Construction @

RFQ Pre-~~Design~~ Bid Walk Sign-In Sheet

RFQ No.: 2023-02-1001
Project Name: Board Room & 2nd Floor Office Remodel
Date: Tuesday, August 22, 2023
Time: 10:30 AM

By attending this Pre-Design Bid Walk, the attendee acknowledges the Sequim School District requirements in regard to COVID-19. By signing this document, this is an Attestation that the attendee certifies they have not experienced any symptoms in the past 14 days, nor been exposed to COVID in the last 3 days. Attendee also agrees to COVID regulations within the RFQ.

Signature	Print Name	Company	Phone number	Discipline
	Eli Collier	Neeley Const	360 460 1183	GC
	KYIE PRIEST	HOCH	(360) 452-5381	GC
	Mike Rutter	Olympic Electric	360-457-5303	Elect
	DYLAN SCHLESS	JOHNSON ELECTRIC	209-518-2069	ELEC
	Robert w Bovenzi	CHRISTENSEN INC. G.C.	360-709-0330	GC
	Wayne Johnson	Johnson electric	360-728-4327	Electric
	HEIDI VAN DENBURG	CLARK CONSTRUCTION	360-710-8427	GC
	MATSON CONTARDO	CLARK CONSTRUCTION	360-710-8427	GC
	YUE CHEN	Wenaha Group	206-556-9576	

DOCUMENT 009113 – ADDENDUM 1

1.1 PROJECT INFORMATION

A. Project Name: District Office Board Room & 2nd Floor Office Remodel

B. Owner: Sequim School District No. 323

C. Owner Project Number: 2023-02-1001

D. Architect: design2 Last, Inc.

E. Architect Project Number: 2023-323

F. Date of Addendum: August 28, 2023.

1.2 NOTICE TO BIDDERS

A. This Addendum is issued to all plan centers and posting entities pursuant to the **Instructions to Bidders**. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.

B. The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form.

C. The date for receipt of bids is **changed to the following**, at same time and the original location **and the following additional location**.

1. Bid Date: September 12, 2023, at 2:00pm.

2. Bid Receipt Locations:
   a. Sequim School District Office at 503 N. Sequim Avenue, Sequim, WA 98382
   b. Wenaha Group Federal Way Office at 505 S 336th Street, Suite 630, Federal Way, WA 98003

1.3 ATTACHMENTS

~~A. This Addendum includes no attachments.~~

B. This Addendum includes the following attached Documents and Specification Sections:

1. Document 2023-02-1001 Project Manual ADD 1, dated August 28, 2023, **reissued in full with the following Sections revisions**.
2. Section 000002 – Table of Contents, dated August 28, 2023
3. Section 002113 – Instructions to Bidders, dated August 28, 2023
4. Section 004100 – Bid Form, dated August 28, 2023.

5. Section 004100.03 – Insurance Binder, dated August 28, 2023
6. Section 01100 – Summary of Work, dated August 28, 2023

C. This Addendum includes the following attached Sheets: **Reissuance of entire plan set listed in Section 00 01 15** .

END OF DOCUMENT 009113

DIVISION 00 - Bidding Requirements, Contract Forms, & Conditions of the Contract

DIVISION 01 - General Requirements

DIVISION 02 – Existing Conditions

END OF TABLE OF CONTENTS

DOCUMENT 000101 - PROJECT TITLE PAGE

1.1 PROJECT MANUAL VOLUME 1

A. District Office Board Room & 2nd Floor Office Remodel

B. Sequim School District No. 323

C. Sequim, WA

D. Owner Project No. 2023-02-1001

E. Architect Project No. 2023-323

F. design2 last, Inc. Lauri Strauss, AIA LEED AP BD&C, design2 LAST, inc.

G. 543 Main Street, Suite 101

H. Edmonds, WA 98020

I. Phone: 425-673-7269

J. Web Site: http://design2last.com/

K. Issued: 05-01-2023

END OF DOCUMENT 000101

DOCUMENT 000107 - SEALS PAGE

1.1 DESIGN PROFESSIONALS OF RECORD

A. Architect:

1. Lauri Strauss, AIA LEED AP BD&C
2. Design2 LAST, inc.
3. 543 Main Street, Suite 101
4. Edmonds, WA 98020
5. lauri@deisgn2LAST.com
6. 425-673-7269
7. Responsible for Divisions 01-49 Sections except where indicated as prepared by other design professionals of record.

B. Civil Engineer:

1. John Rundall, PE
2. WR Consulting Inc
3. 3611 45th Avenue West
4. Seattle, WA 98199
5. johnrundall@comcast.net
6. 206-850-1686
7. Responsible for (Included on the drawings)
   a. 01 56 39 Temporary Tree Vegetation and Soil Protection
   b. 01 57 13 Construction Stormwater Control
   c. 01 57 19 Temporary Environmental Pollution Control
   d. 02 41 13 Selective Site Demolition
   e. 02 41 13_23 Site Utility Removal
   f. 31 00 00 Earthwork
   g. 32 23 13_16 Grade Adjustment for Utility Structures
   h. 32 91 13 Soil Protection
   i. 32 92 19_16 Hydroseeding
   j. 32 93 00 Landscape Planting
   k. 33 34 00 Storm Drainage Utilities

C. Structural Engineer:

1. Brian Moll, PE, SE
2. SCBC Engineering PLLC
3. 543 Main Street, Suite 106
4. Edmonds, WA 98020
5. Brian.moll.se@gmail.com
6. 425-745-9926
7. Responsible for (Included on the drawings):
   a. 033000 Cast-In-Place Concrete
   b. 051200 Structural Steel Framing
   c. 053100 Steel Decking

d. 054000 Cold-Formed Metal Framing

D. HVAC/Plumbing Engineer:

1. Rob Cronk, PE
2. Design West Engineering
3. 110 James Street, Suite 106
4. Edmonds, WA98020
5. RCronk@designwesteng.com
6. 425-458-9700
7. Responsible for
   a. None

E. Electrical Engineer:

1. Leo Maya, PE, LEED AP BD&C
2. Design West Engineering
3. 110 James Street, Suite 106
4. Edmonds, WA 98020
5. LMaya@designwesteng.com
6. 425-458-9700
7. Responsible for
   a. None

F. Geotechnical Engineer:
1. Claire Gibson, PE
2. Clarity Engineering LLC
3. 12705 SW 248th Street
4. Vashon, WA 98070
5. claire@clarityengineering.net
6. 206-851-7914
7. Responsible for:
   a. None

G. Elevator Consultant
1. Dylan Turner, Pem LEED AP BD&C
2. The Greenbusch Group, INC.
3. 1900 W. Nickerson St., Suite 201
4. Seattle, WA 98119
5. DylanT@greenbusch.com
6. 206-378-0569
7. Responsible for
   a. 142400 Hydraulic Elevators

END OF DOCUMENT 000107

DOCUMENT 000115 - LIST OF DRAWING SHEETS

1.1 LIST OF DRAWINGS

A. Drawings: Drawings consist of the Contract Drawings and other drawings listed on the Table of Contents page of the separately bound drawing set titled DISTRICT OFFICE ELEVATOR ADDITION & 2nd FLOOR LOFT REMODEL, dated July 28, 2022, as modified by subsequent Addenda and Contract modifications.

B. List of Drawings: Drawings consist of the following Contract Drawings and other drawings of type indicated:

SHEET LIST		SHEET LIST	
Sheet Number	Sheet Name	Sheet Number	Sheet Name
G-1.0	COVER SHEET, INDEX & SCOPE OF WORK	M-0.1	MECHANICAL LEGENDS & NOTES
C1.0	CIVIL GENERAL NOTES	M-0.2	MECHANICAL SCHEDULES
C2.0	TREE PROTECTION AND CSC PLAN	M-1.1	MECHANICAL FIRST FLOOR DEMO PLAN
C2.1	TREE PROTECTION AND CSC DETAILS	M-1.2	MECHANICAL SECOND FLOOR DEMO PLAN
C3.0	PAVING PLAN	M-2.1	MECHANICAL FIRST FLOOR PLAN
C3.1	DETAIL PAVING PLAN	M-2.2	MECHANICAL SECOND FLOOR PLAN
C4.0	CIVIL DETAILS	M-3.1	MECHANICAL DETAILS
A-1.0	OVERALL FLOOR PLANS	M-4.1	MECHANICAL SPECIFICATIONS
D-1.0	OVERALL FLOOR PLANS - EXISTING	M-4.2	MECHANICAL SPECIFICATIONS CONT
D-1.1	1ST & 2ND FLOOR DEMOLITION PLANS	M-4.3	MECHANICAL SPECIFICATIONS CONT
A-1.1	1ST FLOOR BOARD ROOM PLAN & RCP	E-0.1	ELECTRICAL LEGENDS AND NOTES
A-1.2	1ST FLOOR BOARD ROOM ELEVATIONS	E-0.2	ELECTRICAL LEGENDS AND NOTES
A-1.3	1ST FLOOR BOARD ROOM ELEVATIONS	E-0.3	LUMINAIRE SCHEDULE
A-1.4	WOMENS TOILET ROOM PLAN & ELEVATIONS	E-0.4	SINGLE LINE DIAGRAM & FEEDER SCHEDULE
A-1.5	MENS TOILET ROOM PLANS & ELEVATIONS	E-0.5	PANEL SCHEDULE
A-1.6	ENTRY DOOR & STAIRS / DETAILS	E-1.0	OVERALL ELECTRICAL FIRST FLOOR PLAN
A-2.1	2ND FLOOR OPEN OFFICE PLAN & RCP	E-1.1	OVERALL ELECTRICAL SECOND FLOOR PLAN
A-2.2	2ND FLOOR OPEN OFFICE INTERIOR ELEVATIONS	E-1.2	1ST FLOOR POWER AND LIGHTING PLANS
A-6.0	SCHEDULES / WALL TYPES	E-1.3	2ND FLOOR POWER AND LIGHTING PLANS
A-8.0	MISCELLANEOUS DETAILS	E-3.1	ELECTRICAL SPECIFICATIONS
I-1.0	FURNITURE PLANS	E-3.2	ELECTRICAL SPECIFICATIONS CONT.

END OF DOCUMENT 000115

DOCUMENT 001116 - INVITATION TO BID

PART 1 - GENERAL

1.01 PROJECT INFORMATION

A. Notice to Bidders: Qualified Bidders are invited to submit Bids for Project as described in this Document and Instructions to Bidders.

B. Project Identification: District Office Board Room and 2nd Floor Office Remodel

C. Project Location: 503 North Sequim Avenue, Sequim, Washington 98382.

D. Owner: Sequim School District No. 323.

1. Owner's Representative: Wenaha Group, Chris Marfori, Project Manager.

E. Architect Identification: design2 LAST, Inc., Lauri Strauss, AIA LEED AP BD&C, President.

F. Project Overview: The Project consists of a two-story elevator addition and second-floor loft renovation. The Project is more thoroughly described in the Specifications, Bidding Documents, and Contract Documents.

G. Bids will be received for the following Work: General Contract (all trades).

1.02 BID SUBMITTAL AND OPENING

A. Owner will consider Bids prepared in compliance with Instructions to Bidders issued by Owner and delivered as described herein.

B. The Bid, the Bid Security, and any other documents required to be submitted with the Bid, shall be enclosed in a sealed, non-transparent envelope sufficient in size to contain all required bidding documents.

C. Owner will receive sealed Bids no later than 2:00 PM on September 6, 2023, followed with public opening and reading of the Bids at the below-referenced address. Owner reserves the right to postpone the Bid opening. To be considered responsive, each Bid must contain completed versions of each of the following:
1. Bid Form
2. Attachment 1 - Bid Price Form
3. Attachment 2 - Bid Alternates Form
4. Attachment 3 - Insurance Binder
5. Attachment 4 - Bid Security
6. Attachment 5 - Non-Collusion Affidavit
7. Attachment 6 - Statement of Non-Segregated Facilities

8. Attachment 7 - Certification of Compliance with Wage Payment Statutes

D. All sealed Bid envelopes shall contain the following information (typed or written) on the FRONT FACE of the envelope:
   a. "District Office Board Room and 2nd Floor Office Remodel."
   b. Bidder Name.
   c. Bidder Contractor License Number.
   d. Bidder Contact Information.

E. All sealed Bid envelopes shall contain the following information on the BACK FACE of the envelope (printed off & affixed):
   a. Completed Section 00 43 93 ("Bid Submittal Checklist").

F. If the Bid is sent by mail: The sealed envelope shall be enclosed in a separate mailing USPS-approved envelope with the notation "SEALED BID ENCLOSED" on the face there of. Envelope should also note "Attn: Business Manager"

G. Bids shall only be accepted at: The Sequim School District Office, located at: 503 North Sequim Avenue, Sequim, Washington 98382

H. Receipt of Bids:

1. All sealed bidding envelopes will be received by "Project Coordinator" and then marked with a time/date stamp.
2. Please note: The [office designated in 1.02.G] will only be open to receive hand-delivered bids from 8AM-4PM. (Pacific) on the following days:
   a. Monday-Friday
3. Bids received after the date and hour stated above will not receive consideration.

I. Bids shall be typewritten or written legibly in ink on forms provided herein with all provided spaced completed. Unsigned Bids will not be considered.

J. Bids shall be opened publicly, and the results will be read aloud. An abstract of submitted Bids may be made available to Bidders.

K. Additional instructions for submission of Bids are contained in the Instructions to Bidders, which should be reviewed in full in conjunction with this Invitation to Bid.

1.03 VIRTUAL BID OPENING

A. A virtual Bid opening via Zoom will be held on the date and time specified above. Access credentials for the Zoom meeting will be provided at the front desk at the Sequim School District Office. All parties interested in attending are invited. A tabulation of the Base Bids and Alternate Bids will be made available to Bidders, upon request.

1.04 BID SECURITY

A. Submit Bid Security in the form required in the Bidding Documents and equal to five (5) percent of the Bidder's Base Bid (and excluding Washington State sales tax), as further described in the Instructions to Bidders. No Bid may be modified, withdrawn, or canceled for a period of sixty (60) after opening of Bids. Owner reserves the right to reject any and all Bids and to waive informalities and irregularities.

B. The successful Bidder will be required to furnish Performance Bond and Payment Bond, as specified in the Contract Documents and Bidding Documents.

1.05 PREBID MEETING

A. Architect will conduct prebid meetings as indicated below:

1. Meeting 1: August 22, 2023 10:30 AM

B. Bidders' Questions: Architect will provide responses at Prebid meeting to Bidders' questions received up to two (2) business days prior to meeting.

Location: 503 North Sequim Avenue, Sequim, Washington 98382

C. Attendance:

1. Prime Bidders: Prospective prime Bidders are required to attend.
2. Subcontractors: Prospective Subcontractors are encouraged to attend.
3. Notice: A sign-in sheet for potential prime Bidders and Subcontractors will be made available.

1.06 OBTAINING BIDDING AND CONTRACTING DOCUMENTS

A. Online Access to Bidding and Contracting Documents: Obtain access after August 16th, 2023, online at https://www.sequimschools.org/our_district/project_bid_opportunities. **Bid ID #2023-02-1001** Online access will be provided to all registered Bidders and suppliers.

B. Within ten (10) days after notification in writing of the Owner's intent to award Contract, selected Bidder will be required to enter into a Contract with Owner using the form of contract included in the Bidding Documents.

1.07 TIME OF COMPLETION AND LIQUIDATED DAMAGES

A. Bidders shall begin pre-construction Work on receipt of "Limited" Notice to Proceed, and "Full" Notice to Proceed will apply to on-site construction Work; this will commence as indicated on Project schedule. Contractor must complete the Work within Contract Time. This Project is subject to liquidated damages of $250 for each calendar day that Substantial Completion is not timely achieved.

1.08 BIDDER'S QUALIFICATIONS

A. Bidders shall meet those requirements in the Instructions to Bidders and the Bidding Documents. A Performance Bond, separate Payment Bond, and insurance in a form acceptable to Owner will be required of the successful Bidder.

1.09 METHOD OF CONTRACTING AND PROPOSED SCHEDULE

A. Work will be constructed under a single stipulated, lump-sum, cost-plus-fee contract by Contractor, as described by Contract Documents.

B. The proposed scheduled for the Project is as follows (all dates after the Bid Opening are subject to change at the discretion of Owner, other than the dates of Substantial Completion and Final Completion):
   1. Plans Available to Public/Contractors -
   2. 8/22 - Prebid Walkthrough #1
   3. 8/31 - Post Addenda #1 (if applicable)
   4. 9/6 - Bid Opening (2:00 PM)
   5. 9/15 - Intent to Award

C. Calendar Day Contract Time to Substantial Completion: 90 calendar days. (Calendar Day Calculation is from Mobilization through Substantial Completion.)

1.10 SITE REVIEW

A. Prior to submitting Bid for Work, Contractor is required and expected to have examined Project site and premises and be thoroughly familiarized with existing conditions under which Contractor will be obligated to operate or which will in any way affect Work under this Contract.

B. Bidders and potential Subcontractors to Bidders are further cautioned to become familiar with contents, alternates, revisions, Addenda, General Conditions, Special Conditions, Technical Provisions of Specifications, Drawings, and Work of other contractors. Should Bidder find discrepancies or omissions in Bidding Documents, or should there be doubt as to intent, notify Owner and Architect at once, who may, if necessary, issue written instructions to Bidders.

C. Notify Owner and Architect of apparent variances in Bidding Documents from conditions as they exist at Project site. Failure to comply with above requirements does not relieve Contractor of requirements of Contract Documents.

D. No extras will be allowed because of Bidder's misunderstanding as to amount of Work involved, Contractor's own error or negligence, or failure to examine Project site. Lack of knowledge of conditions pertaining to Work shall not relieve Contractor from performing Work required to complete performance of Contract.

- END OF SECTION -

DOCUMENT 002113 - INSTRUCTIONS TO BIDDERS (ADDENDUM 1)

1.01 DEFINITIONS

A. All definitions set forth in the General Conditions or in other proposed Contract Documents are applicable to the Bidding Documents.

B. "Addenda" are written or graphic instruments issued by the Sequim School District prior to the execution of the Contract that modify or interpret the Bidding Documents by additions, deletions, clarifications, or corrections. The contents of Addenda are issued in no particular order and therefore should be carefully and completely reviewed. Addenda relating to administrative matters, such as, for example, the date or time of meetings or Bid receipt, may be issued in writing by fax, mail, or other delivery.

C. An "Alternate Bid" (or "Alternate") is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if a corresponding change in the Work, as described in the Bidding Documents, is accepted by the Sequim School District.

D. "Award" means the formal decision by the Sequim School District notifying a responsible Bidder with the lowest Responsive Bid of the Sequim School District's acceptance of the Bid and intent to enter into a contract with the Bidder. A contract is only formed upon execution of the Contract, and not simply by Award.

E. A "Bid" is a complete and properly signed proposal to perform the Work or designated portion thereof, submitted in accordance with the Bidding Documents, for the sums therein stipulated and supported by any data called for by the Bidding Documents.

F. The "Base Bid" is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base to which work may be added or from which work may be deleted for sums stated in Alternate Bids.

G. A "Bidder" is a person or entity who submits a Bid for a prime contract with the Sequim School District for the Work described in the Contract Documents.

H. The "Bidding Documents" include the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid form, any other sample Bidding and contract forms, the Bid Bond, and the Contract Documents, including any Addenda issued prior to receipt of Bids.

I. The "Contract Documents" for the Work consist of the Advertisement for Bids; Instructions for Bidders; completed Bid Form; General Conditions; Supplemental Conditions; Public Works Contract; other Special Forms; Drawings, and Specifications; and all addenda and modifications thereof.

J. The "Owner" is the Sequim School District, a Washington quasi-municipal corporation.

K. To be considered "Responsible" or meet "Responsibility" requirements, a Bidder must meet the criteria established in RCW 39.04.350 (as it exists at the time of advertisement for bids). That statute requires that the Bidder:

1. At the time of Bid submittal, have a certificate of registration in compliance with Chapter 18.27 RCW;

2. Have a current state unified business identifier (UBI) number;

3. If applicable, have industrial insurance coverage for the Bidder's employees working in Washington as required in Title 51 RCW;

4. Have an Employment Security Department (ESD) number as required in Title 50 RCW;

5. Have a state excise tax registration number as required in Title 82 RCW;

6. Not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations);

7. If bidding on a public works project subject to the apprenticeship utilization requirements in RCW 39.04.320, not have been found out of compliance by the Washington State Apprenticeship and Training Council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under Chapter 49.04 RCW for the one-year period immediately preceding the date of the Bid solicitation;

8. Have received training on the requirements related to public works and prevailing wage under Chapter 39.04 RCW and Chapter 39.12 RCW and designated a person or persons to be trained on those requirements in a manner meeting requirements of the Department of Labor and Industries ("Department"), except that Bidders that have completed three or more public works projects and have had a valid business license in Washington for three or more years are exempt from this requirement; and

9. Within the three-year period immediately preceding the date of the bid solicitation, not have been determined by a final and binding citation and notice of assessment issued by the Department or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of chapters 49.46, 49.48, or 49.52 RCW.

10. In addition, a Bidder must meet the following supplemental responsible bidder criteria applicable to this Project adopted by the Owner to the satisfaction of the Owner:

    a. The ability, capacity, and skill to perform the Contract;

    b. The character, integrity, reputation, judgment, experience, and efficiency of the Bidder;

    c. Whether the Bidder can perform the Contract within the time specified;

    d. The previous and existing compliance by the Bidder with laws relating to the Contract;

e. The quality of performance of previous contracts, including demonstration of successful completion of similar projects in the last three (3) years;

f. The designated Project Manager shall have a minimum of three (3) years of successful experience in project management and scheduling of projects of similar scope and complexity.

g. The designated Superintendent shall have a minimum of five (5) years of successful supervision of projects of similar scope and complexity;

h. The Bidder's principals shall not be excluded or disqualified from Covered Transactions under 2 C.F.R. Part 180 and 2 C.F.R. Part 3000;

i. Any other qualifications required by the Contract Documents or Bidding Documents; and

j. Such other information as may be secured having a bearing on the decision to award the contract.

L. A "Sub-bidder" is a person or entity who submits a bid to a Bidder for materials, equipment, or labor for a portion of the Work.

M. A "Unit Price" is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services as described in the Bidding Documents or in the Contract Documents. The Owner reserves the right to reject at any time, without impairing the balance of the proposal, any or all such predetermined unit prices.

N. The term "day" as used in the Bidding Documents means a calendar day unless otherwise specifically defined.

1.02 BIDDER'S REPRESENTATIONS

A. By making its Bid, each Bidder represents that:

1. **BIDDING DOCUMENTS.** The Bidder has read and understands the Bidding Documents, and its Bid is made in accordance with them.

