	CLASSROOM 8 NORTH	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	+
FC-8B	1	CLASSROOM 8 NORTH			PKFY-P24NKMU-E2	24	700	208/1		15	37	+
	1		MITSUBISHI	WALL HUNG					1.0			+
FC-9	1	CLASSROOM 9	MITSUBISHI	WALL HUNG	PKA-A36KA7	36	1,050	208/1	1.0	15	37	
FC-10A	1	CLASSROOM 10 NORTH	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	<u> </u>
FC-10B	1	CLASSROOM 10 SOUTH	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	
FC-11A	1	PRINCIPAL 11	MITSUBISHI	WALL HUNG	PKFY-P06NKMU-E	6	150	208/1	1.0	15	37	
FC-11B	1	WEST OFFICES 11	MITSUBISHI	WALL HUNG	PKFY-P08NKMU-E	8	150	208/1	1.0	15	37	
FC-11C	1	CONF 11	MITSUBISHI	WALL HUNG	PKFY-P12NKMU-E	12	350	208/1	1.0	15	37	
FC-12A	1	LIBRARY RECEPT 12	MITSUBISHI	WALL HUNG	PKFY-P12NKMU-E	12	350	208/1	1.0	15	37	
FC-12B	1	ADMIN RECEPT 12	MITSUBISHI	WALL HUNG	PKFY-P12NKMU-E	12	350	208/1	1.0	15	37	
FC-12C	1	VICE PRINCIPAL 12	MITSUBISHI	WALL HUNG	PKFY-P12NKMU-E	12	350	208/1	1.0	15	37	
FC-12D	1	LIBRARY CONF 12	MITSUBISHI	WALL HUNG	PKFY-P08NKMU-E	8	150	208/1	1.0	15	37	
FC-13A	1	LIBRARY13 WEST	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	
FC-13B	1	LIBRARY13 EAST	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	
FC-14A	1	CLASSROOM 14 WEST	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	1
FC-14B	1	CLASSROOM 14 EAST	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	+
FC-15	1	CLASSROOM 15	MITSUBISHI	WALL HUNG	PKA-A36KA7	36	1,050	208/1	1.0	15	37	+
FC-16	1	CLASSROOM 16	MITSUBISHI	WALL HUNG	PKA-A36KA7	36	1,050	208/1	1.0	15	37	+
FC-17A	1	CLASSROOM 17 WEST	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	
	1					24	700	-				+
FC-17B	1	CLASSROOM 17 EAST	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2			208/1	1.0	15	37	
FC-18A	1	CLASSROOM 18 NORTH	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	
FC-18B	1	CLASSROOM 18 SOUTH	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	
FC-19A	1	WEST OFFICE 19	MITSUBISHI	WALL HUNG	PKFY-P12NKMU-E	12	350	208/1	1.0	15	37	
FC-19B	1	SMALL OFICE 19	MITSUBISHI	WALL HUNG	PKFY-P06NKMU-E	6	150	208/1	1.0	15	37	
FC-19C	1	LOUNGE 19	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	<u> </u>
FC-19D	1	SE OFFICE 19	MITSUBISHI	WALL HUNG	PKFY-P06NKMU-E	6	150	208/1	1.0	15	37	<u> </u>
FC-20A	1	NURSE RECEPTION 20	MITSUBISHI	WALL HUNG	PKFY-P12NKMU-E	12	350	208/1	1.0	15	37	
FC-20B	1	PATIENT 20	MITSUBISHI	WALL HUNG	PKFY-P06NKMU-E	6	150	208/1	1.0	15	37	
FC-20C	1	CONFERENCE 20	MITSUBISHI	WALL HUNG	PKFY-P06NKMU-E	6	150	208/1	1.0	15	37	
FC-20D	1	STORAGE	MITSUBISHI	WALL HUNG	PKFY-P12NKMU-E	12	350	208/1	1.0	15	37	
FC-21A	1	CLASSROOM 21 WEST	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	
FC-21B	1	CLASSROOM 21 EAST	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	1
FC-22A	1	CLASSROOM 22 NORTH	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	1
FC-22B	1	CLASSROOM 22 SOUTH	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	+
FC-23A	1	STAGE 23 WEST	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	+
FC-23B	1	STAGE 23 WEST	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	700	208/1	1.0	15	37	+
	1		MITSUBISHI					-				+
FC-24A	1	MAINTENANCE OFFICE 24		WALL HUNG	PKFY-P08NKMU-E	8	270	208/1	1.0	15	37	+
FC-24B	1	MAINTENANCE STOR 24	MITSUBISHI	WALL HUNG	PKFY-P24NKMU-E2	24	500	208/1	1.0	15	37	

# HEAT PUMP SCHEDULE

ID	QUANTITY	SERVES	MANUFACTURER	HYPER HEAT MODEL	TON	SEER	HSPF	V/РН	MCA	МОСР	WEIGHT	NOTES
HP-2	1	KITCHEN	MITSUBISHI	PUZ-HA24NHA1	2.0	23.0	12.5	208/1	42	50	290	1, 2
HP-3A	1	CAFETERIA - EAST	MITSUBISHI	MXZ-SM48NAMHZ	4.0	23.0	12.0	208/1	42	50	290	1, 2
HP-3B	1	CAFETERIA - WEST	MITSUBISHI	MXZ-SM48NAMHZ	4.0	23.0	12.0	208/1	42	50	290	1, 2
HP-4	1	CLASSROOM 4	MITSUBISHI	MXZ-SM48NAMHZ	4.0	23.0	12.0	208/1	42	50	290	1, 2
HP-5	1	MUSIC CLASSROOM 5	MITSUBISHI	PUZ-HA36NHA1	3.0	22.0	12.0	208/1	42	50	290	1, 2
HP-6	1	CLASSROOM 6	MITSUBISHI	MXZ-SM48NAMHZ	4.0	23.0	12.0	208/1	42	50	290	1, 2
HP-7A	1	WOOD SHOP 7 WEST	MITSUBISHI	PUZ-HA36NHA1	3.0	23.0	12.5	208/1	42	50	290	1, 2
HP-7B	1	WOOD SHOP 7 EAST	MITSUBISHI	PUZ-HA36NHA1	3.0	23.0	12.5	208/1	42	50	290	1, 2
HP-8	1	CLASSROOM 8	MITSUBISHI	MXZ-SM48NAMHZ	4.0	23.0	12.0	208/1	42	50	290	1, 2
HP-9	1	CLASSROOM 9	MITSUBISHI	PUZ-HA36NHA1	3.0	23.0	12.5	208/1	42	50	290	1, 2
HP-10	1	CLASSROOM 10	MITSUBISHI	MXZ-SM48NAMHZ	4.0	23.0	12.0	208/1	42	50	290	1, 2
HP-11	1	ADMIN OFFICES 11	MITSUBISHI	MXZ-SM36NAMHZ	3.0	23.0	12.0	208/1	42	50	290	1, 2
HP-12	1	LIBRARY OFFICES 12	MITSUBISHI	MXZ-SM36NAMHZ	3.0	23.0	12.0	208/1	42	50	290	1, 2
HP-13	1	LIBRARY13	MITSUBISHI	MXZ-SM48NAMHZ	4.0	23.0	12.0	208/1	42	50	290	1, 2
HP-14	1	CLASSROOM 14	MITSUBISHI	MXZ-SM48NAMHZ	4.0	23.0	12.0	208/1	42	50	290	1, 2
HP-15	1	CLASSROOM 15	MITSUBISHI	PUZ-HA36NHA1	3.0	23.0	12.5	208/1	42	50	290	1, 2
HP-16	1	CLASSROOM 16	MITSUBISHI	PUZ-HA36NHA1	3.0	23.0	12.5	208/1	42	50	290	1, 2
HP-17	1	CLASSROOM 17	MITSUBISHI	MXZ-SM48NAMHZ	4.0	23.0	12.0	208/1	42	50	290	1, 2
HP-18	1	CLASSROOM 18	MITSUBISHI	MXZ-SM48NAMHZ	4.0	23.0	12.0	208/1	42	50	290	1, 2
HP-19	1	STUDENT LOUNGE 19	MITSUBISHI	MXZ-SM48NAMHZ	4.0	23.0	12.0	208/1	42	50	290	1, 2
HP-20	1	NURSES OFFICE 20	MITSUBISHI	MXZ-SM36NAMHZ	3.0	23.0	12.5	208/1	42	50	290	1, 2
HP-21	1	CLASSROOM 21	MITSUBISHI	MXZ-SM48NAMHZ	4.0	23.0	12.5	208/1	42	50	290	1, 2
HP-22	1	CLASSROOM 22	MITSUBISHI	MXZ-SM48NAMHZ	4.0	23.0	12.5	208/1	42	50	290	1, 2
HP-23	1	STAGE 23	MITSUBISHI	MXZ-SM48NAMHZ	4.0	23.0	12.0	208/1	42	50	290	1, 2
HP-24	1	MAINTENANCE OFFICE 24	MITSUBISHI	MXZ-SM36NAMHZ	3.0	23.0	12.5	208/1	42	50	290	1, 2
	33				120.0							

1 - PROVIDE PAN HEATER, DUAL FAN STAND QSMS2402M, DEFROST HEATER,

2 - PROVIDE115 VOLT, 10 WATT PAN/PIPE HEATER CABLE FOR SECONDARY DRAIN PAN AND PIPE TO HEATED GUTTERS. (FIELD VERIFY GUTTER HEATING AND PROVIDE AS NEEDED)



THESE PLANS ARE PREPARED FOR GRANT UNION HIGH SCHOOL. CONTRACTOR SELECTED SHALL HAVE 5 YEARS EXPERIENCE INSTALLING SIMILAR EQUIPMENT AND SHALL TAKE RESPONSIBILITY FOR FIELD VERIFICATION AND ASSOCIATED ACCOMMODATIONS.

PRINT

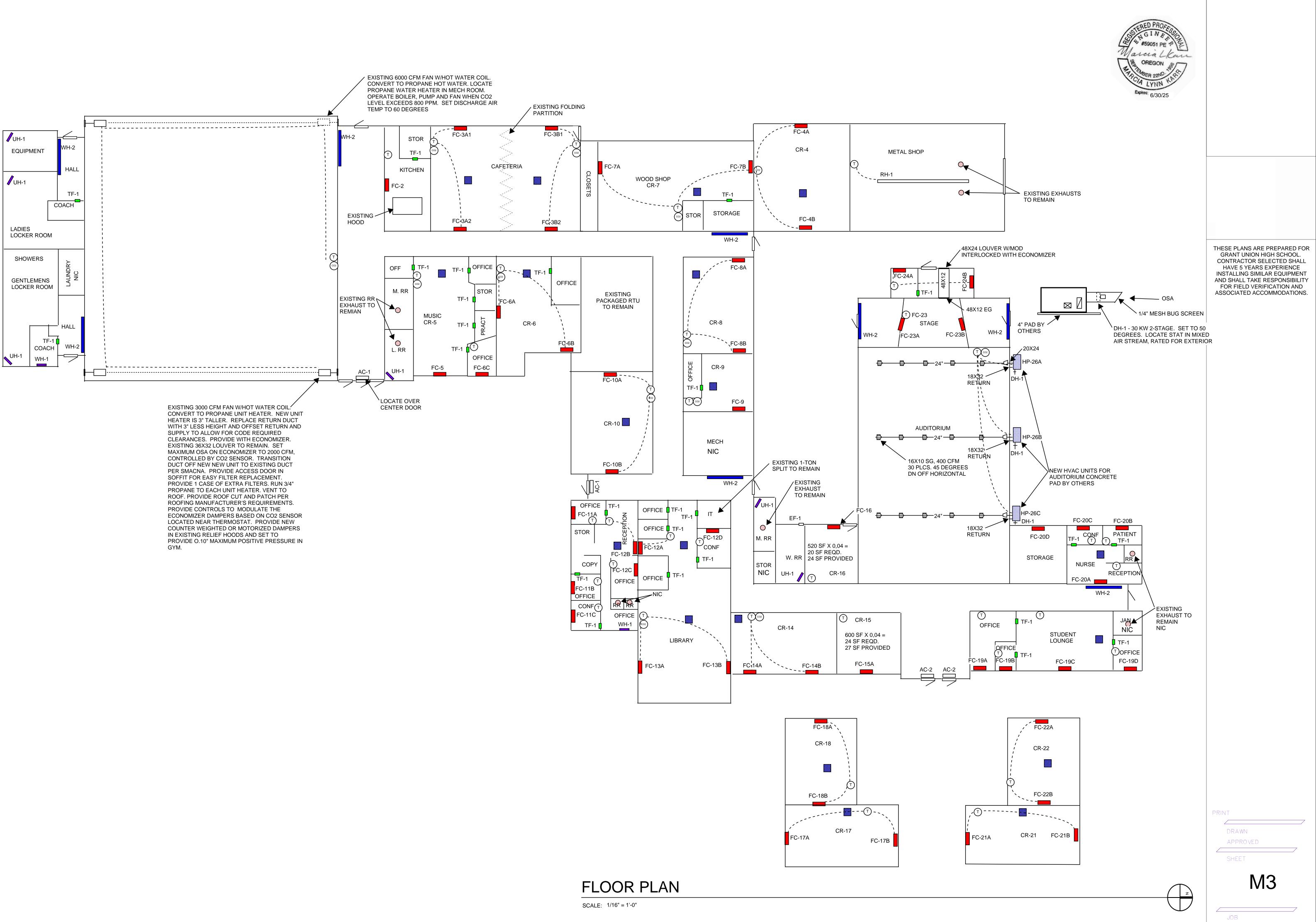
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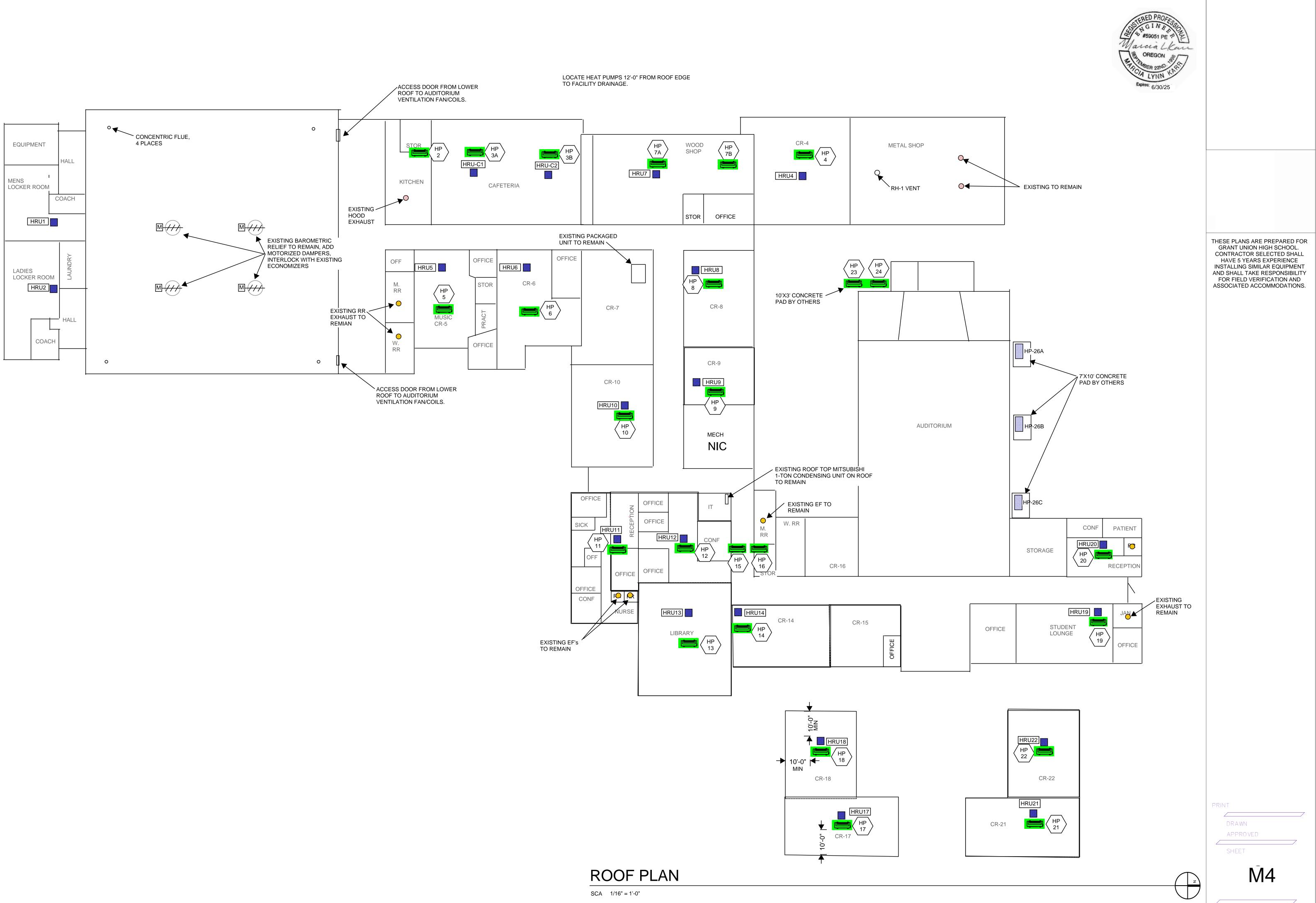
SHEET

M2

\_\_\_\_/

JOB





# GRANT UNION HIGH SCHOOL HVAC

	NOTES				REVIATIONS		
ENERAL REQUIREN	IENTS:			(E)	EXISTING NEW	MH. MIR.	MANHOLE MIRROR
				(N) (R)	REMOVE	М.О.	MASONRY OPENING
		IONS AND ELEVATIONS SHALL NOTIFY THE AR		A.C. A.C.B.	ASPHALT CONCRETE ACOUSTICAL BOARD	M.P. M.S.	MIDPOINT MACHINE SCREW
	ANY SIGNIFICANT DI			A.C.P.	ACOUSTICAL BOARD	MTD.	MOUNTED
CONDITIONS S	HOWN ON THE DRAW	NGS.		A.C.T.	ACOUSTICAL CEILING TILE	MUL.	MULLION
		BE RESPONSIBLE FOR		A.D. ADJ.	AREA DRAIN ADJUSTABLE	NOM. N.T.S.	NOMINAL NOT TO SCALE
		DS. RESPONSIBILITY S		A.F.	ACCESS FLOORING	OBS.	OBSCURE
		S, SEQUENCING, AND S		AGGR. AF.	AGGREGATE ABOVE FINISHED FLOOR	O.C. O.C.D.	ON CENTER OVERHEAD COILING DOOI
REQUIRED TO	COMPLETE CONSTRU	CTION.		BD.	BOARD	0.C.G	OVERHEAD COILING GRILI
3. BEFORE START	ING A SECTION OF W	ORK THE CONTRACTO	R SHALL	BITUM. BKP.	BITUMINOUS BACKING PLATE	0.D. 0.F.C.I.	OUTSIDE DIAMETER OWNER FURNISHED
		Y WORK THAT HAS BEE		BM.	BEAM	0.1.0.1	CONTRACTOR INSTALLED
	PROPER PLANES AN	ID ADJACENT RELATED D LEVELS.	WORK	BOT./B.O. C.B.	BOTTOM/BOTTOM OF	O.F.D.	
				C.B. CEM.	CATCH BASIN CEMENT	0.F.O.I.	OWNER FURNISHED OWN
				CER.		OH.	OPPOSITE HAND
ENERAL CONSTRU	CTION NOTES:			C.G. C.I.	CORNER GUARD CAST IRON	PL. P.LAM.	PLATE PLASTIC LAMINATE
				C.J	CONTROL JOINT	PLAS.	PLASTER
		BLE FOR PROVIDING AL ACCORDANCE WITH AL		CLG. CLKG.	CEILING CAULKING	P.C.P.	PORTLAND CEMENT PLASTER
	EDERAL, STATE, AND			CLO.	CLOSET	PR.	PLASTER PAIR
		CHECKING ALL CONTR	RACT	CLR.		PTN.	PARTITION
DOCUMENTS, F	IELD CONDITIONS, A	ND DIMENSIONS FOR A	CCURACY	C.M.A. C.O.	CONCRETE MASONRY UNIT CASED OPENING	R.C.P. R.D.	REFLECTED CEILING PLAN ROOF DRAIN
AND CONFIRM	NG THAT WORK IS BL	IILDABLE AS SHOWN BE	FORE	CONN	CONNECTION	RL.	RELOCATE
		TION. IF THERE ARE AN ESPONSIBLE FOR OBT		CORR. CPT.	CORRIDOR CARPET	R.O. RWD.	ROUGH OPENING REDWOOD
CLARIFICATION	FROM THE ARCHITE	CT BEFORE PROCEEDI		CTSK.	COUNTERSUNK	R.W.L.	RAIN WALL LEADER
THE WORK IN (	QUESTION OR RELATE	WORK.		C.T. CTR.	CERAMIC TILE CENTER	REV. S.C.	REVERSED SOLID CORE
		E DRAWINGS. WRITTEN		D.F.	DRINKING FOUNTAIN	S.C.D.	SEE CIVIL DRAWINGS
		RN. CONTRACTOR REQU AYS CONTACT THE PR		DET.	DETAIL	SHR.	SHOWER
		OR TO PRECEDING WITH		DISP. DR.	DISPENSER DOOR	S.J. S.L.D.	SCORE JOINT SEE LANDSCAPING
RELATED TO T	HOSE DIMENSIONS.			DWR.	DRAWER		DRAWINGS
		, PATCH, AND REPAIR T		D.S. D.S.A.	DOWNSPOUT DRY STANDPIPE	S.M. S.M.D	SHEET METAL SEE MECHANICAL
ANY WALLS, FL	OORS, CEILINGS, ANI	D/OR OTHER SURFACES	S WHICH	E.J.	EXPANSION JOINT		DRAWINGS
	RBED DURING THE INS	STALLATION OF MECHA OWNER WORK.	ANICAL,	EL. EXPO.	ELEVATION EXPOSED	S.O.G. S.S.D.	SLAB ON GRADE SEE STRUCTURAL
				EXP.	EXPANSION		DRAWINGS
		ONSIBLE FOR ALL CUTT		F.A. FB.	FIRE ALARM FLAT BAR	S.S.	STAINLESS STEEL
EQUIPMENT. PI	ROVIDE DEMOLITION	AND PATCH/REPAIR IN A	ALL AREAS	FВ. F.D.	FLOOR DRAIN	STR. S.T.S.	STRUCTURAL SELF TAPPING SCREW
(WHETHER SPE WORK.	CIFICALLY SHOWN O	R NOT) TO ACCOMMOD	DATE ALL	FDN.		SUSP.	SUSPENDED
WORK.				FE F.A.	FIRE EXTINGUISHER FLAT HEAD	TRD. T.B.	TREAD TOWEL BAR
		A CONDITION NOT COV		F.O.C	FACE OF CONCRETE	T.C.	TOP OF CURB
		PROJECT TEAM BEFOR		F.O.F F.O.S.	FACE OF FINISH FACE OF STUDS	T&G. THK.	TONGUE AND GROOVE THICK
COMMENCING	ANY WORK.			F.S.	FULL SIZE	T.P.	TOP OF PAVEMENT
7. ALL PERMITS A	SSOCIATED WITH TH	E PROJECT SHALL BE P		FTG. FUT.	FOOTING FUTURE	T.W. V.I.F.	TOP OF WALL VERIFY IN FIELD
OBTAINED BY 1				G.A.	GAUGE	V.T.R.	VENT THROUGH ROOF
8. DIMENSIONS A	RE TO FACE OF FINIS	H UNLESS OTHERWISE	NOTED.	G.L. GLB.	GRID LINE GLULAM BEAM	W.C. W.O.	WATER CLOSET WINDOW OPENING
				G.B.	GRAB BAR	vv.O.	
		SOLELY AND COMPLETE S OF THE JOB SITE, INC		GND. GYP.	GROUND		
SAFETY OF PE	RSONS AND PROPERT	Y AND COMPLIANCE W		GYP. G.W.B.	GYPSUM GYPSUM WALL BOARD		
SAFETY STAND	ARDS.			H.B.	HOSE BIBB		
		PERFORMED BY THE		H.C. H.M.	HOLLOW CORE HOLLOW METAL		
		BASIS, THE CONTRACTO DESIGN OF SUCH SYST		J.B.	JUNCTION BOX		
	RING OF ALL ASSOCI			J.O.H. J.O.W.	JAMB OPENING HEIGHT JAMB WIDTH		
CONTRACTOR	SHALL BE RESPONSI	BLE FOR THE COORDIN	ATION OF	JT.	JOINT		
ALL DESIGN BU	ILD SUB CONTRACTC	KS.		LAM. L P	LAMINATE LOW POINT		
		ERENCE AND CONFLIC		L.P. M.C.			
		ONTRACTOR TO COMPL IONS REGARDING SCH		M.D.F.	MEDIUM DENSITY FIBERBOARD		
AND USE OF EI	EVATORS AND LOAD	ING DOCKS FOR DELIVE		M.D.O.	MEDIUM DENSITY OVERLAY		
HANDLING OF I	/IATERIALS, EQUIPME	N F, AND DEBRIS.		MEMB.	MEMBRANE		
SYMBO	LS						
Room name	ROOM NAME		ELEVATION SYMBOL		SIM DETAIL	ACT	
101 -	- ROOM NUMBER	A101	ELEVATION REFERENCE		1 - REFERENCE DRAWING	8'-0	
			SHEET REFERENCE	<u> </u>	REFERENCE SHEET REFERENCE	NOTE	
150 SF	- ROOM AREA	1 Ref	INTERIOR			(#)-	KEYNOTE TAC
N		Ref	ELEVATION SYMBOL	- (	SIM ENLARGED	<i>"</i>	
$\square$	PROJECT NORTH		INTERIOR ELEVATION REFERENCE			#	STRUCTURAL
$\bigcup$			SHEET REFERENCE		REFERENCE SHEET REFERENCE	^	KETNUTE TAG
(101)	DOOR NUMBER	1 Ref			DESIGNATED AREA	<1i>	WALL TYPE
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						( TR	# FLOOR