2. **POSSIBLE SELF-PERFORMED WORK REQUIREMENT.** The Bidder will perform with its own forces at least that percentage (if any) of the Work required by the Bidding Documents or the Contract Documents.

3. **PRE-BID MEETING.** The Bidder has attended any pre-bid meeting(s) required by the Bidding Documents.

4. **BASIS.** Its Bid is based upon the materials, systems, services, and equipment required by the Bidding Documents, without exception.

5. **EXAMINATION.** The Bidder has carefully examined and understands the Bidding Documents, the Contract Documents (including, without limitation, any liquidated

damages, indemnification, and insurance provisions), the Project site, including any existing buildings; has familiarized itself with the local conditions under which the Work is to be performed and has correlated its observations with the requirements of the Contract Documents; and has satisfied itself as to the nature, location, character, quality, and quantity of the Work and the labor, materials, equipment, goods, supplies, work, services, and other items to be furnished, as well as all other requirements of the Contract Documents. The Bidder has also satisfied itself as to the conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof, including but not limited to those conditions and matters affecting: transportation, access, disposal, handling, and storage of materials, equipment, and other items; availability and quality of labor, water, electric power, and utilities; availability and condition of roads; climatic conditions and seasons; physical conditions at the Project site and the surrounding locality; topography and ground surface conditions; and equipment and facilities needed preliminary to and at all times during the performance of the Work. The failure of the Bidder to fully acquaint itself with any applicable condition or matter shall not in any way relieve the Bidder from the responsibility for performing the Work in accordance with, and for the Contract Sum and within the Contract Time provided for in, the Contract Documents.

6. **PROJECT MANUAL.** The Bidder has checked its copies of the Project Manual with the Table of Contents bound therein to ensure the Project Manual is complete.

7. **SEPARATE WORK.** The Bidder has examined and coordinated all Drawings, Contract Documents, and Specifications for any other contracts to be awarded separately from, but in connection with, the Work being bid upon, so that the Bidder is fully informed as to conditions affecting the Work under the contract being bid upon.

8. **LICENSE REQUIREMENTS.** Bidders and their proposed Subcontractors shall be registered and shall hold such licenses as may be required by the laws of Washington, including Chapter 18.27 RCW, for the performance of the Work specified in the Contract Documents.

9. **NO EXCEPTIONS.** Bids must be based upon the materials, systems, and equipment described and required by the Bidding Documents, and terms and conditions in the Contract Documents, without exception.

1.03 BIDDING DOCUMENTS

A. COPIES

1. **Deposit.** Bidders may obtain complete sets of the Bidding Documents from the issuing office and other locations designated in the Advertisement or Invitation to Bid in the number and for the deposit amount, if any, stated. The deposit (if any) will be refunded to Bidders who submit a bona fide Bid and return the Bidding Documents in good condition within ten (10) days after receipt of Bids. The cost of replacement of any missing or damaged documents will be deducted from the deposit. A Bidder awarded a Contract may retain the Bidding Documents, and its deposit will be refunded.

2. **Sub-bidders.** Bidding Documents will not be issued directly to Sub-bidders or others unless specifically offered in the Advertisement or Invitation to Bid.

3. **Complete Sets.** Bidders shall use complete sets of Bidding Documents in preparing Bids and are solely responsible for utilizing established plan holder identification processes to obtain updated bid information; the Owner does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete and/or superseded sets of Bidding Documents. Printed copies of plans take precedence over any online images.

4. **Conditions.** The Owner makes copies of the Bidding Documents available on the above terms only for the purpose of obtaining Bids on the Work and do not confer a license or grant permission for any other use.

5. **Legible Documents.** To the extent any Drawings, Specifications, or other Bidding documents are not legible, it is the Bidder's responsibility to notify the Owner and to obtain legible documents from the plan center.

B. INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

1. **Format.** The Contract Documents may be divided into parts, divisions, and sections for convenient organization and reference. Generally, there has been no attempt to divide the Specification sections into Work performed by the various building trades, any Work by separate contractors, or any Work required for separate facilities in or phases of the Project.

2. **Notify Owner.** Bidders and Sub-bidders shall promptly notify the Owner in writing of any ambiguity, inconsistency, or error that they may discover upon examination of the Bidding Documents or of the site and local conditions. All Bidders and Sub- bidders shall thoroughly familiarize themselves with specified products and installation procedures and submit to the Owner any objections (in writing) no later than five (5) calendar days prior to the Bid Date. The submittal of the Bid constitutes acceptance of products and procedures specified as sufficient, adequate, and satisfactory for completion of the Contract.

3. **Written Request.** Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request, which must be received by the Owner at least five (5) calendar days prior to the date for receipt of Bids.

4. **Addenda.** Any interpretation, correction, or change of the Bidding Documents will be made by written Addendum. Interpretations, corrections, or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections, and changes.

5. **Singular References.** Reference in the singular to an article, device, or piece of equipment shall include as many of such articles, devices, or pieces as are indicated in the Contract Documents or as are required to complete the installation.

6. **Utilities and Runs.** The Bidder should assume that the exact locations of any underground or hidden utilities, underground fuel tanks, and any plumbing and electrical runs may be somewhat different from any location indicated in the surveys or Contract Documents.

C. SUBSTITUTIONS

1. **Standard.** The materials, products, procedures, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality that must be met by any proposed substitution.

2. **Substitution Procedure.** No substitution will be considered prior to receipt of Bids unless the Owner receives a written request for approval on the Owner's Substitution Request form for the Project, with all data requested on the form completed, at least seven (7) days prior to the date for receipt of Bids. Each such request shall be submitted with a Request for Substitution form identical to or equivalent in content to the form found in the Project Manual, and shall include the name of the material or equipment proposed to be replaced and a complete description of the proposed substitute, including drawings, cuts, performance and test data, warranty information, and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or other Work that incorporation of the substitute would require shall be included. The proposer has the burden to prove the merit of the proposed substitute; by proposing the substitution, the Bidder represents that it has personally investigated the proposed material or product and determined that it is equal or better in all respects to that specified, that the same or better warranty will be provided for the substitution, that complete cost data, including all direct and indirect costs of any kind, has been presented, that the Contract Time will not be increased, and that it will coordinate the installation of the substitute if accepted and make all associated changes in the Work. The Owner's decision to approve or disapprove a proposed substitution shall be final. Written requests for approval shall constitute a guarantee by the Bidder that the articles or materials are in all respects, including warranty and installation, equal or superior to those specified, unless otherwise noted.

3. **Addendum.** If the Owner approves a proposed substitution prior to receipt of Bids, the approval will be set forth in a written Addendum. Bidders shall not rely upon approvals made in any other manner. Substitution request forms returned by the Owner are a courtesy only, and Bidders/Sub- bidders shall rely solely on substitution approvals listed in an Addenda.

4. **Post-Bid Substitutions.** After the Contract has been executed, the Owner may consider a written request for the substitution of material or products in place of those specified in the Contract Documents only under the circumstances as specified therein.

D. ADDENDA

1. **Written.** All Addenda will be written. They will be mailed, emailed, faxed, delivered, and/or posted electronically with notice to those the Owner knows to have received a complete set of Bidding Documents.

2. **Copies.** Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

3. **Verification and Acknowledgment of Receipt.** Prior to bidding, each Bidder shall ascertain that it has received all Addenda issued. Each Bidder shall acknowledge its receipt of all Addenda in its Bid.

1.04 BIDDING PROCEDURE

A. FORM AND STYLE OF BIDS

1. **Form.** Bids (including any required attachments) shall be submitted on forms identical to the form included with the Bidding Documents. Bids on different forms may be rejected. No oral, email, or telephonic responses or modifications will be considered to be Bids.

2. **Completion of Form.** All blanks on the Bid form shall be filled in by typewriter or manually in ink.

3. **Words and Figures.** Where so indicated by the makeup of the Bid form, sums shall be expressed in both words and figures; in case of discrepancy between the two, and regardless of any statement to the contrary on the Bid form, the amount written in figures shall govern and the words shall be used to determine any ambiguities in the figures. Portions of the Bid form may require the addition of component bids to a total or the identification of component amounts within a total. In case of discrepancy between component amounts listed and their sum(s), the component amounts listed shall govern.

4. **Initial Changes.** Any interlineation, alteration, or erasure must be initialed by an authorized representative of the Bidder.

5. **Alternates and Unit Prices.** All requested Alternates and unit prices should be bid. The Owner reserves the right, but is not obligated, to reject any Bid on which all requested Alternates or unit prices are not bid. If no change in the Base Bid is required for an Alternate, enter "No Change." If there is no entry, it will be presumed that the Bidder has made no offer to accomplish this Alternate. If it is not otherwise clear from the Bid or nature of the Alternate, it will be presumed that the amount listed for an Alternate is an add rather than a deduct.

6. **No Conditions.** The Bidder shall make no conditions or stipulations on the Bid form nor qualify its Bid in any other manner.

7. **Identity of Bidder.** The Bidder shall include in the specified location on the Bid form the legal name of the Bidder and, if requested, a description of the Bidder as a sole proprietor, a partnership, a joint venture, a corporation (including the state of incorporation), or another described form of legal entity. The Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder, and provide other information requested.

8. **Taxes.** The Bid shall include in the sum stated all taxes imposed by law, EXCEPT STATE AND LOCAL SALES TAX ON THE CONTRACT SUM.

9. **Bid Breakdown.** The Bid form may contain, for the Owner's accounting purposes only, a breakdown of some or all of the components included in the Base Bid.

B. POTENTIAL LISTING OF SUBCONTRACTORS

1. **Procedure.** On certain projects of the Owner, the Bid form includes a requirement that certain Subcontractors be listed, and the list must be submitted to the Owner. In these circumstances, the Bidder must name the Subcontractor with whom the Bidder, if awarded the Contract, will subcontract directly (i.e., not lower-tier Subcontractors) for performance of the work of: HVAC (heating, ventilation, and air conditioning); plumbing as described in Chapter 18.106 RCW; electrical work as described in Chapter 19.28 RCW; structural steel installation and rebar installation; and any other categories of Work listed on the Subcontractor listing form.

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

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

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

    d. **MULTIPLE SUBMITTAL TIMES:** In the event the Bidding Documents call for a second submittal time for receipt of Alternate Bids, and no additional Subcontractors are listed with such Alternate Bids, the Owner will consider that there is no change in the Subcontractors from those listed with the base Bid.

2. **Failure to Submit.** In accordance with RCW 39.30.060, failure of a Bidder to submit as part of the Bid the names of such proposed HVAC, plumbing, and electrical Subcontractors or to name itself to perform such Work or the naming of two or more Subcontractors to perform the same Work shall render the Bidder's Bid nonresponsive and, therefore, void.

3. **Requirement to Subcontract.** The Bidder, if awarded the Contract, will subcontract with the listed Subcontractor for performance of the portion of the Work designated on the Form of Proposal, subject to the provisions of the Contract for Construction and RCW 39.30.060. The Bidder shall not substitute a listed Subcontractor in furtherance of bid shopping or bid peddling.

4. **Replacement.** If a listed Subcontractor is unable to comply with any bondability, qualification, or other requirements of the Contract or Bidding Documents (including without limitation a finding of Subcontractor Non-Responsibility), the Owner may require

the Bidder to replace the Subcontractor with a Subcontractor acceptable to the Owner at no change in the Contract Sum or Contract Time.

5. **Subcontractor Standards.** Subcontractors shall meet contractual and technical qualifications standards, and provide specialized certification, licensing, and/or payment and performance bonding where specified.

C. BID SECURITY

1. **Purpose and Procedure.** Each Bid shall be accompanied by a bid security payable to the Owner in the form required in the Bidding Documents and equal to five percent (5%) of the Base Bid (and excluding Washington State sales tax). The bid security constitutes a pledge that the Bidder will enter into the Contract with the Owner in the form provided, in a timely manner, and on the terms stated in its Bid and will furnish in a timely manner the payment and performance bonds, certificates of insurance, Contractor's Construction Schedule, and all other documents required by the Contract Documents. Should the Bidder fail or refuse to enter into the Contract or fail to furnish such documents, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. By submitting its Bid and bid security, the Bidder agrees that any forfeiture is a reasonable prediction at the time of Bid submittal of future damages to the Owner.

2. **Form.** The bid security shall be in the form of a certified or bank cashier's check payable to the Owner or a bid bond executed by a bonding company acceptable to the Owner and licensed in Washington State on the form included with the Bidding Documents or on an acceptable and equivalent form. The Attorney-in-Fact who executes the bond on behalf of the surety shall be licensed to do business in Washington State and shall affix to the bond a certified and current copy of his or her Power of Attorney.

3. **Retaining Bid Security.** The Owner will have the right to retain the Bid Security of Bidders to whom an award is being considered until the earliest of either: (a) the Contract has been executed, and payment and performance bonds have been furnished; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected.

4. **Return of Bid Security.** Within sixty (60) days after the Bid Date, the Owner will release or return Bid securities to Bidders whose Bids are not to be further considered in awarding the Contract. Bid securities of the three apparent low Bidders will be held until the Contract has been finally executed, after which time all Bid securities not forfeited will be returned.

D. SUBMISSION OF BIDS

1. **Procedure.** The Bid, the Bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party specified in the Advertisement or Invitation to Bidders and shall be identified with the Project name, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

2. **Deposit.** Bids shall be deposited at the designated location prior to the time and date for receipt of Bids indicated in the Advertisement or Invitation to Bid, or any extension thereof made by Addendum. Bids received after the time and date for receipt of Bids may be opened, retained unopened, or returned (open or unopened), all at the discretion of the Owner.

3. **Responsibility.** The Bidder assumes full responsibility for timely delivery at the location designated for receipt of Bids.

4. **Form.** Oral, fax, telephonic, email, electronic, or telegraphic Bids are invalid and will not be considered.

E. MODIFICATION OR WITHDRAWAL OF BID

1. **After Receipt Deadline.** A Bid may not be modified, withdrawn, or canceled by the Bidder during a sixty (60) day period following the time and date designated for the receipt of Bids, and each Bidder so agrees by virtue of submitting its Bid.

2. **Before Receipt Deadline.** Prior to the time and date designated for receipt of Bids, any Bid submitted may be modified or withdrawn only by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder or by telegram or fax; if by telegram or fax, written confirmation over the signature of the Bidder shall be mailed and postmarked on or before the date and time set for receipt of Bids. The notice shall be worded so as not to reveal the amount of the original Bid. Email notice shall not be considered. It shall be the Bidder's sole responsibility to verify that the notice has been received by the Owner in time to be withdrawn before the Bid opening.

3. **Resubmittal.** Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids, provided that they are then fully in conformance with these Instructions to Bidders.

4. **Bid Security with Resubmission.** Bid security shall be in an amount sufficient for the Bid as modified or resubmitted.

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

1.05 CONSIDERATION OF BIDS

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

B. **Rejection of Bids.** The Owner shall have the right, but not the obligation, to reject any or all Bids for any reason or for no reason, to reject a Bid not accompanied by required Bid security

or by other material or data required by the Bidding Documents, or to reject a Bid which is in any way incomplete or irregular.

C. **Acceptance of Bid (Award).**

1. **Owner.** The Owner intends (but is not bound) to award a Contract to the lowest Responsible and Responsive Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner has the right to waive any informality or irregularity in any Bid(s) received and to accept the Bid which, in its judgment, is in its own best interests.

2. **Alternates.** The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Contract Documents or Bidding Documents, and to determine the low Bidder on the basis of the sum of the Base Bid and the Alternates (if any) accepted. The Owner retains the right to accept Alternate Bid items at the price bid within sixty (60) days after the Agreement is executed.

3. **Requirements for Award.** Before the Award, the lowest Responsive Bidder shall meet the Award Requirements.

D. BID PROTEST PROCEDURES

1. **Request for Copies of Bids.** Within two (2) business days of the bid opening, the Owner will provide, if requested by a Bidder, copies of all the bids received for the Project. The Owner will allow at least two (2) business days after providing copies of the bids before executing a Contract. (Intermediate Saturdays, Sundays, and legal holidays are not counted.)

2. **Procedure.** A Bidder protesting for any reason the Bidding Documents; a bidding procedure; the Owner's objection to the Bidder or a person or entity proposed by the Bidder, including but not limited to a finding of Non-Responsibility; the rejection of a Bid; the award of the Contract; or any other aspect arising from or relating in any way to the bidding and award (or lack thereof), shall cause a written protest to be filed with the Owner within two (2) business days of the event giving rise to the protest and, in any event, no later than two (2) business days after either (a) the date upon which Bids are opened, or (b) when the Owner provides copies of the bids to those Bidders requesting bids under Paragraph 1.05(D)(1), above. (Intermediate Saturdays, Sundays, and legal holidays are not counted.) The written protest shall include the name of the protesting Bidder, a detailed description of the specific factual and legal grounds for the protest, copies of all supporting documents, and the specific relief requested. The written protest shall be delivered to: Darlene Apeland, Director of Business – Sequim School District, 503 North Sequim Avenue, Sequim WA 98382. (ADDENDUM 1)

3. **Consideration.** Upon receipt of the written protest, the Owner will consider the protest. The Owner may, within three (3) business days of the Owner's receipt of the protest, provide any other affected Bidder(s) the opportunity to respond in writing to the protest. If the protest is not resolved by mutual agreement of the protesting Bidder and the Owner, the Superintendent of the Owner or his or her designee will review the issues and promptly

furnish a final and binding written decision to the protesting Bidder and any other affected Bidder(s) within six (6) business days of the Owner's receipt of the protest. (If more than one (1) protest is filed, the Owner's decision will be provided within six (6) business days of the Owner's receipt of the last protest.) If no reply is received from the Owner during the six (6) business-day period, the protest shall be deemed rejected.

4. **Waiver.** Failure to comply with these protest procedures will render a protest waived.

5. **Condition Precedent.** Timely and proper compliance with and exhaustion of these protest procedures shall be a condition precedent to any otherwise permissible judicial consideration of a protest.

1.06 POST-BID INFORMATION

A. INFORMATION FROM APPARENT LOW BIDDER

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

   a. Additional information regarding the use of their own forces and the use of Subcontractors and suppliers;

   b. A properly executed Contractor's Qualification Statement on the form provided (unless otherwise required to be submitted at the time of the Bid);

   c. A letter or form from the Bidder's insurance company stating that the insurance required by the Contract Documents will become effective upon execution of the Contract;

   d. A letter or form from the Bidder's surety stating that the bond(s) required by the Contract Documents will become effective upon execution of the Contract;

   e. If requested by the Owner, a detailed breakdown of the Bid in a form acceptable to the Owner;

   f. The names of the persons or entities (including a designation of the Work to be performed with the Contractor's own forces, and the names of those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work;

   g. The proprietary names and the suppliers of the principal items or systems of materials and equipment proposed for the Work;

   h. An Office of Superintendent of Public Instruction (OSPI) Form D-9, if requested; and

   i. A signed statement in accordance with RCW 9A.72.085 verifying under penalty of perjury that the bidder is in compliance with the responsible bidder criteria of RCW 39.04.350(1)(g).

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

2. **Responsibility.** The Bidder will be required to establish to the satisfaction of the Owner the reliability and Responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents and the qualifications set forth in the sections of the Project Manual pertaining to such proposed Subcontractors' respective trades. The Responsibility of the Bidder may be judged in part by the Responsibility of these proposed entities. The following will be considered:

   a. The ability, capacity, and skill to perform the Contract;

   b. The character, integrity, reputation, judgment, experience, and efficiency of the Bidder;

   c. Whether the Bidder can perform the Contract within the time specified;

   d. The previous and existing compliance by the Bidder with laws relating to the Contract;

   e. The quality of performance of previous contracts, including demonstration of successful completion of similar projects in the last three (3) years;

   f. The designated Project Manager shall have a minimum of three (3) years of successful experience in project management and scheduling of projects of similar scope and complexity.

   g. The designated Superintendent shall have a minimum of five (5) years of successful supervision of projects of similar scope and complexity;

   h. Any other qualifications required by the Contract Documents or Bidding Documents; and

   i. Such other information as may be secured having a bearing on the decision to award the contract.

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

   a. The Bidder does not have sufficient prior experience (or an acceptable substitute thereof, as described below) with projects of a similar nature in technical, managerial, and financial requirements to that in the present Contract being bid. In addition to such established contractors, a newly established contractor may be considered qualified if it has shown on the Contractor's Qualification Statement that it is staffed with sufficient technical, managerial, and financial personnel with prior experience in the nature of construction for which the Bids are invited.

b. The Bidder does not have sufficient capability to undertake the obligations of the Contract. A determination will be made when the Owner's review of the probable cash flow needs of the Bidder for this Project (including payroll, cost of material and supplies, equipment rental costs, and any other direct or incidental costs of the Contract), concludes that the Bidder does not have sufficient financial resources to enable it to satisfy its financial obligations under the Contract.

c. The Bidder has submitted unrealistic unit prices as determined by other Bidders' unit prices for this Project.

d. The Bidder does not have sufficient staff, equipment, or plant available to perform the Contract. The Owner's determination in this matter will be based upon that represented by Bidder in the Contractor's Qualification Statement.

e. The Bidder has a history of unsatisfactory performance of contracts of this or similar nature, regardless of whether such contracts existed between the Owner and the Bidder, or other parties.

   i. A determination of this nature will be made if the Owner, after review of the Bidder's previous work experience, determines that the Bidder's unsatisfactory performance has resulted predominantly from the Bidder's failure rather than a failure to perform by another party. The Owner will give the Contractor an opportunity to explain such nonperformance's before any final determination is reached.

   ii. A determination of failure to perform will be made if the Owner is satisfied, after review of the Bidder's prior experience, that the Bidder has failed to satisfy its obligations under past contracts, and the Owner cannot safely assume satisfactory performance of the Contract by the Bidder.

   iii. In reaching its determination, the Owner may consider statements of other parties to the prior unperformed contracts, as well as the representations of the Bidder on its Contractor's Qualification Statement.

4. **Subcontractors.** The Responsibility of the Bidder may be judged in part by the Responsibility of its Subcontractors. Bidders must verify Responsibility criteria for each first-tier Subcontractor. A Subcontractor of any tier that hires other Subcontractors must verify Responsibility criteria for each of its next lower-tier Subcontractors. Verification shall include that each Subcontractor, at the time of subcontract execution, is Responsible and possesses an electrical contractor license, if required by Chapter 19.28 RCW, or an elevator contractor license, if required by Chapter 70.87 RCW, and can obtain any payment and performance bonds required by the Bidding or Contract Documents.

5. **Request to Modify Criteria.** No later than ten (10) days prior to the Bid Date, a potential Bidder may request in writing that the Owner modify the Responsibility criteria listed in Paragraph 1.06(A)(2), above, or elsewhere in the Contract Documents or the Bidding Documents. The Owner will evaluate the information submitted by the potential Bidder

and respond before the Bid Date. If the evaluation results in a change of the criteria, the Owner will issue an Addendum identifying the new criteria.

6. **Objection.** Prior to the Award of the Contract, the Owner will notify the Bidder in writing if the Owner, after due investigation, has reasonable objection to the Bidder or a person or entity proposed by the Bidder, and the Owner will provide the reasons for the determination. The Bidder may appeal the determination within two (2) business days of its receipt of the objection by presenting additional information to the Owner, and the Owner will consider the additional information before issuing its final determination. The Bidder may, after the Owner's objection or determination, and at Bidder's option, (1) withdraw the Bid, (2) submit an acceptable substitute person or entity with no change in the Contract Time and no adjustment in the Base Bid or any Alternate Bid, even if there is a cost to the Bidder occasioned by the substitution, or (3) appeal by filing a protest in accordance with Paragraph 1.05(D). In the event of withdrawal, Bid security will not be forfeited.

7. **Change.** Persons and entities proposed by the Bidder and to whom the Owner has made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner.

8. **Right to Terminate.** The Bidder's representations concerning its qualifications will be construed as a covenant under the Contract. Should it appear that the Bidder has made a material misrepresentation on its Contractor's Qualification Statement, the Owner shall have the right to terminate the Contract for cause for the Contractor's breach, and the Owner may then pursue such remedies as exist elsewhere under the Contract, or as otherwise are provided at law or equity.

B. **INFORMATION FROM OTHER BIDDERS:** All other Bidders designated by the Owner as under consideration for award of a Contract shall also provide a properly executed Contractor's Qualification Statement, if so requested by the Owner.

C. **BIDDING MISTAKES:** The Owner will not be obligated to consider notice of claimed bidding mistakes received more than three (3) business days after the Bid opening. In accordance with Washington law, a low Bidder that claims error and fails to enter into the Contract is prohibited from bidding on the Project if a subsequent call for Bids is made for the Project.

1.07 PERFORMANCE BOND; LABOR AND MATERIAL PAYMENT BOND

A. **Bond Requirements.** Within twenty-four (24) hours after the issuance of the Owner's notice of intent to award the Contract, and prior to the date of execution of the Contract, the Bidder shall furnish evidence satisfactory to the Owner of its ability to obtain statutory bonds pursuant to Chapter 39.08 RCW covering the faithful performance of the Contract and the payment of all obligations arising thereunder in the form prescribed in the Contract Documents and in the full amount of the Contract Sum plus sales tax. The cost of such bonds shall be included in the Base Bid.

B. **Subcontractor Bonds.** The Owner reserves the right to require certain Subcontractors to furnish performance and labor and material payment bonds in form as set forth herein and as set forth under the Bidding Documents or Contract Documents. The Owner shall not, however, be responsible for any costs for any Subcontractor bonds unless the Owner, prior to the execution of the Owner-Contractor Agreement, requires the Bidder, in writing, to furnish such bonds from designated Subcontractors. Should any bonds be furnished by subcontract bidders, or be required by any Bidder to be furnished by any subcontract bidder or Subcontractor, without the written request of the Owner prior to the execution of the Owner-Contractor Agreement, the costs for any such bonds shall be at the expense of the Bidder and shall not be added to the Contract Sum.

C. **Time of Delivery and Form of Bonds.** The Bidder shall deliver the bonds and other documents required by the Contract Documents (including, but not limited to, certificates of insurance) to the Owner pursuant to the Contract Documents, and in no event any later than seven (7) days after the date of execution of the Contract and prior to commencing operations at the site. The bonds shall be written in the form(s) approved by the Owner for public works, as specified in Bidding Documents, and as required by Chapter 39.08 RCW. The bonds shall be written by a surety firm licensed to do business in the State of Washington, with an A.M. Best rating of at least A/IX. The Bidder shall require the Attorney-in-Fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his/her Power of Attorney.

1.08 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

A. **Form to be Used:** The Agreement for the Work will be written on the form(s) contained in the Bidding Documents.

B. **Conflicts:** In case of conflict between the provisions of these Instructions and any other Bidding Document, these Instructions shall govern. In case of conflict between the provisions of the Bidding Documents and the Contract Documents, the Contract Documents shall govern.

1.09 CONTRACT DOCUMENTS

This paragraph contains descriptions of some, <u>but not all</u>, of the provisions of the Contract Documents.

A. **RETAINAGE.** The Contract Documents specify the statutory retainage requirements of Chapter 60.28 RCW for this Project.

B. **CONTRACT TIME.** The Contract Documents specify the Contract Time. Timely completion of this Project is essential to the Owner.

C. **PREVAILING WAGES.** The Contract Documents contain requirements regarding the payment of prevailing wages pursuant to Chapter 39.12 RCW.

D. **WRITTEN CLAIMS AND NOTICE.** The Contract Documents contain a number of provisions that require the Contractor to provide notice of Claims and to make and support

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

E. **CHANGES IN CONTRACT SUM.** The Contract Documents contain provisions specifying requirements for and pricing of changes in the Contract Sum.

F. **DISPUTE RESOLUTION.** The Contract Documents contain provisions replacing the arbitration provisions of the form General Conditions with an alternative dispute resolution procedure which, among other things, requires non-binding mediation of all disputes.

G. **CONTRACTOR REGISTRATION.** Pursuant to Chapter 39.06 RCW, the Bidder shall be registered or licensed as required by the laws of the Washington State, including, but not limited to, Chapter 18.27 RCW.

H. **COMMISSIONING OF OPERATIONAL SYSTEMS.** Certain systems may be designated in the Contract Documents as "Operational Systems." If so, prior to the Date of Substantial Completion the Operational Systems must be up and running, ready for normal operation, and subject to a pre-commissioning inspection.

I. **TAXES.** The Contractor shall include in its Bid and pay for all applicable taxes, except Washington State sales tax and local sales tax on the Contract Sum, which shall be excluded in the preparation of its Bid. Such State and local sales taxes shall be added to the Contract Sum, paid by the Owner to the Contractor, and then paid by the Contractor as specified in the Contract Documents. Refer to General, Supplementary, or other conditions regarding further information.

J. **OTHER PROVISIONS.** The above paragraphs contain descriptions of some, <u>but not all</u>, of the provisions of the Contract Documents. Bidders should review in detail the Contract Documents themselves and not rely upon the above paragraphs in this Paragraph 1.09 as complete or inclusive.

1.10 POSSIBLE TRENCH EXCAVATION SAFETY PROVISIONS

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

1.11 APPRENTICESHIP UTILIZATION

In accordance with RCW 39.04.350, if the successful Bidder has a history of receiving monetary penalties for not achieving the apprentice utilization requirements pursuant to RCW 39.04.320, or is habitual in utilizing the good faith effort exception process, the bidder must submit to the Owner an apprenticeship utilization plan within ten (10) business days immediately following the Notice to Proceed date.

- END OF DOCUMENT 002113 -

DOCUMENT 003100 - AVAILABLE PROJECT INFORMATION

1.1 AVAILABLE PROJECT INFORMATION

A. This Document and its referenced attachments are part of the Procurement and Contracting Requirements for Project. They provide Owner's information for the Bidder's convenience and are intended to supplement rather than serve in lieu of the Bidder's own investigations. They are made available for the Bidder's convenience and information but are not a warranty of existing conditions. This Document and its attachments are not part of the Contract Documents.

B. Preliminary project schedule including design and construction milestones have been established by Owner and are scheduled for completion 90 days after mobilization

1. For Project time requirements, see the Invitation to Bid, Public Works Contract, and General Conditions.

C. Existing drawings that include information on existing conditions including previous construction at Project site are available for viewing at the maintenance offices of the District.

D. Permit Application: Complete building or Labor and Industries permit application and file with authorities having jurisdiction within [five] days of the Notice of Award..

E. Related Requirements:

1. Review Document 002113, "Instructions to Bidders," for the Bidder's responsibilities on examination of Project site and existing conditions.

- END OF DOCUMENT 003100 -

DOCUMENT 004100 - BID FORM (ADDENDUM 1)

BIDS WILL ONLY BE RECEIVED AT:

Owner:	Sequim School District 503 North Sequim Ave, Sequim, WA 98382
Bids Must Be Received By:	September 12th at 2:00 PM (ADDENDUM 1)
Owner's Representative:	Wenaha Group, Chris Marfori, Project Manager

BID IS FOR THE PROJECT REFERENCED:

Project No.	2023-02-1001
Project Location:	503 North Sequim Avenue, Sequim, Washington 98382
Architect:	design2 LAST, Inc.

The undersigned Bidder acknowledges receipt of, and declares that it has examined and is fully familiar with, the Bidding Documents, the Project Manual, the Drawings, the Specifications, the Contract Documents, and the Addenda specified below.

The Bidder further declares that it has inspected the site and familiarized itself with local conditions that may affect the cost of the Work, the time for performance of the Work, and/or the difficulty thereof; that it has satisfied itself as to nature, location, character, quality, and quantity of the Work required by the Contract, including materials and equipment, and including the fact that the description of quantities of work and materials as included in the Bid is brief and is intended only to indicate the general nature of the work and to correlate said quantities with detailed requirements in the Contract Documents; that this Bid is made according to provisions and under terms of the Contract Documents, which are hereby made a part of this Bid; and that Bidder has carefully checked all of the words and figures that compose this Bid.

IN SUBMITTING THE BID, THE UNDERSIGNED AGREES:

1. To furnish all material, labor, tools, equipment, management, supervision, and utility and transportation services necessary to perform and complete, in a workmanlike manner, all of the Work required for construction of the Project in accordance with the Contract Documents and contained or referenced in the Bidding Documents. Bidder acknowledges that the Contract Documents consist of the Public Works Contract (Document 007200.01) and General Conditions (Document 007200.02); Supplemental Conditions; Drawings; Specifications; and Addenda.

2. The Base Bid reflected in Attachment 01 to this Bid Form, and the Alternatives reflected in Attachment 02 to this Bid Form, represent full compensation for satisfactory performance of all obligations under the Contract Documents.

3. Bidder has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by Owner, as well as from the Drawings and Specifications made a part of the Contract Documents.

4. The Owner may continue to occupy parts of the site and may employ, under separate contracts, other contractors at or near the site concurrently with the Work of the Contract. As a result, the Bidder will have limited use of the premises for work, storage, access, parking, and equipment, and Bidder will be required to coordinate the use of the premises under the direction of the Owner. Further, adjoining areas may be conducting normal operations during the Work, and Bidder should anticipate pedestrian and traffic congestion, limited parking, and the requirement that the Work be coordinated with ongoing operations. Bidder acknowledges that its Bid is based upon a schedule and assumptions that incorporate these conditions, and upon a schedule that complies with schedule requirements set forth in the Contract Documents.

5. To hold its Bid open for sixty (60) consecutive calendar days from the date designated for opening of bids.

6. To accept the provisions of the Instructions to Bidders, including the disposition of Bid Security.

7. Within ten (10) days of award, to execute and deliver the Contract, to furnish the Performance Bond and Payment Bond in accordance with the requirements of the Contract Documents, to deliver the required certificates of insurance, and to perform the other obligations specified in the Contract Documents.

8. To commence the Work of the Contract upon receipt of a written Notice to Proceed and complete all such Work by the dates for Substantial Completion and Final Completion, respectively, specified in the Contract Documents.

9. The requirements of Chapter 39.12 RCW ("Prevailing Wages") are included as a part of this Bid, and the undersigned agrees to comply with all of the provisions thereof.

10. The undersigned Bidder has enclosed the required Bid Security in the amount of five percent (5%) of the Base Bid in the form required by and otherwise in accordance with the Instructions to Bidders. The Bidder agrees to enter into the Contract with the Owner in the form provided, in a timely manner, and on the terms stated in its Bid and to furnish in a timely manner the Payment Bond and Performance Bond, certificates of insurance, Contractor's Construction Schedule, and all other documents required by the Contract Documents. Bidder agrees that, should it fail or refuse to enter into the Contract or fail to furnish such documents, the amount of the Bid Security will be forfeited to the Owner as liquidated damages, not as a penalty. By submitting its Bid and Bid Security, the Bidder agrees that any forfeiture is a reasonable prediction at the time of Bid submittal of future damages to the Owner.

11. It satisfies the Bidder responsibility criteria listed in RCW 39.04.350(1).

12. Failure to timely complete and submit this Bid Form, Attachments 1-7, or the inclusion of false information in any aspect of its Bid, will render this Bid nonresponsive.

13. The Owner reserves the right to reject any or all bids and to waive informalities and irregularities.

BIDDER SUBMISSION INFORMATION

Bidder Information	
Legal Name of Bidder:	
Type of Entity (e.g., corporation, partnership, joint venture, or sole proprietor):	
Business Address:	
Business Phone No:	
Website (if applicable):	
Email:	
Washington State Contractor's Registration No.: *NOTE: Failure to have required license at time of bid opening will result in rejection of the Bid.*	
Contractor's License Expiration Date:	
Federal Tax Identification Number (TIN):	
Unified Business Identifier Number (UBI):	
Bidder's Authorized Representative Information	
Name:	
Title:	
Phone No:	
Email:	
Bid Bonding Company Information	
Bonding Company Name:	
Bonding Company Address:	
Bonding Company Phone No:	
Bonding Agent Name:	
Bonding Agent Email:	

(Continued on next page)

ADDENDA ACKNOWLEDGEMENT

Bidder acknowledges receipt, review, and full consideration of those Addenda indicated below. *(If a given addendum number was not utilized, that row should be left blank.)*

Number:	Addendum Dated:	Bidder Authorized Representative Initials
Addendum #1	August 28, 2023	
Addendum #2		
Addendum #3		
Addendum #4		
Addendum #5		
Addendum #6		

ATTACHMENTS REQUIRED

Bidder has fully completed and included the following attachments to this Bid Form, which are required for the Bid to be considered responsive.

Number:	Description:	Bidder Authorized Representative Initials
Attachment 1	Bid Price Form	
Attachment 2	Bid Alternates Form	
Attachment 3	Insurance Binder	
Attachment 4	Bid Security	
Attachment 5	Non-Collusion Affidavit	
Attachment 6	Statement of Non-Segregated Facilities	
Attachment 7	Certification of Compliance with Wage Payment Statutes	

Dated: _____

_____ _____

Name of Authorized Representative **Signature of Authorized Representative**

END OF BID FORM

(Complete and include Attachments 1-7)

DOCUMENT 004100.01 - BID PRICE FORM
(Attachment 1 to Bid Form)

BID IS FOR THE PROJECT REFERENCED:

Project Name:	District Office Board Room and 2nd Floor Office Remodel
Project No.	2023-02-1001
Project Location:	503 North Sequim Avenue, Sequim, Washington 98382
Architect:	design2 LAST, Inc.

SALES TAX

For all bid prices listed in this Bid Form, DO NOT INCLUDE applicable local and Washington State sales tax that will be applied to the Contract Sum.

BIDDER ACKNOWLEDGEMENT

By submitting this Bid, the undersigned Bidder acknowledges the following:

1. The below-listed Base Bid amount may be modified by amounts indicated by the Bidder on Document 004100.02 ("Alternates Form").

2. Owner reserves the right to reject any or all Bids, to waive any informality or irregularity in any Bid received, and to accept or reject any Alternates in any order or combination.

TOTAL BASE BID AMOUNT

The undersigned Bidder, in response to the Bidding Documents, having carefully examined the Contract Documents, having had the option to visit the site with the Owner-provided optional walkthroughs, and being familiar with all conditions and requirements of the Work, hereby offers to perform all the Work on the above-referenced Project in accordance with the Contract Documents for the total, combined fixed-price lump sum of:

_____ Dollars ($_____)
(Show amount in words and in figures. This amount does not include state/local sales tax.)

TRENCH EXCAVATION SAFETY PROVISIONS

In compliance with RCW 39.04.180, on public works projects in which trench excavation will exceed a depth of four feet, all costs for adequate safety systems for the trench excavation that meet the requirements of the Washington Industrial Safety and Health Act, Chapter 49.17 RCW, must be included in the Base Bid. The cost of trench excavation safety provisions included in the lump-sum dollar amount stated above (even if the value is $0.00) must be listed below to be responsive.

Total amount of trench excavation safety included in the Base Bid (above):

_____ Dollars ($_____)
(Show amount in words and in figures. This amount does not include state/local sales tax.)

Dated: _____

_____ _____
Name of Authorized Representative **Signature of Authorized Representative**

- END OF ATTACHMENT 1 -

DOCUMENT 004100.02 - BID ALTERNATES FORM
(Attachment 2 to Bid Form)

BID IS FOR THE PROJECT REFERENCED:

Project Name:	District Office Board Room and 2nd Floor Office Remodel
Project No.	2023-02-1001
Project Location:	503 North Sequim Avenue, Sequim, Washington 98382
Architect:	design2 LAST, Inc.

ALTERNATE BIDS

The following represents incremental differences to cost outlined in the Base Bid to incorporate alternates should they be accepted by the Owner. Amounts do not include state or local sales tax.

Alternate A

Add / Deduct *(Please choose "Add" or "Deduct" by drawing a circle around the word)*

_____
Dollars
(amount in words)

$ _____
(amount in numbers)

Alternate B

Add / Deduct *(Please choose "Add" or "Deduct" by drawing a circle around the word)*

_____
Dollars
(amount in words)

$ _____
(amount in numbers)

Dated: _____

_____ _____
Name of Authorized Representative **Signature of Authorized Representative**

- END OF ATTACHMENT 2 -

DOCUMENT 004100.03 - INSURANCE BINDER
(Attachment 3 to Bid Form)

BID IS FOR THE PROJECT REFERENCED:

Project Name:	District Office Board Room and 2nd Floor Office Remodel
Project No.	2023-02-1001
Project Location:	503 North Sequim Avenue, Sequim, Washington 98382
Architect:	design2 LAST, Inc.

The undersigned confirms that the Bidder has reviewed the insurance and bonding requirements stated in Part 2 of the General Conditions (and elsewhere in the Contract Documents) for the above-referenced Project with its insurance provider. If awarded the Contract, Bidder will provide the required insurance at no additional cost to the Owner.

Dated: _____

_____ _____

Name of Authorized Representative **Signature of Authorized Representative**

- END OF ATTACHMENT 3 -

SECTION 004100.04 - BID SECURITY
(Attachment 4 to Bid Form)

BID IS FOR THE PROJECT REFERENCED:

Project Name:	District Office Board Room and 2nd Floor Office Remodel
Project No.	2023-02-1001
Project Location:	503 North Sequim Avenue, Sequim, Washington 98382
Architect:	design2 LAST, Inc.

BID SECURITY REQUIRED

1. To be considered responsive, the Bidder must provide the Bid Security in an amount constituting five percent (5%) of the Base Bid in accordance with the Instructions to Bidders.

2. Bid Security must be submitted to Owner in the form of a cashier's check, certified check, U.S. money order, or bid bond.

3. Bid bonds must be in the form of AIA-A310 or, in the alternative, the below Owner-provided form.

4. Bid bond must contain the notarized signature of the Principal and the Surety.

5. Taxes levied by federal, state, or municipal governments must be included in Base Bid unless indicated otherwise, with the exception that Washington State sales tax is not to be included in the Base Bid.

6. In the event Owner does not award a contract to Bidder within 60 calendar days after the Bid Date, Owner will return the Bid Security to the Bidder.

(Form of Bid Bond included on next page.)

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS: That we, _____

_____ (herein "Principal"),

as Principal, and _____ (herein "Surety"),

as Surety, are held firmly bound unto Sequim School District, Clallam County, Washington, in the full sum of

_____ Dollars ($_____) lawful money of the United States of America for the payment of which sum of money, well and truly to be made, said Principal and Surety bind themselves and each and every of their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas, the above-named Principal has submitted a bid for the **District Office Board Room and 2nd Floor Office Remodel** in accordance with instructions in notice to contractors, prepared by Sequim School District, and are desirous of accompanying said bid with a proposal bond in the penalty of five (5) percent of said bid in lieu of certified check.

NOW THEREFORE, if said Principal, upon receipt of written notice of the acceptance of such bid, shall within ten (10) days enter into a written contract with Sequim School District upon the form of contract of said Sequim School District for the completion of such contract in accordance with the terms and conditions of said bid, and provide payment and performance bonds with good and sufficient sureties for the faithful and proper fulfillment of such contract, and provide all insurances as required by the contract, then this obligation shall be null and void; otherwise to remain in full force and effect.

SIGNED AND SEALED this _____ day of _____, 20____.

Principal: _____	**Surety:** _____
_____ Signature of Representative	_____ Signature of Representative
_____ Printed Name	_____ Printed Name
_____ Title	_____ Title
_____ Address	_____ Address
_____ Telephone No.	_____ Telephone No.
_____ Witness	_____ Witness

- END OF ATTACHMENT 4 -

DOCUMENT 004100.05 - NON-COLLUSION AFFIDAVIT
(Attachment 5 to Bid Form)

STATE OF WASHINGTON)
) ss.
COUNTY OF _____)

_____, being first duly sworn, deposes and says: that he/she is_____ (a partner or officer, etc.) of the party making the foregoing bid; that he/she certifies that such bid is genuine and not collusive or sham; that said bidder has not colluded, conspired, connived, or agreed, directly or indirectly, with any bidder or person, to put in a sham proposal or to refrain from proposing, and has not in any manner, directly or indirectly, sought by agreement or collusion, or communication or conference, with any person, to fix the proposal price of affiant or of any other bidder, or to fix any overhead, profit, or cost element of said price, or that of any other bidder, or to secure any advantage against the Sequim School District or any person interested in the proposed contract; and that all statements in said bid are true.

_____
(Signature of Affiant)

_____
(Printed Name)

_____
(Title)

_____
(Company)

Subscribed and worn to before me this _____ day of _____, 20____.

_____
(Signature of Notary)

_____
(Print or stamp name of Notary)

_____
(Title of office)
My commission expires: _____

DOCUMENT 004100.06 – CERTIFICATION OF NON-SEGREGATED FACILITIES
(Attachment 6 to Bid Form)

BID IS FOR THE PROJECT REFERENCED:

Project Name:	District Office Board Room and 2nd Floor Office Remodel
Project No.	2023-02-1001
Project Location:	503 North Sequim Avenue, Sequim, Washington 98382
Architect:	design2 LAST, Inc.

By submitting its Bid, the undersigned Bidder hereby certifies as follows:

(a) Segregated facilities, as used in this provision, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or otherwise.

(b) By the submission of this offer, the offeror certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The offeror agrees that a breach of this certification is a violation of the Equal Opportunity clause in the contract.