- DELTA w// CURRENT REVISION NUMBER 

CENTER LINE REVISION SET TAG

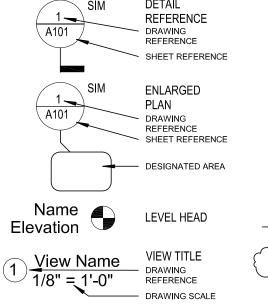
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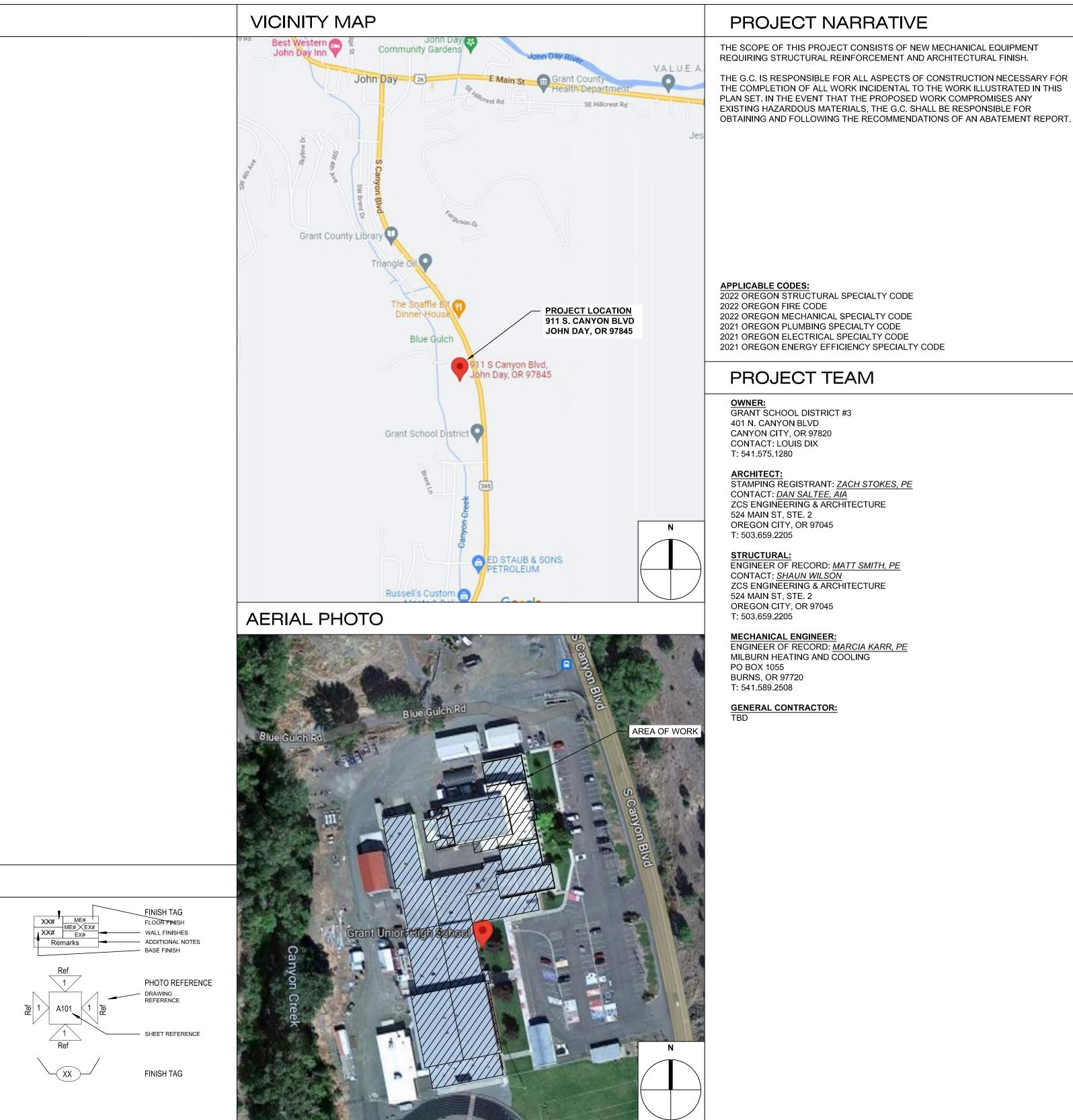
FINISH TYPE

WINDOW/GLAZING TAG

SECTION — INTERIOR ELEVATION REFERENCE SHEET REFERENCE



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GRANT SCHOOL DISTRICT 911 S. CANYON BLVD JOHN DAY, OR 97845

# **GRANT UNION HIGH** SCHOOL HVAC



S0.20 SPECIAL INSPECTIONS AND TESTING S1.10 PARTIAL FOUNDATION PLAN - AREA 'A'

S0.10 STRUCTURAL GENERAL NOTES

SHEET INDEX

G0.00 COVER SHEET

A1.00 OVERALL ROOF PLAN

A1.10 ROOF PLAN - AREA 'A'

A1.20 ROOF PLAN - AREA 'B'

AS.10 SPECIFICATIONS AS.20 SPECIFICATIONS

-ARCHITECTURAL-

A2.00 DETAILS A2.10 DETAILS

-STRUCTURAL-

-GENERAL-

- S2.10 ROOF FRAMING PLAN AREA 'A'
- S2.20 UPPER ROOF FRAMING PLAN AREA 'A' S2.30 ROOF FRAMING PLAN - AREA 'B'
- S3.10 FOUNDATION AND ROOF DETAILS

## -MECHANICAL-

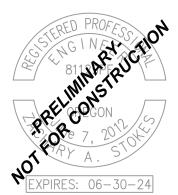
- SCHEDULES M1
- M2 SCHEDULES М3
- FLOOR PLAN M4 ROOF PLAN

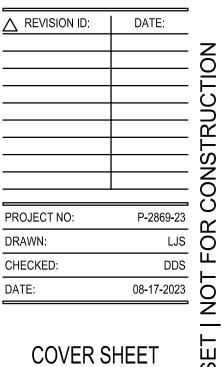
- 2022 OREGON MECHANICAL SPECIALTY CODE
- 2021 OREGON ELECTRICAL SPECIALTY CODE 2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE

STAMPING REGISTRANT: <u>ZACH STOKES, PE</u> CONTACT: <u>DAN SALTEE, AIA</u> **ZCS ENGINEERING & ARCHITECTURE** 

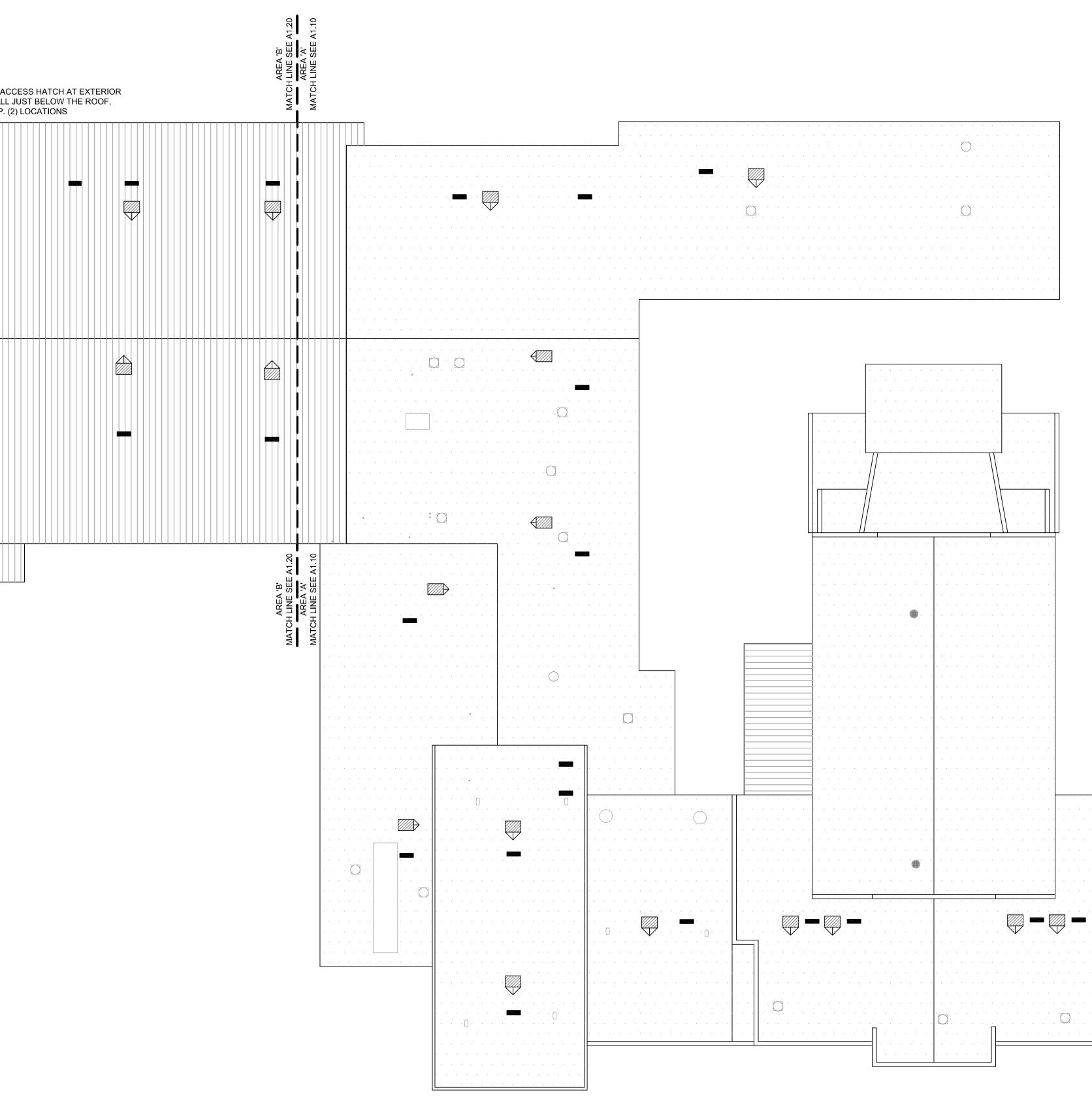
ENGINEER OF RECORD: MATT SMITH, PE CONTACT: <u>SHAUN WILSON</u> ZCS ENGINEERING & ARCHITECTURE

ENGINEER OF RECORD: MARCIA KARR, PE



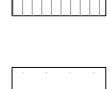








## ROOF LEGEND:



HATCH INDICATES AREA OF (E) STANDING SEAM METAL ROOFING

HATCH INDICATES AREA OF (E) TPO ROOFING

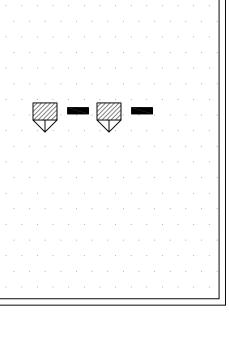
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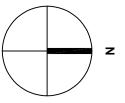
GRANT SCHOOL DISTRICT 911 S. CANYON BLVD JOHN DAY, OR 97845

# GRANT UNION HIGH SCHOOL HVAC



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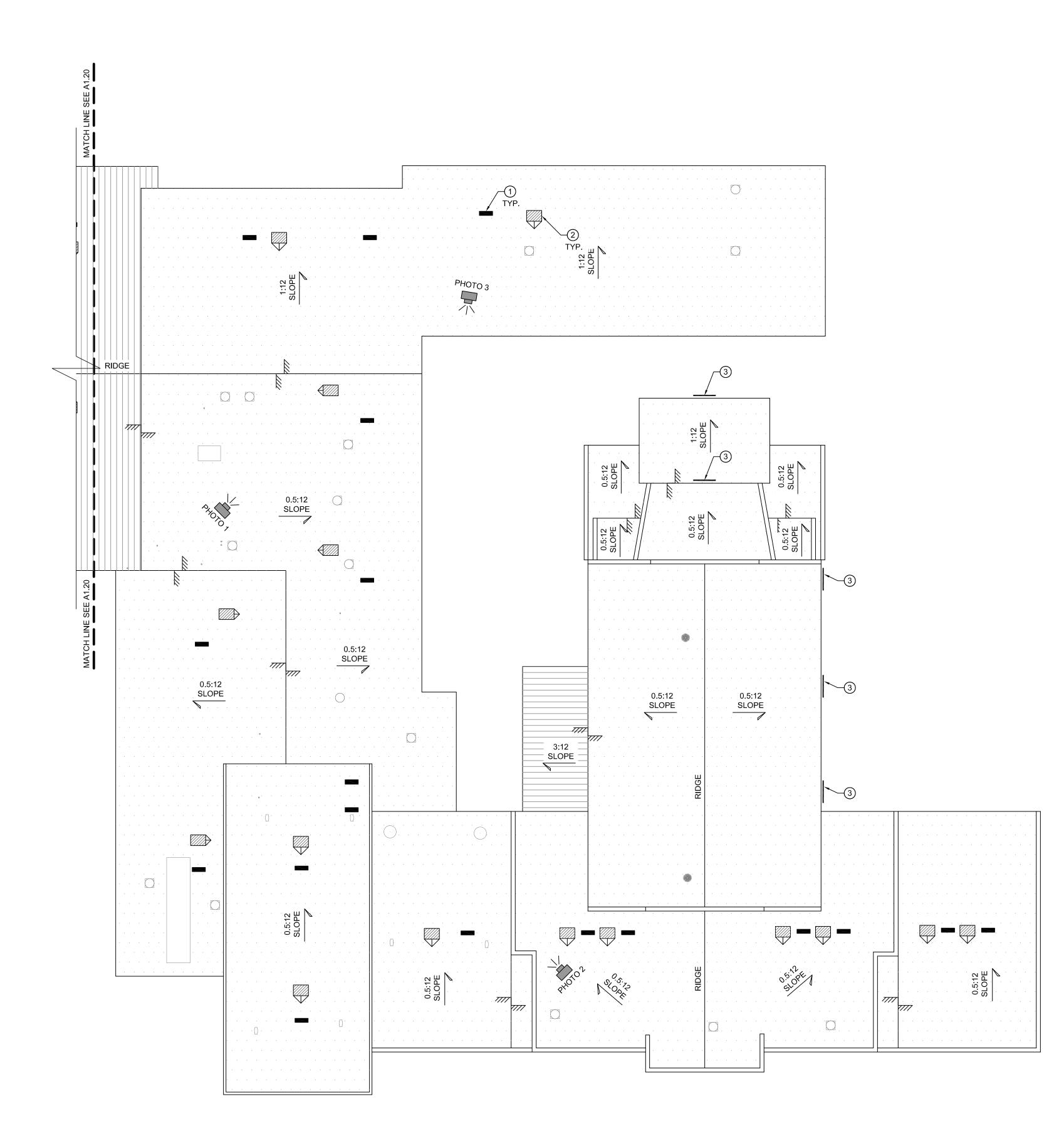


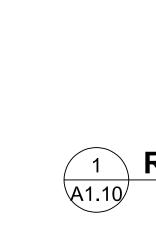


1/16" = 1'-0"



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		R.
		ST
		CONSTRUCTION
PROJECT NO:	P-2869-23	Ŭ
DRAWN:	LJS	OR
CHECKED:	DDS	
DATE:	08-17-2023	VOT F
OVER/ ROOF P	/ SET   N	





**ROOF PLAN - AREA 'A'** 



A1.10











ROOF PLAN GENERAL NOTES:

- 1. ALL WORK AND MATERIALS SHALL CONFORM TO ALL APPLICABLE STATE AND LOCAL REGULATIONS, STANDARDS AND MFR. SPECIFICATIONS AND THE 2022 OSSC. CONTACT ARCHITECT FOR DIRECTIVE IN THE EVENT OF CONFLICTING STANDARDS AND SPECS.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND MAINTENANCE OF ALL TEMPORARY ROOF ACCESS SYSTEMS. ALL SYSTEMS MUST COMPLY WITH OSHA. 3. ALL JOINTS TO BE WATER-TIGHT AND TO BE INSTALLED PER
- DETAILS AND MANUFACTURER'S SPECIFICATIONS. NOTIFY ARCHITECT OF RECORD IN THE EVENT OF A CONFLICT. 4. IN THE EVENT OF CONFLICTS BETWEEN CONTRACT PLANS
- AND MANUFACTURERS SPECIFICATIONS CONSULT ARCHITECT PRIOR TO PROCEEDING. 5. CONTRACTOR TO RESTORE ALL FEATURES AND OTHER
- INCIDENTAL WORK TO THEIR ORIGINAL CONDITION UPON COMPLETION OF THE WORK, AS INCLUDED IN CONTRACT WORK AS REQUIRED TO PROVIDE A COMPLETE ROOFING PACKAGE.
- 6. COORDINATE STAGING AND MATERIALS STORAGE AREA WITH DISTRICT PERSONNEL. SECURITY OF STORED MATERIAL IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 7. WORK SHALL BE APPROPRIATELY STAGED AND SEQUENCED TO PREVENT THE INTRUSION OF MOISTURE INTO ANY
- PORTION OF THE BUILDING. 8. NO PORTION OF THE ROOF SHALL BE LEFT UNPROTECTED
- AGAINST THE ELEMENTS BETWEEN CONTRACTOR SHIFTS. PRESENT PROPOSED WORK SEQUENCING PLAN AND WEATHER CONTINGENCY PLAN PRIOR TO BEGINNING WORK.
- 10. SEE PLAN SET AND/OR SPECIFICATIONS FOR MORE INFORMATION.
- 11. REFER TO AND PROVIDE MANUFACTURE RECOMMENDED DETAILS FOR ALL CONDITIONS AS REQUIRED TO COMPLETE PROJECT SCOPE AND MAINTAIN WARRANTIES.

# ROOF LEGEND:

	HATCH INDICATES AREA OF (E) STANDING SEAM METAL ROOFING
· · · · ·	HATCH INDICATES AREA OF (E) TPO ROOFING
1111 1112	INDICATES STEP IN ROOF
	ERV UNIT WITH CURB, SEE MECHANICAL
	MINI-SPLIT UNIT, SEE MECHANICAL
	(E) ROOF TOP EQUIPMENT, VENT PIPES, HEAT STACKS, EXHAUST FANS TO REMAIN

# (#) ROOF PLAN KEY NOTES

- FLASH MINI-SPLIT SUPPORT STAND TO (E) TPO ROOFING 1. PER 1/A2.10. FLASH ANY ASSOCIATED PIPE PENETRATIONS PER 2/A2.10
- 2. FLASH ERV CURB WITH CRICKET TO (E) TPO ROOFING PER 3/A2.10
- EXTERIOR WALL PENETRATION PER 4/A2.10 AND 5/A2.10. SEE MECHANICAL FOR LOCATIONS AND TYPE OF PENETRATION 3.



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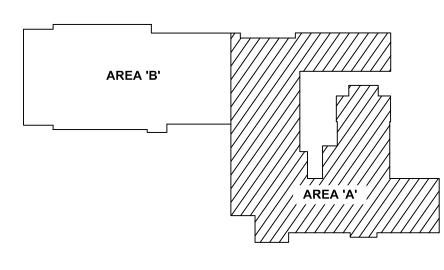
**GRANT SCHOOL DISTRICT** 911 S. CANYON BLVD JOHN DAY, OR 97845

# **GRANT UNION HIGH** SCHOOL HVAC



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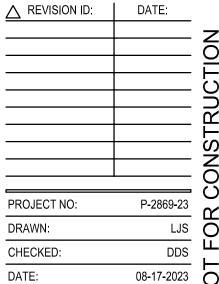






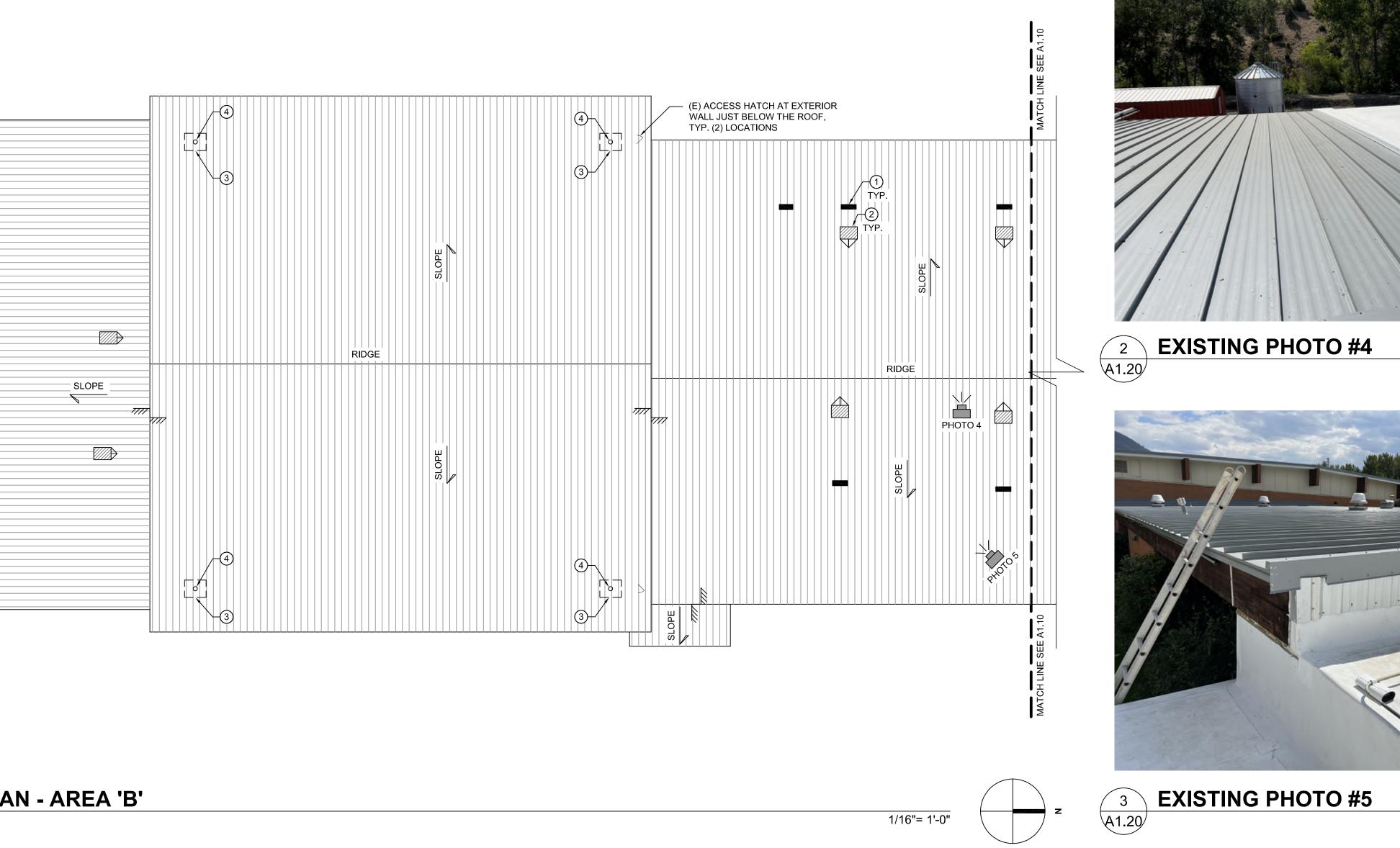


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ROOF PLAN -AREA 'A'

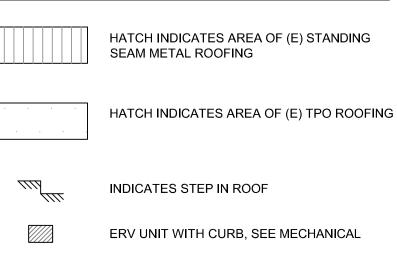




ROOF PLAN GENERAL NOTES:

- 1. ALL WORK AND MATERIALS SHALL CONFORM TO ALL APPLICABLE STATE AND LOCAL REGULATIONS, STANDARDS AND MFR. SPECIFICATIONS AND THE 2022 OSSC. CONTACT ARCHITECT FOR DIRECTIVE IN THE EVENT OF CONFLICTING STANDARDS AND SPECS.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND MAINTENANCE OF ALL TEMPORARY ROOF ACCESS SYSTEMS. ALL SYSTEMS MUST COMPLY WITH OSHA. 3. ALL JOINTS TO BE WATER-TIGHT AND TO BE INSTALLED PER
- DETAILS AND MANUFACTURER'S SPECIFICATIONS. NOTIFY ARCHITECT OF RECORD IN THE EVENT OF A CONFLICT. 4. IN THE EVENT OF CONFLICTS BETWEEN CONTRACT PLANS
- AND MANUFACTURERS SPECIFICATIONS CONSULT ARCHITECT PRIOR TO PROCEEDING. 5. CONTRACTOR TO RESTORE ALL FEATURES AND OTHER
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- 6. COORDINATE STAGING AND MATERIALS STORAGE AREA WITH DISTRICT PERSONNEL. SECURITY OF STORED MATERIAL IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 7. WORK SHALL BE APPROPRIATELY STAGED AND SEQUENCED TO PREVENT THE INTRUSION OF MOISTURE INTO ANY
- PORTION OF THE BUILDING. 8. NO PORTION OF THE ROOF SHALL BE LEFT UNPROTECTED
- AGAINST THE ELEMENTS BETWEEN CONTRACTOR SHIFTS. 9. PRESENT PROPOSED WORK SEQUENCING PLAN AND
- WEATHER CONTINGENCY PLAN PRIOR TO BEGINNING WORK. 10. SEE PLAN SET AND/OR SPECIFICATIONS FOR MORE
- INFORMATION. 11. REFER TO AND PROVIDE MANUFACTURE RECOMMENDED DETAILS FOR ALL CONDITIONS AS REQUIRED TO COMPLETE PROJECT SCOPE AND MAINTAIN WARRANTIES.