(c) The offeror further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will—

(1) Obtain identical certifications from proposed subcontractors before the award of subcontracts under which the subcontractor will be subject to the Equal Opportunity clause;

(2) Retain the certifications in the files; and

(3) Forward the following notice to the proposed subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods):

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT FOR CERTIFICATIONS OF NONSEGREGATED FACILITIES
A Certification of Nonsegregated Facilities must be submitted before the award of a subcontract under which the subcontractor will be subject to the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semiannually, or annually). NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

(Signature on next page)

_____
(Signature)

_____
(Printed Name)

_____
(Title)

_____
(Company)

- END OF ATTACHMENT 6 -

DOCUMENT 004100 - CERTIFICATION OF COMPLIANCE WITH WAGE PAYMENT STATUTES
(Attachment 7 to Bid Form)

BID IS FOR THE PROJECT REFERENCED:

Project Name:	District Office Board Room and 2nd Floor Office Remodel
Project No.	2023-02-1001
Project Location:	503 North Sequim Avenue, Sequim, Washington 98382
Architect:	design2 LAST, Inc.

The Bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date of August 16th, 2023, the Bidder is not a "willful" violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Washington State Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

_____
Bidder's Business Name

_____
Signature of Authorized Official*

_____
Printed Name

_____
Title

_____ _____ _____
Date City State or country

Check One:
Sole Proprietorship ☐ Partnership ☐ Joint Venture ☐ Corporation ☐

State of incorporation, or if not a corporation, state where business entity formed: _____

If a co-partnership, give firm name under which business is transacted: _____

** If a corporation, proposal must be executed in the corporate name by the president or vice-president (or any other corporate officer accompanied by evidence of authority to sign). If a co-partnership, proposal must be executed by a partner.*

- END OF ATTACHMENT 7 -

DOCUMENT 004393 - BID SUBMITTAL CHECKLIST

1.1 BID INFORMATION

A. Bidder: _____.

B. Prime Contract: _____.

C. Project Name: District Office Board Room and 2nd Floor Office Remodel.

D. Project Location: 503 North Sequim Avenue, Sequim, Washington 98382.

E. Owner: Sequim School District No. 323.

F. Architect: design2 LAST, Inc.

G. Architect Project Number: 2021-011.

H. Construction Manager: Wenaha Group, Chris Marfori, Project Manager.

1.2 BIDDER'S CHECKLIST

A. In an effort to assist the Bidder in properly completing all documentation required, the following checklist is provided for the Bidder's convenience. The Bidder is solely responsible for verifying compliance with bid submittal requirements.

B. Attach this completed checklist to the outside of the Submittal envelope.

1. Used the Bid Form provided in the Project Manual.

2. Prepared the Bid Form as required by the Instructions to Bidders.

3. Indicated on the Bid Form the Addenda received.

4. Attached to the Bid Form: Bid Price Form (Attachment 1)

5. Attached to the Bid Form: Bid Alternates Form (Attachment 2)

6. Attached to the Bid Form: Insurance Binder (Attachment 3)

7. Attached to the Bid Form: Bid Security (Attachment 4)

8. Attached to the Bid Form: Non-Collusion Affidavit (Attachment 5)

9. Attached to the Bid Form: Statement of Non-Segregated Facilities (Attachment 6)

10. Attached to the Bid Form: Certification of Compliance with Wage Payment Statutes (Attachment 7)

11. Attached to the Bid Form: Bid Bond OR a certified check for the amount required.

12. Verified that the Bidder can provide executed Performance Bond and separate Payment Bond as required by the Bidding Documents.

13. Verified that the Bidder can provide Certificates of Insurance in the amounts indicated.

14. Verified that Bidder signed the Bid Form.

15. Verified that the Bid Bond has the notarized signatures of both the Bidder and the Surety.

16. Bid envelope shows on its FRONT FACE the name of the Project and the name, contractor license number, and address of the Bidder.

17. Bid envelope shows on its BACK FACE a completed version of this checklist.

18. If the Bid is sent by mail, the sealed envelope is enclosed in a separate mailing USPS-approved envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

- END OF DOCUMENT 004393 -

DOCUMENT 00 43 95 - BIDDER QUALIFICATION STATEMENT

1. Introduction

1.1. Pursuant to section 1.06 of the Instructions to Bidders, the Sequim School District is requesting the following information. Failure to provide any of the following information in a timely manner may constitute an event of breach permitting forfeiture of the bid security. *Please attach additional pages where necessary.*

1.2. This Bidder Qualification Statement is submitted with respect to the following project:

District Office Board Room and 2nd Floor Office Remodel

2. General Information

2.1. Name of Bidder: _____

2.2. Address of Bidder: _____

2.3. Telephone No. of Bidder: _____

3. Bidder's Forces, Use of Subcontractors, and Suppliers

3.1. What portions of the work included in the proposed contract will be performed by the Bidder's own forces?

_____

_____

_____

3.2. What portions of the work included in the proposed contract will be performed by Subcontractors?

_____

_____

_____

3.3. Attach or list the names of the persons or entities (including a designation of the work to be performed with the Bidder's own forces, and the names of those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the work.

_____

_____

_____

3.4. List the proprietary names and the suppliers of the principal items or systems of materials and equipment proposed for the Work.

4. Bid Breakdown

4.1. Attach an itemized breakdown of the Bid, including labor tasks, labor costs, materials, material costs, and delivery charges.

5. Work History

5.1. Attach or list the following information on similar projects that your organization has completed in the past three (3) years: name and type of project, owner (include name and telephone number of the contact person), contract amount, expected date of completion, and date of completion.

5.2. Describe your organization's experience with remodeling of and/or additions to K-12 school buildings.

5.3. Attach or list the following information on all projects that your organization now has in progress: name and type of project, owner, architect/engineer (include name and telephone number of contact person), contract amount, and scheduled date of completion.

5.4. Has your organization ever defaulted on or otherwise failed to complete any work under contract? If so, describe each such circumstance:

5.5. Has any officer, partner, or principal of your organization ever been an officer, partner, or principal of another organization that defaulted on or otherwise failed to complete any work under contract? If so, describe each such circumstance:

_____

_____

_____

5.6. Provide the construction experience (length, project type, scope, complexity) of the Project Manager and Superintendent that would be assigned to perform the Work under this proposed contract.

_____

_____

_____

6. Additional Letters and Forms

6.1. Attach a letter or form from the Bidder's insurance company stating that the insurance required by the Bidding Documents (see the General Conditions) will become effective upon execution of the proposed Contract.

6.2. Attach a letter or form from the Bidder's surety stating that the Payment Bond and Performance Bond will become effective upon execution of the proposed Contract.

6.3. [If applicable, see Owner for questions:] Attach a completed copy of page 2 of the Office of Superintendent of Public Instruction (OSPI) Form D-9. The applicable form may be found at: Form D-9 (www.k12.wa.us).

- END OF SECTION -

DOCUMENT 005100 - NOTICE OF INTENT TO AWARD

1.1 BID INFORMATION

A. Bidder: <**Insert successful bidder name**>.

B. Bidder's Address: <**Insert street address, city, state, zip, and telephone**>.

C. Project Name: District Office Board Room and 2nd Floor Office Remodel.

D. Project Location: 503 North Sequim Avenue, Sequim, Washington 98382.

E. Owner: Sequim School District No. 323.

F. Architect: design2 LAST, Inc.

G. Architect Project Number: 2021-011.

1.2 NOTICE OF INTENT TO AWARD CONTRACT

A. Notice: The above Bidder is hereby notified that its bid, dated <**Insert date**>, for the above Contract has been considered and the Bidder is hereby awarded a contract for <**Insert brief description of Work or sections of Work awarded**>.

B. Alternates Accepted: The following alternates have been accepted by Owner and have been incorporated in the Contract Sum:

1. Alternate No. 1: <**Insert alternate title**>.
2. Alternate No. 2: <**Insert alternate title**>.

C. Contract Sum: The Contract Sum is <**Insert written amount**> dollars ($<**Insert numeric amount**>).

1.3 EXECUTION OF CONTRACT

A. Contract Documents: Copies of the Contract Documents will be made available to the Bidder immediately. The Bidder must comply with the following conditions precedent within ten (10) days of the above date of issuance of the Notice:

1. Deliver to Owner three (3) sets of fully executed copies of the Contract Documents.

B. Delivery of Bonds and Certificates of Insurance: Within seven (7) days after Bidder's execution of the Contract, and prior to commencing operations at the site, the Bidder must deliver the executed Payment Bond, Performance Bond, and Certificates of Insurance required by the Contract Documents to the Owner per the Instructions to Bidders.

C. Compliance: Failure to comply with conditions of this Notice within the time specified will entitle Owner to consider the Bidder in default, annul this Notice, and declare the Bidder's Bid security forfeited.

D. Execution by Owner: Within thirty (30) days after the Bidder complies with the conditions of this Notice, Owner will return to the Bidder one fully executed copy of the Contract Documents.

1.4 NOTIFICATION

A. This Notice is issued by:

1. Sequim School District No. 323
2. Date: _____
3. Authorized Signature: _____
4. Name of Signatory: _____
5. Title of Signatory: _____

- END OF DOCUMENT 005100 -

DOCUMENT 006000 - PROJECT FORMS

1.1 FORM OF AGREEMENT AND GENERAL CONDITIONS

A. The following form of Owner/Contractor Agreement and form of the General Conditions shall be used for Project:

1. The Public Works Contract as specified in Document 007200.01.

2. The General Conditions as specified in Document 007200.02.

3. The Supplementary Conditions for the Project, if any, are as separately prepared and included in the Project Manual.

1.2 ADMINISTRATIVE FORMS

A. Administrative Forms: Additional administrative forms may be specified in Division 01 General Requirements Sections.

B. Copies of AIA standard forms may be obtained from the following:

1. The American Institute of Architects: www.aia.org/contractdocs/purchase/index.htm; docspurchases@aia.org; (800) 942-7732.

C. Preconstruction Forms:

1. Form of Performance Bond and Labor and Material Bond: AIA Document A312, "Performance Bond and Payment Bond."

2. Form of Certificate of Insurance: AIA Document G715, "Supplemental Attachment for ACORD Certificate of Insurance 25-S."

D. Information and Modification Forms:

1. Form for Requests for Information (RFIs): AIA Document G716, "Request for Information (RFI)."

2. Form of Request for Proposal: AIA Document G709, "Work Changes Proposal Request."

3. Change Order Form: AIA Document G701, "Change Order."

4. Form of Architect's Memorandum for Minor Changes in the Work: AIA Document G707, "Architect's Supplemental Instructions."

5. Form of Change Directive: AIA Document G714, "Construction Change Directive."

E. Payment Forms:

1. Schedule of Values Form: AIA Document G703, “Continuation Sheet.”

2. Payment Application: AIA Document G702/703, “Application and Certificate for Payment and Continuation Sheet.”

3. Form of Contractor's Affidavit: AIA Document G706, “Contractor's Affidavit of Payment of Debts and Claims.”

4. Form of Affidavit of Release of Liens: AIA Document G706A, “Contractor's Affidavit of Payment of Release of Liens.”

5. Form of Consent of Surety: AIA Document G707, “Consent of Surety to Final Payment.”

- END OF DOCUMENT 006000 -

DOCUMENT 007200.01 – PUBLIC WORKS CONTRACT

SEQUIM SCHOOL DISTRICT NO. 323
PUBLIC WORKS CONTRACT

Project Name: District Office Board Room and 2nd Floor Office Remodel

Project Number: 2023-02-1001

Project Description: The Project consists of a two-story elevator addition and second-floor loft renovation. The Project is more thoroughly described in the Specifications, Bidding Documents, and Contract Documents.

Project Location: 503 North Sequim Avenue, Sequim, Washington 98382.

THIS PUBLIC WORKS CONTRACT ("Contract") is made and entered into by and between the Sequim School District No. 323, a Washington quasi-municipal corporation ("Owner"), and NAME, a _____ _____ ("Contractor"). Contractor and Owner may hereinafter be referred to as "Parties."

A. Effective Date: This Contract shall be effective on the last date set forth on the signature page ("Effective Date").

B. Contract Work: This Contract shall be the agreed basis of performing the Work identified and defined in the Contract Documents. The Contractor agrees to furnish all material, labor, tools, equipment, apparatus, facilities, etc. necessary to perform and complete in a workmanship like manner the Work called for in the Contract Documents for the Project noted above, according to the terms of this Contract and the Contract Documents, which documents are incorporated herein by reference, as if set forth herein in full.

C. Enumeration of Contract Documents: The Contract Documents include the Advertisement for Bids, Instructions for Bidders, completed Bid Form, Payment and Performance Bonds, General Conditions, Supplemental Conditions to the General Conditions, other Special Forms, this Public Works Contract, and the following Drawings, Specifications, and Addenda:

Drawings dated: _____ Specifications dated: _____

Addendum No.	Dated:	Addendum No.	Dated:
Addendum No.	Dated:	Addendum No.	Dated:
Addendum No.	Dated:	Addendum No.	Dated:
Addendum No.	Dated:	Addendum No.	Dated:

D. Time for Completion: The Work to be performed under this Contract shall commence as soon as the Contractor has been officially notified to proceed and shall be substantially complete within 90 calendar days of the Notice to Proceed.

E. Liquidated Damages: The Contractor further agrees that, from the compensation otherwise to be paid, the Owner may retain the sum of $250 for each calendar day thereafter that the Work remains uncompleted, which sum is agreed upon as the liquidated damages, and the Parties agree this sum is not to be construed as in any sense a penalty.

F. Apprenticeship Utilization: The Contractor acknowledges that apprenticeship utilization goals should be met, and that the Owner has determined monetary incentives for meeting the goals, and monetary penalties for not meeting the goals. The Contractor further agrees that, from the compensation otherwise to be paid, the Owner may retain the sum of $_____ as a monetary penalty for not meeting the apprenticeship utilization goals. The Contractor further agrees, that in addition to the compensation otherwise to be paid, the Owner will pay by issuance of a Change Order $_____ as an incentive for meeting the apprenticeship utilization goals.

G. Contract Award Amount: Owner hereby agrees to pay the Contractor the Contract Award Amount indicated below, not including State Sales Tax, as consideration for the agreements set forth above, including but not limited to, Contractor's completion of all Work, in strict accord with the Contract Documents, as follows:

Base Bid:
Alternates Awarded:
Alternate Bid No. ___
Alternate Bid No. ___
CONTRACT AWARD AMOUNT:

H. Project Representatives: The parties designated the following persons to administer this Contract and receive notices pursuant to the Contract Documents.

1. The Owner's designated representative is as follows: Wenaha Group, Chris Marfori, Project Manager, chrism@wenahagroup.com.

2. The Contractor's designated representative is as follows: NAME, TITLE, ADDRESS, EMAIL.

I. Governing Law: This Contract shall be construed and governed by the laws and statutes of the State of Washington.

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IN WITNESS WHEREOF, the Parties hereto have executed this Contract by having their authorized representatives affix their signatures below.

OWNER:	**CONTRACTOR:**
Sequim School District No. 323	**INSERT**
By: _____	By: _____
Signature Date	Signature Date
Name: _____	Name: _____
Title: _____	Title: _____

Washington Contractor's Registration No.: _____

Contractor's Federal Tax ID No.: _____

PART 1 – GENERAL CONDITIONS

1.01 DEFINITIONS

A. "Application for Payment" means a written request submitted by Contractor to the Owner (or A/E, if applicable) for payment of Work completed in accordance with the Contract Documents and approved Schedule of Values, supported by such substantiating data as Owner or A/E may require.

B. "Architect," "Engineer," or "A/E" means a person or entity lawfully entitled to practice architecture or engineering, representing Owner within the limits of its delegated authority, if applicable to the Project. Owner may choose not to contract with an A/E for certain projects, in which event all references to the A/E shall be construed to reference the Owner.

C. "Change Order" means a written instrument signed by Owner and Contractor stating their agreement upon all of the following: (1) a change in the Work; (2) the amount of the adjustment in the Contract Sum, if any, and (3) the extent of the adjustment in the Contract Time, if any.

D. "Claim" means Contractor's exclusive remedy for resolving disputes with Owner regarding the terms of a Change Order or a request for equitable adjustment, as more fully set forth in Part 8.

E. "Contract Award Amount" is the sum of the Base Bid and any accepted Alternates.

F. "Contract Documents" means the Advertisement for Bids, Instructions for Bidders, completed Bid Form, General Conditions, Supplemental Conditions, Public Works Contract, other Special Forms, Drawings, and Specifications, and all addenda and modifications thereof.

G. "Contract Sum" is the total amount payable by Owner to Contractor, for performance of the Work in accordance with the Contract Documents, including all taxes imposed by law and properly chargeable to the Work, except Washington State sales tax.

H. "Contract Time" is the number of calendar days allotted in the Contract Documents for achieving Substantial Completion of the Work.

I. "Contractor" means the person or entity who has agreed with Owner to perform the Work in accordance with the Contract Documents.

J. "Day" means a calendar day, unless otherwise specified.

K. "Drawings" are the graphic and pictorial portions of the Contract Documents showing the design, location, and dimensions of the Work, and may include plans, elevations, sections, details, schedules, and diagrams.

L. "Final Acceptance" means the written acceptance issued to Contractor by Owner after Contractor has completed the requirements of the Contract Documents, as more fully set forth in Section 6.09 B.

M. "Final Completion" means that the Work is fully and finally complete in accordance with the Contract Documents, as more fully set forth in Section 6.09A.

N. "Force Majeure" means those acts entitling Contractor to request an equitable adjustment in the Contract Time, as more fully set forth in Section 3.05A.

O. "Notice" means a written notice which has been delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended or, if delivered or sent by registered or certified mail, to the last business address known to the party giving notice.

P. "Notice to Proceed" means a notice from Owner to Contractor that defines the date on which the Contract Time begins to run.

Q. "Owner" means the Sequim School District or its authorized representative with the authority to enter into, administer, and/or terminate the Work in accordance with the Contract Documents and make related determinations and findings.

R. "Person" means a corporation, partnership, business association of any kind, trust, company, or individual.

S. "Prior Occupancy" means Owner's use of all or parts of the Project before Substantial Completion, as more fully set forth in Section 6.08A.

T. "Progress Schedule" means a schedule of the Work, in a form satisfactory to Owner, as further set forth in Section 3.02.

U. "Project" means the total construction of which the Work performed in accordance with the Contract Documents, which may be the whole or a part and which may include construction by Owner or by separate contractors.

V. "Project Record" means the separate set of Drawings and Specifications as further set forth in Section 4.02A.

W. "Schedule of Values" means a written breakdown allocating the total Contract Sum to each principal category of Work, in such detail as requested by Owner.

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

Y. "Subcontract" means a contract entered into by Subcontractor for the purpose of obtaining supplies, materials, equipment, or services of any kind for or in connection with the Work.

Z. "Subcontractor" means any person, other than Contractor, who agrees to furnish or furnishes any supplies, materials, equipment, or services of any kind in connection with the Work.

AA. "Substantial Completion" means that stage in the progress of the Work when the construction is sufficiently complete, as more fully set forth in Section 6.07.

AB. "Work" means the construction and services required by the Contract Documents, and includes, but is not limited to, labor, materials, supplies, equipment, services, permits, and the manufacture and fabrication of components, performed, furnished, or provided in accordance with the Contract Documents.

1.02 ORDER OF PRECEDENCE

Any conflict or inconsistency in the Contract Documents shall be resolved by giving the documentsprecedence in the following order:

A. Signed Public Works Contract, including any Change Orders.

B. Supplemental Conditions.

C. General Conditions.

D. Specifications.

E. Drawings. In case of conflict within the Drawings, large-scale drawings shall take precedenceover small-scale drawings.

F. Signed and Completed Bid Form.

G. Instructions to Bidders.

H. Advertisement for Bids.

1.03 EXECUTION AND INTENT

Contractor makes the following representations to Owner:

A. Contract Sum reasonable: The Contract Sum is reasonable compensation for the Work and the Contract Time is adequate for the performance of the Work, as represented by the Contract Documents;

B. Contractor familiar with Project: Contractor has carefully reviewed the Contract Documents, visited and examined the Project site, become familiar with the local conditions in which the Work is to be performed, and satisfied itself as to the nature, location, character, quality, and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services, and other items to be furnished and all other requirements of the Contract Documents, as well as the surface and subsurface conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof;

C. Contractor financially capable: Contractor is financially solvent, able to pay its debts as they mature, and possesses sufficient working capital to complete the Work and perform Contractor's obligations required by the Contract Documents; and

D. Contractor can complete Work: Contractor is able to furnish the plant, tools, materials, supplies, equipment, and labor required to complete the Work and perform the obligations required by the Contract Documents and has sufficient experience and competence to do so.

PART 2 – INSURANCE AND BONDS

2.01 CONTRACTOR'S LIABILITY INSURANCE

A. Prior to commencement of the Work, the Contractor shall obtain all the insurance required by the Contract Documents and provide evidence satisfactory to Owner that such insurance has been procured. Review of the Contractor's insurance by Owner or the specification or approval of the insurance in this Contract or of its coverage or amount shall not relieve or decrease the liability of the Contractor under the Contract Documents or otherwise. The Contractor shall include in its bid the cost of all insurance and bonds required to complete the Base Bid Work and accepted alternates.

B. The Contractor shall purchase and maintain in full force and effect the following insurance coverage without interruption from the date of commencement of the Work through the date of Final Acceptance and termination of any coverage required to be maintained after final payment, including, but not limited to, during the performance of any corrective Work required by Section 5.16. Completed Operations coverage shall remain in force for three (3) years after Final Acceptance. All coverages shall be written on an occurrence basis, reasonably acceptable to the Owner, and written for at least the minimum limits specified in this Section 2.01 or required by law, whichever coverage is greater.

1. Commercial General Liability (CGL):

a. The Contractor shall procure an occurrence-based Commercial General Liability (CGL) insurance policy, written on an ISO-based occurrence form or its equivalent. Such insurance shall provide coverage for personal injury, bodily injury, and property damage liability arising from the Contractor's operations in connection with the Work, whether such operations are by the Contractor or Subcontractors and suppliers of any tier; owned, non-owned, and hired vehicles; work the Contractor may subcontract or sublet to others; and the indemnity provisions of this Contract. Without limiting the foregoing, such insurance shall protect the Contractor and additional insureds required by this Section 2.01 from claims set forth below that may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor or the additional insureds may be legally liable, whether such operations are by the Contractor, a Subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

(1) Claims under workers' compensation (industrial insurance), disability benefit, and other similar employee benefit acts that are applicable to the Work to be performed in the form of Stop Gap Liability Insurance (Employer's Contingent Liability Insurance);

(2) Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;

(3) Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;

(4) Claims for damages insured by usual personal injury liability coverage;

(5) Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;

(6) Claims for bodily injury or property damage arising out of completed operations;

(7) Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 5.22 ("Indemnification"); and

(8) Claims for bodily injury and property damage resulting from mold and fungus.

b. Without limiting the foregoing, this CGL insurance shall be on a comprehensive basis and include all major divisions of coverage, including, but not limited to:

(1) Premises and Operations;

(2) Products and Completed Operations;

(3) Explosion, Collapse, and Underground (XCU);

(4) The Owners and Contractors Protective;

(5) Personal and Advertising Injury, with employment exclusion deleted;

(6) Blanket contractual, including specific provision for Contractor's obligation under the indemnity provisions of this Contract; and

(7) Broad Form Property Damage.