## ROOF LEGEND:



<u> </u>	MINI-SPLIT UNIT, SEE MECHANICAL
•	(E) ROOF TOP EQUIPMENT, VENT PIPES, HEAT STACKS, EXHAUST FANS TO REMAIN

## (#) ROOF PLAN KEY NOTES

- 1. FLASH MINI-SPLIT SUPPORT STAND TO (E) STANDING SEAM METAL ROOFING PER 5/A2.00. FLASH ANY ASSOCIATED PIPE PENETRATIONS PER 4/A2.00
- 2. FLASH ERV CURB WITH CRICKET TO (E) STANDING SEAM METAL ROOFING PER 1/A2.00, 2/A2.00, AND 3/A2.00
- REPLACE (E) HVAC EQUIPMENT WITH NEW PER MECHANICAL. REMOVE AND INSTALL NEW EQUIPMENT 3. THROUGH INTERIOR SOFFIT/PLENUM BELOW THE ROOF REMOVE AND REPLACE (E) ACOUSTIC CEILING TILES IN KIND AS NEEDED TO SWAP OUT EQUIPMENT. CONTRACTOR SHALL VERIFY (E) ACCESS HATCH IS ADEQUATELY SIZED FOR EASY FILTER REPLACEMENT.
- FLASH NEW FLUE TO (E) STANDING SEAM METAL ROOFING PER 4/A2.00 4.



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GRANT SCHOOL DISTRICT 911 S. CANYON BLVD JOHN DAY, OR 97845

# **GRANT UNION HIGH** SCHOOL HVAC

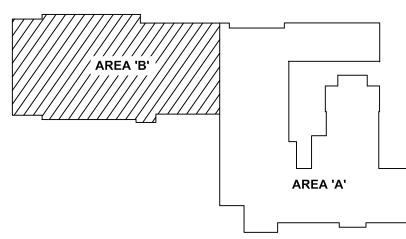






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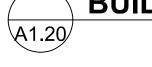


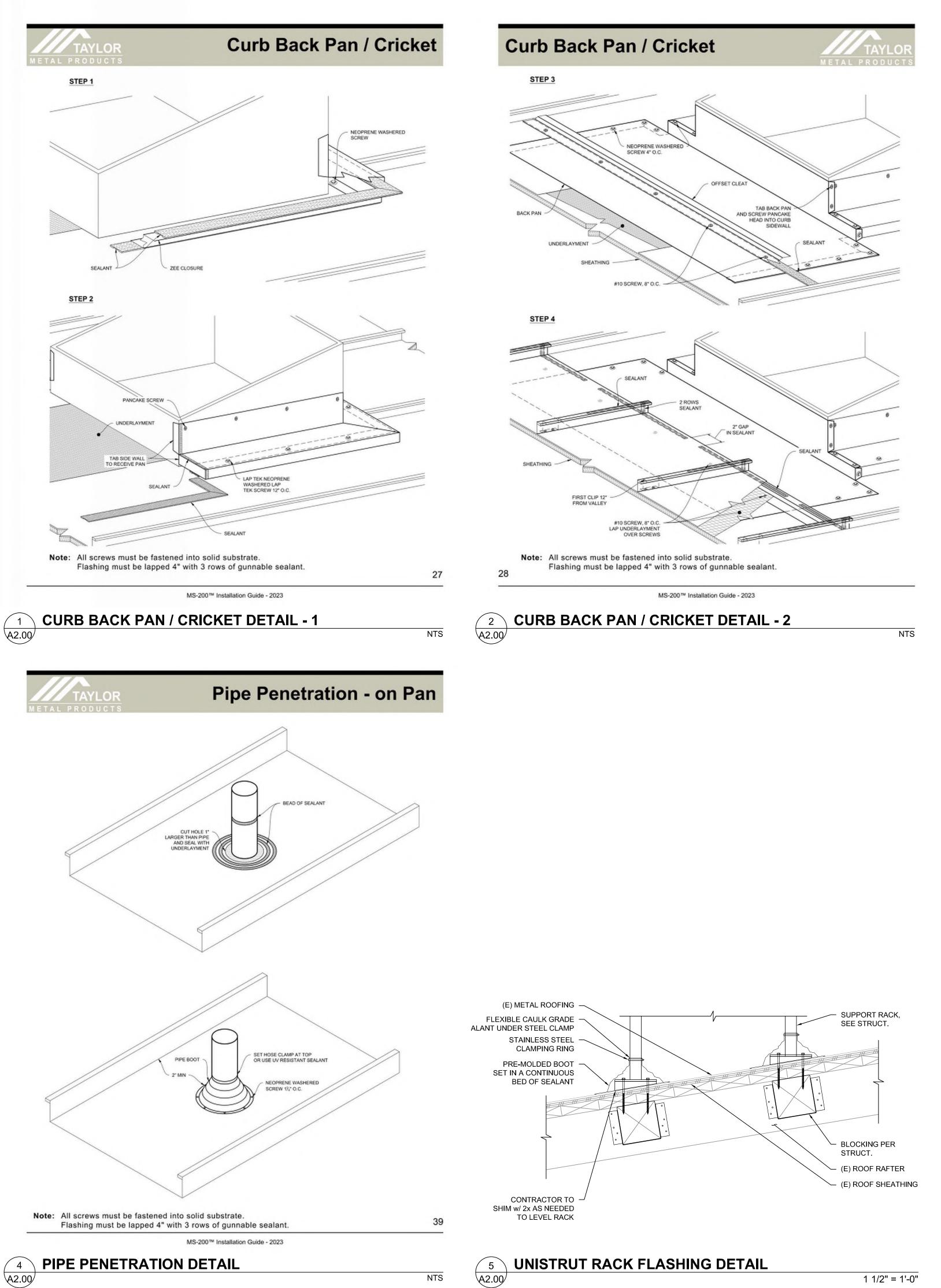


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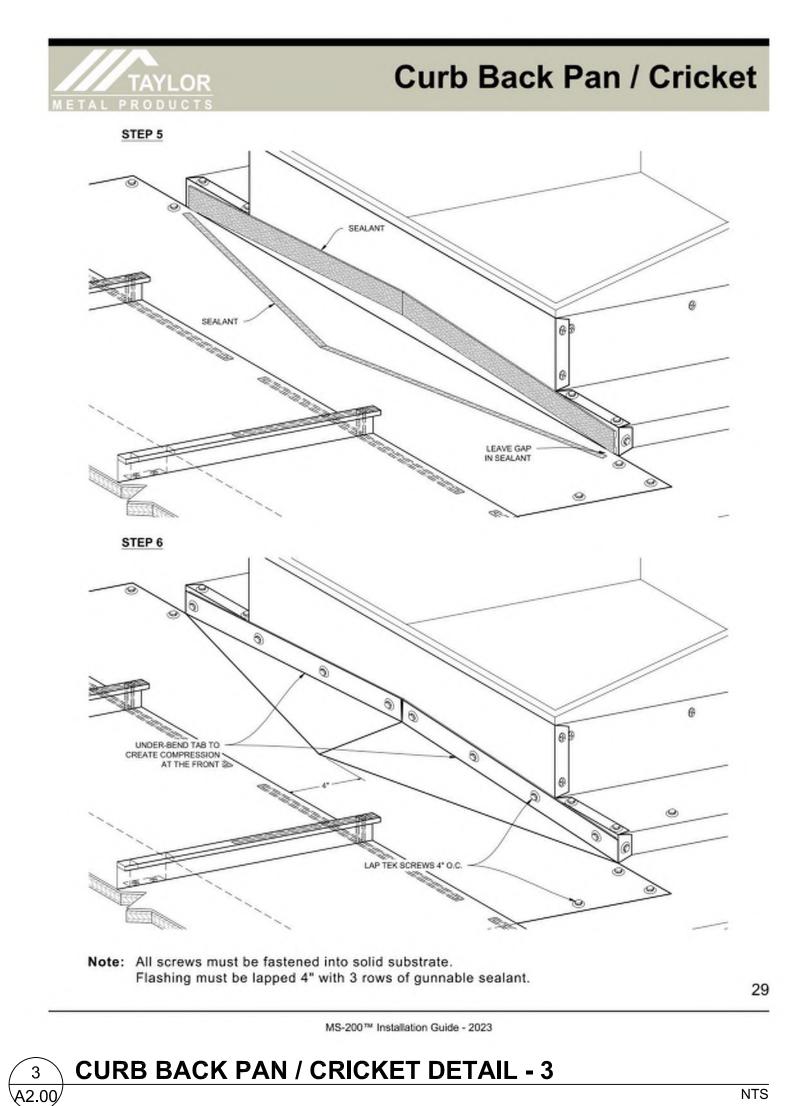


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NTS





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GRANT SCHOOL DISTRICT 911 S. CANYON BLVD JOHN DAY, OR 97845

**GRANT UNION HIGH** SCHOOL HVAC

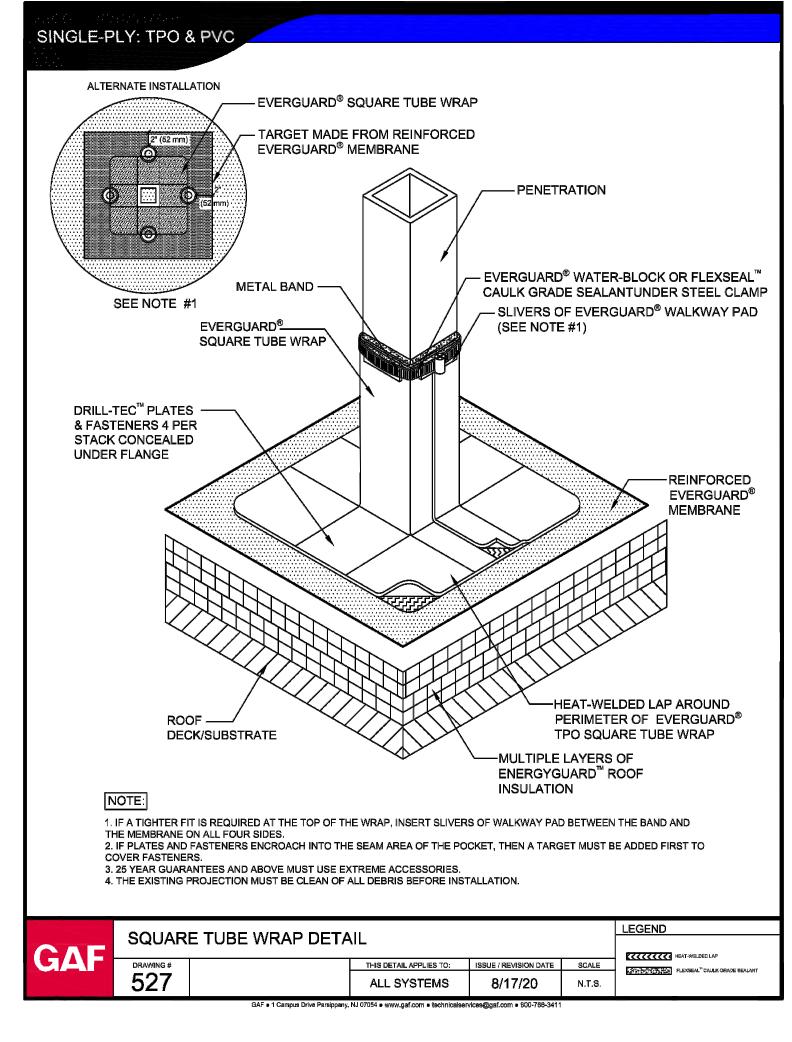




	DATE:
PROJECT NO:	P-2869-23
DRAWN:	LJS
CHECKED:	DDS
DATE:	08-17-2023

DETAILS



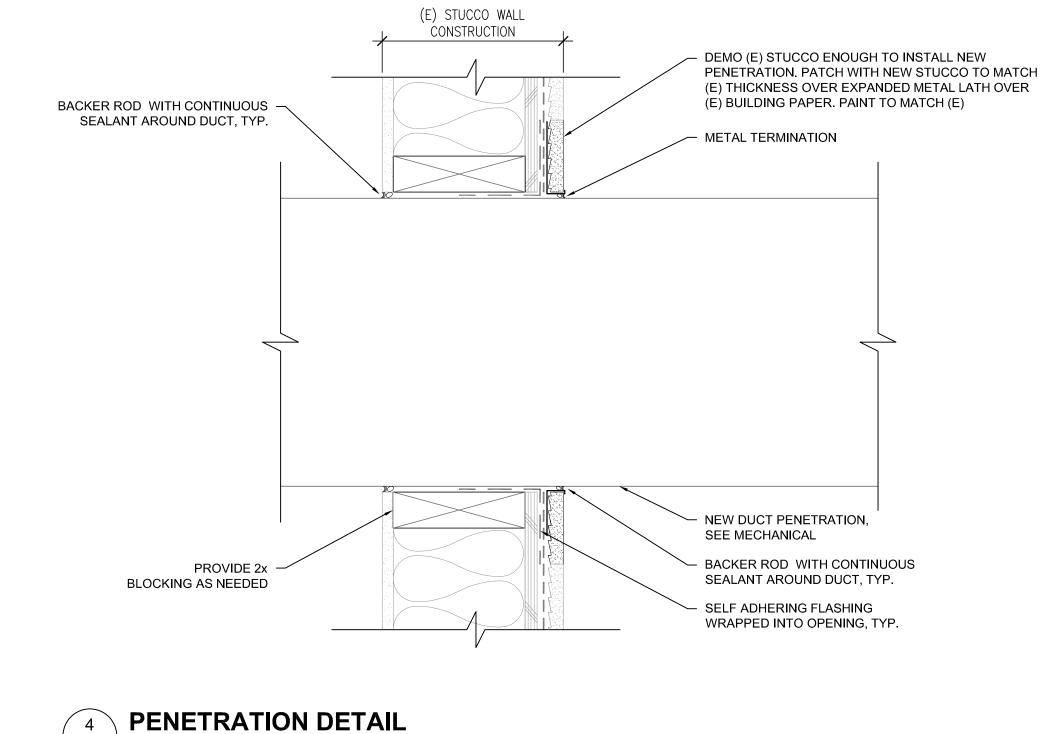


# SQUARE TUBE TPO WRAP DETAIL A2.10

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´2

A2.10/



A2.10

SINGLE-PLY: TPO & PVC

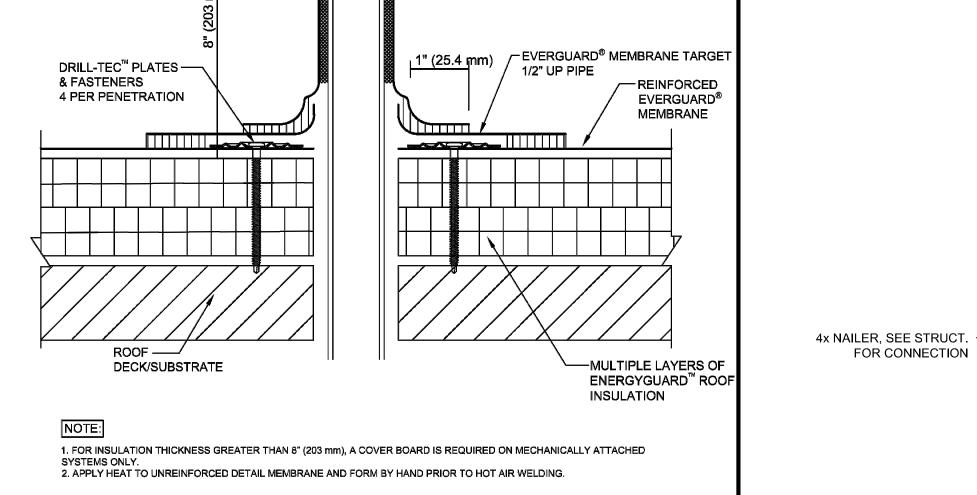
2" (52 mm

PLAN VIEW

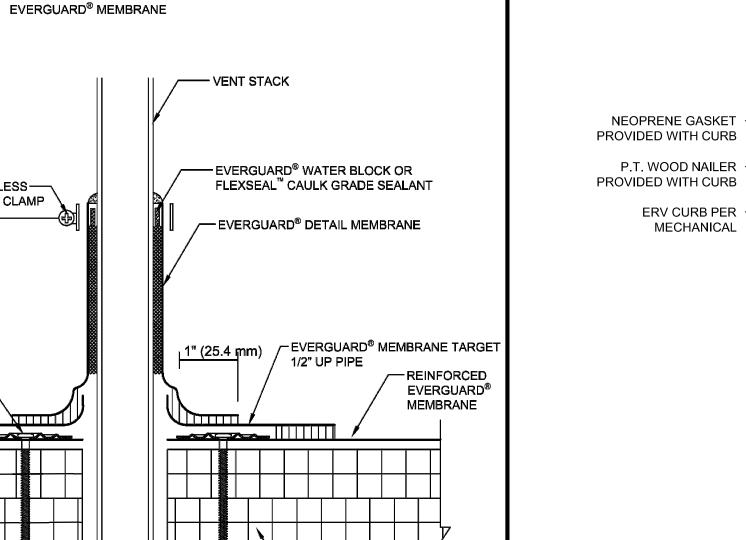
STEEL CLAMP

drawing # ALL SYSTEMS 5/4/23 N.T.S. GAF • 1 Campus Drive Parsippany, NJ 07054 • www.gzi.com • technicalservices@gaf.com • 800-766-34 FIELD-WRAPPED PENETRATION TPO FLASHING DETAIL

FIELD-WRAPPED PENETRATION FLASHING DETAIL LEGEND GAF HEAT-WELDED THIS DETAIL APPLIES TO: ISSUE / REVISION DATE SCALE RESEARCH CALLK GRADE SEALANT EVERGUARD® BONDING ADHEBIVE (C



- TARGET MADE FROM REINFORCED



BACKER ROD WITH CONTINUOUS SEALANT AROUND LOUVER, TYP.

FOR CONNECTION

3

NTS

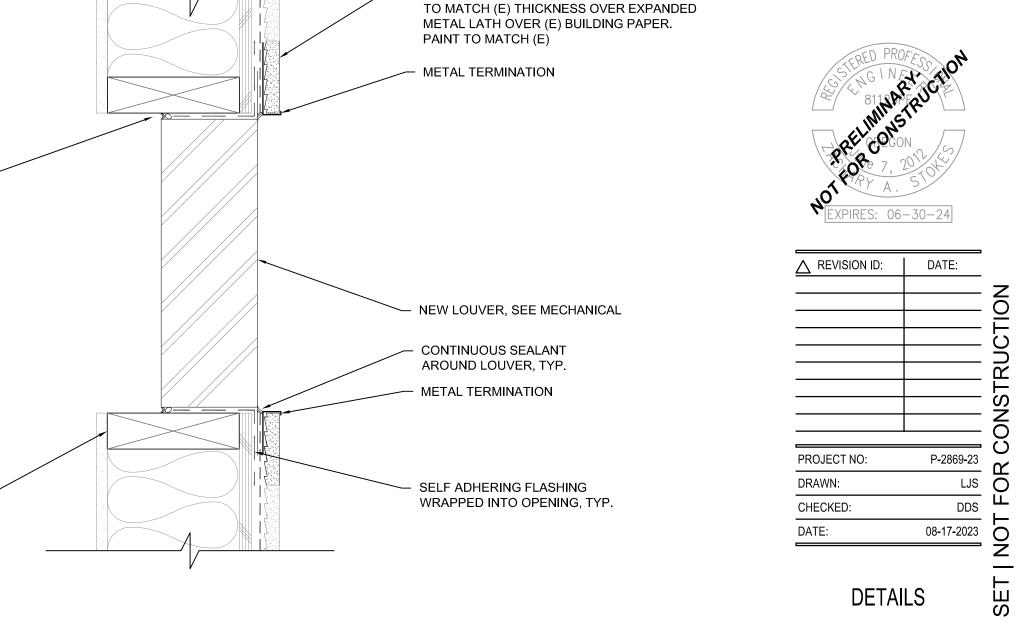
A2.10

PROVIDE 2x BLOCKING AS NEEDED



3" = 1'-0"





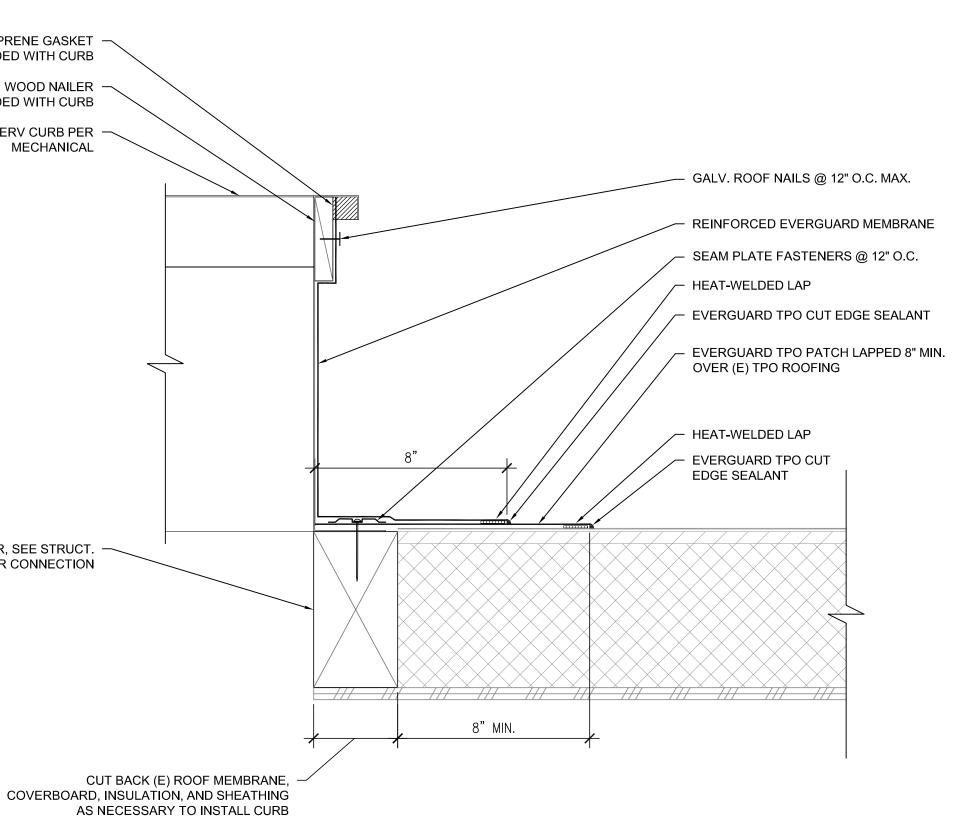
- DEMO (E) STUCCO ENOUGH TO INSTALL NEW PENETRÁTION. PATCH WITH NEW STUCCO

# **ERV CURB FLASHING DETAIL**

(E) STUCCO WALL

CONSTRUCTION







JOHN DAY, OR 97845

**GRANT UNION HIGH** SCHOOL HVAC

GRANT SCHOOL DISTRICT 911 S. CANYON BLVD

524 Main Street, Suite 2, Oregon City, Oregon 97045 | 503-659-2205



#### SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES 01 33 00

1.1 SUMMAR

#### A. SHOP DRAWING, PRODUCT DATA, AND SAMPLE REQUIREMENTS FOR ALL

- WORK SPECIFIED B. SUBMITTALS FOR PROJECT CLOSEOUT
- C. RELATED SECTION: SUBMITTALS IN DIVISION 1 WHICH PROVIDES DETAILED INFORMATION ON SUBMITTAL REQUIREMENTS AND FORMAT.
- 1.2 REQUIREMENTS
- A. SHOP DRAWINGS: PROVIDE SHOP DRAWINGS IN A CLEAR AND THOROUGH MANNER. IDENTIFY DETAILS BY REFERENCE TO DRAWING AND DETAIL SCHEDULE, OR ROOM NUMBERS SHOWN.
- B. PRODUCTS OR MODELS. SHOW PERFORMANCE CHARACTERISTICS AND CAPACITIES, SHOW DIMENSIONS AND CLEARANCES REQUIRED. SHOW WIRING OR PIPING DIAGRAMS AND CONTROLS.
- C. SAMPLES: SAMPLES SHALL BE OF SUFFICIENT SIZE AND QUALITY TO CLEARLY ILLUSTRATE THE FOLLOWING: FUNCTIONAL CHARACTERISTICS OF THE PRODUCTS WITH INTEGRALLY RELATED PARTS AND ATTACHMENT DEVICES AND THE FULL RANGE OF COLOR, TEXTURE, AND PATTERN.

#### 1.3 SUBMITTALS REQUIRED:

- A. SHOP DRAWINGS: PROVIDE SHOP DRAWINGS FOR THE FOLLOWING SPECIFIED ITEMS:
  - 1. ROOFING ASSEMBLIES: BASE FLASHINGS, MEMBRANE TERMINATIONS, FASTENING PATTERNS AND SPACING FOR ROOFING, DETAILS FOR CURBS, PIPE PENETRATIONS, AND GUTTERS.
- 2. ROOF SPECIALTIES: PLANS, ELEVATIONS, EXPANSION JOINT LOCATIONS, KEYED DETAILS, AND ATTACHMENTS TO OTHER WORK B. PRODUCT DATA: PROVIDE PRODUCT DATA FOR THE FOLLOWING SPECIFIED
- ITEMS
- 1. GYPSUM ASSEMBLIES, WEATHER BARRIERS: PRODUCT DATA 2. SHEET METAL FLASHING: MAINTENANCE DATA, WARRANTY
- 3. JOINT SEALANTS: PRODUCT DATA, COMPATIBILITY AND ADHESION
- TEST REPORTS (FROM MANUFACTURER), WARRANTIES 4. ROOF ASSEMBLIES: PRODUCT DATA, QUALIFICATION DATA FOR
- MANUFACTURER AND INSTALLER, MANUFACTURER CERTIFICATE CERTIFYING ROOF COMPLIES WITH PERFORMANCE CRITERIA, PRODUCT TEST REPORTS, MAINTENANCE DATA, WARRANTIES 5. PAINTING: PRODUCT DATA, PAINT SCHEDULE INDICATING SUBSTRATE,
- COLOR, SHEEN, PAINT TYPE, AND PRIMER C. SAMPLES: PROVIDE PHYSICAL SAMPLES FOR THE FOLLOWING SPECIFIED ITEMS
- 1. ROOF ASSEMBLY, SHEET METAL FLASHING: PROVIDE STANDARD
- COLOR CHART FOR SELECTION IF NOT INDICATED ON DRAWINGS. 2. PAINTING: PROVIDE COLOR SAMPLES OF EACH COLOR AND SHEEN USED ON PROJECT.

#### 02 41 19 SELECTIVE DEMOLITION

1.1 SUMMARY

- A. DEMOLITION AND REMOVAL OF SELECTED PORTIONS OF BUILDING B. SALVAGE OF EXISTING ITEMS TO BE REUSED OR RECYCLED
- 1.2 DEFINITIONS A. REMOVE: DETACH ITEMS FROM EXISTING CONSTRUCTION AND LEGALLY
- DISPOSE OF THEM OFF-SITE. B. REMOVE AND SALVAGE: CAREFULLY DETACH FROM EXISTING CONSTRUCTION, IN A MANNER TO PREVENT DAMAGE AND DELIVER TO OWNER.
- C. REMOVE AND REINSTALL: DETACH ITEMS FROM EXISTING CONSTRUCTION,
- PREPARE FOR REUSE, AND REINSTALL WHERE INDICATED. D. EXISTING TO REMAIN: EXISTING ITEMS OF CONSTRUCTION THAT ARE NOT TO BE PERMANENTLY REMOVED.

#### 2.1 SELECTIVE DEMOLITION, GENERAL

- A. VERIFY THAT UTILITIES HAVE BEEN DISCONNECTED AND CAPPED BEFORE
- STARTING SELECTIVE DEMOLITION OPERATIONS. B. MAINTAIN FIRE-PROTECTION FACILITIES IN SERVICE DURING SELECTIVE DEMOLITION OPERATIONS.
- C. EXISTING SERVICES TO BE REMOVED, RELOCATED, OR ABANDONED: LOCATE IDENTIFY, DISCONNECT, AND SEAL OR CAP OFF INDICATED UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS SERVING AREAS TO BE SELECTIVELY DEMOLISHED.
- D. PROVIDE TEMPORARY BARRICADES AND OTHER PROTECTION REQUIRED TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN.
- E. NEATLY CUT OPENINGS AND HOLES PLUMB, SQUARE AND TRUE TO DIMENSIONS REQUIRED. USE CUTTING METHODS LEAST LIKELY TO DAMAGE CONSTRUCTION TO REMAIN OR ADJOINING CONSTRUCTION.
- F. DO NOT USE CUTTING TORCHES UNTIL WORK AREA IS CLEARED OF FLAMMABLE MATERIALS. MAINTAIN PORTABLE FIRE-SUPPRESSION DEVICES DURING FLAME-CUTTING OPERATIONS.
- G. LOCATE SELECTIVE DEMOLITION EQUIPMENT AND REMOVE DEBRIS AND MATERIALS SO AS NOT TO IMPOSE EXCESSIVE LOADS ON SUPPORTING WALLS, FLOORS, OR FRAMING.
- H. REMOVED AND SALVAGED ITEMS: STORE ITEMS IN A SECURE AREA UNTIL DELIVERY TO OWNER AND TRANSPORT ITEMS TO OWNER'S STORAGE AREA. I. EXISTING ITEMS TO REMAIN: PROTECT CONSTRUCTION INDICATED TO REMAIN AGAINST DAMAGE AND SOILING DURING SELECTIVE DEMOLITION. WHEN PERMITTED BY EOR, ITEMS MAY BE REMOVED TO A SUITABLE, PROTECTED STORAGE LOCATION DURING SELECTIVE DEMOLITION AND CLEANED AND REINSTALLED IN THEIR ORIGINAL LOCATIONS AFTER SELECTIVE DEMOLITION
- OPERATIONS ARE COMPLETE. J. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE. TRANSPORT DEMOLISHED MATERIALS OFF OWNER'S PROPERTY AND LEGALLY DISPOSE OF THEM.

#### 07 62 00 SHEET METAL FLASHING AND TRIM

1.1 SUMMARY

- A. FORMED EQUIPMENT SUPPORT FLASHING
- 1.2 PERFORMANCE CRITERIA A. SHEET METAL FLASHING AND TRIM ASSEMBLIES SHALL WITHSTAND WIND LC STRUCTURAL MOVEMENT, THERMALLY INDUCED MOVEMENT, AND EXPOSUR
- WEATHER WITHOUT FAILURE DUE TO DEFECTIVE MANUFACTURE, FABRICATI INSTALLATION, OR OTHER DEFECTS IN CONSTRUCTION. COMPLETED SHEET METAL FLASHING AND TRIM SHALL NOT RATTLE, LEAK OR LOOSEN, AND SHA **REMAIN WATERTIGHT** B. SHEET METAL STANDARD FOR FLASHING AND TRIM: COMPLY WITH NCRA'S "I
- NRCA ROOFING MANUAL" AND SMACNA'S "ARCHITECTURAL SHEET METAL MANUAL" REQUIREMENTS FOR DIMENSIONS AND PROFILES.
- 2.1 PRODUCTS A. METALLIC-COATED STEEL SHEET: PROVIDE ZINC-COATED (GALVANIZED) STE SHEET ACCORDING TO ASTM A 653/A 653M, G90 COATING DESIGNATION; PREPAINTING BY COIL-COATING PROCESS COMPLY WITH ASTM A 755/A755M
  - 1. SURFACE; SMOOTH, FLAT
- 2. EXPOSED COIL-COATED FINISH: A. TWO-COAT FLUOROPOLYMER: AAMA 621. FLUOROPOLYMER FINISH CONTAIN NOT LESS THAN 70 PERCENT PVDF RESIN BY WEIGHT IN COLOR COAT.
- B. COLOR: WHERE NOTED ON DRAWINGS. B. FASTENERS:
- EXPOSED FASTENERS: SELF-DRILLING, GASKETED, WITH HEX-WASHER
- 2. BLIND FASTENERS: HIGH-STRENGTH ALUMINUM OR STAINLESS STEEL RI SUITABLE FOR METAL 3. GALVANIZED STEEL SHEET: SERIES 300 STAINLESS STEEL OR HOT-DIP
- GALVANIZED STEEL
- C. SOLDER: FOR GALVANIZED STEEL: ASTM B 32, GRADE SN50, 50% TIN AND 50% LEAD OR GRADE SN 60% TIN AND 40% LEAD. D. SEALANT TAPE: PRESSURE-SENSITIVE, 100% SOLIDS, POLYISOBUTYLENE COMPOUND SEALANT TAPE WITH RELEASE-PAPER BACKING. PROVIDE
- PERMANENTLY ELASTIC, NONSAG, NONTOXIC, NONSTAINING TAPE 1/2 INCH ' BY 1/8 INCH THICK. E. ELASTOMERIC SEALANT: ASTM C 920, X
- F. BUTYL SEALANT: ASTM C 1311, TYPE S, GRADE NS, COLOR: GRAY; TREMCO; BUTYL SEALANT 2. DAP; BUTYL-FLEX
- . OR EQUAL
- G. EPOXY SEAM SEALER: TWO-PART, NONCORROSIVE, ALUMINUM SEAM-CEMEI COMPOUND RECOMMENDED BY ALUMINUM MANUFACTURER FOR EXTERIOR NONMOVING JOINTS, INCLUDING RIVETED JOINTS H. BITUMINOUS COATING: COLD-APPLIED ASPHALT EMULSION ACCORDING TO A
- D 1187 I. SELF-ADHERED MEMBRANE FLASHING: MIN. 30 MILS THICK, CONSISTING OF SLIP-RESISTANT POLYETHYLENE- OR POLYPROPYLENE-FILM TOP SURFACE LAMINATED TO A LAYER OF BUTYL - OR SBS MODIFIED ASPHALT ADHESIVE W
- RELEASE-PAPER BACKING; SPECIFICALLY DESIGNED TO WITHSTAND HIGH M TEMPERATURES. PROVIDE PRIMER AS RECOMMENDED BY MANUF.
- 1. CARLISLE; CCW WIP 300HT 2. W.R. GRACE CO.; GRACE VYCOR V40 SELF-ADHERED FLASHING
- 3. HENRY CO.; BLUESKIN PE200 HT
- 4. KIRSCH BUILDING PRODUCTS; SHARKSKIN ULTRA SA 5. METAL-FAB MANUF.; METSHIELD
- 6. OWENS-CORNING; WEATHERLOCK METAL HIGH TEMPERATURE UNDERLAYMENT

3.1 EXECUTION

- A. INSTALL SHEET METAL FLASHING AND TRIM TRUE TO LINE, LEVELS, SLOPES. PROVIDE UNIFORM, NEAT SEAMS WITH MINIMUM EXPOSURE OF SOLDER, WE AND SEALANT. DO NOT TORCH CUT SHEET METAL FLASHING.
- B. SPACE CLEATS NOT MORE THAN 12 INCHES APART. ATTACHE CLEAT WITH AT LEAST TWO FASTENERS. BEND TABS OVER FASTENERS. C. WHERE DISSIMILAR METALS CONTACT EACH OTHER, OR WHERE METAL CONTACTS PRESSURE-TREATED WOOD OR OTHER CORROSIVE SUBSTRATE PROTECT AGAINST GALVANIC ACTION OR CORROSION BY PAINTING CONTAC
- SURFACES WITH BITUMINOUS COATING OR OTHER PERMANENT SEPARATION. D. EXPANSION PROVISIONS: PROVIDE FOR THERMAL EXPANSION OF EXPOSED FLASHING AND TRIM. SPACE MOVEMENT JOINTS AT MAX. 10 FEET WITH NO JOINTS WITHIN 24 INCHES OR CORNER OR INTERSECTION. FORM EXPANSION JOINTS WITH INTERMESHING HOOKED FLANGES, NOT LESS THAN 1 INCH DEEP,
- FILLED WITH SEALANT CONCEALED WITHIN JOINTS. E. SELF-ADHERING MEMBRANE FLASHING (SAF): INSTALL WRINKLE FREE, SHINGLE FASHION TO SHED WATER, WITH END LAPS OF NOT LESS THAN 6 INCHES STAGGERED 24 INCHES BETWEEN COURSES. COVER SAF WITHIN 14 DAYS. PROVIDE A CONTINUOUS LAYER OF SAF BELOW ALL PARAPET COPINGS AND AS INDICATED ON THE DRAWINGS.

	07 72 00 ROOF ACCESSORIES
	1.1 SUMMARY
	A. SECTION INCLUDES: 1. FORMED EQUIPMENT SUPPORT FLASHING
.oads, Re to Tion, T All	<ol> <li>ACTION SUBMITTALS         <ul> <li>GENERAL PERFORMANCE: ROOF SPECIALTIES SHALL WITHSTAND EXPOSURE TO WEATHER AND RESIST THERMALLY INDUCED MOVEMENT WITHOUT FAILURE, RATTLING, LEAKING, OR FASTENER DISENGAGEMENT DUE TO DEFECTIVE MANUFACTURE, FABRICATION, INSTALLATION, OR OTHER DEFECTS IN CONSTRUCTION.</li> </ul> </li> </ol>
"THE	<ul> <li>B. THERMAL MOVEMENTS: ALLOW FOR THERMAL MOVEMENTS FROM AMBIENT AND SURFACE TEMPERATURE CHANGES TO PREVENT BUCKLING, OPENING OF JOINTS, HOLE ELONGATION, OVERSTRESSING OF COMPONENTS, FAILURE OF JOINT SEALANTS, FAILURE OF CONNECTIONS, AND OTHER DETRIMENTAL EFFECTS. PROVIDE CLIPS THAT RESIST ROTATION AND AVOID SHEAR</li> </ul>
EEL	STRESS AS A RESULT OF THERMAL MOVEMENTS. BASE CALCULATIONS ON SURFACE TEMPERATURES OF MATERIALS DUE TO BOTH SOLAR HEAT GAIN
Л	AND NIGHTTIME-SKY HEAT LOSS. 1. TEMPERATURE CHANGE (RANGE): 120 DEGREES F, AMBIENT 180 DEGREES F, MATERIAL SURFACE
NING	2.1 PRODUCTS
	A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:
R HEAD. RIVETS	1. GAF 2. MASTER FLASH 3. DEKTITE
0%	<ul> <li>B. AUXILIARY MATERIALS</li> <li>1. GENERAL: AUXILIARY MATERIALS RECOMMENDED BY ROOFING SYSTEM MANUFACTURER FOR INTENDED USE AND COMPATIBLE WITH OTHER ROOFING COMPONENTS.</li> <li>2. SHEET FLASHING: MANUFACTURER'S STANDARD UNREINFORCED TPO</li> </ul>
IWIDE	SHEET FLASHING, 55 MILS THICK, MINIMUM, OF SAME COLOR AS TPO SHEET. 3. PREFABRICATED PIPE FLASHINGS: AS RECOMMENDED BY ROOF
	MEMBRANE MANUFACTURER. 4. ROOF VENTS: AS RECOMMENDED BY ROOF MEMBRANE MANUFACTURER.
ENTING R	<ul> <li>a. SIZE: NOT LESS THAN 4-INCH DIAMETER.</li> <li>5. BONDING ADHESIVE: MANUFACTURER'S STANDARD, WATER BASED.</li> <li>6. SLIP SHEET: ASTM D2178/D2178M, TYPE IV; GLASS FIBER; ASPHALT-IMPREGNATED FELT.</li> </ul>
ASTM	<ul> <li>7. SLIP SHEET: MANUFACTURER'S STANDARD, OF THICKNESS REQUIRED FOR APPLICATION.</li> </ul>
	<ol> <li>METAL TERMINATION BARS: MANUFACTURER'S STANDARD, PREDRILLED STAINLESS STEEL OR ALUMINUM BARS, APPROXIMATELY 1 BY 1/8 INCH THICK; WITH ANCHORS.</li> </ol>
WITH METAL	<ol> <li>METAL BATTENS: MANUFACTURER'S STANDARD, ALUMINUM-ZINC-ALLOY-COATED OR ZINC-COATED STEEL SHEET, APPROXIMATELY 1 INCH WIDE BY 0.05 INCH THICK PRE-PUNCHED.</li> <li>10. FASTENERS: FACTORY-COATED STEEL FASTENERS AND METAL OR</li> </ol>
	PLASTIC PLATES COMPLYING WITH CORROSION-RESISTANCE PROVISIONS IN FM APPROVALS 4470, DESIGNED FOR FASTENING ROOFING COMPONENTS TO SUBSTRATE, AND ACCEPTABLE TO ROOFING SYSTEM MANUFACTURER. 11. MISCELLANEOUS ACCESSORIES: PROVIDE POURABLE SEALERS,
-	PREFORMED CONE AND VENT SHEET FLASHINGS, PREFORMED INSIDE AND OUTSIDE CORNER SHEET FLASHINGS, T-JOINT COVERS, LAP SEALANTS, TERMINATION REGLETS, AND OTHER ACCESSORIES.
S. /ELDS,	3.1 EXECUTION
, АТ	A. GENERAL: INSTALL COMPONENTS TO PRODUCE A WATER-TIGHT SYSTEM ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. COORDINATE INSTALLATION OF FLASHING WITH INSTALLATION OF PENETRATIONS.
ES, CT	B. PENETRATIONS: UTILIZE FACTORY PREFABRICATED FLASHINGS FOR PENETRATIONS SUCH AS PIPES, EQUIPMENT CURBS, BRACES, AND PITCH POCKETS. THESE FLASHING SHALL BE MADE OF THE SAME MEMBRANE
ON.	MATERIAL AS THE ROOF SECTIONS. ATTACH EACH FLASHING TO THE ROOF MEMBRANE USING HOT-AIR WELDS AND TERMINATE THE FLASHING TO THE

MEMBRANE USING HOT-AIR WELDS AND TERMINATE THE FLASHING TO THE

PENETRATION PER MANUFACTURER'S SPECIFICATION.

- 1.1 SUMMAR
- A. ACRYLIC LATEX JOINT SEALANTS
- B. URETHANE JOINT SEALANTS SILICONE JOINT SEALANTS
- D. RELATED SECTION:
  - 1. BUTYL SEALANTS IN ROOFING 2. GLAZING SEALANTS IN GLAZING
  - 3. FIRE-RESISTANCE-RATED CONSTRUCTION SEALANTS IN I
- 1.2 QUALITY ASSURANCE A. PRECONSTRUCTION FIELD-ADHESION TESTING: BEFORE INSTALL TEST ADHESION TO PROJECT JOINT SUBSTRATES AS FOLLOWS: 1. FOR JOINTS WITH DISSIMILAR SUBSTRATES, VERIFY ADH SUBSTRATE SEPARATELY; EXTEND CUT ALONG ONE SIDE
- TO OPPOSITE SIDE. REPEAT PROCEDURE FOR OPPOSITE B. COMPATIBILITY: PROVIDE JOINT SEALANTS, BACKING, AND OTHEI MATERIALS THAT ARE COMPATIBLE WITH ON ANOTHER AND WITH
- UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONST JOINT-SEALANT MANUFACTURER, BASED ON TESTING AND FIELD C. SUITABILITY FOR IMMERSION IN LIQUIDS: WHERE SEALANTS ARE IN JOINTS THAT WILL BE CONTINUOUSLY IMMERSED IN LIQUIDS, F THAT HAVE UNDERGONE TESTING ACCORDING TO ASTM C 1247.
- TESTING SEALANTS IS DEIONIZED WATER, U.N.O.. D. STAIN-TEST-RESPONSE CHARACTERISTICS: WHERE SEALANTS AF NON-STAINING TO POROUS SUBSTRATES, PROVIDE PRODUCTS TH

UNDERGONE TESTING ACCORDING TO ASTM C 1248.

- 2.1 PRODUCTS
- A. ACRYLIC LATEX JOINT SEALANTS: ASTM C 834, TYPE O, GRADE NF PERIMETER JOINTS BETWEEN INTERIOR WALL SURFACES, FR DOORS, WINDOWS, ELEVATOR ENTRANCES ETC. PAINTABL
  - 1. BASF BUILDING SYSTEMS; SONOLOC 2. BOSTIK INC.; CHEM-CALK 600
  - 3. MAY NATIONAL ASSOC.; BONDAFLEX 600
  - 4. PECORA CORP.; AC-20+
  - SCHNEE-MOREHEAD, INC.; SM8200
- 6. TREMCO INC.; TREMFLEX 834 B. ACRYLIC LATEX SEALANTS: ASTM C 834, TYPE O, GRADE NF, NON-PAINTABLE. APPLICATION: INTERIOR PERIMETER AND CONCEALED ACOUSTIC PARTITIONS
  - 1. MIRACLE SCS-100
  - 2. PECORA CORP.: AC-20 FTR ACOUSTICAL AND INSULATION
- 3. US GYPSUM CO,;SHEETROCK ACOUSTICAL SEALANT. C. URETHANE JOINT SEALANTS: TYPE M, GRADE NS, CLASS 25, USES NT, USES (SUBSTRATES) M, A, O APPLICATION: EXTERIOR VERTIC NON TRAFFIC JOINTS IN CIP AND PRECAST CONCRETE, EXTERIOR EXPANSION JOINTS, EXTERIOR PERIMETER JOINTS AT FRAMES O AND LOUVERS, VERTICAL JOINTS ON EXPOSED SURFACES OF IN VERTICAL CONTROL AND EXPANSION JOINTS ON EXPOSED INTER EXTERIOR WALLS.
  - 1. BASF BUILDING SYSTEMS; SONOLOSTIC NP 2
  - 2. MAY NATIONAL ASSOC.; BONDAFLEX PUR 2 NS 3. PACIFIC POLYMERS; ELASTO-THANE 227 HIGH SHORE TYF
  - 4. PECORA CORP.; DYNATRED
  - 5. SIKA CORP.; SIKAFLEX 2C NS OR SIKAFLEX 2C EZ MIX
- 6. TREMCO; VULKEM 240 FC OR VULKEM 227 D. URETHANE JOINT SEALANTS: TYPE S OR M, GRADE P, CLASS 50, U AND NT, USES (SUBSTRATES) M, A, O (BRICK & CERAMIC TILE) APP CERAMIC TILE EXPANSION, CONTROL, CONTRACTION, AND ISOLA HORIZONTAL TRAFFIC SURFACES, EXTERIOR HORIZONTAL NONTF
- ISOLATION AND CONTRACTION JOINTS IN CIP CONCRETE SLABS. 1. TYPE M (MULTI-COMPONENT)
  - a. POLYMERIC SYSTEMS, INC.; PSI-270
  - b. SONNEBORN, DIVISION OF CHEMREX; SL 2
  - c. TREMCO INC.; DYMERIC 240 FC d. PECORA CORP.; DYNATROL II-G
  - e. SIKA CORP.; SIKAFLEX 2C SL
- 2. TYPE S (SINGLE-COMPONENT) a. POLYMERIC SYSTEMS, INC.; PSI-901

b. PACIFIC POLYMERS INT.; ELASTO-THANE 230 LM TYPI SILICONE JOINT SEALANTS: TYPE S, GRADE NS, CLASS 50, USES ( USES (SUBSTRATES) M, G, A, O (BRICK, GALV. STEEL) APPLICATIO IN STUCCO SYSTEMS.