2. Automobile Liability: Such insurance shall provide coverage for all owned, non-owned, and hired automobiles. It shall cover claims for damages because of bodily injury, death of a person, or property damage arising out of ownership, maintenance, or use of a motor vehicle (including loss of use thereof arising out of operation of automobiles), including Comprehensive Automobile Liability, Bodily Injury, and Property Damage Combined Single Limit.

3. Umbrella Policy: For projects with a Contract Sum of $1 million or more, the Contractor shall procedure a true umbrella policy that provides excess limits over the primary layer.

4. Employer's Liability: The Contractor shall provide an employer's liability policy providing coverage for liability to employees for work-related bodily injury or disease, other than liability imposed by workers' compensation law.

5. Workers' Compensation: The Contractor shall provide, and require Subcontractors of any tier to provide, workers' compensation insurance as required by the industrial insurance laws of the State of Washington.

C. The Contractor's insurance obtained under this Section 2.01 will:

1. Name the Owner, the Owner's consultants, as well as their directors, officers, employees, and agents, as additional insureds under CG 2010 and CG 2037 or their equivalent.

2. Include a severability of interest (cross-liability clause) in favor of the Owner for Work performed under this Contract.

3. Be designated and endorsed as primary coverage for both defense and indemnity, and any Owner's policies shall be excess and non-contributory.

4. Provide a waiver of any rights of subrogation against the Owner.

5. Have per-project general aggregate provisions in accordance with the limits set forth in Section 2.01J, which provisions may be modified in the Special Conditions. The insurance shall be endorsed to have the general aggregate apply to this Project only.

6. Without limiting the foregoing, the insurance described above shall include coverage for underground collapse and explosion exposures.

D. Any company writing the insurance to be obtained pursuant to this Section 2.01 shall be authorized to do business in the State of Washington. Insurance carriers providing insurance in accordance with the Contract Documents must be acceptable to Owner and shall possess an A.B. Best's policyholder's rating of "A" or better and a financial rating of no less than "VIII."

E. Losses up to the deductible amount of any insurance under this part shall be the responsibility of the Contractor.

F. The Contract Sum includes an amount to pay the premium for insurance required under the Contract Documents and to name the Owner and others listed in the Contract Documents as additional insureds on all insurance policies required by Section 2.01.

G. There shall be no self-insured retention without the prior written approval of the Owner.

H. If the Owner is damaged by the failure of the Contractor to maintain any of the insurance in this Section 2.01 or to so notify the Owner, the Contractor shall bear all costs attributable thereto. The Owner may withhold payment pending receipt of all certificates of insurance. Failure to withhold payment shall not constitute a waiver.

I. The Contractor shall comply with the Washington State Industrial Insurance Act and, if applicable, the Federal Longshoremen's and Harbor Workers' Act and the Jones Act.

J. Coverage Limits: The minimum coverage limits for Contractor's liability insurance shall be as follows:

1. Commercial General Liability (CGL):

   a. At least $3,000,000 General Aggregate Limit (Other than Products-Completed Operations).

   b. At least $1,000,000 Each Occurrence Limit.

   c. At least $1,000,000 Products-Completed Operations Aggregate Limit.

   d. At least $1,000,000 Personal Injury and Advertising Liability Limit, each occurrence.

2. Automobile Liability: At least $1,000,000 Combined Single Limit for Automobile Bodily Injury and Property Damage Liability, each accident or loss.

3. Umbrella Policy: Where applicable, the umbrella policy will have excess limits over the primary layer in an amount not less than $2,000,000.

4. Employer's Liability: At least $1,000,000 each occurrence limit.

5. Workers' Compensation: The Contractor shall provide workers' compensation insurance in the amounts required by the industrial insurance laws of the State of Washington. For any employees not subject to the Washington State workers' compensation statute, the Contractor shall provide, and cause each Subcontractor to provide workers' compensation insurance with a private company in an amount equivalent to that provided by the workers' compensation statute, but no less than a $1,000,000 limit of liability for the protection of its employees not otherwise protected. Stop Gap Liability Insurance (Employer's Contingent Liability Insurance) shall be at least $1,000,000 Each Occurrence.

K. Proof of Insurance:

1. Prior to commencement of the Work, any presence on the site, or exposure to loss can occur, and in any event within seven (7) Days after the Owner has issued its Notice to Proceed, the Contractor shall furnish the Owner with the following:

   a. Two (2) copies of Certificates of Insurance evidencing all insurance required by the Contract Documents;

   b. A written statement of the actual costs (expressed as a percentage) of the Contractors' liability insurance under 2.01;

   c. Endorsements for additional insureds as listed in Section 2.01C.1;

   d. Two (2) copies of Department of Labor & Industries statements for state workers' compensation coverage.

2. All insurance policies and certificates must be signed copies. Edition dates of endorsements on policies obtained under this Section 2.01 shall be consistent.

3. All policies shall include the premium percentage to be paid by the Contractor for increases in the Contract Sum.

4. The Contractor shall furnish to the Owner copies of any subsequently issued endorsements amending, modifying, altering, or restricting coverage or limits.

5. Policies or certificates obtained under this part shall verify that the policy contains coverage for blanket contractual liability, including both oral and written contracts, and acknowledge the indemnification provisions and liability coverages called for by this Contract.

6. Upon written request, the Contractor shall provide a copy of its policies obtained under this part to the Owner within five (5) business days.

7. All insurance certificates obtained pursuant to this part will:

   a. Name Owner's Project number and Project title.

   b. State the insurance carrier's A.B. Best rating.

   c. Evidence full compliance with the requirements of Section 2.01.

d. Specifically require written notice by certified mail must be provided to the Owner at least forty-five (45) Days before the policies expire, are cancelled, or are reduced; the limits are decreased; or the additional insureds removed, except that thirty (30) Days' notice shall be required for surplus line insurance.

8. Notwithstanding anything herein to the contrary, the Contractor shall provide all bonding, insurance, and permit documentation as required by governmental entities for all portions of the Project.

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

10. The Owner may withhold payment pending receipt of all certificates of insurance meeting the requirements of Section 2.01K. Failure to withhold payment shall not constitute a waiver of any provision of the Contract.

2.02 PAYMENT AND PERFORMANCE BONDS

A. In accordance with Chapter 39.08 RCW ("Contractor's Bond"), the Contractor will furnish to the Owner bonds, with a surety company admitted and licensed in the State of Washington and acceptable to the Owner, conditioned that the Contractor will: (1) faithfully perform all provisions of this Contract (the "Performance Bond"); and (2) pay all laborers, mechanics, Subcontractors, and materialmen, and all persons who supply such person, persons, or Subcontractors, with provisions and supplies for carrying out the Project and pay the taxes, increases, and penalties incurred on the Project under state law (the "Payment Bond"). Each of the Performance Bond and Payment Bond will be in the full amount of the Contract Sum. Such surety company will possess an A.M. Best rating of "A" or better and a financial rating of no less than "IX."

B. Bond forms must be deemed acceptable and approved by Owner. Owner shall deem acceptable and approve payment and performance bonds that use the Payment Bond and Performance Bond form published by and available from the American Institute of Architects (AIA) – form A312. Separate bonds for payment and performance must be provided to Owner. Provision of payment and performance bonds by Contractor to Owner is a condition precedent to performance by Owner.

C. Prior to execution of a Change Order that, cumulatively with previous Change Orders, increases the Contract Award Amount by ten (10) percent or more, the Contractor shall provide either new payment and performance bonds for the revised Contract Sum, or riders to the existing payment and performance bonds increasing the amount of the bonds. The Contractor shall likewise provide additional bonds or riders when subsequent Change Orders increase the Contract Sum by ten (10) percent or more.

D. No payment or performance bonds are required if the Contract Sum is $150,000 or less and Owner and Contractor agree that Owner may, in lieu of the bond, retain 10 percent of the Contract Sum for the period allowed by RCW 39.08.010.

E. All reinsurers that may be called upon to support or share in a surety's obligations specified in connection with the performance and payment bond obligations required of the Contractor by this Contract must also have an A.M. Best rating of "A" or better and financial rating of not less than "IX."

F. Within seven (7) days of the issuance of Owner's Notice of Intent to Award the Contract, the Contractor will deliver evidence of its bondability to the Owner. Within seven (7) days after its execution of the Contract, the Contractor will deliver copies of the bonds to the Owner.

G. THE OWNER MAY DECLINE TO ENTER INTO THE CONTRACT IF THE REQUESTED EVIDENCE OF BONDABILITY IS NOT RECEIVED. THE CONTRACTOR WILL NOT PROCEED WITH THE WORK UNTIL SUCH SURETY BOND IS RECEIVED. Evidence of bondability shall include the percentage to be paid by the Contractor for increases in the Contract Sum.

H. Upon request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor will promptly furnish a copy of the bond(s) or will authorize a copy to be furnished.

I. Additional Bond Security: The Contractor will promptly furnish additional security required to protect Owner and persons supplying labor or materials required by this Contract if: (1) Owner has a reasonable objection to the surety; or (2) any surety fails to furnish reports on its financial condition if required by Owner.

J. Potential Subcontractors' Payment and Performance Bonds: Within ten (10) days after the issuance of the Notice to Proceed, any Subcontractors so required in the Bidding or Contract Documents or Special Conditions shall deliver evidence of their payment and performance bondability to the Owner through the Contractor. The evidence shall include a letter from the bonding company that includes the price of payment and performance bonds to be issued during the thirty (30) day period after the Notice to Proceed. The surety company must be acceptable to the Owner and admitted and licensed in the State of Washington, with an A.M. Best rating of "A" or better and a financial rating of no less than "VIII." The bonds shall be in an amount equal to the full contract sum of the Subcontract between the Subcontractor and the Contractor but shall not include sales tax. The bonds shall be conditioned that the Subcontractor shall faithfully perform all the provisions of its subcontract, payment of all obligations arising thereunder, and for one year's maintenance for correction of defective work. If the Owner elects to require payment and performance bonds from one or more of the Subcontractors, it will so notify the Contractor in writing within fourteen (14) days of receipt of the evidence of bondability from the respective Subcontractor, in which case the Contract Sum shall be increased by a Change Order in the amount specified in the letter, unless otherwise agreed by the parties. The Owner shall not be responsible for the costs of any Subcontractor bonds it requires until the Owner receives a copy of the bond. THE OWNER MAY DECLINE TO ENTER INTO THE CONTRACT OR MAY REQUIRE A CHANGE OF SUBCONTRACTOR AT NO INCREASE IN THE CONTRACT SUM OR CONTRACT TIME IF THIS EVIDENCE OF BONDABILITY IS NOT RECEIVED. THE OWNER MAY WITHHOLD PAYMENT TO THE CONTRACTOR UNTIL SUCH SURETY BONDS ARE RECEIVED. Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a

copy of the bonds or shall permit a copy to be made. The Subcontractors responsible to the Contractor for the work listed in the Instructions to Bidders must comply with this paragraph to the extent directed by the Owner.

K. If the Owner is damaged by the failure of the Contractor to maintain any of the bonds or insurance in this Section 2.02 or elsewhere in the Contract Documents or to so notify the Owner, then the Contractor will bear all costs attributable thereto. The Owner may withhold payment pending receipt of all certificates of insurance and bonds. Failure to withhold payment will not constitute a waiver.

2.03 ALTERNATIVE SURETY

A. When alternative surety required: Contractor shall promptly furnish payment and performance bonds from an alternative surety as required to protect Owner and persons supplying labor or materials required by the Contract Documents if:

1. Owner has a reasonable objection to the surety; or

2. Any surety fails to furnish reports on its financial condition if required by Owner.

2.04 BUILDER'S RISK

A. Contractor to buy Property Insurance: Contractor shall purchase and maintain property insurancein the amount of the Contract Sum, including all Change Orders for the Work, on a replacement-cost basis until Substantial Completion. For projects not involving New Building Construction, "Installation Floater" is an acceptable substitute for the Builder's Risk Insurance. The insurance shall cover the interest of Owner, Contractor, and any Subcontractors, as their interests may appear.

B. Losses covered: Contractor property insurance shall be placed on an "all risk" basis and insure against the perils of fire and physical loss or damage including theft, vandalism, malicious mischief, collapse, false work, temporary buildings, and debris removal (including demolition occasioned by enforcement of any applicable legal requirements), and shall cover reasonable compensation for A/E's services and expenses required as a result of an insured loss.

C. Waiver of subrogation rights: Owner and Contractor waive all subrogation rights against each other, any Subcontractors, A/E, A/E's subconsultants, separate contractors described herein, if any, and any of their subcontractors, for damages caused by fire or other perils to the extent covered by property insurance obtained pursuant to this section or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by Owner as fiduciary. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

PART 3 – TIME AND SCHEDULE

3.01 PROGRESS AND COMPLETION

Contractor to meet schedule: Contractor shall diligently prosecute the Work, with adequate forces, achieve Substantial Completion within the Contract Time, and achieve Final Completion within a reasonable period thereafter.

3.02 CONSTRUCTION SCHEDULE

A. Preliminary Progress Schedule: Contractor shall, within 14 Days after issuance of the Notice to Proceed, submit a preliminary Progress Schedule. The Progress Schedule shall show the sequence in which Contractor proposes to perform the Work and the dates on which Contractor plans to start and finish major portions of the Work, including dates for Shop Drawings and other submittals, and for acquiring materials and equipment.

B. Form of Progress Schedule: The Progress Schedule shall be in the form of a bar chart, or a critical path method analysis, as specified by Owner. The preliminary Progress Schedule may be general, showing the major portions of the Work, with a more detailed Progress Schedule submitted as directed by Owner.

C. Owner comments on Progress Schedule: Owner shall return comments on the preliminary Progress Schedule to Contractor within 14 Days of receipt. Review by Owner of Contractor's schedule does not constitute an approval or acceptance of Contractor's construction means, methods, or sequencing, or its ability to complete the Work within the Contract Time. Contractor shall revise and resubmit its schedule, as necessary. Owner may withhold a portion of progress payments until a Progress Schedule has been submitted which meets the requirements of this section.

D. Monthly updates and compliance with Progress Schedule: Contractor shall utilize and comply with the Progress Schedule. On a monthly basis, or as otherwise directed by Owner, Contractor shall submit an updated Progress Schedule at its own expense to Owner indicating actual progress. If, in the opinion of Owner, Contractor is not in conformance with the ProgressSchedule for reasons other than acts of Force Majeure as identified in Section 3.05, Contractor shall take such steps as are necessary to bring the actual completion dates of its work activities into conformance with the Progress Schedule, and if directed by Owner, Contractor shall submit acorrective action plan or revise the Progress Schedule to reconcile with the actual progress of theWork.

E. Contractor to notify Owner of delays: Contractor shall promptly notify Owner in writing of any actual or anticipated event which is delaying or could delay achievement of any milestone or performance of any critical path activity of the Work. Contractor shall indicate the expected duration of the delay, the anticipated effect of the delay on the Progress Schedule, and the action being or to be taken to correct the problem. Provision of such notice does not relieve Contractor of its obligation to complete the Work within the Contract Time.

3.03 OWNER'S RIGHT TO SUSPEND THE WORK FOR CONVENIENCE

A. Owner may suspend Work: Owner may, at its sole discretion, order Contractor, in writing, to suspend all or any part of the Work for up to 90 Days, or for such longer period as mutually agreed.

B. Compliance with suspension; Owner's options: Upon receipt of a written notice suspending the Work, Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of cost of performance directly attributable to such suspension. Within a period up to 90 Days after the notice is delivered to Contractor, or within any extension of that period to which the parties shall have agreed, Owner shall either:

1. Cancel the written notice suspending the Work; or

2. Terminate the Work covered by the notice as provided in the termination

provisions ofPart 9.

C. Resumption of Work: If a written notice suspending the Work is cancelled or the period of the notice or any extension thereof expires, Contractor shall resume Work.

D. Equitable adjustment for suspensions: Contractor shall be entitled to an equitable adjustment in the Contract Time, or Contract Sum, or both, for increases in the time or cost of performance directly attributable to such suspension, provided Contractor complies with all requirements set forth in Part 7.

3.04 OWNER'S RIGHT TO STOP THE WORK FOR CAUSE

A. Owner may stop Work for Contractor's failure to perform: If Contractor fails or refuses to perform its obligations in accordance with the Contract Documents, Owner may order Contractor, in writing, to stop the Work, or any portion thereof, until satisfactory corrective action has been taken.

B. No equitable adjustment for Contractor's failure to perform: Contractor shall not be entitled to an equitable adjustment in the Contract Time or Contract Sum for any increased cost or time of performance attributable to Contractor's failure or refusal to perform or from any reasonable remedial action taken by Owner based upon such failure.

3.05 DELAY

A. Force Majeure actions not a default; Force Majeure defined: Any delay in or failure of performance by Owner or Contractor, other than the payment of money, shall not constitute a default hereunder if and to the extent the cause for such delay or failure of performance was unforeseeable and beyond the control of the party ("Force Majeure"). Acts of Force Majeure include, but are not limited to:

1. Acts of God or the public enemy;
2. Acts or omissions of any government entity;
3. Fire or other casualty for which Contractor is not responsible;
4. Quarantine or epidemic;
5. Strike or defensive lockout;
6. Unusually severe weather conditions which could not have been reasonably anticipated;and
7. Unusual delay in receipt of supplies or products which were ordered and expedited and for which no substitute reasonably acceptable to Owner was available. The pandemic of the disease COVID-19 and the consequences thereof do not constitute a Force Majeure Event.

B. Contract Time adjustment for Force Majeure: Contractor shall be entitled to an equitable adjustment in the Contract Time for changes in the time of performance directly attributable to an act of Force Majeure, provided it makes a request for equitable adjustment according to Section 7.03. Contractor shall not be entitled to an adjustment in the Contract Sum resulting from an act of Force Majeure.

C. Contract Time or Contract Sum adjustment if Owner at fault: Contractor shall be entitled to

an equitable adjustment in Contract Time, and may be entitled to an equitable adjustment in Contract Sum, if the cost or time of Contractor's performance is changed due to the fault or negligence of Owner, provided the Contractor makes a request according to Sections 7.02 and 7.03.

D. No Contract Time or Contract Sum adjustment if Contractor at fault: Contractor shall not be entitled to an adjustment in Contract Time or in the Contract Sum for any delay or failure of performance to the extent such delay or failure was caused by Contractor or anyone for whose acts Contractor is responsible.

E. Contract Time adjustment only for concurrent fault: To the extent any delay or failure of performance was concurrently caused by the Owner and Contractor, Contractor shall be entitled to an adjustment in the Contract Time for that portion of the delay or failure of performance that was concurrently caused, provided it makes a request for equitable adjustment according to Section 7.03, but shall not be entitled to an adjustment in Contract Sum.

F. Contractor to mitigate delay impacts: Contractor shall make all reasonable efforts to prevent and mitigate the effects of any delay, whether occasioned by an act of Force Majeure or otherwise.

3.06 NOTICE TO OWNER OF LABOR DISPUTES

A. Contractor to notify Owner of labor disputes: If Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay timely performance in accordance with theContract Documents, Contractor shall immediately give notice, including all relevant information, to Owner.

B. Pass through notification provisions to Subcontractors: Contractor agrees to insert a provision in its Subcontracts and to require insertion in all sub-subcontracts, that in the event timely performance of any such contract is delayed or threatened by delay by any actual or potential labor dispute, the Subcontractor or Sub-subcontractor shall immediately notify the next higher tierSubcontractor or Contractor, as the case may be, of all relevant information concerning the dispute.

3.07 DAMAGES FOR FAILURE TO ACHIEVE TIMELY COMPLETION

A. Liquidated Damages

1. Reason for Liquidated Damages: Timely performance and completion of the Work is essential to Owner and time limits stated in the Contract Documents are of the essence. Owner will incur serious and substantial damages if Substantial Completion of the Work does not occur within the Contract Time. However, it would be difficult if not impossible to determine the exact amount of such damages. Consequently, provisions for liquidated damages are included in the Contract Documents.

2. Calculation of Liquidated Damages amount: The liquidated damage amounts set forth in the Contract Documents will be assessed not as a penalty, but as liquidated damages forbreach of the Contract Documents. This amount is fixed and agreed upon by and between the Contractor and Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain. This amount shall be construed as the actual amount of damages sustained by the Owner, and may be retained by the Owner and

deducted from periodic payments to the Contractor.

3. Contractor responsible even if Liquidated Damages assessed: Assessment of liquidated damages shall not release Contractor from any further obligations or liabilities pursuant tothe Contract Documents.

B. Actual Damages

Calculation of Actual Damages: Actual damages will be assessed for failure to achieve Final Completion within the time provided. Actual damages will be calculated on the basis of direct architectural, administrative, and other related costs attributable to the Project from the date when Final Completion should have been achieved, based on the date Substantial Completion is actually achieved, to the date Final Completion is actually achieved. Owner may offset these costs against any payment due Contractor.

C. Waiver of Claims for Consequential Damages

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

1. Damages incurred by Owner for rental expenses, for income, profit, financing, business, and reputation, and for loss of management or employee productivity or of the services of such persons; and

2. Damages incurred by the Contractor for principal and home office overhead and expenses including, without limitation, the compensation of personnel stationed there, for losses of financing, business and reputation, for losses on other projects, for interest or financing costs, and for loss of profit, except as explicitly allowed under the Contract Documents.

PART 4 – SPECIFICATIONS, DRAWINGS, AND OTHER DOCUMENTS

4.01 DISCREPANCIES AND CONTRACT DOCUMENT REVIEW

A. Specifications and Drawings are basis of the Work: The intent of the Specifications and Drawings is to describe a complete Project to be constructed in accordance with the Contract Documents. Contractor shall furnish all labor, materials, equipment, tools, transportation, permits, and supplies, and perform the Work required in accordance with the Drawings, Specifications, and other provisions of the Contract Documents.

B. Parts of the Contract Documents are complementary: The Contract Documents are complementary. What is required by one part of the Contract Documents shall be binding as if required by all. Anything mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be of like effect as if shownor mentioned in both.

C. Contractor to report discrepancies in Contract Documents: Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by Owner. If, during the performance of the Work, Contractor finds a conflict, error, inconsistency, or omission in the Contract Documents, it shall promptly and before proceeding with the Work affected thereby, report such conflict, error, inconsistency, or omission to the Owner (and A/E, if applicable) in writing.