- 1. NEUTRAL-CURING SILICONE SEALANT
- a. DOW CORNING CORP.; 790 b. GE SILICONES; SILLPRUF LM SCS2700
- c. TREMCO INC.; SPECTREM 1 (BASIC)
- PECORA CORP.; 890
- e. SONNEBORN DIVISION OF CHEMREX; OMNISEAL 2. SIYL-TERMINATED POLYETHER SEALANT
- a. SONNEBORN DIVISION OF CHEMREX; 150 VLM

# 09 91 00 PAINTING

	1.1 SUMMARY A. INTERIOR PAINTING B. EXTERIOR PAINTING
N FIRESTOPPING	<ul> <li>1.2 REGULATORY AGENCY REQUIREMENTS</li> <li>A. REMOVAL OF ANY LEAD-BASE PAINT PRODUCTS (EXCEEDING 20 FT OF EXTERIOR SURFACE OR 6 SQ FT OF INTERIOR SURFACE) MUST BE PERFORMED BY WORKERS WHO HAVE BEEN PRE-CERTIFIED BY EPA.</li> </ul>
LING SEALANTS, FIELD	<ul> <li>B. EXISTING STRUCTURE IS OLDER THAN 1978, THEREFORE, COMPLY WITH FEDERAL</li> <li>DUST REMOVAL LAW REQUIREMENTS INCLUDING THE FOLLOWING:</li> <li>1. PROVIDE HEPA FILTER EQUIPPED VACUUMS AND OTHER NECESSARY</li> </ul>
HESION TO EACH DE, VERIFY ADHESION FE SIDE. ER RELATED H JOINT SUBSTRATES STRATED BY D EXPERIENCE. E INDICATED FOR USE PROVIDE PRODUCTS . LIQUID USED FOR ARE SPECIFIED TO BE THAT HAVE	DUST-REMOVAL TOOLS         1.3 SITE CONDITIONS         A. PERFORM WORK ONLY UNDER THE FOLLOWING CONDITIONS, UNLESS OTHERWISE INSTRUCTED BY MANUFACTURER: <ol> <li>MAXIMUM RELATIVE HUMIDITY: 85%</li> <li>AMBIENT AIR TEMPERATURES ARE BETWEEN 50 DEGREES AND 95 DEGREES F.</li> <li>MAXIMUM MOISTURE CONTENT OF SUBSTRATES, WHEN MEASURED WITH AN ELECTRONIC MOISTURE METER:             <li>CONCRETE: 12%</li> <li>MASONRY (CLAY AND CMU): 12%</li> <li>WOOD: 15%</li> <li>PORTLAND CEMENT PLASTER: 12%</li> <li>GYPSUM BOARD: 12%</li> </li></ol>
NF. APPLICATION: FRAMES OF INTERIOR BLE.	<ul> <li>2.1 EXTERIOR PAINTING SCHEDULE <ul> <li>A. BASIS OF DESIGN IS SHERWIN WILLIAMS.</li> <li>B. CONCRETE</li> <li>1. PREVIOUSLY COATED SURFACES: LOXON CONDITIONER</li> <li>2. PRIMER: LOXON CONCRETE &amp; MASONRY PRIMER SEALER</li> <li>3. (2) TOP COATS: A5-400 CONFLEX XL SMOOTH ELASTOMERIC HIGH BUILD COATING</li> </ul> </li> </ul>
N-STAINING, ED JOINTS OF DN SEALANT.	COATING C. CMU 1. PREVIOUSLY COATED SURFACES: LOXON CONDITIONER 2. PRIMER: LOXON BLOCK SURFACE 3. (2) TOP COATS: A5-400 CONFLEX XL SMOOTH ELASTOMERIC HIGH BUILD COATING D. METAL 1. PRIMER: PRO-INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER 2. (2) TOP COATS: PRO INDUSTRIAL WATER BASED ACROLON 100 URETHANE E. WOOD
ES (EXPOSURE) T AND CAL AND HORIZONTAL OR CONTROL AND OF DOORS, WINDOWS, NTERIOR CONCRETE, ERIOR SURFACES OF	<ol> <li>PRIMER: EXTERIOR LATEX WOOD PRIMER</li> <li>(2) TOP COATS: A-100 EXTERIOR LATEX SATIN</li> <li>F. EXTERIOR PLASTER, STUCCO, EIFS</li> <li>PREVIOUSLY COATED SURFACES: LOXON CONDITIONER</li> <li>PRIMER: LOXON CONCRETE &amp; MASONRY PRIMER SEALER</li> <li>(2) TOP COATS: A5-400 CONFLEX XL SMOOTH ELASTOMERIC HIGH BUILD COATING</li> </ol>
(PE II	<ul> <li>2.2 INTERIOR PAINTING SCHEDULE</li> <li>A. BASIS OF DESIGN IS SHERWIN WILLIAMS. PROVIDE APPROPRIATE PRIMER FOR EACH SUBSTRATE PER MANUFACTURER.</li> <li>B. CORRIDORS AND STAIRWELLS: <ol> <li>WALLS: (2) TOP COATS - PRO INDUSTRIAL PRE-CATALYZED WATERBASED</li> </ol> </li> </ul>
USES (EXPOSURE) T PPLICATION:INTERIOR ATION JOINTS IN IRAFFIC AND TRAFFIC	<ul> <li>EPOXY SEMI-GLOSS</li> <li>2. CEILINGS: (2) TOP COATS - PROMAR 200 ZERO VOC LATEX SATIN</li> <li>C. CLASSROOMS AND OFFICES: <ol> <li>WALLS: (2) TOP COATS - PROMAR 200 ZERO VOC INTERIOR LATEX SATIN</li> </ol> </li> <li>D. CEILINGS: (2) TOP COATS - PROMAR 200 ZERO VOC LATEX EGGSHELL RESTROOMS, KITCHEN, CAFETERIA, LOCKER ROOMS: <ol> <li>WALLS &amp; CEILINGS: (2) TOP COATS - PRO INDUSTRIAL WATERBASED CATALYZED EPOXY SEMI-GLOSS</li> </ol> </li> <li>E. DOOR FRAMES, WINDOW FRAMES, TRIM: <ol> <li>(2) TOP COATS - PRO INDUSTRIAL ACRYLIC SEMI-GLOSS</li> </ol> </li> <li>F. EXPOSED METAL DECKING OR BAR JOISTS: <ol> <li>(2) TOP COATS - PRO INDUSTRIAL WATERBOURNE ACRYLIC DRYFALL EGG SHELL</li> </ol> </li> </ul>
PE II 5 (EXPOSURE) NT, ON:EXTERIOR JOINTS	<ul> <li>3.1 SURFACE PREPARATION <ul> <li>A. ALUMINUM: REMOVE ALL OIL, GREASE, DIRT, OXIDE AND OTHER FOREIGN MATERIAL BY CLEANING PER SSPC-SP1 SOLVENT CLEANING.</li> <li>B. CMU &amp; CONCRETE: REMOVE ALL LOOSE MORTAR AND FOREIGN MATERIAL, FILL BUG HOLES, AIR POCKETS, AND OTHER VOIDS WITH A CEMENT PATCHING COMPOUND. CONCRETE AND MORTAR MUST BE CURED AT LEAST 30 DAYS.</li> <li>C. CEMENT SIDING/PANELS: WASH SURFACE WITH APPROPRIATE CLEANER, RINSE THOROUGHLY AND ALLOW TO DRY. EXISTING PEELED OR CHECKED PAINT SHOULD BE SCRAPED AND SANDED TO A SOUND SURFACE.</li> <li>D. INTERIOR DRYWALL: ALL SCREW/NAIL HEADS MUST BE SET AND SPACKLED, JOINTS TAPED AND MUDDED, SANDED SMOOTH, AND ALL DUST REMOVED FROM SURFACE.</li> <li>E. GALVANIZED METAL: CLEAN PER SSP-SP1 USING DETERGENT OR A DEGREASING CLEANER TO REMOVE GREASES AND OILS.</li> <li>F. PLASTER: DAMAGED AREAS MUST BE REPAIRED WITH AN APPROPRIATE PATCHING MATERIAL. BARE PLASTER MUST BE CURED AND HARD. TEXTURED, SOFT, POROUS, OR POWDERY PLASTER SHOULD BE TREATED WITH A SOLUTION OF 1 PINT HOUSEHOLD VINEGAR TO 1 GALLON OF WATER. REPEAT UNTIL SURFACE IS HARD, RINSE WITH CLEAR WATER, AND ALLOW TO DRY.</li> <li>G. STEEL: REMOVE ALL LOOSE MILL SCALE, LOOSE RUST, AND OTHER FOREIGN MATERIAL. CLEAN WITH SCUPENT PATCHING CALL VISIBLE OIL, GREASE, SOIL, DRAWING AND CUTTING COMPOUNDS. CHANGE RAGS AND CLEANING SOLUTION FREQUENTLY.</li> <li>H. WOOD: KNOTS, PITCH STREAKS MUST BE SCRAPED, SANDED, AND SPOT PRIMED BEFORE FULL PRIMING COAT IS APPLIED. PATCH ALL NAIL HOLES WITH WOOD FILLER OR PUTTY AND SAND SMOOTH.</li> <li>MILDEVY: REMOVE ANY MILDEW BY SCRUBBING WITH TRISODIUM PHOSPHATE</li> </ul> </li> </ul>

SOLUTION, TREAT WITH BLEACH SOLUTION, RINSE WITH CLEAN WATER, AND ALLOW SURFACES TO COMPLETE DRY.

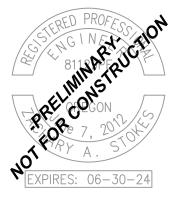


Main Street, Suite 2, Oregon City, regon 97045 | 503-659-2205

ANT SCHOOL DISTRICT S. CANYON BLVD IN DAY, OR 97845

# RANT UNION HIGH HOOL HVAC





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SPECIFICATIONS



## 22 00 00 PLUMBING DESIGN-BUILD PERFORMANCE SPECIFICATION

#### 1.1 DESCRIPTION OF WORK

- A. THIS PROJECT CONSISTS OF REPLACING EXISTING HVAC EQUIPMENT AT THE GRANT UNION HIGH SCHOOL LOCATED IN JOHN DAY, OREGON. THIS SPECIFICATION SECTION COVERS DESIGN/BUILD PERFORMANCE REQUIREMENTS FOR THE PLUMBING SYSTEMS. REFER TO CONSTRUCTION DRAWINGS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK. THE PROJECT SHALL INCLUDE THE FOLLOWING LINE ITEMS AS PART OF THE BID
- 1. BASE BID: a. REFER TO DRAWINGS FOR SCOPE OF WORK.
- B. PERFORM A DETAILED FIELD INVESTIGATION AND PREPARE DESIGN DOCUMENTS WITH OREGON MECHANICAL ENGINEER'S STAMP AND SIGNATURE, SUITABLE FOR PLAN CHECK SUBMISSION AND CONSTRUCTION.

#### 1.2 SECTION INCLUDES

1.4 REFERENCES

- A. DESIGN AND CONSTRUCTION OF COMPLETE PLUMBING SYSTEMS.
- 1.3 RELATED SECTIONS A. SEE OTHER SPECIFICATION SECTIONS.

#### A. PLUMBING SYSTEM DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE OREGON PLUMBING SPECIALTY CODE (OPSC) AND LOCAL LAWS AND ORDINANCES.

- B. OMSC 2022 OREGON MECHANICAL SPECIALTY CODE
- C. OESC 2021 OREGON ELECTRICAL SPECIALTY CODE
- D. OSSC 2022 OREGON STRUCTURAL SPECIALTY CODE
- E. OEESC 2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE

#### 1.5 REQUIREMENTS

SIZE

A. THE PLUMBING DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.

#### B. SUBMIT TO THE OWNER FOR REVIEW:

- 1. REVIEWING AGENCY SUBMITTAL: 10 DAYS AFTER RECEIVING REVIEWING AGENCY COMMENTS. 2. CONSTRUCTION SHALL NOT COMMENCE UNTIL THE DETAILED DRAWINGS,
- SPECIFICATIONS, AND ENGINEERING CALCULATIONS HAVE BEEN ACCEPTED AND APPROVED BY THE OWNER AND THE REVIEWING AGENCY.

#### C. CONSTRUCTION DOCUMENTS AND REVIEWING AGENCY SUBMITTALS: 1. DRAWINGS SHALL BE SCALABLE, DATED, STAMPED AND SIGNED BY THE

CONTRACTOR'S REGISTERED MECHANICAL ENGINEER FOR THE STATE OF OREGON, AND SHALL BE PROVIDED IN PDF AND HARDCOPY FORMAT, 24"X36"

2. SPECIFICATIONS SHALL BE PROVIDED IN HARDCOPY FORMAT, 8.5" X 11" SIZE. 3. DRAWINGS AND SPECIFICATIONS SHALL BE SUITABLE FOR SUBMISSION TO THE REVIEWING AGENCY FOR REVIEW.

#### D. IF APPLICABLE, COORDINATE WITH THE MECHANICAL AND ELECTRICAL DESIGN CONTRACTORS AND THEIR ENGINEERS FOR THE PLUMBING EQUIPMENT BEING INSTALLED AS PART OF THIS PROJECT.

#### 1.6 SUBMITTALS FOR REVIEW

- A. CONSTRUCTION DOCUMENTS COMPONENTS (IN ADDITION TO DESIGN DEVELOPMENT COMPONENTS): 1. DRAWINGS INCLUDING:
- a. COMPLETE PLUMBING SYSTEMS FLOOR PLAN DRAWINGS.
- b. COMPLETED PLUMBING ENERGY CODE FORMS. c. OREGON ENGINEERING STAMP WITH SIGNATURES.

## B. REVIEWING AGENCY SUBMITTAL:

- 1. REVIEWING AGENCY COMMENTS AND CONTRACTOR RESPONSES.
- 2. DRAWINGS WITH REVIEWING AGENCY COMMENTS INCORPORATED. 3. PLUMBING SPECIFICATIONS.
- 4. FINAL STAMPED, SIGNED AND APPROVED DRAWINGS SUITABLE FOR CONSTRUCTION.

#### 3.1 GENERAL

- A. DRAWINGS: 1. COORDINATE DRAWINGS WITH OTHER DISCIPLINES, INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL
- B. EXISTING DOCUMENTATION:
- 1. COORDINATE WITH ZCS ENGINEERING & ARCHITECTURE TO OBTAIN RECORD DOCUMENTS (DRAWINGS AND/OR SPECIFICATIONS) OF THE EXISTING BUILDINGS. DRAWINGS ARE PROVIDED AS A COURTESY, AND MAY BE INCOMPLETE, AND/OR OUT OF DATE. THE CONTRACTOR SHALL INDEPENDENTLY PERFORM ALL REQUIRED FIELD INVESTIGATIONS.

#### C. PLUMBING DESIGN:

- 1. PLUMBING CALCULATIONS AND DESIGN SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE OREGON PLUMBING SPECIALTY CODE (OPSC).
- 2. SLOPE DRAINAGE LINES AS DETERMINED BY THE EXISTING CONNECTION POINT. BUT NOT LESS THAN 1/8-INCH PER FOOT.
- 3. INSULATE ALL POTABLE HOT WATER LINES AS SPECIFIED IN THE OREGON
- ENERGY EFFICIENCY CODE: 4. INSULATE ALL COLD WATER LINES TO PREVENT CONDENSATION;
- 5. SOIL PIPE SHALL BE CAST IRON;
- 6. POTABLE WATER LINES SHALL BE COPPER, TYPE L FOR ABOVE GRADE AND TYPE K FOR BELOW GRADE.

#### 3.2 FIELD INVESTIGATION

A. PERFORM AN EXTENSIVE FIELD INVESTIGATION AND RECORD INFORMATION REQUIRED TO PERFORM THE PLUMBING SYSTEMS DESIGN DESCRIBED HEREIN.

## B. THE FIELD INVESTIGATION SHALL COVER:

- 1. ALL AREAS REQUIRED TO COMPLETE THIS PROJECT'S SCOPE OF WORK.
- 3.5 PLUMBING DESIGN A. COORDINATE WITH THE OWNER, ARCHITECT, AND OTHER DISCIPLINES TO DETERMINE LOCATIONS AND SPACE REQUIREMENTS OF ALL NEW FIXTURES.

### 23 00 00 MECHANICAL DESIGN-BUILD PERFORMANCE SPECIFICATION

- 1.1 DESCRIPTION OF WORK A. THIS PROJECT CONSISTS OF REPLACING EXISTING HVAC EQUIPMENT AT TH UNION HIGH SCHOOL LOCATED IN JOHN DAY, OREGON. THIS SPECIFICATION SECTION COVERS DESIGN/BUILD PERFORMANCE REQUIREMENTS FOR THE MECHANICAL SYSTEMS. REFER TO CONSTRUCTION DRAWINGS FOR ADDITION INFORMATION AND SCOPE OF WORK. THE PROJECT SHALL INCLUDE THE FOLLOWING LINE ITEMS AS PART OF THE BID: 1. BASE BID BUILDING:
  - a. REFER TO DRAWINGS FOR SCOPE OF WORK.
  - B. PERFORM A DETAILED FIELD INVESTIGATION AND PREPARE DESIGN DOCUM WITH OREGON MECHANICAL ENGINEER'S STAMP AND SIGNATURE, SUITABL PLAN CHECK SUBMISSION AND CONSTRUCTION.
- 1.2 SECTION INCLUDES
- A. DESIGN AND CONSTRUCTION OF MECHANICAL HEATING, VENTILATION, AND COOLING SYSTEMS UNDER THE BASE BID.
- 1.3 RELATED SECTIONS A. SEE OTHER SPECIFICATION SECTIONS.
- 1.4 REFERENCES A. HEATING, VENTILATING, AND COOLING SYSTEM DESIGN SHALL BE IN ACCOR WITH THE REQUIREMENTS OF THE OREGON MECHANICAL SPECIALTY CODE LOCAL LAWS AND ORDINANCES AND WITH LOAD CALCULATIONS IN ACCORD WITH ASHRAE PROCEDURES;
  - B. OMSC 2022 OREGON MECHANICAL SPECIALTY CODE;
- C. OESC 2021 OREGON ELECTRICAL SPECIALTY CODE;
- D. OSSC 2022 OREGON STRUCTURAL SPECIALTY CODE; AND,
- E. OEESC 2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE.
- 1.5 REQUIREMENTS A. THE MECHANICAL (HVAC) DRAWINGS SHALL BE PROVIDED BY THE CONTRA
- B. SUBMITTALS SHALL BE SUBMITTED TO THE OWNER FOR REVIEW.
- 1. CONSTRUCTION SHALL NOT COMMENCE UNTIL THE DETAILED DRAWING SPECIFICATIONS, AND ENGINEERING CALCULATIONS HAVE BEEN ACCEPT APPROVED BY THE OWNER AND THE REVIEWING AGENCY.
- C. CONSTRUCTION DOCUMENTS AND REVIEWING AGENCY SUBMITTALS: 1. DRAWINGS SHALL BE SCALABLE, DATED, STAMPED AND SIGNED BY THE CONTRACTOR'S REGISTERED MECHANICAL ENGINEER FOR THE STATE C OREGON, AND SHALL BE PROVIDED IN PDF AND HARDCOPY FORMAT, 24" SIZE
- 2. SPECIFICATIONS SHALL BE PROVIDED IN HARDCOPY FORMAT, 8.5"X11" SI 3. DRAWINGS AND SPECIFICATIONS SHALL BE SUITABLE FOR SUBMISSION REVIEWING AGENCY FOR REVIEW.
- D. COORDINATE WITH THE ELECTRICAL DESIGN-BUILD CONTRACTOR AND HIS ELECTRICAL ENGINEER FOR THE MECHANICAL EQUIPMENT BEING INSTALLE PART OF THIS PROJECT.
- E. PROVIDE STRUCTURAL ENGINEERING ANALYSIS AND DESIGN OF STRUCTUR ACCOMMODATE ALL HVAC EQUIPMENT ADDED BY THIS SCOPE OF WORK.

#### 1.6 SUBMITTALS FOR REVIEW

- A. CONSTRUCTION DOCUMENTS COMPONENTS: 1. DRAWINGS INCLUDING:
  - a. MECHANICAL SYSTEMS PLAN DRAWINGS; MECHANICAL SECTIONAL DRAWINGS, IF REQUIRED FOR CLARITY; COMPLETED MECHANICAL ENERGY CODE FORMS;
- 2. MECHANICAL SPECIFICATIONS
- B. REVIEWING AGENCY SUBMITTAL: 1. REVIEWING AGENCY COMMENTS AND CONTRACTOR RESPONSES.
- 2. DRAWINGS WITH REVIEWING AGENCY COMMENTS INCORPORATED.
- 3. MECHANICAL SPECIFICATIONS. 4. FINAL STAMPED, SIGNED AND APPROVED DRAWINGS SUITABLE FOR CONSTRUCTION.

# PART 3 EXECUTION

3.1 GENERAL

- A. DRAWINGS:
- 1. COORDINATE DRAWINGS WITH OTHER DISCIPLINES, INCLUDING ARCHITE STRUCTURAL, PLUMBING, AND ELECTRICAL.
- 2. SCREENED LINE TYPES AND FONTS SHALL REPRESENT WORK THAT IS NO INCLUDED IN THIS CONTRACT. 3. BOLD LINE TYPES AND FONTS SHALL REPRESENT WORK THAT IS INCLUD
- THIS CONTRACT. 4. REVISIONS TO DRAWINGS AFTER THE CONSTRUCTION DOCUMENTS SUB
- SHALL BE NOTED WITH: a. REVISION NOTES IN THE DRAWING TITLE BLOCK INCLUDING THE RE NUMBER, BRIEF DESCRIPTION, DATE, AND INITIALS OF THE PERSON RESPONSIBLE FOR THE REVISION.
- "CLOUDS" ENCOMPASSING THE DRAWING REVISION. "DELTA" BLOCKS ADJACENT TO THE CLOUDS WITH REVISION NUMB CORRESPONDING TO THE ASSOCIATED TITLE BLOCK REVISION NOT
- B. EXISTING DOCUMENTATION: 1. COORDINATE WITH ZCS ENGINEERING & ARCHITECTURE TO OBTAIN REC DOCUMENTS (DRAWINGS AND/OR SPECIFICATIONS) OF THE EXISTING BU
- DRAWINGS ARE PROVIDED AS A COURTESY, AND MAY BE INCOMPLETE, AND/OR OUT OF DATE. THE CONTRACTOR SHALL INDEPENDENTLY PERF REQUIRED FIELD INVESTIGATIONS.
- C. EQUIPMENT EVALUATION: 1. EVALUATE EXISTING MECHANICAL EQUIPMENT AND COMPONENTS TO RE AND VERIFY THE EQUIPMENT IS IN GOOD WORKING ORDER AND MEETS CURRENT CODE REQUIREMENTS.

#### D. MECHANICAL DESIGN:

- 1. MECHANICAL SYSTEM PERFORMANCE SHALL BE RETURNED TO THE STAT WHICH IT WAS BEFORE CONSTRUCTION. 2. MECHANICAL SYSTEMS SHALL INCLUDE HEATING, COOLING, AND VENTIL/
- 3. MECHANICAL CALCULATIONS AND DESIGN SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE OMSC AND ASHRAE.
- 4. COORDINATE WITH THE OWNER, ENGINEER, AND OTHER DISCIPLINES TO DETERMINE LOCATIONS AND SPACE REQUIREMENTS OF ALL NEW EQUIP AND DUCTWORK.

CATION	26 00 00 ELECTRICAL DESIGN-BUILD PERFORMANCE SPECIFICATION	
The grant On Ie Tional	<ul> <li>1.1 DESCRIPTION OF WORK</li> <li>A. THIS PROJECT CONSISTS OF REPLACING EXISTING HVAC EQUIPMENT AT THE GRANT UNION HIGH SCHOOL LOCATED IN JOHN DAY, OREGON. THIS SPECIFICATION SECTION COVERS DESIGN/BUILD PERFORMANCE REQUIREMENTS FOR THE MECHANICAL SYSTEMS. REFER TO CONSTRUCTION DRAWINGS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK. THE PROJECT SHALL INCLUDE THE FOLLOWING LINE ITEMS AS PART OF THE BID</li> <li>1. BASE BID: <ul> <li>a. REFER TO DRAWINGS FOR SCOPE OF WORK.</li> </ul> </li> </ul>	
JMENTS BLE FOR	B. WORK SPECIFIED IN THIS SECTION SHALL BE DESIGNED UNDER THE RESPONSIBLE CHARGE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OREGON. DESIGN DOCUMENTS SHALL BE STAMPED AND SIGNED.	
ID	<ul> <li>C. DESIGN DOCUMENTS SHALL MEET ALL OF THE FOLLOWING REQUIREMENTS:</li> <li>1. SUITABLE FOR REVIEW BY THE OWNER AND THE OWNER'S CONSULTANTS.</li> <li>2. MEET THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO THE BUILDING DEPARTMENT, THE FIRE MARSHAL, THE POWER COMPANY, AND ALL ASSOCIATED PARTIES.</li> <li>3. CONFORM TO CODES, LAWS, AND ORDINANCES AS CALLED FOR IN THIS SPECIFICATION.</li> </ul>	E N G I N E E R I N G A R C H I T E C T U R E 524 Main Street, Suite 2, Oregon City,
ORDANCE DE (OMSC),	1.2 ASSUMPTION A. THE EXISTING SERVICE IS SIZED TO ACCOMMODATE THIS PROJECT'S LOADS.	Oregon 97045   503-659-2205
RDANCE	1.3 RELATED SECTIONS A. SEE OTHER SPECIFICATION SECTIONS (MECHANICAL AND STRUCTURAL).	GRANT SCHOOL DISTRICT 911 S. CANYON BLVD
	1.4 REFERENCES A. ELECTRICAL AND LIGHTING SYSTEM DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC), OREGON ELECTRICAL SPECIALTY CODE (OESC) AND LOCAL LAWS AND ORDINANCES.	JOHN DAY, OR 97845
	B. NEC - 2021 NATIONAL ELECTRICAL CODE	SCHOOL HVAC
ACTOR.	C. OESC - 2021 OREGON ELECTRICAL SPECIALTY CODE	
ACTOR.	D. OSSC - 2022 OREGON STRUCTURAL SPECIALTY CODE	
GS, PTED AND	E. OEESC - 2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE	
E	<ul> <li>1.5 REQUIREMENTS</li> <li>A. THE ELECTRICAL AND LIGHTING SYSTEM DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.</li> </ul>	C
OF 4"X36" SIZE. N TO THE	<ul> <li>B. SUBMITTALS SHALL BE SUBMITTED TO THE OWNER FOR REVIEW COINCIDING WITH THE CONSTRUCTION SCHEDULE. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE THESE SUBMITTALS. ANY LEAD-TIME ISSUES NEED TO BE BROUGHT TO THE GENERAL CONTRACTOR'S ATTENTION WITHIN 10 DAYS OF RECEIVING SIGNED CONTRACTS.</li> <li>1. CONSTRUCTION SHALL NOT COMMENCE UNTIL THE DETAILED DRAWINGS,</li> </ul>	
S LED AS	SPECIFICATIONS, AND ENGINEERING CALCULATIONS HAVE BEEN ACCEPTED AND APPROVED BY THE OWNER AND THE REVIEWING AGENCIES.	
URE TO	<ul> <li>C. CONSTRUCTION DOCUMENTS AND REVIEWING AGENCY SUBMITTALS:</li> <li>1. DRAWINGS SHALL BE SCALABLE, DATED, STAMPED AND SIGNED BY THE CONTRACTOR'S REGISTERED ELECTRICAL ENGINEER FOR THE STATE OF OREGON, AND SHALL BE PROVIDED IN PDF AND HARDCOPY FORMAT, 24"X36" SIZE.</li> <li>2. SPECIFICATIONS SHALL BE PROVIDED IN HARDCOPY FORMAT, 8.5"X11" SIZE.</li> <li>3. DRAWINGS AND SPECIFICATIONS SHALL BE SUITABLE FOR SUBMISSION TO THE</li> </ul>	
	REVIEWING AGENCY FOR REVIEW. D. COORDINATE WITH THE MECHANICAL DESIGN CONTRACTOR FOR MECHANICAL	
	<ul> <li>EQUIPMENT BEING INSTALLED AS PART OF THIS PROJECT.</li> <li>1.6 SUBMITTALS FOR REVIEW <ul> <li>A. CONSTRUCTION DOCUMENTS COMPONENTS:</li> <li>1. FIELD INVESTIGATION REPORT INCLUDING ITEMS DESCRIBED IN PART 3.2.</li> <li>2. DRAWINGS INCLUDING: <ul> <li>a. LOCATIONS OF MAJOR EQUIPMENT REQUIRING NEW OR MODIFIED POWER DISTRIBUTION DESIGN.</li> <li>b. CONVENIENCE RECEPTACLE AND DATA.</li> </ul> </li> <li>3. ELECTRICAL SPECIFICATIONS OUTLINE. <ul> <li>a. COMPLETED LIGHTING ENERGY CODE FORMS.</li> <li>b. OREGON ENGINEERING STAMP WITH SIGNATURES.</li> </ul> </li> </ul> </li> </ul>	
TECTURAL,	B. REVIEWING AGENCY SUBMITTAL:	
NOT JDED IN	<ol> <li>REVIEWING AGENCY COMMENTS AND CONTRACTOR RESPONSES.</li> <li>DRAWINGS WITH REVIEWING AGENCY COMMENTS INCORPORATED.</li> <li>ELECTRICAL SPECIFICATIONS.</li> <li>FINAL STAMPED, SIGNED AND APPROVED DRAWINGS SUITABLE FOR CONSTRUCTION.</li> </ol>	
JBMITTAL	3.1 GENERAL	
REVISION	<ul> <li>A. DRAWINGS:</li> <li>1. COORDINATE DRAWINGS WITH OTHER DISCIPLINES, INCLUDING ARCHITECTURAL, STRUCTURAL, PLUMBING, AND MECHANICAL.</li> <li>2. SCREENED LINE TYPES AND FONTS SHALL REPRESENT WORK THAT IS NOT</li> </ul>	
/BERS OTES.	<ul> <li>INCLUDED IN THIS CONTRACT.</li> <li>3. BOLD LINE TYPES AND FONTS SHALL REPRESENT WORK THAT IS INCLUDED IN THIS CONTRACT.</li> <li>4. REVISIONS TO DRAWINGS AFTER THE CONSTRUCTION DOCUMENTS SUBMITTAL</li> </ul>	
ECORD BUILDINGS.	SHALL BE NOTED WITH: a. REVISION NOTES IN THE DRAWING TITLE BLOCK INCLUDING THE REVISION NUMBER, REVISION DATE, AND INITIALS OF THE REPORTS	
RFORM ALL	<ul> <li>NUMBER, BRIEF DESCRIPTION, DATE, AND INITIALS OF THE PERSON RESPONSIBLE FOR THE REVISION.</li> <li>b. "CLOUDS" ENCOMPASSING THE DRAWING REVISION.</li> <li>c. "DELTA" BLOCKS ADJACENT TO THE CLOUDS WITH REVISION NUMBERS</li> </ul>	CD DROCK
REMAIN S THE TATE IN	CORRESPONDING TO THE ASSOCIATED TITLE BLOCK REVISION NOTES. B. EXISTING DOCUMENTATION: 1. COORDINATE WITH ZCS ENGINEERING & ARCHITECTURE TO OBTAIN RECORD DOCUMENTS (DRAWINGS AND/OR SPECIFICATIONS) OF THE EXISTING BUILDINGS. DRAWINGS ARE PROVIDED AS A COURTESY, AND MAY BE INCOMPLETE, AND/OR OUT OF DATE. THE CONTRACTOR SHALL INDEPENDENTLY PERFORM ALL REQUIRED FIELD INVESTIGATIONS.	RELIMINARY CON
ILATION.	C. EQUIPMENT EVALUATION:	A PRY A. STOR
ΓΟ IPMENT	<ol> <li>EVALUATE EXISTING ELECTRICAL EQUIPMENT AND COMPONENTS TO REMAIN AND VERIFY THE EQUIPMENT IS IN GOOD WORKING ORDER, MEETS THE CURRENT CODE REQUIREMENTS, AND IS OF ADEQUATE CAPACITY. FOR DEFICIENCIES, PROVIDE DETAILED INFORMATION, INCLUDING RECOMMENDATIONS, AND COSTS THEREOF.</li> </ol>	EXPIRES: 06-30-24
	<ul> <li>D. ELECTRICAL DESIGN:</li> <li>1. ELECTRICAL CALCULATIONS AND DESIGN SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC.</li> </ul>	

P-2869-23



SPECIFICATIONS

PROJECT NO:

DRAWN:

CHECKED:

DATE:

PROJECT STRUCTURAL NOTES (CANYON CITY, GRANT COUNTY, OR, 97820) GENERAL INFORMATION:

- STRUCTURAL DRAWINGS ARE A PORTION OF THE CONTRACT DOCUMENTS AND ARE INTENDED TO BE USED WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FROM THESE DRAWINGS INTO THEIR SHOP DRAWINGS AND WORK. THESE GENERAL NOTES SUPPLEMENT THE PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
- THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.
- ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY SIGNIFICANT DISCREPANCIES FROM CONDITIONS SHOWN ON THE DRAWINGS.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS. RESPONSIBILITY SHALL INCLUDE BUT NOT LIMITED TO DEMOLITION AND CONSTRUCTION MEANS AND METHODS, TECHNIQUES, SEQUENCING, AND SAFETY REQUIRED TO COMPLETE CONSTRUCTION.
- UNLESS OTHERWISE NOTED, MATERIAL AND DESIGN SPECIFICATIONS CITED HEREIN SHALL BE THOSE CONFORMING WITH THE VERSION OF THE APPLICABLE SPECIFICATIONS OR CODE MOST RECENTLY ADOPTED BY THE PERMITTING AUTHORITY. THESE STRUCTURAL NOTES ARE TO BE USED AS A SUPPLEMENT TO THE SPECIFICATIONS.
- THIS STRUCTURE AND ALL OF ITS PARTS MUST BE ADEQUATELY BRACED AGAINST WIND, LATERAL EARTH AND SEISMIC FORCES UNTIL THE PERMANENT LATERAL-FORCE RESISTING SYSTEMS HAVE BEEN CONSTRUCTED AND ALL ATTACHMENTS AND CONNECTIONS NECESSARY FOR THE STABILITY OF THE STRUCTURE AND ITS PARTS HAVE BEEN MADE.
- ALL FEATURES OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME TYPE AND CHARACTER AS SHOWN FOR SIMILAR CONDITIONS, SUBJECT TO REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD.
- ALL PRODUCTS AND MATERIALS USED BY THE CONTRACTOR SHALL BE APPLIED, PLACED, ERECTED OR INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

## CODE REQUIREMENT

CONFORM TO THE 2022 OREGON STRUCTURAL SPECIALTY CODE, BASED ON THE 2021 INTERNATIONAL BUILDING CODE (IBC). NOTE: THIS APPLIES TO ALL REFERENCES TO OSSC. DESIGN CRITERIA:

- DESIGN IS BASED ON THE STRENGTH AND DEFLECTION CRITERIA OF THE OSSC. IN ADDITION TO THE DEAD LOADS, THE FOLLOWING LOADING AND ALLOWABLE LOAD IS USED FOR DESIGN:
- A. LIVE LOADS: 100 PSF SLAB ON GRADE 20 PSF ROOF B. GROUND SNOW LOAD: 8 PSF EXPOSURE FACTOR 0.9 SNOW IMPORTANCE FACTOR 1.2 THERMAL FACTOR 1.1 MINIMUM FLAT ROOF SNOW LOAD 20 PSF FLAT ROOF SNOW LOAD 24 PSF C. WIND LOAD: BASIC WIND SPEED (3-SECOND GUST) 111 MPH WIND EXPOSURE **BUILDING CATEGORY** IV 0.18 INTERNAL PRESSURE COEFFICIENT TOPOGRAPHIC FACTOR 1.00 D. EARTHQUAKE DESIGN DATA: **RISK CATEGORY** IV 0.310g SS 0.123g SDS 0.321g SD1 0.193g SITE CLASS SEISMIC DESIGN CATEGORY SEISMIC IMPORTANCE FACTOR ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE BASIC SEISMIC-FORCE RESISTING SYSTEMS: AIR-SIDE HVACR CONSTRUCTED OF SHEET METAL FRAMING **RESPONSE MODIFICATION FACTOR** R = 6 SEISMIC RESPONSE COEFFICIENT CS = 0.107 ROOF-MOUNTED STACK BRACED BELOW CENTER OF MASS **RESPONSE MODIFICATION FACTOR** R = 3 SEISMIC RESPONSE COEFFICIENT CS = 0.641 SPECIAL INSPECTION & STRUCTURAL OBSERVATIONS:

1. SEE SHEET S0.20 FOR SPECIAL INSPECTION & STRUCTURAL OBSERVATION REQUIREMENTS.

## SUBMITTALS:

1. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION REGARDING ALL STRUCTURAL ITEMS, INCLUDING THE FOLLOWING:

- A. CONCRETE MIX DESIGNS, CONCRETE AND MASONRY REINFORCEMENT (INCLUDING MILL TEST REPORTS), STRUCTURAL STEEL (INCLUDING MILL TEST REPORTS)
- B. ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND ACCEPTANCE OF THE STRUCTURAL ENGINEER OF RECORD. DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS, INCLUDING: UNISTRUT CATWALK AND ATTACHMENTS,
- STEEL & UNISTRUT ROOFTOP RACK SYSTEM SHALL BEAR THE SEAL AND SIGNATURE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OREGON, AND SHALL BE INCLUDED FOR CONNECTIONS TO THE STRUCTURE, CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED ON THE REQUIREMENTS OF THE OSSC WITH THE FOLLOWING: EARTHQUAKE AND WIND LOADS AS NOTED IN DESIGN CRITERIA
  - MAXIMUM INELASTIC STORY DRIFT M: 0.228 INCHES (N/S DIRECTION) & 0.253 INCHES (E/W DIRECTION)
- D. THE CONTRACTOR SHALL COORDINATE SEISMIC RESTRAINTS OF MECHANICAL, PLUMBING, AND ELECTRICAL EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING WITH THE STRUCTURE. ANY CONNECTIONS TO THE STRUCTURE SHALL CONFORM TO THE OSSC AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION.

### **DIVISION 03 - CONCRETE**

CONCRETE:

	ABSOLUTE WATER-CEMENT RATIO BY WEIGHT						
	f'c (psi)	NON AIR-ENTRAINED	AIR-ENTRAINED	USE			
	3,000	N/A	0.50	MECHANICAL PAD			
-	VERIFY WATER/CEMENT RATIO WITH FLOOR COVERING MANUFACTURER FOR CONCRETE FLOORS WITH MOISTURE SENSITIVE FLOOR COVERINGS, AND VERIFY COORDINATE WITH PROJECT SPECIFICATIONS.						

- MINIMUM CEMENT CONTENT PER CUBIC YARD SHALL BE AS FOLLOWS: f'c=4,000 psi:
- DATA.
- SUPPLIER IN CONJUNCTION WITH THE CONCRETE MIX DESIGN.

## CONCRETE CAST IN PLACE:

- INSPECTION IS NOT REQUIRED PER OSSC 1705.3.
- TESTED AS FOLLOWS:
- A. ONE (1) AT SEVEN (7) DAYS, AND B. TWO (2) AT TWENTY-EIGHT (28) DAYS
- STATISTICAL BACKUP, SHALL BE SUBMITTED FOR REVIEW.

- ADJACENT AREAS, UNLESS NOTED OTHERWISE. CONCRETE SHALL NOT BE PLACED ON FROZEN GROUND.

- CONCRETE REINFORCING STEEL: PLACE WITH #16 ANNEALED IRON WIRE.
- NOTED ON THE PLANS SHALL BE DAYTON BAR-GRIP SPLICES OR APPROVED WITH A CURRENT ICC APPROVAL REPORT.

	TTFICAL LAF SFLICE LENGTT SCHEDOLL							
BAR SIZE	3,000 psi		4,000 psi		5,000 psi		6,000 psi	
	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
#3	22	32	19	28	17	25	16	23
#4	29	43	25	37	22	33	20	31

#### NOTES: A. DIMENSIONS ARE IN INCHES.

- a. BEAMS OR COLUMNS: CASE 1: COVER  $\geq$  db AND c-c SPACING  $\geq$  2db
- CASE 2: COVER < db OR c-c SPACING < 2db
- b. ALL OTHERS: CASE 1: COVER  $\geq$  db AND c-c SPACING  $\geq$  3db
- CASE 2: COVER < db OR c-c SPACING < 3db
- MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
- DISPLACEMENT. ALL TIE WIRE SHALL BE MIN. #16 ANNEALED STEEL
- REINFORCING (MINIMUM UNLESS NOTED OTHERWISE ON PLANS) FOUNDATIONS.
- B. PLACE 2'-0" x 1'-0" BARS AT CORNERS AND INTERSECTIONS FOR WALLS AND FOUNDATIONS EQUAL IN SIZE AND NUMBER TO HORIZONTAL REINFORCING.
- DIMENSION.
- ON SIDES AND ENDS.
- **DETAILING MANUAL 315.**
- UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
- 3" TO BOTTOM OF FOOTING
- DEVELOPING ONE HUNDRED TWENTY-FIVE PERCENT (125%) OF THE SPECIFIED YIELD STRENGTH OF THE REINFORCEMENT.

CONCRETE WORK SHALL CONFORM TO CHAPTER 19 OF THE OSSC. CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD 28 DAY CYLINDER TESTS PER ASTM C39, AND SHALL BE AS FOLLOWS:

4. FLY ASH CONFORMING TO ASTM C618 (INCLUDING TABLE 2A) TYPE F, MAY BE USED TO REPLACE UP TO 20% OF THE CEMENT CONTENT, PROVIDED THAT THE MIX STRENGTH IS SUBSTANTIATED BY TEST

5. THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS, ALONG WITH TEST DATA COMPLIANT WITH OSSC SECTION 1905, A MINIMUM OF TWO WEEKS PRIOR TO PLACING CONCRETE. NO WATER MAY BE ADDED TO CONCRETE IN THE FIELD UNLESS SPECIFICALLY APPROVED IN WRITING BY THE CONCRETE

6. A WATER-REDUCING ADMIXTURE CONFORMING TO ASTM C494, USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, SHALL BE INCORPORATED IN CONCRETE DESIGN MIXES. A HIGH-RANGE WATER-REDUCING (HRWR) ADMIXTURE CONFORMING TO ASTM C494, TYPE F OR G, MAY BE USED IN CONCRETE MIXES PROVIDING THAT THE SLUMP DOES NOT EXCEED 8". AN AIR-ENTRAINING

SURFACES EXPOSED TO WEATHER. THE AMOUNT OF ENTRAINED AIR SHALL BE 5% +/- 1% BY VOLUME

1. STRUCTURAL CALCULATIONS ARE BASED ON 2,500 psi CONCRETE STRENGTH, THEREFORE SPECIAL

A MINIMUM OF THREE (3) CONCRETE TEST CYLINDERS SHALL BE PROVIDED FOR EACH ONE HUNDRED (100) CU. YARDS, OR EACH DAY OF POUR, FOR EACH CONCRETE STRENGTH. CYLINDERS SHALL BE

4. CONCRETE CYLINDER SAMPLING AND TESTING SHALL CONFORM WITH ASTM SPECIFICATIONS. REQUIREMENTS FOR REINFORCED CONCRETE". TWO (2) SETS OF MIX DESIGNS, WITH COMPLETE

CONCRETE MATERIALS, FORM WORK, MIXING, PLACING AND CURING SHALL CONFORM WITH THE SPECIFICATIONS CONTAINED IN THE ACI "MANUAL OF CONCRETE PRACTICE".

8. ALL EXPOSED CORNERS SHALL HAVE 3/4" CHAMFER, UNLESS NOTES OTHERWISE.

REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. FOR DEFORMED BARS AND ASTM A185 FOR SMOOTH WELDED WIRE FABRIC (WWF), UNLESS OTHERWISE NOTED. REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING STEEL SHALL BE SECURELY TIED IN

BARS IN SLABS SHALL BE SUPPORTED ON WELL CURED CONCRETE BLOCKS OR APPROVED METAL CHAIRS, AS SPECIFIED BY THE CRSI MANUAL OF STRANDED PRACTICE, MSP-1. REINFORCING STEEL SHALL BE DETAINED IN ACCORDANCE WITH THE "ACI MANUAL OF STANDARD PRACTICE, MSP-1 REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315. LAP ALL REINFORCING BARS PER THE TYPICAL LAP SPLICE LENGTH SCHEDULE, EXCEPT AS NOTED. MECHANICAL SPLICES

TYPICAL LAP SPLICE LENGTH SCHEDULE

B. CASES 1 AND 2 ARE DEFINED AS FOLLOWS: (db = BAR DIAMETER)

C. FOR TOP BARS, MULTIPLY LAP LENGTH ABOVE BY 1.3. TOP BARS ARE HORIZONTAL BARS WITH

REINFORCEMENT SHALL BE SECURED IN FORMS WITH TIES AND ANCHORAGE TO PREVENT

ALL REINFORCING STEEL SHALL BE TIED 100% ALONG ALL PERIMETER EDGES AND 50% FIELD.

A. PLACE TWO (2) NO. 4 CONTINUOUS AT BOTTOM, TOP AND AT DISCONTINUOUS ENDS OF ALL

C. PLACE TWO (2) NO. 4x OPENING DIMENSIONS PLUS 4'-0" EACH SIDE OF ALL OPENINGS AND TWO (2) NO. 4x4'-0" DIAGONAL BARS AT EACH CORNER OF ALL SLAB OPENINGS GREATER THAN 1'-6" IN

ALL WELDED WIRE FABRIC SHALL CONFORM WITH ASTM A 185. ALL WIRE FABRIC SHALL BE SUPPLIED, LAID IN FLAT SHEETS AND CHAIRED TO PROPER POSITION IN SLABS. LAP ONE (1) FULL MESH PLUS 2"

7. ALL REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI

A. ALL REINFORCING STEEL SHALL BE ACCURATELY AND SECURELY PLACED. B. REINFORCING SHALL NOT BE BENT OR DISPLACED FOR THE CONVENIENCE OF OTHER TRADES,

C. SPLAY REINFORCING STEEL AROUND OPENINGS WITH 1" IN 10" SPLAY, UNLESS NOTED OTHERWISE. D. MINIMUM COVER FROM CONCRETE SURFACES TO REINFORCING STEEL SHALL BE:

• 3/4" SLAB TO TOP AND BOTTOM SURFACES, CENTER OF SLAB ON GRADE REINFORCEMENT BARS SHALL NOT BE TACK WELDED, WELDED, HEATED OR CUT, UNLESS INDICATED

ON THE CONTRACT DOCUMENTS OR APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. REINFORCEMENT COUPLERS SHALL BE LENTON, FOX-HOWLETT OR APPROVED, CAPABLE OF

550 lbs.

AGENT CONFORMING TO ASTM C260 SHALL BE USED IN CONCRETE MIXES FOR EXTERIOR HORIZONTAL

CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4" WITHOUT THE USE OF ADMIXTURES AS NOTED.

ACCEPTANCE OF CONCRETE SHALL BE GOVERNED BY THE PROVISIONS OF ACI 318 "BUILDING CODE

AT AREAS OF DEPRESSIONS FOR SLABS AND BEAMS, PROVIDE MINIMUM THICKNESS OF DEPTH AS FOR

STANDARD WASHERS AND NUTS. GALVANIZE EXTERIOR BOLTS. GALVANIZING SHALL BE IN ACCORDANCE WITH ASTM A 153, CLASS C. NUTS SHALL BE OVER-TAPPED TO CLASS 2A FIT BEFORE GALVANIZING, IN ACCORDANCE WITH ASTM A 563. 10. BOLT HEADS OR NUTS BEARING ON SLOPING FLANGES SHALL BE EQUIPPED WITH BEVELED WASHERS. ERECTION AIDS (SUCH AS BOLTS, CLIPS, SHIMS, SEATS OR ANY OTHERS REQUIRED TO FACILITATE

CONSTRUCTION) ARE THE RESPONSIBILITY OF THE CONTRACTOR TO DESIGN AND PROVIDE. 12. ALL FIELD WELDS TO GALVANIZED STEEL AND AREAS DAMAGED BY WELDING, FLAME CUTTING OR HANDLING, SHALL BE REPAIRED WITH AN ORGANIC COLD GALVANIZING COMPOUND HAVING A MINIMUM OF NINETY-FOUR PERCENT (94%) ZINC DUST IN THE DRY FILM. APPLY IN MULTIPLE COATS, UNTIL AN 8 MIL THICKNESS HAS BEEN ACHIEVED. SURFACES TO RECEIVE ZINC-RICH PAINT SHALL BE CLEAN, DRY

AND FREE OF OIL, GREASE, SALT AND CORROSION PRODUCTS. 13. ALL EMBEDDED STEEL SHALL BE FABRICATED FROM MATERIAL CONFORMING WITH THE REQUIREMENTS OF ASTM A 36. HOT-DIP GALVANIZE IN ACCORDANCE WITH ASTM A 123, UNLESS NOTED OTHERWISE.