D. Contractor knowledge of discrepancy in documents – responsibility: Contractor shall do no Work without applicable Drawings, Specifications, or written modifications, or Shop

Drawings where required, unless instructed to do so in writing by Owner. If Contractor performs any construction activity, and it knows or reasonably should have known that any of the Contract Documents contain a conflict, error, inconsistency, or omission, Contractor shall be responsible for theperformance and shall bear the cost for its correction.

E. Contractor to perform Work implied by Contract Documents: Contractor shall provide any work ormaterials the provision of which is clearly implied and is within the scope of the ContractDocuments even if the Contract Documents do not mention them specifically.

F. Interpretation questions: Questions regarding interpretation of the requirements of the Contract Documents shall be referred to the Owner (and A/E, if applicable).

4.02 PROJECT RECORD

A. Contractor to maintain Project Record Drawings and Specifications: Contractor shall legibly mark in ink on a separate set of the Drawings and Specifications all actual construction, including depths of foundations, horizontal and vertical locations of internal and underground utilities, and appurtenances referenced to permanent visible and accessible surface improvements, field changes of dimensions and details, actual suppliers, manufacturers and trade names, models of installed equipment, and Change Order Proposals (COP). This separate set of Drawings and Specifications shall be the "Project Record."

B. Update Project Record weekly and keep on site: The Project Record shall be maintained on the project site throughout the construction and shall be clearly labeled "PROJECT RECORD." The Project Record shall be updated at least weekly noting all changes and shall be available to Owner at all times.

C. Final Project Record before Final Acceptance: Contractor shall submit the completed and finalized Project Record to the Owner (and A/E, if applicable) prior to Final Acceptance.

4.03 SHOP DRAWINGS

A. Definition of Shop Drawings: "Shop Drawings" means documents and other information required to be submitted to the Owner (or A/E, if applicable) by Contractor pursuant to the Contract Documents, showing in detail: the proposed fabrication and assembly of structural elements; and the installation (i.e., form, fit, and attachment details) of materials and equipment. Shop Drawings include, but are not limited to, drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, samples, and similar materials furnished by Contractor to explain in detail specific portions of the Work required by the Contract Documents. For materials and equipment to be incorporated into the Work, Contractor submittal shall include the name of the manufacturer, the model number, and other information concerning the performance, capacity, nature, and rating of the item. When directed, Contractor shall submit all samples at its own expense. Owner may duplicate, use, and disclose Shop Drawings provided in accordance with the Contract Documents.

B. Approval of Shop Drawings: Contractor shall coordinate all Shop Drawings, and review them for accuracy, completeness, and compliance with the Contract Documents and shall indicate its approval thereon as evidence of such coordination and review. Where required by law, Shop Drawings shall be stamped by an appropriate professional licensed by the state of Washington. Shop Drawings submitted to the Owner (or A/E, if applicable) without evidence of Contractor's approval shall be returned for resubmission. Contractor shall review, approve, and submit Shop Drawings with reasonable promptness and in such

sequence as to cause no delay in the Work or in the activities of Owner or separate contractors. Contractor's submittal schedule shall allow a reasonable time for the Owner (or A/E, if applicable) to review. The Owner (or A/E, if applicable) will review, approve, or take other appropriate action on the Shop Drawings. Contractor shall perform no portion of the Work requiring submittal and review ofShop Drawings until the respective submittal has been reviewed and the A/E, if applicable, or Owner has approved or taken other appropriate action. The A/E and/or Owner, as applicable, shall respond to Shop Drawing submittals with reasonable promptness. Any Work by Contractor shall be in accordance with reviewed Shop Drawings. Submittals made by Contractor which are not required by the Contract Documents may be returned without action.

C. Contractor not relieved of responsibility when Shop Drawings approved: Approval, or other appropriate action with regard to Shop Drawings, by Owner or A/E shall not relieve Contractor of responsibility for any errors or omissions in such Shop Drawings, nor from responsibility for compliance with the requirements of the Contract Documents. Unless specified in the Contract Documents, review by Owner or A/E shall not constitute an approval of the safety precautions employed by Contractor during construction, or constitute an approval of Contractor's means or methods of construction. If Contractor fails to obtain approval before installation and the item or work is subsequently rejected, Contractor shall be responsible for all costs of correction.

D. Variations between Shop Drawings and Contract Documents: If Shop Drawings show variations from the requirements of the Contract Documents, Contractor shall describe such variations in writing, separate from the Shop Drawings, at the time it submits the Shop Drawings containing such variations. If the Owner (or A/E, if applicable) approves any such variation, an appropriate Change Order will be issued. If the variation is minor and does not involve an adjustment in the Contract Sum or Contract Time,a Change Order need not be issued; however, the modification shall be recorded upon the Project Record.

E. Contractor to submit copies of Shop Drawings: Contractor shall submit to A/E and Owner for approval five (5)copies of all Shop Drawings. Unless otherwise indicated, three (3) sets of all Shop Drawings shall be retained by A/E, if applicable, or the Owner and two (2) sets shall be returned to Contractor.

4.04 ORGANIZATION OF SPECIFICATIONS

Specification organization by trade: Specifications may be prepared in sections which conform generally with trade practices. These sections are for Owner and Contractor convenience and shall not control Contractor in dividing the Work among the Subcontractors or in establishing the extent of the Work to be performed by any trade.

4.05 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS, AND OTHER DOCUMENTS

A. A/E, not Contractor, owns Copyright of Drawings and Specifications: The Drawings, Specifications, and other documents prepared by A/E, if any, are instruments of A/E's service through which the Work to be executed by Contractor is described. Neither Contractor nor any Subcontractor shall own or claim a copyright in the Drawings, Specifications, and other documents prepared by A/E, if any, and A/E shall be deemed the author of them and will, along with anyrights of Owner, retain all common law, statutory, and other reserved rights, in addition to the copyright. All copies of these documents, except Contractor's set, shall be returned or suitably accounted for to A/E, on request, upon completion of the Work.

B. Drawings and Specifications to be used only for this Project: The Drawings, Specifications, and other documents prepared by the A/E, if any, and copies thereof furnished to Contractor, are for use solely with respect to this Project. They are not to be used by Contractor or any Subcontractor onother projects or for additions to this Project outside the scope of the Work without the specific written consent of Owner (and A/E, if applicable). Contractor and Subcontractors are granted a limited license to use and reproduce applicable portions of the Drawings, Specifications, and other documents prepared by A/E, if any, appropriate to and for use in the execution of their Work.

C. Shop Drawing license granted to Owner: Contractor and all Subcontractors grant a non-exclusivelicense to Owner, without additional cost or royalty, to use for its own purposes (including reproduction) all Shop Drawings, together with the information and diagrams contained therein, prepared by Contractor or any Subcontractor. In providing Shop Drawings, Contractor and all Subcontractors warrant that they have authority to grant to Owner a license to use the Shop Drawings, and that such license is not in violation of any copyright or other intellectual property right. Contractor agrees to defend and indemnify Owner pursuant to the indemnity provisions in Section 5.03 and 5.22 from any violations of copyright or other intellectual property rights arising out of Owner's use of the Shop Drawings hereunder, or to secure for Owner, at Contractor's own cost, licenses in conformity with this section.

D. Shop Drawings to be used only for this Project: The Shop Drawings and other submittals prepared by Contractor, Subcontractors of any tier, or its or their equipment or material suppliers, and copies thereof furnished to Contractor, are for use solely with respect to this Project. They are not to be used by Contractor or any Subcontractor of any tier, or material or equipment supplier, on other projects or for additions to this Project outside the scope of the Work without the specific written consent of Owner. The Contractor, Subcontractors of any tier, and material or equipment suppliers are granted a limited license to use and reproduce applicable portions of the Shop Drawings and other submittals appropriate to and for use in the execution of their Work under the Contract Documents.

PART 5 – PERFORMANCE

5.01 CONTRACTOR CONTROL AND SUPERVISION

A. Contractor responsible for means and methods of construction: Contractor shall supervise and direct the Work, using its best skill and attention, and shall perform the Work in a skillful manner. Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work, unless the Contract Documents give other specific instructions concerning these matters. Contractor shall disclose its means and methods of construction when requested by Owner.

B. Compliance with laws: The Contractor shall abide by the provisions of all applicable Washington statutes and regulations and all those provisions of the county and city municipal codes that apply in the jurisdiction where the Project is located. Although a number of statutes are referenced in the Contract Documents, these references are not meant to be a complete list and should not be relied upon as such.

C. WSSP compliance: The Parties acknowledge and agree that to the extent this Project receives Washington State funds for school construction, design and construction of the Project must meet at least the Washington Sustainable Schools Protocol (WSSP) requirements in accordance with Chapter 39.35D RCW. The Contractor will provide all

services, including, but not limited to, labor and materials, required to construct the Project such that it fully meets all WSSP requirements in effect at the time the Project, or any portion thereof, is completed. The Contractor will fully participate in any and all activities required by state law or regulations or the WSSP to achieve WSSP compliance and approval, including, but not limited to, providing all applications, documentation, and reports (annual or otherwise) requested by Owner or mandated by the WSSP. The Contractor will manage environmental issues and implement and document the Project's WSSP requirements, including but not limited to: monitoring the submittal process to ensure WSSP compliance, training Subcontractors in WSSP requirements, reviewing design changes during construction for WSSP impacts and informing the Owner of said impacts, ensuring installed products are WSSP compliant, and assembling, maintaining, and submitting all records to document WSSP compliance, including but not limited to annual reports.

D. Competent superintendent required: Performance of the Work shall be directly supervised by a competent superintendent who has authority to act for Contractor. The superintendent must be satisfactory to the Owner and shall not be changed without the prior written consent of Owner. Owner may require Contractor to remove the superintendent from the Work or Project site, if Owner reasonably deems the superintendent incompetent, careless, or otherwise objectionable, provided Owner has first notified Contractor in writing and allowed a reasonable period for transition.

E. Contractor responsible for acts and omissions of self and agents: Contractor shall be responsible to Owner for acts and omissions of Contractor, Subcontractors, and their employees and agents.

F. Unemployment Compensation: Pursuant to Chapter 50.24 RCW ("Contributions by Employers") in general and RCW 50.24.130 in particular, the Contractor shall pay contributions for wages for personal services performed under this Contract or arrange for a bond acceptable to the Commissioner of the ESD.

G. Contractor to employ competent and disciplined workforce: Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Work, including observance of badging, drug testing, and all smoking, tobacco, drug, alcohol, parking, safety, weapons, background checks, sexual harassment, and other rules governing the conduct of personnel at Owner's property and at the Project site.

1. Copies of the Owner's policies and procedures applicable to the Project are available at https://www.sequimschools.org/School_Board/policies-_procedures.

2. Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

3. No employees of either Contractor or any of its Subcontractors of any tier shall harass, intimidate, have physical contact with, or engage in other verbal or physical conduct or communication of a sexual, intimidating, or harassing nature with students, parents, volunteers, or Owner's directors, officers, or employees, nor create an intimidating, hostile, or offensive environment.

4. Without limiting the foregoing, Contractor shall remove from the Work and Project site any employee, agent, or other person who has violated Owner's policies and/or procedures or otherwise engaged in actions that Owner reasonably considers objectionable without change in the Contract Sum or Contract Time.

5. Contractor shall also ensure by appropriate provisions in each subcontract agreement that Contractor may remove from the Work and Work site any Subcontractor or Subcontractor's employee who has violated District policies/procedures or engaged in such action without change in the Contract Sum or Contract Time.

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

H. Tobacco-Free Environment: Pursuant to RCW 28A.210.310, smoking or use of any kind of lighted pipe, cigar, cigarette, vaping device, or any other lighted smoking equipment, tobacco material, or smokeless tobacco product is prohibited on all District property.

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

J. Background checks: All employees of Contractor and Subcontractors of any tier who may have unsupervised access to students shall undergo a record check through the Washington State Patrol criminal investigation system under RCW 43.43.830-.834, RCW 10.97.030, and RCW 10.97.050, and through the Federal Bureau of Investigation, before working at the Project site. The record check will include a fingerprint check using a complete Washington State criminal identification fingerprint card. Contractor will provide the results of the record check to the subject of the records and to Owner. Contractor will pay all costs of the requirements set forth in this provision. When necessary, applicants may be employed on a conditional basis pending completion of the background check. In addition, any agreements between the Contractor and Subcontractors of any tier who will perform services for Owner will include this provision requiring the Subcontractor to comply with RCW 28A.400.303.

K. Crimes Against Children: The Contractor will prohibit any employee of the Contractor from working at the Project site who has pleaded guilty to or been convicted of any crime enumerated in RCW 28A.400.322, as now or hereafter amended. Any failure to comply with this Section 5.01K will be grounds for the Owner to immediately terminate the Contract. In addition, any agreements between the Contractor and Subcontractors of any tier who will perform services for the Owner will include this provision requiring the Subcontractor to prohibit any employee of said Subcontractor from working at a public school or the Project site who has pleaded guilty to or been convicted of any crime enumerated in RCW 28A.400.322.

L. Contractor to keep Project documents on site: Contractor shall keep on the Project site a copy of the Drawings, Specifications, addenda, reviewed Shop Drawings, and permits and permit drawings.

M. Work during off hours: When work is to be performed during other than normal working hours or on Sequim School District holidays, Contractor shall give Owner prior notice. Any construction activity between the hours of 10:00 p.m. to 6:00 a.m. is subject to approval of

Owner.

N. Without limiting Section 9.01, failure to comply with these requirements in Section 5.01 is grounds for immediate termination of the Contract for cause.

5.02 PERMITS, FEES, AND NOTICES

A. Contractor to obtain and pay for permits: Unless otherwise provided in the Contract Documents, Contractor shall pay for and obtain all permits, licenses, and inspections necessary for proper execution and completion of the Work. Prior to Final Acceptance, the approved, signed permits shall be delivered to Owner.

B. Allowances for permit fees: If allowances for permits or utility fees are called for in the Contract Documents and set forth in Contractor's bid, and the actual costs of those permits or fees differ from the allowances in the Contract Documents, the difference shall be adjusted by Change Order.

C. Contractor to comply with all applicable laws: Contractor shall comply with and give notices required by all federal, state, and local laws, ordinances, rules, regulations, and lawful orders of public authorities applicable to performance of the Work.

5.03 PATENTS AND ROYALTIES

Payment, indemnification, and notice: Contractor is responsible for, and shall pay, all royalties and license fees. Contractor shall defend, indemnify, and hold Owner harmless from any costs, expenses, and liabilities arising out of the infringement by Contractor of any patent, copyright, or other intellectual property right used in the Work; however, provided that Contractor gives prompt notice, Contractor shall not be responsible for such defense or indemnity when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents. If Contractor has reason to believe that use of the required design, process, or product constitutes an infringement of a patent or copyright, it shall promptly notify Owner of such potential infringement.

5.04 PREVAILING WAGES

A. Contractor to Pay Prevailing Wages: Contractor shall pay the prevailing rate of wages to all workers, laborers, or mechanics employed in the performance of any part of the Work in accordance with Chapter 39.12 RCW and the rules and regulations of the Department of Labor and Industries. The schedule of prevailing wage rates for the locality or localities of the Work, is determined by the Industrial Statistician of the Department of Labor and Industries. It is the Contractor's responsibility to verify the applicable prevailing wage rate.

B. Statement of Intent to Pay Prevailing Wages: Before payment is made by the Owner to the Contractor for any work performed by the Contractor and Subcontractors whose work is included in the application for payment, the Contractor shall submit, or shall have previously submitted to the Owner for the Project, a Statement of Intent to Pay Prevailing Wages, approved by the Department of Labor and Industries, certifying the rate of hourly wage paid and to be paid each classification of laborers, workers, or mechanics employed upon the Work by Contractor and Subcontractors. Such rates of hourly wage shall not be less than the prevailing wage rate.

C. Affidavit of Wages Paid: Prior to release of retainage, the Contractor shall submit to the Owner an Affidavit of Wages Paid, approved by the Department of Labor and Industries, for the Contractor and every Subcontractor, of any tier, that performed work on the Project.

D. Disputes: Disputes regarding prevailing wage rates shall be referred for arbitration to the Directorof the Department of Labor and Industries. The arbitration decision shall be final and conclusive and binding on all parties involved in the dispute as provided for by RCW 39.12.060.

E. Statement with Pay Application; Post Statements of Intent at Jobsite: Each Application for Payment submitted by Contractor shall state that prevailing wages have been paid in accordance with the pre-filed statement(s) of intent, as approved. Copies of the approved intent statement(s) shall be posted on the job site with the address and telephone number of the Industrial Statistician of the Department of Labor and Industries where a complaint or inquiry concerning prevailing wages may be made.

F. Contractor to Pay for Statements of Intent and Affidavits: In compliance with Chapter 296-127 WAC, Contractor shall pay to the Department of Labor and Industries the currently established fee(s) for each statement of intent and/or affidavit of wages paid submitted to the Department of Labor and Industries for certification.

G. Certified Payrolls: Consistent with WAC 296-127-320, the Contractor and any Subcontractor shallsubmit a certified copy of payroll records if requested.

5.05 HOURS OF LABOR

A. Overtime: Contractor shall comply with all applicable provisions of Chapter 49.28 RCW, which are incorporated herein by reference. Pursuant to that statute, no laborer, worker, or mechanic employed by Contractor, any Subcontractor, or any other person performing or contracting to do the whole or any part of the Work, shall be permitted or required to work more than eight (8) hours in any one calendar day, provided, that in cases of extraordinary emergency, such as danger to life or property, the hours of work may be extended, but in such cases the rate of pay for time employed in excess of eight (8) hours of each calendar day shall be not less than one and one-half (1.5) times the rate allowed for this same amount of time during eight (8) hours of service.

B. 4-10 Agreements: Notwithstanding the preceding paragraph, Chapter 49.28 RCW permits the Contractor or a Subcontractor subject to those provisions to enter into an agreement with its employees in which the employees work up to ten (10) hours in a calendar day. No such agreement may provide that the employees work ten (10) hour days for more than four (4) calendar days a week. Any such agreement is subject to approval by the employees. The overtime provisions of Chapter 49.28 RCW shall not apply to the hours, up to forty (40) hours per week, worked pursuant to any such agreement.

5.06 NONDISCRIMINATION

A. Discrimination prohibited by applicable laws: Discrimination in all phases of employment is prohibited by, among other laws and regulations, Title VII of the Civil Rights Act of 1964, the Vietnam Era Veterans Readjustment Act of 1974, Sections 503 and 504 of the Vocational Rehabilitation Act of 1973, the Equal Employment Act of 1972, the Age Discrimination Act of 1967, the Americans with Disabilities Act of 1990, the Civil Rights Act of 1991, Presidential Executive Order 11246, Executive Order 11375, the Washington State Law Against Discrimination, RCW 49.60, and Gubernatorial Executive Order 85-09. These laws and regulations establish minimum requirements for affirmative action and fair employment practices which Contractor must meet.

B. During performance of the Work:

1. Protected Classes: Contractor shall not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, marital status, or the presence of any physical, sensory, or mental disability, Vietnam era veteran status, ordisabled veteran status, nor commit any other unfair practices as defined in Chapter 49.60 RCW.

2. Advertisements to state nondiscrimination: Contractor shall, in all solicitations or advertisements for employees placed by or for it, state that all qualified applicants will be considered for employment, without regard to race, creed, color, national origin, sex, age,marital status, or the presence of any physical, sensory, or mental disability.

3. Contractor to notify unions and others of nondiscrimination: Contractor shall send to each labor union, employment agency, or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice advising the labor union, employment agency, or workers' representative of Contractor's obligations according to the Contract Documents and Chapter 49.60 RCW.

4. Owner and State access to Contractor records: Contractor shall permit access to its books, records, and accounts, and to its premises by Owner, and by the Washington State Human Rights Commission, for the purpose of investigation to ascertain compliance with this section of the Contract Documents.

5. Passthrough provisions to Subcontractors: Contractor shall include the provisions of thissection in every Subcontract.

C. Provisions for Aged and Handicapped Persons: The Contractor shall comply with applicable statutory provisions relating to public works of Chapter 70.92 RCW ("Provisions in Buildings for Aged and Handicapped Persons") and the federal Americans with Disabilities Act (ADA) and federal implementing regulations.

5.07 SAFETY PRECAUTIONS

A. Contractor responsible for safety: Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Work. The Contractor shall comply with pertinent provisions of Chapter 49.17 RCW ("Washington Industrial Safety and Health Act") and Chapter 296-155 WAC ("Safety Standards for Construction Work").

B. Contractor safety responsibilities: In carrying out its responsibilities according to the Contract Documents, Contractor shall protect the lives and health of employees performing the Work and other persons who may be affected by the Work; prevent damage to materials, supplies, and equipment whether on site or stored off-site; and prevent damage to other property at the site or adjacent thereto. Contractor shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property or to protectthem from damage, injury, or loss; shall erect and maintain all necessary safeguards for such safety and protection; and shall notify owners of adjacent property and utilities when prosecution of the Work may affect them.

C. Contractor to maintain safety records: Contractor shall maintain an accurate record of exposure data on all incidents relating to the Work resulting in death, traumatic injury, occupational disease,or damage to property, materials, supplies, or equipment. Contractor shall immediately report any such incident to Owner. Owner shall, at all times, have a right

of access to all records of exposure.

D. Contractor to provide HazMat training: Contractor shall provide all persons working on the Project site with information and training on hazardous chemicals in their work at the time of their initial assignment, and whenever a new hazard is introduced into their work area.

1. Information. At a minimum, Contractor shall inform persons working on the Project site of:

a. WAC: The requirements of Chapter 296-62 WAC, General Occupational Health Standards;

b. Presence of hazardous chemicals: Any operations in their work area where hazardous chemicals are present; and

c. Hazard communications program: The location and availability of written hazard communication programs, including the required list(s) of hazardous chemicals and material safety data sheets required by Chapter 296-62 WAC.

2. Training. At a minimum, Contractor shall provide training for persons working on the Project site which includes:

a. Detecting hazardous chemicals: Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (suchas monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);

b. Hazards of chemicals: The physical and health hazards of the chemicals in the work area;

c. Protection from hazards: The measures such persons can take to protect themselves from these hazards, including specific procedures Contractor, or its Subcontractors, or others have implemented to protect those on the Project site from exposure to hazardous chemicals, such as appropriate work practices,emergency procedures, and personal protective equipment to be used; and

d. Hazard communications program: The details of the hazard communications program developed by Contractor, or its Subcontractors, including an explanationof the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.

E. Hazardous, toxic, or harmful substances: Contractor's responsibility for hazardous, toxic, or harmful substances shall include the following duties:

1. Illegal use of dangerous substances: Contractor shall not keep, use, dispose, transport, generate, or sell on or about the Project site, any substances now or hereafter designated as, or which are subject to regulation as, hazardous, toxic, dangerous, or harmful by any federal, state, or local law, regulation, statute or ordinance (hereinafter collectively referred to as "hazardous substances"), in violation of any such law, regulation, statute, or ordinance, but in no case shall any such hazardous substance be stored more than 90 Days on the Project site.