CONCRETE ACCESSORIES:

- 10. MECHANICAL BOLTS SHALL BE SIMPSON TITEN HD, OR APPROVED WITH EQUIVALENT ICC ALLOWABLE TENSION AND SHEAR VALUES. MECHANICAL BOLTS SHALL BE INSTALLED IN STRICT CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS. DO NOT CUT REINFORCING IN NEW OR EXISTING CONCRETE DURING INSTALLATION.
- 11. PERMANENTLY EXPOSED EMBEDDED PLATES AND ANGLES SHALL BE HOT-DIPPED, GALVANIZED AFTER FABRICATION, UNLESS OTHERWISE NOTED. NO LOADS OR WELDS SHALL BE PLACED ON EMBEDDED PLATES OR ANGLES FOR A MINIMUM OF 7 DAYS AFTER CASTING.

**DIVISION 05 - METALS** 

STRUCTURAL STEEL AND MISCELLANEOUS IRON:

STRUCTURAL STEEL SHALL BE:

STRUCTURAL STEEL					
ASTM A36 CHANNELS, PLATES, AND ANGLES, U.N.O.					
ASTM A500, GRADE B (Fy = 46 ksi)	HOLLOW STRUCTURAL SECTIONS (TUBES)				

- 1. DESIGN, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE "AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" WITH "COMMENTARY" AND THE "CODE OF STANDARD PRACTICE", WITH EXCEPTIONS NOTED IN
- SPECIFICATIONS 2. DRAWINGS ARE DIMENSIONED FOR LAYOUT AND NOT DIMENSIONED PER AISC STANDARDS. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE BETWEEN ALL DRAWINGS AND
- DEVELOP SHOP DRAWINGS WITH DETAIL AND DIMENSIONING PER AISC. 3. ALL FABRICATION, ERECTION, IDENTIFICATION, AND PAINTING SHALL CONFORM TO AISC
- SPECIFICATIONS.
- 4. ALL STEEL EXPOSED TO WEATHER, SOIL, MOISTURE, OR AS DENOTED ON PLANS SHALL BE HOT DIP GALVANIZED PER ASTM A-123, OR OTHER APPROVED PROTECTIVE COATING.
- 5. ALL WELDING SHALL CONFORM TO AWS (LATES EDITION) SPECIFICATIONS. A. ALL WELDERS TO BE QUALIFIED UNDER AWS SPECIFICATIONS WITHIN THE PAST TWO YEARS FOR THE TYPE OF WELDING PERFORMED.
- B. ALL WELDS SHALL BE PERFORMED USING PRE-QUALIFIED WELDING PROCEDURES. WELDS FILLER METAL SHALL BE AWS A5.1 OR A5.5 E70XX ELECTRODES OR AWS A5.18 ER70S-X AFTER FABRICATION, BUT BEFORE INSTALLATION, REMOVE RUST, SCALE, GREASE, AND OIL BY
- WIRE BRUSHING AND CHEMICAL TREATMENT. WELDS TO METAL DECK, METAL STUDS OR OTHER LIGHT GAUGE METALS SHALL CONFORM WITH
- AWS D1.3. 6. ALL HIGH-STRENGTH BOLTS, MATERIAL AND INSTALLATION, SHALL CONFORM WITH ASTM STANDARDS. A. BOLTS SHALL CONFORM WITH ASTM A 325, TYPE N, TYPE X, TYPE SC (CLASS A). BOLTS NOT NOTED
- IN THE DRAWINGS AS TYPE SC SHALL BE TYPE N, TYPE X. B. FRICTION CONNECTIONS SHALL BE FREE OF PAINT AT THE FAYING SURFACES, OR A CLASS A SURFACE SHALL BE PROVIDED.
- C. FOR FRICTION TYPE CONNECTIONS (TYPE SC), LOAD-INDICATING BOLTS SHALL BE THE LEJEUNE TENSION CONTROL FASTENING SYSTEM MANUFACTURED BY THE LEJEUNE BOLT COMPANY, OR APPROVED. LOAD-INDICATING BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER. CONNECTION BOLTS SHALL HAVE A HARDENED WASHER PLACED UNDER THE ELEMENT TO BE TIGHTENED. AS APPROVED, STANDARD TYPE SC BOLTS WITH LOAD-INDICATING WASHERS MAY BE USED IN LIEU OF THE LOAD-INDICATING BOLT ASSEMBLY. LOAD-INDICATING WASHERS SHALL BE ASTM F959 "CORONET", AS MANUFACTURED BY
- THE COOPER AND TURNER DIVISION OF J AND M TURNER, INC. D. FOR BEARING-TYPE CONNECTIONS, TYPE N, TYPE X BOLTS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION, ONLY.
- E. ALL HIGH-STRENGTH BOLTS SHALL BE INSTALLED WITH HARDENED WASHERS, CONFORMING WITH ASTM F 436, AND NUTS, CONFORMING WITH ASTM A 563. F. ALL BOLTS REQUIRING GALVANIZATION SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH
- ASTM A 153, CLASS C. G. NO WELDING TO HIGH-STRENGTH BOLTS IS ALLOWED.
- 7. ALL MEMBERS SHALL BE CONNECTED WITH SEMI-FINISHED MACHINE BOLTS, UNLESS NOTED OTHERWISE ON PLANS. MACHINE BOLTS SHALL CONFORM TO ASTM A 307, GRADE A. 9. ANCHOR BOLT SHALL CONFORM WITH ASTM A 307, GRADE A, AND SHALL BE PROVIDED WITH

## **DIVISION 06 - WOOD, PLASTICS AND COMPOSITES**

#### FRAMING LUMBER:

- 1. ALL FRAMING LUMBER SHALL BE DOUGLAS FIR-LARCH AND SHALL BE GRADED UNDER THE MOST
- RECENTLY ADOPTED RULES OF THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB). ALL BEAMS AND JOISTS SHALL BE NO. 2 MINIMUM, UNLESS INDICATED OTHERWISE ON THE PLANS. ALL STUDS AND BLOCKING SHALL BE NO. 2.
- ALL LUMBER IN CONTACT WITH CONCRETE OR EXPOSED SHALL BE PRESSURE TREATED IN
- ACCORDANCE WITH AWPA STANDARD C-2 AND SHALL BEAR THE AWPA QUALITY MARK. DOUBLE ALL JOISTS UNDER WALL PARTITIONS, AND PROVIDE BLOCKING BETWEEN JOISTS WHERE BEARING WALLS ARE PERPENDICULAR TO JOISTS.

### NAILING AND FASTENERS:

- 1. NAILING INDICATED ON PLANS AND DETAILS ARE "COMMON" NAILS. MINIMUM FRAMING NAILING SHALL CONFORM TO OSSC TABLE 2304.10.1. SEE DETAILS FOR ADDITIONAL TYPICAL NAILING REQUIREMENTS. SUBSTITUTION OF NAILS OTHER THAN "COMMON" IS NOT PERMITTED WITHOUT PRIOR APPROVAL. 2. POWER DRIVEN NAILS OTHER THAN "COMMON" NAILS MAY BE USED IF DATA IS SUBMITTED AND
- APPROVED PRIOR TO USE.
- BLOCKING, AND PLATES IMMEDIATELY PRIOR TO PLACEMENT OF FLOOR SHEATHING. 4. ALL BOLTED CONNECTIONS SHALL BE MADE WITH MACHINE BOLTS (M.B.) CONFORMING TO ASTM A307.
- ALL BOLTS AND LAGS SHALL BE INSTALLED WITH STANDARD WASHERS, UNLESS NOTED. JOIST HANGERS, HOLDOWNS AND OTHER FRAMING ACCESSORIES ARE REFERRED TO ON PLANS BY PARTICULAR TYPE AS MANUFACTURED BY SIMPSON COMPANY, SAN LEANDRO, CA. ALL HARDWARE IS TO BE FASTENED PER MANUFACTURER'S SPECIFICATIONS, U.N.O.
- ALL PLATES AND LEDGERS SHALL BE ANCHORED WITH A MINIMUM OF THREE FASTENERS PER PIECE. 7. PRE-DRILL HOLES FOR LAG BOLTS. SOAP THREADS OF LAGS IMMEDIATELY PRIOR TO INSTALLATION.

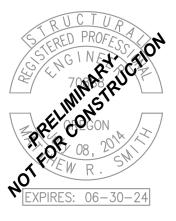


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GRANT SCHOOL DISTRICT 911 S. CANYON BLVD JOHN DAY, OR 97845

# **GRANT UNION HIGH** SCHOOL HVAC





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STRUCTURAL GENERAL NOTES

GENERAL - SPECIAL INSPECTIONS							
	OSSC CODE	CODE OR	FREQUENCY (NOTE 6)		REMARKS		
SYSTEM OR MATERIAL			CONTINUOUS	PERIODIC			
FABRICATORS	1705.10 1704.2.5				SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTIONS SHALL BE PERFORMED DURING FABRICATION. PERFORMING SPECIAL INSPECTIONS IS NOT REQUIRED, WHERE FABRICATOR HAS BEEN APPROVED AS AN APPROVED FABRICATOR, PER SECTION 1704.2.5.1.		
DEFERRED SUBMITTALS				Х	SPECIAL INSPECTION REQUIREMENTS FOR DEFERRED SUBMITTAL ITEMS, INCLUDING REQUIREMENTS FOR DESIGNATED SEISMIC SYSTEMS IN ACCORDANCE WITH OSSC SECTION 1705.12.4 IF APPLICABLE, TO BE SPECIFIED BY THE SYSTEM ENGINEER AND INCLUDED WITH DEFERRED SUBMITAL DOCUMENTS.		
SUBMITTALS TO THE BUILDING OFFICIAL	1704.5			Х	CERTIFICATES OF COMPLIANCE, REPORTS OF PRE-CONSTRUCTION TESTS, OR REPORTS OF MATERIAL PROPERTIES SHALL BE SUBMITTED TO THE BUILDING OFFICIAL.		
POST INSTALLED MECHANICAL ANCHORS AND ADHESIVE ANCHORS (EXCLUDING CONDITIONS NOTED ABOVE) IN HARDENED CONCRETE AND COMPLETED MASONRY	TABLE 1705.3-4			Х			
WIND RESISTING COMPONENTS - SPECIAL INSPECTIONS							
ROOF COVERING, ROOF DECK AND ROOF FRAMING CONNECTIONS	1705.12.3			Х			
EXTERIOR WALL COVERING AND WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRAGMS AND FRAMING	1705.12.3			Х			

STEEL - SPECIAL INSPECTIONS						
	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTES 5 AND 6)			
SYSTEM OR MATERIAL			CONTINUOUS/ PERFORM	PERIODIC/ OBSERVE	REMARKS	
STEEL FABRICATION						
FABRICATION OF STRUCTURAL ELEMENTS	1704.2.5.1	AISC 360		Х	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS	
MATERIAL VERIFICATION OF STRUCTURAL STEEL COMPONENTS	1705.2 2203.1 TABLE 1705.2	ASTM A6 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS AISC 360 A3.1 AISC 360 N3.2		X	CERTIFIED MILL TEST REPORTS	
MATERIAL VERIFICATION OF WELD FILLER METALS	1705.2.1.1 TABLE 1705.2-5	AISC 360 A3.5 AISC 360 N3.2 APPLICABLE AWS A5 DOCUMENTS		Х	MANUFACTURER'S CERTIFIED TEST REPORTS	
STRUCTURAL STEEL WELDING						
VERIFYING USE OF PROPER WPS'S	1705.2.1 AWS D1.1	AISC 360 N3.2			RETAIN A RECORD OF WELDING PROCEDURE SPECIFICATIONS	
VERIFYING WELDER QUALIFICATIONS		AWS D1.1		Х	RETAIN A RECORD OF QUALIFICATION CARDS	
SINGLE PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"	TABLE 1705.2-6			Х		
VERIFICATION OF JOINT & CONNECTION DETAILS INCLUDING MEMBER AND COMPONENT LOCATIONS, BRACING, AND STIFFENERS	TABLE 1705.2-7	AWS D1.1		Х		

REQUIRED SPECIAL INSPECTIONS for SEISMIC RESISTANCE						
SYSTEM OR MATERIAL	OSSC CODE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)			
	REFERENCE		CONTINUOUS	PERIODIC	REMARKS	
		ELECTRICAL	COMPONENTS			
INSTALLATION OF ANCHORAGE OF OTHER ELECTRICAL EQUIPMENT	1705.13.6			Х		
	PLU	JMBING MECHAN	NICAL COMPONI	ENTS		
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR MECHANICAL SYSTEMS AND THEIR COMPONENTS	1705.13.6			Х		
	S	RUCTURAL	OBSERVAT	ION		
		INSPEC	DEMAD//0			
SYSTEM OR MATERIAL	OSSC CODE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS	
	REFERENCE		CONTINUOUS	PERIODIC		
PRIOR TO COVERING STRUCTURAL ANCHORAGE AND ATTACHMENTS	1704.6.1			х		

STATEMENT OF SPECIAL INSPECTION NOTES:

- INSPECTIONS SHALL CONFORM TO SECTION 1705 OF THE 2022 OSSC, CONTRACT DOCUMENTS AND APPROVED 1. SUBMITTALS. REFER TO SPECIAL INSPECTION AND TESTING TABLES FOR PROJECT REQUIREMENTS.
- SPECIAL INSPECTIONS AND ASSOCIATED TESTING SHALL BE PERFORMED BY AN APPROVED ACCREDITED INDEPENDENT AGENCY MEETING THE REQUIREMENTS OF ASTM E329 (MATERIALS). THE INSPECTION AND TESTING 2. AGENCY SHALL FURNISH TO THE STRUCTURAL ENGINEER ARCHITECT A COPY OF THEIR SCOPE OF ACCREDITATION. SPECIAL INSPECTORS SHALL BE APPROVED BY THE BUILDING OFFICIAL. WELDING INSPECTORS SHALL BE QUALIFIED PER SECTION 6.1.4.1(1) OF AWS D1.1.
- 3. THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION AND NOTED IN THE INSPECTION REPORTS.
- THE SPECIAL INSPECTOR AND GEOTECHNICAL ENGINEER SHALL FURNISH INSPECTION REPORTS FOR EACH 4. INSPECTION TO THE BUILDING OFFICIAL, STRUCTURAL ENGINEER, ARCHITECT, CONTRACTOR, AND OWNER. THE SPECIAL INSPECTION AGENCY SHALL SUBMIT A FINAL REPORT STATING THAT THE WORK REQUIRING SPECIAL INSPECTION WAS INSPECTED AND IS IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THAT ALL DISCREPANCIES NOTED IN THE INSPECTION REPORTS HAVE BEEN CORRECTED.
- QUALITY ASSURANCE (QA) IS REQUIRED FOR STRUCTURAL STEEL ITEMS PER AISC 360 AND 341 UNLESS 5. SPECIFICALLY NOTED OTHERWISE. QUALITY CONTROL (QC) TO BE PROVIDED BY THE FABRICATOR, ERECTOR OR OTHER RESPONSIBLE CONTRACTOR AS APPLICABLE. CONTRACTOR AND SPECIAL INSPECTOR TO DOCUMENT QUALITY CONTROL AS REQUIRED IN AISC 360 SECTION N3 AND AISC 341 SECTION J2.
- 6. INSPECTION TYPES:
  - CONTINUOUS : THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED • SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED. PERIODIC : THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY • AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS
  - BEING PERFORMED AND AT THE COMPLETION OF THE WORK.
  - OBSERVE : OBSERVE THESE FUNCTIONS ON A RANDOM, DAILY BASIS. OPERATIONS NEED NOT BE DELAYED • PENDING OBSERVATIONS. PERFORM : INSPECTIONS SHALL BE PERFORMED PRIOR TO THE FINAL ACCEPTANCE OF THE ITEM. •
- PERFORM INSPECTION PRIOR TO FINAL ACCEPTANCE OF THE ITEM FOR TEN WELDS TO BE MADE BY A GIVEN 7. WELDER, WITH THE WELDER DEMONSTRATING UNDERSTANDING OF REQUIREMENTS AND POSSESSION OF SKILLS AND TOOLS TO VERIFY THESE ITEMS, THE PERFORM DESIGNATION OF THIS TASK SHALL BE REDUCED TO OBSERVE, AND THE WELDER SHALL PERFORM THIS TASK. SHOULD THE INSPECTOR DETERMINE THAT THE WELDER HAS DISCONTINUED PERFORMANCE OF THIS TASK, THE TASK SHALL BE RETURNED TO PERFORM UNTIL SUCH TIME AS THE INSPECTOR HAS RE-ESTABLISHED ADEQUATE ASSURANCE THAT THE WELDER WILL PERFORM THE INSPECTION TASKS LISTED.
- 8. SPECIAL INSPECTION OF MECHANICAL POST INSTALLED ANCHORS SHALL BE IN STRICT CONFORMANCE WITH THE ICC REPORT AND MANUFACTURER'S INSTALLATION REQUIREMENTS. ANCHOR INSTALLERS SHALL BE QUALIFIED AS REQUIRED BY JURISDICTION REQUIREMENTS. •
  - INSPECTION REPORTS SHALL IDENTIFY NAMES OF INSTALLERS. SPECIAL INSPECTOR SHALL PROVIDE DOCUMENTATION AT THE END OF ANCHOR INSTALLATIONS STATING • THAT THE ANCHORS WERE INSPECTED PER APPROVED ANCHOR EVALUATION REPORT.
- TESTING ABBREVIATIONS:
  - NDT NON-DESTRUCTIVE TESTING C.J.P. - COMPLETE JOINT PENETRATION
  - MT MAGNETIC PARTICLE TESTING
  - D. RBS - REDUCED BEAM SECTION
- 10. DOCUMENT (D): INDICATES CONTRACTOR AND SPECIAL INSPECTOR TO PROVIDE DOCUMENTATION IN ACCORDANCE WITH AISC 341.

#### CONTRACTOR RESPONSIBILITY:

EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF THE MAIN WIND-OR SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND-OR SEISMIC-RESISTING COMPONENT LISTED THE TABLES SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN THE FOLLOWING:

ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.

- 1. ACKNOWLEDGEMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL.
- PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND 2 FREQUENCY OF REPORTING AND DISTRIBUTION OF THE REPORTS.
- 3. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION.

### STRUCTURAL OBSERVATION:

- 1. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE SER IN ADVANCE.
- 2. SER STRUCTURAL ENGINEER OF RECORD / AOR ARCHITECT OF RECORD.
- 3. A FIELD REPORT WILL BE SUBMITTED TO THE BUILDING DEPARTMENT FOLLOWING EACH SITE VISIT.
- 4. STRUCTURAL OBSERVATION IS FOR THE GENERAL CONFORMANCE OF THE STRUCTURAL DRAWING, SPECIAL
- INSPECTION IS STILL REQUIRED AFTER REINFORCING STEEL HAS BEEN INSTALLED.

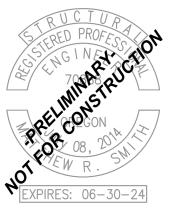


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GRANT SCHOOL DISTRICT 911 S. CANYON BLVD JOHN DAY, OR 97845

# **GRANT UNION HIGH** SCHOOL HVAC



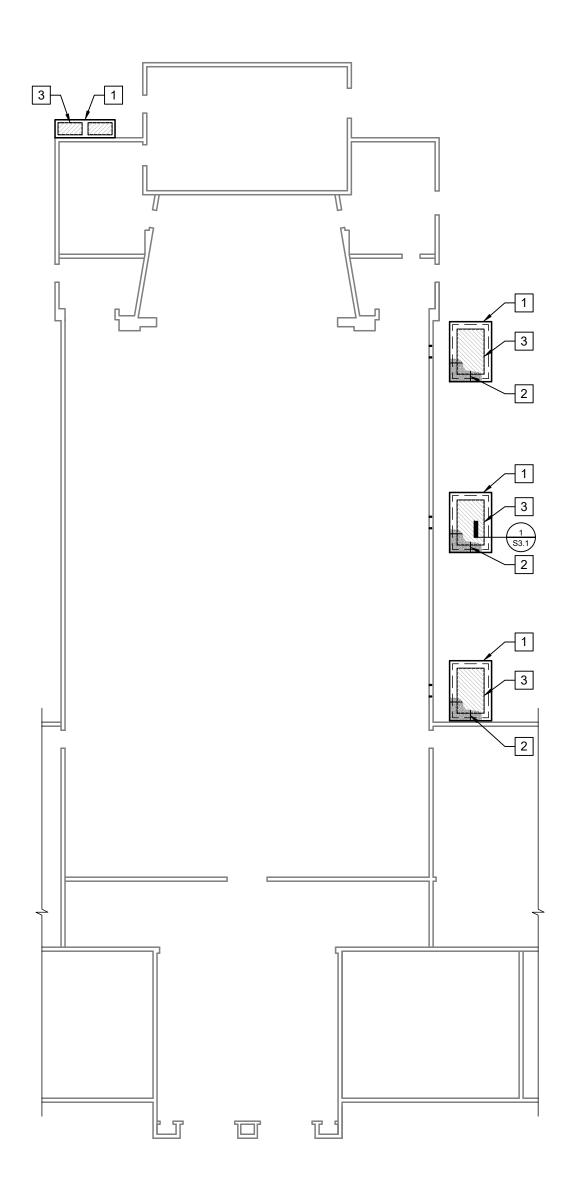


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SPECIAL INSPECTIONS AND TESTING

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ONE INCH EQUALS FULL SCALE



# **FOUNDATION PLAN NOTES:**

- 1. DIMENSIONS SHOWN ARE FOR REFERENCE ONLY, CONFIRM w/ ARCHITECTURAL PLAN & DETAILS.
- 2. SEE SHEET S0.10 FOR ALL NOTES AND SCHEDULES.
- 3. ALL KEYNOTES INDICATE NEW ITEMS TYPICALLY, UNLESS, NOTED OTHERWISE.

# **FOUNDATION PLAN KEY NOTES:**

- I. 4" CONCRETE SLAB w/ 6" TRUNDOWN EDGE w/ #4 @ 18" o.c. E.W. SEE DETAIL 1/S3.1 FOR ADDITIONAL INFORMATION.
- 2. COORDINATE EXACT LOCATIONS OF NEW CONCRETE SLABS FOR MECHANICAL UNITS WITH MECHANICAL ENGINEER.
- 3. MECHANICAL UNIT BY OTHERS w/ (4) 3/8" SIMPSON TITEN HD ANCHORS w/ MINIMUM 2-1/2" EMBEDMENT.