2. Contractor notifications of spills, failures, inspections, and fines: Contractor shall

promptly notify Owner of all spills or releases of any hazardous substances which are otherwise required to be reported to any regulatory agency and pay the cost of cleanup. Contractor shall promptly notify Owner of all failures to comply with any federal, state, or local law, regulation, or ordinance; all inspections of the Project site by any regulatory entity concerning the same; all regulatory orders or fines; and all responses or interim cleanup actions taken by or proposed to be taken by any government entity or private party on the Project site.

F. Public safety and traffic: All Work shall be performed with due regard for the safety of the public. Contractor shall perform the Work so as to cause a minimum of interruption of vehicular traffic or inconvenience to pedestrians. All arrangements to care for such traffic shall be Contractor's responsibilities. All expenses involved in the maintenance of traffic by way of detours shall be borne by Contractor.

G. Contractor to act in an emergency: In an emergency affecting the safety of life, the Work, or adjoining property, Contractor is permitted to act, at its discretion, to prevent such threatened lossor injury, and Contractor shall so act if so authorized or instructed.

H. No duty of safety by Owner or A/E: Nothing provided in this section shall be construed as imposing any duty upon Owner (or A/E if applicable) with regard to, or as constituting any express or implied assumption of control or responsibility over, Project site safety, or over any other safety conditions relating to employees or agents of Contractor or any of its Subcontractors, or the public.

I. In order to receive a Notice to Proceed, the Contractor must submit the following to Owner:

1. A copy of its company Safety Program. The Safety Program shall contain, at a minimum, the following:

   a. Organization, including names of individuals who will perform safety duties, titles, work assignments, authority and reporting relationships.

   b. Training Program. Who, how and when training is provided; method of employee training concerning safety rules and procedures; training in use of protective equipment.

   c. Protective Equipment. List of personal protective equipment to be provided to employees.

   d. Accident Prevention and Loss Control Plan. Work site inspection and hazard correction procedures; disciplinary procedures for safety infractions; accident response, investigation and reporting procedures.

   e. Regular Safety Meetings. On-site weekly or other frequency as appropriate, safety meetings mandatory for all employees.

J. Prior to commencing any Work onsite, Contractor shall submit an appropriate site specific safety plan for Owner's acceptance. The plan must be tailored to the needs of the particular project and to the types of hazards involved, and be in compliance with WISHA requirements. Contractor shall not begin any on-site Work until the site-specific safety plan has been accepted by Owner.

K. COVID-19 Safety Compliance: Contractor shall comply with Owner's COVID-19 safety and mitigation protocols, as they may be revised from time to time and ensure that its owner(s)

and employees, and those of its Subcontractors, comply with such mitigation protocols. Contractor shall also comply with and ensure its owner(s) and employees, and those of its Subcontractors, comply with Proclamation 21-14.1 *et seq*.

5.08 OPERATIONS, MATERIAL HANDLING, AND STORAGE AREAS

A. Limited storage areas: Contractor shall confine all operations, including storage of materials, to Owner-approved areas.

B. Temporary buildings and utilities at Contractor expense: Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be provided by Contractor only with the consent of Owner and without expense to Owner. The temporary buildings and utilities shall be removed by Contractor at its expense upon completion of the Work.

C. Roads and vehicle loads: Contractor shall use only established roadways or temporary roadwaysauthorized by Owner. When materials are transported in prosecuting the Work, vehicles shall notbe loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by federal, state, or local law or regulation.

D. Ownership and reporting by Contractor of demolished materials: Ownership and control of all materials or facility components to be demolished or removed from the Project site by Contractor shall immediately vest in Contractor upon severance of the component from the facility orseverance of the material from the Project site. Contractor shall be responsible for compliance with all laws governing the storage and ultimate disposal. Contractor shall provide Owner with a copy of all manifests and receipts evidencing proper disposal when required by Owner or applicable law.

E. Contractor responsible for care of materials and equipment on-site: Contractor shall be responsible for the proper care and protection of its materials and equipment delivered to the Project site. Materials and equipment may be stored on the premises subject to approval of Owner. When Contractor uses any portion of the Project site as a shop, Contractor shall be responsible for any repairs, patching, or cleaning arising from such use.

F. Contractor responsible for loss of materials and equipment: Contractor shall protect and be responsible for any damage or loss to the Work, or to the materials or equipment until the date of Substantial Completion, and shall repair or replace without cost to Owner any damage or loss that may occur, except damages or loss caused by the acts or omissions of Owner. Contractor shall also protect and be responsible for any damage or loss to the Work, or to the materials or equipment, after the date of Substantial Completion, and shall repair or replace without cost to Owner any such damage or loss that might occur, to the extent such damages or loss are causedby the acts or omissions of Contractor, or any Subcontractor.

5.09 PRIOR NOTICE OF EXCAVATION

A. Excavation defined; Use of locator services: “Excavation” means an operation in which earth, rock, or other material on or below the ground is moved or otherwise displaced by any means, except the tilling of soil less than 12 inches in depth for agricultural purposes, or road ditch maintenance that does not change the original road grade or ditch flow line. Before commencing any excavation, Contractor shall provide notice of the scheduled commencement of excavation toall owners of underground facilities or utilities, through locator services.

5.10 UNFORESEEN PHYSICAL CONDITIONS

A. Notice requirement for concealed or unknown conditions: If Contractor encounters conditions at the site which are subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then Contractor shall give written notice to Owner promptly and in no event later than seven (7) Days after the first observance of the conditions. Conditions shall not be disturbed prior to such notice.

B. Adjustment in Contract Time and Contract Sum: If such conditions differ materially and cause a change in Contractor's cost of, or time required for, performance of any part of the Work, the Contractor may be entitled to an equitable adjustment in the Contract Time or Contract Sum, or both, provided it makes a request therefore as provided in Part 7.

C. Mold: If Contractor encounters mold in the course of its work, it shall notify Owner to evaluate what action might be necessary. Contractor shall ensure that all building materials used during the work are dry prior to incorporation into the Work. If Contractor encounters water intrusion from any source it shall take immediate steps to ensure that any effected material is dry according to generally accepted industry standards

5.11 PROTECTION OF EXISTING STRUCTURES, EQUIPMENT, VEGETATION, UTILITIES AND IMPROVEMENTS

A. Contractor to protect and repair property: Contractor shall protect from damage all existing structures, equipment, improvements, utilities, and vegetation: at or near the Project site; and on adjacent property of a third party, the locations of which are made known to or should be known by Contractor. Contractor shall repair any damage, including that to the property of a third party, resulting from failure to comply with the requirements of the Contract Documents or failure to exercise reasonable care in performing the Work. If Contractor fails or refuses to repair the damage promptly, Owner may have the necessary work performed and charge the cost to Contractor.

B. Tree and vegetation protection: Contractor shall only remove trees when specifically authorized to do so, and shall protect vegetation that will remain in place.

5.12 LAYOUT OF WORK

A. Advanced planning of the Work: Contractor shall plan and lay out the Work in advance ofoperations so as to coordinate all work without delay or revision.

B. Layout responsibilities: Contractor shall lay out the Work from any Owner-established baselines and benchmarks indicated on the Drawings, and shall be responsible for all field measurements in connection with the layout. Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the Work. Contractor shall be responsible for executing the Work to the lines and grades that may be established. Contractor shall be responsible for maintaining or restoring all stakes and other marks established.

5.13 MATERIAL AND EQUIPMENT

A. Contractor to provide new and equivalent equipment and materials: All equipment, material, and articles incorporated into the Work shall be new and of the most suitable grade for the

purpose intended, unless otherwise specifically provided in the Contract Documents. References in the Specifications to equipment, material, articles, or patented processes by tradename, make, or catalog number, shall be regarded as establishing a standard quality and shall not be construed as limiting competition. Contractor may, at its option, use any equipment, material, article, or process that, in the judgment of the Owner (or A/E if applicable), is equal to that named in the specifications, unless otherwise specifically provided in the Contract Documents. Contractor shall ensure that all equipment, materials, and articles incorporated into the Work shall be free of asbestos.

B. Contractor responsible for fitting parts together: Contractor shall do all cutting, fitting, or patching that may be required to make its several parts fit together properly, or receive or be received by work of others set forth in, or reasonably implied by, the Contract Documents. Contractor shall not endanger any work by cutting, excavating, or otherwise altering the Work and shall not cut or alter the work of any other contractor unless approved in advance by Owner.

C. Owner may reject defective Work: Should any of the Work be found defective, or in any way not in accordance with the Contract Documents, this work, in whatever stage of completion, may be rejected by Owner.

5.14 AVAILABILITY AND USE OF UTILITY SERVICES

A. Owner to provide and charge for utilities: Owner shall make all reasonable utilities available to Contractor from existing outlets and supplies, as specified in the Contract Documents. Unless otherwise provided in the Contract Documents, the utility service consumed shall be charged to or paid for by Contractor at prevailing rates charged to Owner or, where the utility is produced by Owner, at reasonable rates determined by Owner. Contractor will carefully conserve any utilities furnished.

B. Contractor to install temporary connections and meters: Contractor shall, at its expense and in a skillful manner satisfactory to Owner, install and maintain all necessary temporary connections and distribution lines, together with appropriate protective devices, and all meters required to measure the amount of each utility used for the purpose of determining charges. Prior to the date of Final Acceptance, Contractor shall remove all temporary connections, distribution lines, meters, and associated equipment and materials.

5.15 TESTS AND INSPECTIONS

A. Contractor to provide for all testing and inspection of Work: Contractor shall maintain an adequate testing and inspection program and perform such tests and inspections as are necessary or required to ensure that the Work conforms to the requirements of the Contract Documents. Contractor shall be responsible for inspection and quality surveillance of all its Work and all Work performed by any Subcontractor. Unless otherwise provided, Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. Contractor shall give Owner timely notice of when and where tests and inspections are to be made. Contractor shall maintain complete inspection records and make them available to Owner.

B. Owner may conduct tests and inspections: Owner may, at any reasonable time, conduct such inspections and tests as it deems necessary to ensure that the Work is in accordance with the Contract Documents. Owner shall promptly notify Contractor if an inspection or test reveals that the Work is not in accordance with the Contract Documents. Unless the subject items are expressly accepted by Owner, such Owner inspection and tests are for the sole

benefit of Owner and do not:

1. Constitute or imply acceptance;

2. Relieve Contractor of responsibility for providing adequate quality control measures;

3. Relieve Contractor of responsibility for risk of loss or damage to the Work, materials, or equipment;

4. Relieve Contractor of its responsibility to comply with the requirements of the ContractDocuments; or

5. Impair Owner's right to reject defective or nonconforming items, or to avail itself of anyother remedy to which it may be entitled.

C. Inspections or inspectors do not modify Contract Documents: Neither observations by an inspector retained by Owner, the presence or absence of such inspector on the site, nor inspections, tests, or approvals by others, shall relieve Contractor from any requirement of the Contract Documents, nor is any such inspector authorized to change any term or condition of the Contract Documents.

D. Contractor responsibilities on inspections: Contractor shall promptly furnish, without additional charge, all facilities, labor, material, and equipment reasonably needed for performing such safe and convenient inspections and tests as may be required by Owner. Owner may chargeContractor any additional cost of inspection or testing when Work is not ready at the time specified by Contractor for inspection or testing, or when prior rejection makes reinspection or retest necessary. Owner shall perform its inspections and tests in a manner that will cause no undue delay in the Work.

5.16 CORRECTION OF NONCONFORMING WORK

A. Work covered by Contractor without inspection: If a portion of the Work is covered contrary to the requirements in the Contract Documents, it must, if required in writing by Owner, be uncovered for Owner's observation and be replaced at the Contractor's expense and without change in the Contract Time.

B. Payment provisions for uncovering covered Work: If, at any time prior to Final Completion, Owner desires to examine the Work, or any portion of it, which has been covered, Owner may request to see such Work and it shall be uncovered by Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an adjustment in the Contract Sum for the costs of uncovering and replacement, and, if completion of the Work is thereby delayed, an adjustment in the Contract Time, provided it makes such a request as provided in Part 7. If such Work is not in accordance with the Contract Documents, the Contractor shall pay the costs of examination and reconstruction.

C. Contractor to correct and pay for non-conforming Work: Contractor shall promptly correct Work found by Owner not to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed, or completed. Contractor shall bear all costs of correcting such nonconforming Work, includingadditional testing and inspections.

D. Contractor's compliance with warranty provisions: If, within one (1) year after the date of Substantial Completion of the Work or designated portion thereof, or within one year after the date for commencement of any system warranties established under Section 6.08, or

within the terms of any applicable special warranty required by the Contract Documents, any of the Work is found by the Owner to be not in accordance with the requirements of the Contract Documents, Contractor shall correct itpromptly after receipt of written notice from Owner to do so. Owner shall give such notice promptly after discovery of the condition. This period of one year shall be extended, with respect to portions of Work first performed after Substantial Completion, by the period of time between Substantial Completion and the actual performance of the Work. Contractor's duty to correct withrespect to Work repaired or replaced shall run for one year from the date of repair or replacement. Obligations under this paragraph shall survive Final Acceptance.

E. Contractor to remove non-conforming Work: Contractor shall remove from the Project site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by Contractor nor accepted by Owner.

F. Owner may charge Contractor for non-conforming Work: If Contractor fails to correct nonconforming Work within a reasonable time after written notice to do so, Owner may replace, correct, or remove the nonconforming Work and charge the cost thereof to the Contractor.

G. Contractor to pay for damaged Work during correction: Contractor shall bear the cost of correcting destroyed or damaged Work, whether completed or partially completed, caused by Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.

H. No Period of limitation on other requirements: Nothing contained in this section shall be construed to establish a period of limitation with respect to other obligations which Contractor might have according to the Contract Documents. Establishment of the time period of one year as described in Section 5.16D relates only to the specific obligation of Contractor to correct the Work, and has no relationship to the time within which the Contractor's obligation to comply with the Contract Documents may be sought to be enforced, including the time within which such proceedings may be commenced.

I. Owner may accept non-conforming Work and charge Contractor: If Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, Owner may do so instead of requiring its removal and correction, in which case the Contract Sum may be reduced as appropriate and equitable.

5.17 CLEAN UP

Contractor to keep site clean and leave it clean: Contractor shall at all times keep the Project site, including hauling routes, infrastructures, utilities, and storage areas, free from accumulations of waste materials. Before completing the Work, Contractor shall remove from the premises its rubbish, tools, scaffolding, equipment, and materials. Upon completing the Work, Contractor shall leave the Project site in a clean, neat, and orderly condition satisfactory to Owner. If Contractor fails to clean up as provided herein, and after reasonable notice from Owner, Owner may do so and the cost thereof shall be charged to Contractor.

5.18 ACCESS TO WORK

Owner and A/E access to Work site: Contractor shall provide Owner (and A/E if applicable) access to the Work in progress wherever located.

5.19 OTHER CONTRACTS

Owner may award other contracts; Contractor to cooperate: Owner may undertake or award other contracts for additional work at or near the Project site. Contractor shall reasonably cooperate with the other contractors and with Owner's employees and shall carefully adapt scheduling and perform the Work in accordance with these Contract Documents to reasonably accommodate the other work.

5.20 SUBCONTRACTORS AND SUPPLIERS

A. Subcontractor Responsibility: The Contractor shall include the language of this paragraph in each of its first-tier subcontracts and shall require each of its Subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms usedfor the contracting parties. Upon request of the Owner, the Contractor shall promptly provide documentation to the Owner demonstrating that the Subcontractor meets the subcontractor responsibility criteria below. The requirements of this paragraph apply to all Subcontractors regardless of tier. At the time of subcontract execution, the Contractor shall verify that each of its first-tier Subcontractors meets the following bidder responsibility criteria:

1. Have a current certificate of registration as a contractor in compliance with Chapter 18.27 RCW, which must have been in effect at the time of Subcontract bid submittal;

2. Have a current Washington Unified Business Identifier (UBI) number;

3. If applicable, have:

   a. Industrial Insurance (workers' compensation) coverage for the Subcontractor'semployees working in Washington, as required in Title 51 RCW;

   b. A Washington Employment Security Department number, as required in Title 50 RCW;

   c. A Washington Department of Revenue state excise tax registration number, asrequired in Title 82 RCW;

   d. An electrical contractor license, if required by Chapter 19.28 RCW;

   e. An elevator contractor license, if required by Chapter 70.87 RCW.

4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or RCW 39.12.065(3).

5. On a project subject to the apprenticeship utilization requirements in RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under Chapter 49.04 RCW for the one-year period immediately preceding the date of the Owner's first advertisement of the project.

B. Provide names of Subcontractors and use qualified firms: Before submitting the first Application for Payment, Contractor shall furnish in writing to Owner the names, addresses, and telephone numbers of all Subcontractors, as well as suppliers providing materials in excess of $2,500. Contractor shall utilize Subcontractors and suppliers which are experienced and qualified and meet the requirements of the Contract Documents, if any. Contractor shall not utilize anySubcontractor or supplier to whom the Owner has a reasonable objection, and shall obtain Owner's written consent before making any

substitutions or additions.

C. Subcontracts in writing and passthrough provision: All Subcontracts must be in writing. By appropriate written agreement, Contractor shall require each Subcontractor, so far as applicable to the Work to be performed by the Subcontractor, to be bound to Contractor by terms of the Contract Documents, and to assume toward Contractor all the obligations and responsibilities which Contractor assumes toward Owner in accordance with the Contract Documents. Each Subcontract shall preserve and protect the rights of Owner in accordance with the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with Sub-Subcontractors. However, nothing in this paragraph shall be construed to alter the contractual relations between Contractor and its Subcontractors with respect to insurance or bonds.

D. Coordination of Subcontractors; Contractor responsible for Work: Contractor shall schedule, supervise, and coordinate the operations of all Subcontractors. No Subcontracting of any of the Work shall relieve Contractor from its responsibility for the performance of the Work in accordance with the Contract Documents or any other obligations of the Contract Documents.

E. Automatic assignment of subcontracts: Each subcontract agreement for a portion of the Work is hereby assigned by Contractor to Owner provided that:

1. Effective only after termination and Owner approval: The assignment is effective only after termination by Owner for cause pursuant to Section 9.01 and only for those Subcontracts which Owner accepts by notifying the Subcontractor in writing; and

2. Owner assumes Contractor's responsibilities: After the assignment is effective, Owner will assume all future duties and obligations toward the Subcontractor which Contractor assumed in the Subcontract.

3. Impact of bond: The assignment is subject to the prior rights of the surety, if any, obligated under any bond provided in accordance with the Contract Documents.

5.21 WARRANTY OF CONSTRUCTION

A. Contractor warranty of Work: In addition to any special warranties provided elsewhere in the Contract Documents, Contractor warrants that all Work conforms to the requirements of the Contract Documents and is free of any defect in equipment, material, or design furnished, or workmanship performed by Contractor.

B. Contractor responsibilities: With respect to all warranties, express or implied, for Work performedor materials furnished according to the Contract Documents, Contractor shall:

1. Obtain warranties: Obtain all warranties that would be given in normal commercial practice;

2. Warranties for benefit of Owner: Require all warranties to be executed, in writing, for the benefit of Owner;

3. Enforcement of warranties: Enforce all warranties for the benefit of Owner, if directed by Owner; and

4. Contractor responsibility for subcontractor warranties: Be responsible to enforce any

subcontractor's, manufacturer's, or supplier's warranties should they extend beyond the period specified in the Contract Documents.

C. Warranties beyond Final Acceptance: The obligations under this section shall survive Final Acceptance.

5.22 INDEMNIFICATION

A. To the fullest extent permitted by law and subject to the conditions of this Section 5.22, the Contractor shall defend, indemnify, and hold harmless the Owner, its directors, officers, employees, consultants, project manager, students, and volunteers, the A/E, the A/E's consultants, agents and employees of any of them, and the successors and assigns of any of them ("Indemnified Parties") from and against all claims, damages, losses, and expenses, direct and indirect, or consequential, including but not limited to costs, design professional and consultant fees, and attorneys' fees incurred on such claims and in proving the right to indemnification ("Claims"), arising out of or resulting from performance of the Work, provided that such Claim is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor of any tier, their agents, or anyone directly or indirectly employed by them, or anyone for whose acts they may be liable ("Indemnitor"), regardless of whether or not such Claim is caused in part by a party indemnified hereunder.

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

2. If such claims are caused by or are resulting from the sole negligence of the Indemnified Parties or their agents or employees, then the Contractor shall have no duty to defend, indemnify, and hold harmless the Indemnified Parties.

3. If such claims are caused by or are resulting from the concurrent negligence of (a) the Indemnified Parties or the Indemnified Parties' agents or employees, and (b) the Contractor or the Contractor's agents or employees, then the Contractor shall be obligated to defend, indemnify, and hold harmless the Indemnified Parties only to the extent of the Indemnitor's negligence.

B. The Contractor agrees to being added by the Owner as a party to any arbitration or litigation with third parties in which the Owner alleges indemnification or contribution from the Contractor, any of its Subcontractors of any tier, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable. The Contractor agrees that all of its Subcontractors of any tier shall, in their subcontracts, similarly stipulate; in the event any does not, the Contractor shall be liable in place of such Subcontractor(s) of any tier.

C. To the extent any portion of this 5.22 is stricken by a court of competent jurisdiction for any reason, all remaining provisions shall retain their vitality and effect.

D. The obligations of the Contractor under this Section 5.22 shall not be construed to negate, abridge, or otherwise reduce any other right or obligations of indemnity which would otherwise exist as to any party or person described in this Section 5.22. To the extent the wording of this Section 5.22 would reduce or eliminate an available insurance coverage of the Contractor or the Owner, this Section 5.22 shall be considered modified to the extent that such insurance coverage is not affected.

E. In claims against any person or entity indemnified under this Section 5.22 by an employee of

the Contractor, a Subcontractor of any tier, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 5.22 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor of any tier under workers' compensation acts, disability benefit acts, or other employee benefit acts. After mutual negotiation of the parties, the Contractor waives immunity as to the Owner and its consultants only under Title 51 RCW ("Industrial Insurance)." IF THE CONTRACTOR DOES NOT AGREE WITH THIS WAIVER, IT MUST PROVIDE A WRITTEN NOTICE TO THE OWNER PRIOR TO THE DATE FOR THE RECEIPT OF BIDS, OR THE CONTRACTOR WILL BE DEEMED TO HAVE NEGOTIATED AND WAIVED THIS IMMUNITY.

F. Contractor will immediately report to the Owner any failure by the Contractor, a Subcontractor of any tier, or any third party observed by the Contractor to comply with applicable laws, regulations, or ordinances while performing the Work or upon the Project, including, but not limited to, those related to environmental compliance, spills, unauthorized fill in waters of the State (including wetlands), water quality standards, noise, and air quality.