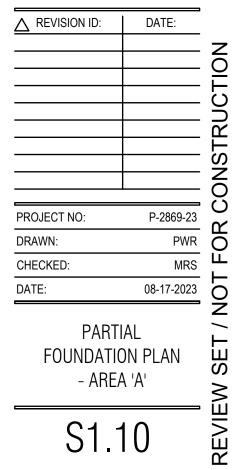
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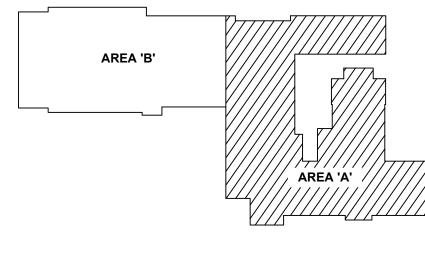
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GRANT UNION HIGH SCHOOL HVAC



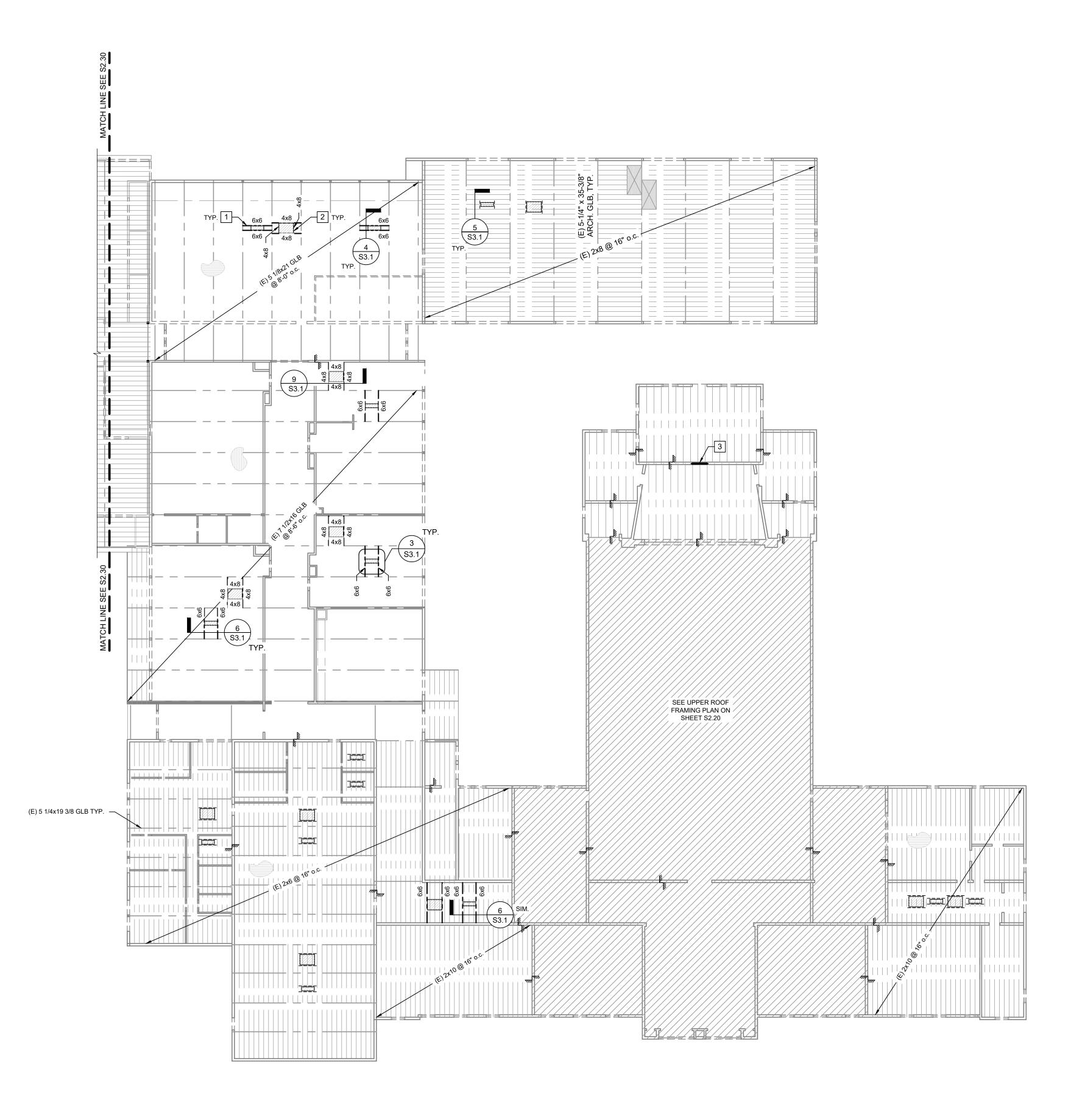




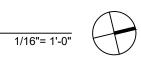












# **ROOF FRAMING PLAN NOTES:**

- 1. COORDINATE ALL DIMENSIONS & FEATURES NOT SHOWN w/ ARCHITECT.
- 2. SEE SHEET S0.10 FOR ALL NOTES AND SCHEDULES.
- ALL KEYNOTES INDICATE NEW ITEMS TYPICALLY, UNLESS, NOTED OTHERWISE. 3.

# **ROOF FRAMING PLAN KEY NOTES:**

- ROOF TOP MECHANICAL UNIT BY OTHERS (MAX. 300 LBS.) ON ROOF TOP RACK w/ 6x6 BLOCKING w/ U66 HANGER AT EACH END.
- ROOF TOP MECHANICAL UNIT BY OTHERS (MAX. 300 LBS.) ON CURB w/ 4x8 BLOCKING w/ U48 HANGER AT EACH END. UNIT SHALL BE PLACED TO PROVIDE ADEQUATE PASS-THRU CLEARANCE BETWEEN ROOF RAFTERS. 2.
- MAX 48" WIDE LOUVER OPENING. PROVIDE 4x8 HEADER OVER 3 OPENING w/ (1) TRIMMER STUD & (1) FULL HEIGHT KING STUD EACH SIDE.

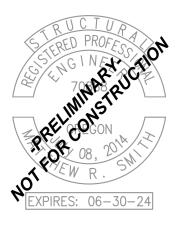


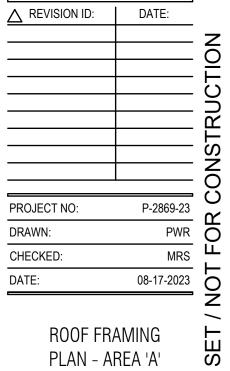
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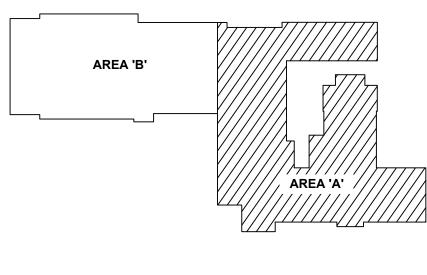
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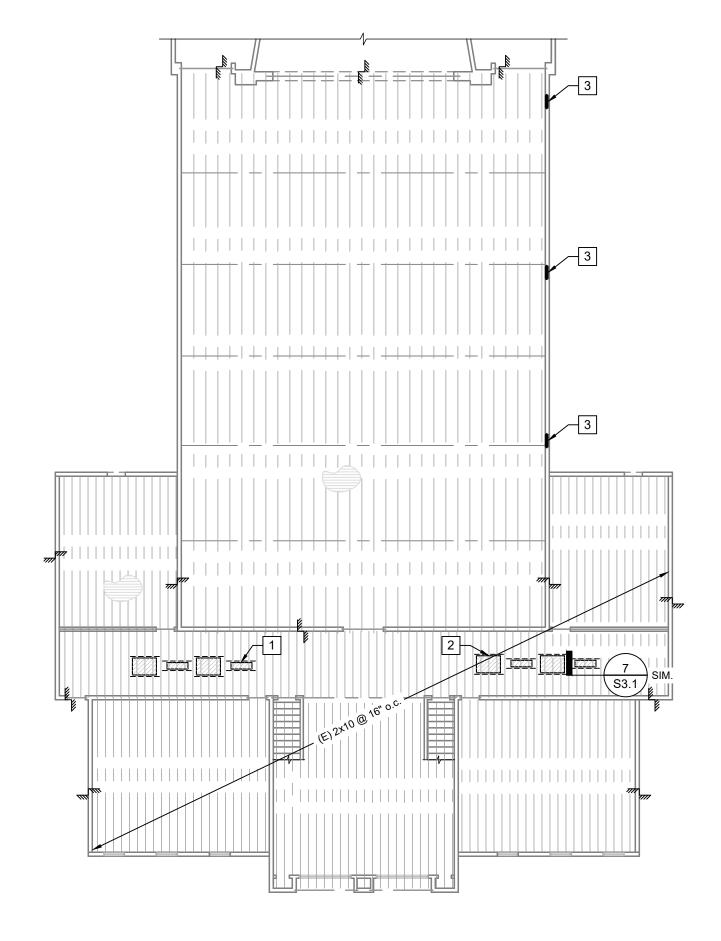












UPPER ROOF FRAMING PLAN - AREA 'A' S2.20

# **ROOF FRAMING PLAN NOTES:**

- 1. COORDINATE ALL DIMENSIONS & FEATURES NOT SHOWN w/ ARCHITECT.
- 2. SEE SHEET S0.10 FOR ALL NOTES AND SCHEDULES.
- 3. ALL KEYNOTES INDICATE NEW ITEMS TYPICALLY, UNLESS, NOTED OTHERWISE.

# **ROOF FRAMING PLAN KEY NOTES:**

- ROOF TOP MECHANICAL UNIT BY OTHERS (MAX. 300 LBS.) ON ROOF TOP RACK w/ 6x6 BLOCKING w/ U66 HANGER AT EACH END.
- ROOF TOP MECHANICAL UNIT BY OTHERS (MAX. 300 LBS.) ON CURB w/ 4x8 BLOCKING w/ U48 HANGER AT EACH END. UNIT SHALL BE PLACED TO PROVIDE DATEDO 2. CLEARANCE BETWEEN ROOF RAFTERS.
- MAX 48" WIDE LOUVER OPENING. PROVIDE 4x8 HEADER OVER 3. OPENING w/ (1) TRIMMER STUD & (1) FULL HEIGHT KING STUD EACH SIDE.

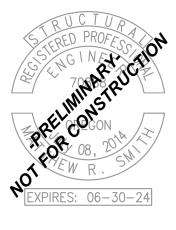


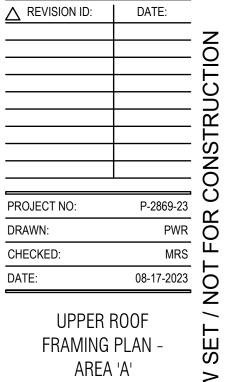
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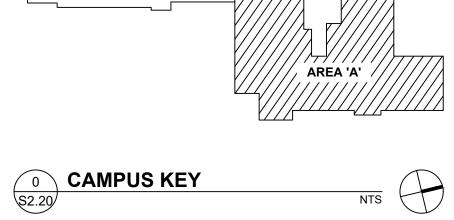
GRANT UNION HIGH SCHOOL HVAC



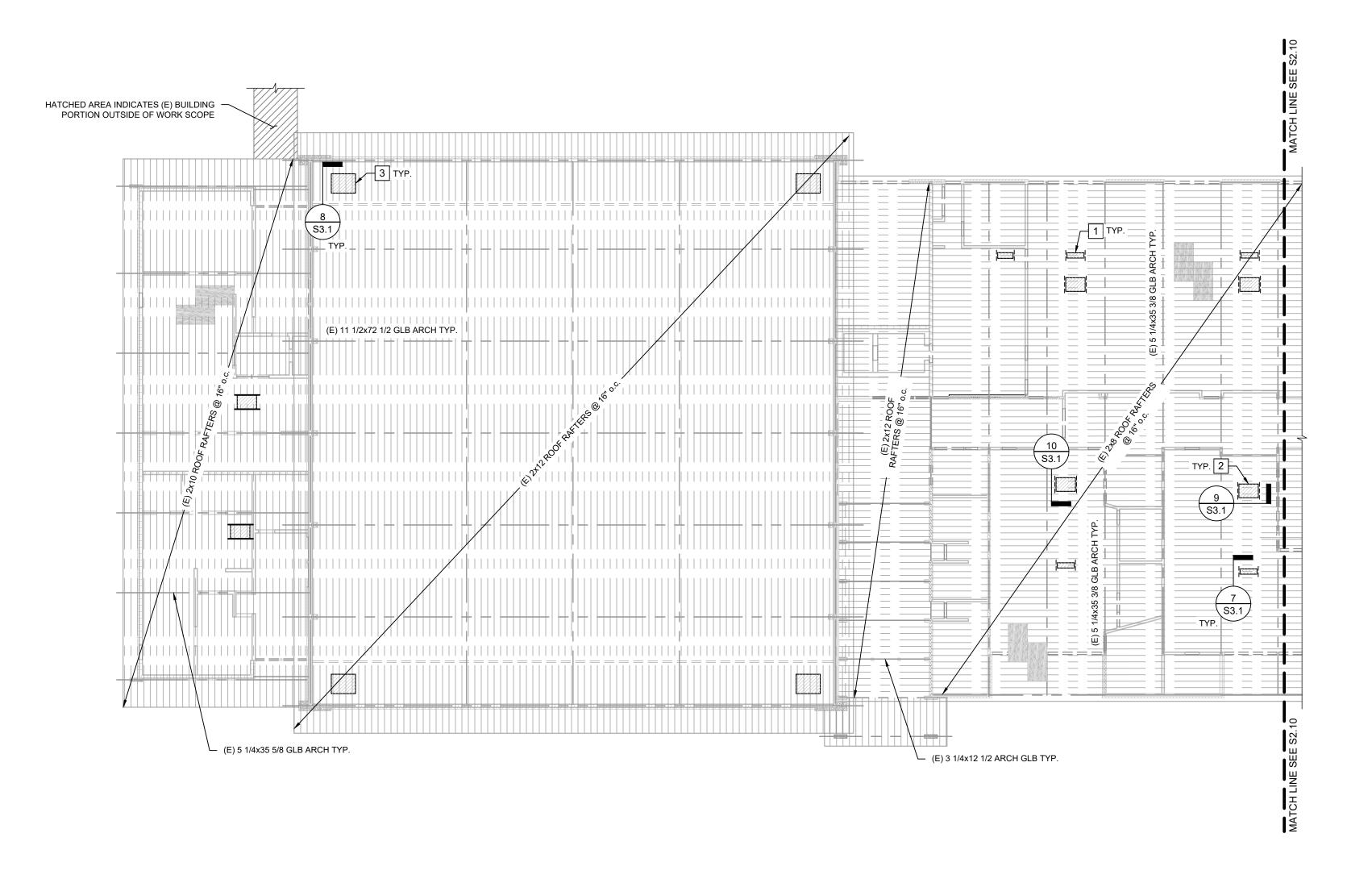


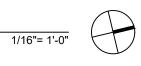


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AREA 'B'





# **ROOF FRAMING PLAN NOTES:**

- 1. COORDINATE ALL DIMENSIONS & FEATURES NOT SHOWN w/ ARCHITECT.
- 2. SEE SHEET S0.10 FOR ALL NOTES AND SCHEDULES.
- ALL KEYNOTES INDICATE NEW ITEMS TYPICALLY, UNLESS, NOTED OTHERWISE. 3.

# **ROOF FRAMING PLAN KEY NOTES:**

- ROOF TOP MECHANICAL UNIT BY OTHERS (MAX. 300 LBS.) ON ROOF TOP RACK w/ 6x6 BLOCKING w/ U66 HANGER AT EACH END.
- ROOF TOP MECHANICAL UNIT BY OTHERS (MAX. 300 LBS.) ON CURB w/ 4x8 BLOCKING w/ U48 HANGER AT EACH END. UNIT SHALL BE PLACED TO PROVIDE ADEQUATE PASS-THRU CLEARANCE BETWEEN ROOF RAFTERS. 2
- 3. ROOF HUNG MECHANICAL UNIT BU OTHER (MAX. 500 LBS).

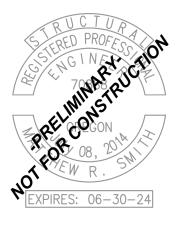


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GRANT UNION HIGH SCHOOL HVAC

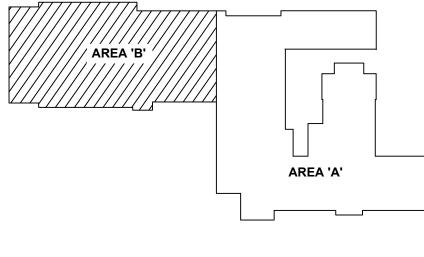




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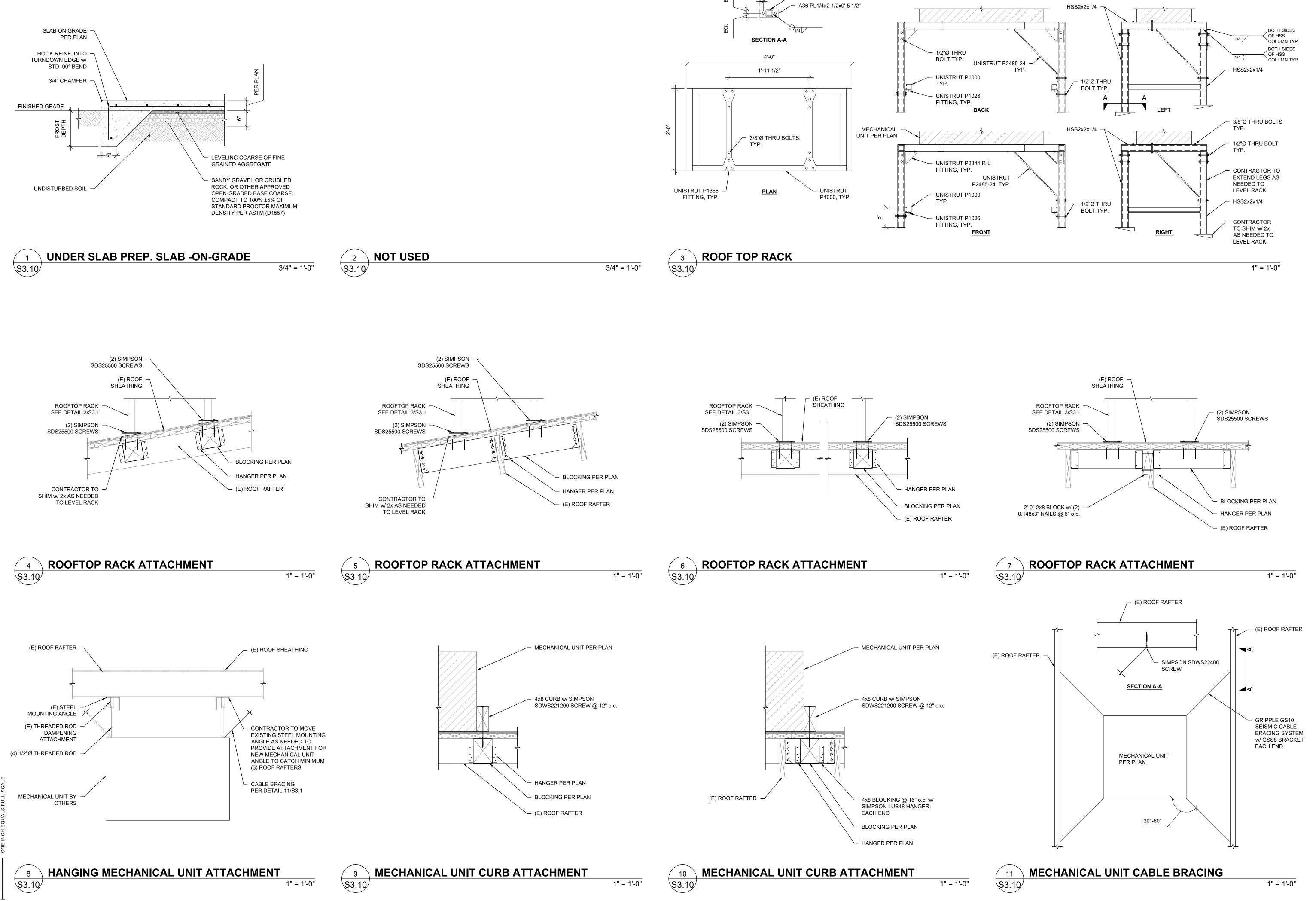
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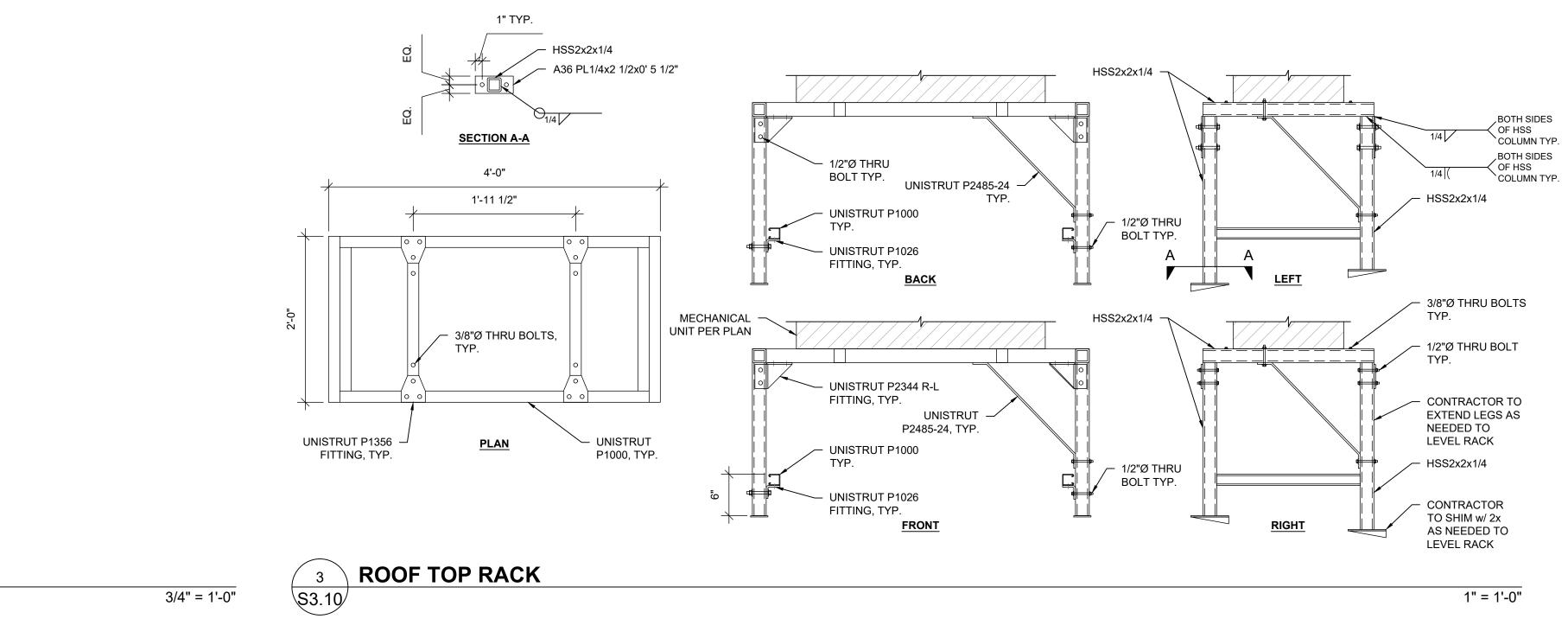


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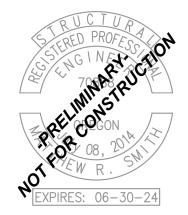


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# **GRANT UNION HIGH** SCHOOL HVAC





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#### Exhibit B Proposal and Fee Schedule

[Enclosed]



August 29, 2023

Shaun Wilson ZCS Engineering & Architecture 524 Main Street, Suite 2 Oregon City, Oregon 97045

Re: Grant Union High School HVAC Proposal for Engineering Services

Shaun,

We appreciate the opportunity to provide a proposal for engineering services related to the abovereferenced project. We understand that the project consists of providing power to replacement HVAC units, specifying a new main switchboard, and replacing the electrical service at Grant Union High School. Based on our review of the plans and subsequent discussions, we understand that the proposed scope of work will be as follows:

- Verification of existing electrical service capacity.
- Specification of a new main switchboard to serve the campus.
- Evaluation of existing electrical equipment for use with new equipment.
- Review mechanical drawings and provide power to new equipment.
- Power design for new HVAC equipment serving school.

#### SCOPE OF WORK

We understand that the scope of work for this project will consist of the following:

- 1. Construction Documents Phase: Visit site to verify existing conditions and points of connection. Evaluate existing electrical service and specify new main switchboard suitable for carrying the additional electrical load. Prepare construction drawings and technical specifications for electrical systems as described above. Closely coordinate this work with design team. Submit drawings and calculations to reviewing agency.
- 2. Agency Review Phase: Respond to reviewing agency comments related to scope of work described above. Provide revised drawings and backcheck comment response letter.
- 3. Construction Phase: Prepare addenda and clarification documents, interpret drawings and specifications where required to clarify the intent of construction documents. Review shop drawings and submittal data for general compliance with mechanical contract documents, respond to RFIs and submittals, and prepare change order documents where required to meet existing job conditions, and provide site visits during construction.

#### CONTRACT EXCLUSIONS

The following items are excluded from the Scope of Work described above:

- 1. Structural design.
- 2. Mechanical and plumbing design.
- 3. Fire alarm and fire protection design.
- 4. Low voltage and security system design.
- 5. Photovoltaic and microgrid system design.
- 6. Commissioning services.
- 7. LEED consulting services.
- 8. Testing and inspection services.
- 9. Additional site visits beyond those described above.

#### PROJECT FEE

The fee for the Scope of Work will be as follows:

Base Services	
Construction Documents Phase (Includes one site visit)	\$ 23,000
Agency Review Phase	\$ 1,500
Construction Administration Phase (Includes one site visit)	\$ 6,100
Total Fee	\$ 30,600
Reimbursable Expenses	
Accommodation	\$ 300
Mileage (2 site visits, \$0.55 per mile)	\$ 1,000

This includes all expenses such as travel, printing, and postage. All services will be invoiced monthly based on the percent of work completed at that time. This proposal will be valid for a period of thirty (30) calendar days. Please do not hesitate to contact me if you have any questions or concerns. We look forward to working with you on a successful project.

Sincerely,

Nathan Warner, E.I.T. Electrical Designer