PART 6 – PAYMENTS AND COMPLETION

6.01 CONTRACT SUM

Owner shall pay Contract Sum: Owner shall pay Contractor the Contract Sum plus state sales tax for performance of the Work, in accordance with the Contract Documents.

6.02 SCHEDULE OF VALUES

Contractor to submit Schedule of Values: Before submitting its first Application for Payment, Contractor shall submit to Owner for approval a breakdown allocating the total Contract Sum to each principal category of work, in such detail as requested by Owner ("Schedule of Values"). The approved Schedule of Values shall include appropriate amounts for demobilization, record drawings, O&M manuals, and any other requirements for Project closeout, and shall be used by Owner as the basis for progress payments. Payment for Work shall be made only for and in accordance with those items included in the Schedule of Values.

6.03 APPLICATION FOR PAYMENT

A. Monthly Application for Payment with substantiation: At monthly intervals, unless determined otherwise by Owner, Contractor shall submit to Owner an itemized Application for Payment for Work completed in accordance with the Contract Documents and the approved Schedule of Values. Each application shall be supported by such substantiating data as Owner may require.

B. Contractor certifies Subcontractors paid: By submitting an Application for Payment, Contractor is certifying that all Subcontractors have been paid, less earned retainage in accordance with RCW 60.28.011, as their interests appeared in the last preceding certificate of payment. By submitting an Application for Payment, Contractor is recertifying that the representations set forth in Section 1.03, are true and correct, to the best of Contractor's knowledge, as of the date of the Application for Payment.

C. Reconciliation of Work with Progress Schedule: At the time it submits an Application for Payment, Contractor shall analyze and reconcile, to the satisfaction of Owner, the actual progress of the Work with the Progress Schedule.

D. Payment for material delivered to site or stored off-site: If authorized by Owner, the

Application for Payment may include request for payment for material delivered to the Project site and suitably stored, or for completed preparatory work. Payment may similarly be requested for material stored off the Project site, provided Contractor complies with or furnishes satisfactory evidence of the following:

1. Suitable facility or location: The material will be placed in a facility or location that is structurally sound, dry, lighted and suitable for the materials to be stored;

2. Facility or location within 10 miles of Project: The facility or location is located within a 10-mile radius of the Project. Other locations may be utilized, if approved in writing, by Owner;

3. Facility or location exclusive to Project's materials: Only materials for the Project are stored within the facility or location (or a secure portion of a facility or location set asidefor the Project);

4. Insurance provided on materials in facility or location: Contractor furnishes Owner a certificate of insurance extending Contractor's insurance coverage for damage, fire, and theft to cover the full value of all materials stored, or in transit;

5. Facility or location locked and secure: The facility or location (or secure portion thereof) is continuously under lock and key, and only Contractor's authorized personnel shall have access;

6. Owner right of access to facility or location: Owner shall at all times have the right of access in company of Contractor;

7. Contractor assumes total responsibility for stored materials: Contractor and its surety assume total responsibility for the stored materials; and

8. Contractor provides documentation and Notice when materials moved to site: Contractor furnishes to Owner certified lists of materials stored, bills of lading, invoices, and other information as may be required, and shall also furnish Notice to Owner when materials are moved from storage to the Project site.

6.04 PROGRESS PAYMENTS

A. Owner to pay within 30 Days: Owner shall make progress payments, in such amounts as Owner determines are properly due, within 30 Days after receipt of a properly executed Application for Payment. Owner shall notify Contractor in accordance with Chapter 39.76 RCW if the Application for Payment does not comply with the requirements of the Contract Documents.

B. Withholding retainage; Options for retainage: Owner shall retain five (5) percent of the amount of each progress payment until forty-five (45) Days after Final Acceptance and receipt of all documents required by law or the Contract Documents, including, at Owner's request, consent of surety to release of the retainage. In accordance with Chapter 60.28 RCW, Contractor may request that monies reserved be retained in a fund by Owner, deposited by Owner in a bank or savings and loan, or placed in escrow with a bank or trust company to be converted into bonds and securities to be held in escrow with interest to be paid to Contractor. Owner may authorize in writing Contractor to provide an appropriate bond in lieu of the retained funds.

C. Title passes to Owner upon payment: Title to all Work and materials covered by a progress

payment shall pass to Owner at the time of such payment free and clear of all liens, claims, security interests, and encumbrances. Passage of title shall not, however, relieve Contractor from any of its duties and responsibilities for the Work or materials, or waive any rights of Owner to insist on full compliance by Contractor with the Contract Documents.

D. Interest on unpaid balances: Payments due and unpaid in accordance with the Contract Documents shall bear interest as specified in Chapter 39.76 RCW.

6.05 PAYMENTS WITHHELD

A. Owner's right to withhold payment: Owner may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any payment to such extent as may be necessary to protect Owner from loss or damage for reasons including but not limited to:

1. Non-compliant Work: Work not in accordance with the Contract Documents;

2. Remaining Work to cost more than unpaid balance: Reasonable evidence that the Work required by the Contract Documents cannot be completed for the unpaid balance of the Contract Sum;

3. Owner correction or completion Work: Work by Owner to correct defective Work or complete the Work in accordance with Section 5.16;

4. Contractor's failure to perform: Contractor's failure to perform in accordance with the Contract Documents; or

5. Contractor's negligent acts or omissions: Cost or liability that may occur to Owner as the result of Contractor's fault or negligent acts or omissions.

B. Owner to notify Contractor of withholding for unsatisfactory performance: In any case where part or all of a payment is going to be withheld for unsatisfactory performance, Owner shall notify Contractor in accordance with Chapter 39.76 RCW.

6.06 RETAINAGE AND BOND CLAIM RIGHTS

Chapters 39.08 RCW and 60.28 RCW incorporated by reference: Chapters 39.08 RCW and 60.28 RCW, concerning the rights and responsibilities of Contractor and Owner with regard to the performance and payment bonds and retainage, are made a part of the Contract Documents by reference as though fully set forth herein.

6.07 SUBSTANTIAL COMPLETION

Substantial Completion defined: Substantial Completion is the stage in the progress of the Work (or portion thereof designated and approved by Owner) when the construction is sufficiently complete, in accordance with the Contract Documents, so Owner has full and unrestricted use and benefit of the facilities (or portion thereof designated and approved by Owner) for the use for which it is intended. All Work other than incidental corrective and incidental punch list work shall be completed. Substantial Completion shall not have been achieved if all systems and parts are not functional, if utilities are not connected and operating normally, if all required occupancy permits have not been issued, or if the Work is not accessible by normal vehicular and pedestrian traffic routes. The date Substantial Completion is achieved shall be established in writing by Owner. Contractor may request an early date of Substantial Completion which must be approved by Change Order. Owner's occupancy of the Work or designated portion thereof does not necessarily indicate that Substantial Completion has been achieved.

6.08 PRIOR OCCUPANCY

A. Prior Occupancy defined; Restrictions: Owner may, upon written notice thereof to Contractor, take possession of or use any completed or partially completed portion of the Work ("Prior Occupancy") at any time prior to Substantial Completion. Unless otherwise agreed in writing, Prior Occupancy shall not: be deemed an acceptance of any portion of the Work; accelerate the time for any payment to Contractor; prejudice any rights of Owner provided by any insurance, bond, guaranty, or the Contract Documents; relieve Contractor of the risk of loss or any of the obligations established by the Contract Documents; establish a date for termination or partial termination of the assessment of liquidated damages; or constitute a waiver of claims.

B. Damage; Duty to repair and warranties: Notwithstanding anything in the preceding paragraph, Owner shall be responsible for loss of or damage to the Work resulting from Prior Occupancy. Contractor's one (1) year duty to repair any system warranties shall begin on building systems activated and used by Owner as agreed in writing by Owner and Contractor.

6.09 FINAL COMPLETION, ACCEPTANCE, AND PAYMENT

A. Final Completion defined: Final Completion shall be achieved when the Work is fully and finally complete in accordance with the Contract Documents. The date Final Completion is achieved shall be established by Owner in writing, but in no case shall Final Completion constitute Final Acceptance, which is a subsequent, separate, and distinct action.

B. Final Acceptance defined: Final Acceptance shall be achieved when the Contractor has completed the requirements of the Contract Documents. The date Final Acceptance is achieved shall be established by Owner in writing. Prior to Final Acceptance, Contractor shall, in addition to all other requirements in the Contract Documents, submit to Owner a written notice of any outstanding disputes or claims between Contractor and any of its Subcontractors, including the amounts and other details thereof. Neither Final Acceptance, nor final payment, shall release Contractor or its sureties from any obligations of these Contract Documents or the payment and performance bonds, or constitute a waiver of any claims by Owner arising from Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Final payment waives Claim rights: Acceptance of final payment by Contractor, or any Subcontractor, shall constitute a waiver and release to Owner of all claims by Contractor, or any such Subcontractor, for an increase in the Contract Sum or the Contract Time, and for every actor omission of Owner relating to or arising out of the Work, except for those Claims made in accordance with the procedures, including the time limits, set forth in Part 8.

PART 7 – CHANGES

7.01 CHANGE IN THE WORK

A. Changes in Work, Contract Sum, and Contract Time by Change Order: Owner may, at any time and without notice to Contractor's surety, order additions, deletions, revisions, or other changes inthe Work. These changes in the Work shall be incorporated into the Contract Documents through the execution of Change Orders. If any change in the Work ordered by Owner causes an increase or decrease in the Contract Sum or the Contract Time, an equitable adjustment shall be made as provided in Section 7.02 or 7.03, respectively, and such adjustment(s) shall be incorporated into a Change Order.

B. Owner may request COP from Contractor: If Owner desires to order a change in the Work, it mayrequest a written Change Order Proposal (COP) from Contractor. Contractor shall submit a Change Order Proposal within fourteen (14) Days of the request from Owner, or within such other period as mutually agreed. Contractor's Change Order Proposal shall be full compensation for implementing the proposed change in the Work, including any adjustment in the Contract Sum or Contract Time, and including compensation for all delays in connection with such change in the Work and for any expense or inconvenience, disruption of schedule, or loss of efficiency or productivity occasioned by the change in the Work.

C. COP negotiations: Upon receipt of the Change Order Proposal, or a request for equitable adjustment in the Contract Sum or Contract Time, or both, as provided in Sections 7.02 and 7.03,Owner may accept or reject the proposal, request further documentation, or negotiate acceptable terms with Contractor. Pending agreement on the terms of the Change Order, Owner may direct Contractor to proceed immediately with the Change Order Work. Contractor shall not proceed with any change in the Work until it has obtained Owner's approval. All Work done pursuant to any Owner-directed change in the Work shall be executed in accordance with the Contract Documents.

D. Change Order as full payment and final settlement: If Owner and Contractor reach agreement onthe terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, such agreement shall be incorporated in a Change Order. The Change Order shall constitute full payment and final settlement of all claims for time and for direct, indirect, and consequential costs, including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity, related to any Work either covered or affected by the Change Order, or related to the events giving rise to the request for equitable adjustment.

E. Failure to agree upon terms of Change Order; Final offer and Claims: If Owner and Contractor are unable to reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, Contractor may at any time in writing, request a final offer from Owner. Owner shall provide Contractor with its written response within thirty (30) Days of Contractor's request. Owner may also provide Contractor with a final offer at any time. If Contractor rejects Owner's final offer, or the parties are otherwise unable to reach agreement, Contractor's only remedy shall be to file a Claim as provided in Part 8.

F. Field Authorizations: The Owner may direct the Contractor to proceed with a change in the work through a written Field Authorization (also referred to as a Field Order) when the time required to price and execute a Change Order would impact the Project.

The Field Authorization shall describe and include the following:

1. The scope of work;

2. An agreed upon maximum not-to-exceed amount;

3. Any estimated change to the Contract Time;

4. The method of final cost determination in accordance with the requirements of Part 7 ofthe General Conditions;

5. The supporting cost data to be submitted in accordance with the requirements of Part 7of the General Conditions;

Upon satisfactory submittal by the Contractor and approval by the Owner of supporting cost data,a Change Order will be executed. The Owner will not make payment to the Contractor for Field Authorization work until that work has been incorporated into an executed Change Order.

7.02 CHANGE IN THE CONTRACT SUM

A. General Application

1. Contract Sum changes only by Change Order: The Contract Sum shall only be changed by a Change Order. Contractor shall include any request for a change in the Contract Sum in its Change Order Proposal.

2. Owner fault or negligence as basis for change in Contract Sum: If the cost of Contractor's performance is changed due to the fault or negligence of Owner, or anyone for whose acts Owner is responsible, Contractor shall be entitled to make a request foran equitable adjustment in the Contract Sum in accordance with the following procedure. No change in the Contract Sum shall be allowed to the extent: Contractor's changed cost of performance is due to the fault or negligence of Contractor, or anyone for whose acts Contractor is responsible; the change is concurrently caused by Contractor and Owner;or the change is caused by an act of Force Majeure as defined in Section 3.05.

   a. Notice and record keeping for equitable adjustment: A request for an equitable adjustment in the Contract Sum shall be based on written notice delivered to Owner within seven (7) Days of the occurrence of the event giving rise to the request. For purposesof this part, "occurrence" means when Contractor knew, or in its diligent prosecution of the Work should have known, of the event giving rise to the request. If Contractorbelieves it is entitled to an adjustment in the Contract Sum, Contractor shall immediately notify Owner and begin to keep and maintain complete, accurate, and specific daily records. Contractor shall give Owner access to any such records and, if requested shall promptly furnish copies of such records to Owner.

   b. Content of notice for equitable adjustment; Failure to comply: Contractor shall not be entitled to any adjustment in the Contract Sum for any occurrence of events or costs that occurred more than seven (7) Days before Contractor's written notice to Owner. The written notice shall set forth, at a minimum, a description of: the event giving rise to the request for an equitable adjustment in the Contract Sum; the nature of the impacts to Contractor and its Subcontractors of any tier, if any; and to the extent possible the amount of the adjustment in Contract Sum requested. Failure to properly give such written notice shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.

   c. Contractor to provide supplemental information: Within thirty (30) Days of the occurrence of the event giving rise to the request, unless Owner agrees in writing to allow an additional period of time to ascertain more accurate data, Contractor shall supplement the written notice provided in accordance with Subsection (a), above, with additional supporting data. Such additional data shall include, at a minimum: the amount of compensation requested,

itemized in accordance with the procedure set forth herein; specific facts, circumstances, and analysis that confirms not only that Contractor suffered the damages claimed, but that the damages claimed were actually a result of the act, event, or condition complained of and that the Contract Documents provide entitlement to an equitable adjustment to Contractor for suchact, event, or condition; and documentation sufficiently detailed to permit an informed analysis of the request by Owner. When the request for compensation relates to a delay, or other change in Contract Time, Contractor shall demonstrate the impact on the critical path, in accordance with Section 7.03C. Failure to provide such additional information and documentation within the time allowed or within the format required shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.

d. Contractor to proceed with Work as directed: Pending final resolution of any request made in accordance with this paragraph, unless otherwise agreed in writing, Contractor shall proceed diligently with performance of the Work.

e. Contractor to combine requests for same event together: Any requests by Contractor for an equitable adjustment in the Contract Sum and in the Contract Time that arise out of the same event(s) shall be submitted together.

3. Methods for calculating Change Order amount: The value of any Work covered by a ChangeOrder, or of any request for an equitable adjustment in the Contract Sum, shall be determinedby one of the following methods:

a. Fixed Price: On the basis of a fixed price as determined in Section 7.02B.

b. Unit Prices: By application of unit prices to the quantities of the items involved asdetermined in Section 7.02C.

c. Time and Materials: On the basis of time and material as determined in Section7.02D.

d. Fixed price method is default; Owner may direct otherwise: When Owner has requested Contractor to submit a Change Order Proposal, Owner may direct Contractor as to which method in the paragraph immediately above to use when submitting its proposal. Otherwise, Contractor shall determine the value of the Work, or of a request for an equitable adjustment, on the basis of the fixed price method.

B. Change Order Pricing – Fixed Price

Procedures: When the fixed price method is used to determine the value of any Work covered by a Change Order, or of a request for an equitable adjustment in the Contract Sum, the following procedures shall apply:

1. Breakdown and itemization of details on COP: Contractor's COP, or request for adjustment in the Contract Sum, shall be accompanied by a complete itemization of the costs, including labor, material, Subcontractor costs, and overhead and profit. The costs shall be itemized in the manner set forth below, and shall be submitted on breakdown sheets in a form approved by Owner.

2. Use of industry standards in calculating costs: All costs shall be calculated based

upon appropriate industry standard methods of calculating labor, material quantities, and equipment costs.

3. Costs contingent on Owner's actions: If any of Contractor's pricing assumptions are contingent upon anticipated actions of Owner, Contractor shall clearly state them in the proposal or request for an equitable adjustment.

4. Markups on additive and deductive Work: The cost of any additive or deductive changes in the Work shall be calculated as set forth below, except that overhead and profit shall not be included on deductive changes in the Work. Where a change in the Work involves additive and deductive work by the same Contractor or Subcontractor, small tools, overhead, profit, bond, and insurance markups will apply to the net difference.

5. Breakdown not required if change less than $1,000: If the total cost of the change in the Work or request for equitable adjustment does not exceed $1,000, Contractor shall not be required to submit a breakdown if the description of the change in the Work or request for equitable adjustment is sufficiently definitive for Owner to determine fair value.

6. Breakdown required if change between $1,000 and $2,500: If the total cost of the change in the Work or request for equitable adjustment is between $1,000 and $2,500, Contractor may submit a breakdown in the following level of detail if the description of the change in the Work or if the request for equitable adjustment is sufficiently definitive to permit the Owner to determine fair value:

   a. Lump sum labor;

   b. Lump sum material;

   c. Lump sum equipment usage;

   d. Overhead and profit as set forth below; and

   e. Insurance and bond costs as set forth below.

7. Components of increased cost: Any request for adjustment of Contract Sum based upon the fixed price method shall include only the following items:

   a. Craft labor costs: These are the labor costs determined by multiplying the estimated or actual additional number of craft hours needed to perform the change in the Work by the hourly labor costs. Craft hours should cover direct labor, as well as indirect labor due to trade inefficiencies. When estimating labor hours for electrical work, such hours shall be no greater than the Labor Units for specific items included in the "Normal" project conditions column of the NECA Manual of Labor Units, most recent edition. When estimating labor hours for mechanical work, such hours shall be no greater than 75% of the Labor Units for specific items included in the MCAA Web-Based Estimating Manual (WebLEM), subject to the assumptions and notes in the WebLEM, except that the Labor Units for "Hangers, Sleeves, & Inserts" shall be no greater than 50% of the WebLEM Labor Units. Special exceptions for electrical and mechanical work may be made for work having to be performed under extraordinary conditions. Such exceptions shall be identified and explained in any applicable pricing proposals and shall be

subject to approval by Owner. The hourly costs shall be based on the following:

(1) Basic wages and benefits: Hourly rates and benefits as stated on the Department of Labor and Industries approved "statement of intent to pay prevailing wages" or a higher amount if approved by the Owner. Direct supervision shall be a reasonable percentage not to exceed fifteen (15) percent of the cost of direct labor. No supervision markup shall be allowed in a Change Order that contains direct labor costs for a working supervisor's hours (including any category of foreman).

(2) Worker's insurance: Direct contributions to the State of Washington for industrial insurance; medical aid; and supplemental pension, by the class and rates established by the Department of Labor and Industries.

(3) Federal insurance: Direct contributions required by the Federal Insurance Compensation Act; Federal Unemployment Tax Act; and the State Unemployment Compensation Act.

(4) Travel allowance: Travel allowance and/or subsistence, if applicable, not exceeding those allowances established by regional labor union agreements, which are itemized and identified separately.

(5) Safety: Cost incurred due to the Washington Industrial Safety and HealthAct, which shall be a reasonable percentage not to exceed two (2) of the sum of the amounts calculated in (1), (2), and (3) above.

b. Material costs: This is an itemization of the quantity and cost of materials needed to perform the change in the Work. Material costs shall be developed first from actual known costs, including, but not limited to, Contractor's supplier(s)' actual cost(s) available from the standard industry pricing guide "Trade Service." If those are not available, material costs shall be developed second from supplier quotations. If those are not available, material costs shall be developed third from other standard industry pricing guides. Material costs shall include all available discounts. Freight costs, express charges, or special delivery charges shall be itemized.

c. Equipment costs: This is an itemization of the type of equipment and the estimated or actual length of time the construction equipment appropriate for the Work is or will be used on the change in the Work. Costs will be allowed for construction equipment only if used solely for the changed Work, or for additional rental costs actually incurred by the Contractor. The Contractor's cost for utility vehicles and other items such as pickup trucks, vans, flatbed trucks, storage trailers, containers, etc., that are already in use or planned for use on the Project will not be compensated in Change Order work except for the time that, in the opinion of the Owner, such items: (1) are directly and necessarily used for the performance of the change work; and (2) the cost of using such items has not been included within the Contractor's total project overhead costs. Equipment charges shall be computed on the basis of actual invoice costs or if owned, from the current edition of one of the following sources:

(1) Associated General Contractors Washington State Department of

Transportation (AGC-WSDOT) Equipment Rental Agreement current edition, on the Contract execution date.

(2) The National Electrical Contractors Association for equipment used on electrical work. Equipment pricing shall be no greater than seventy-five (75) percent of NECA monthly rates.

(3) The Mechanical Contractors Association of America for equipment used on mechanical work.

The EquipmentWatch Rental Rate Blue Book shall be used as a basis for establishing rental rates of equipment not listed in the above sources. The maximum rate for standby equipment shall not exceed that shown in the AGC-WSDOT Equipment Rental Agreement, current edition on the Contract execution date.

d. Allowance for small tools, expendables & consumable supplies: Small tools consist of tools which cost $1,000 or less and are normally furnished by the performing Contractor. The maximum rate for small tools shall not exceed the following:

(1) For Contractor: three (3) percent of direct labor costs.

(2) For Subcontractors: five (5) percent of direct labor costs.

Expendables and consumables supplies directly associated with the change in Work must be itemized.

e. Subcontractor costs: This is defined as payments Contractor makes to Subcontractors for change Work performed by Subcontractors of any tier. The Subcontractors' cost of Work shall be calculated and itemized in the same manner as prescribed herein for Contractor.

f. Allowance for overhead: This is defined as costs of any kind attributable to direct and indirect delay, acceleration, or impact, added to the total cost to Owner of any change in the Contract Sum. If the Contractor is compensated under Section 7.03D, the amount of such compensation shall be reduced by the amount Contractor is otherwise entitled to under this Subsection (f). This allowance shall compensate Contractor for all non-craft labor, temporary construction facilities, field engineering, schedule updating, as-built drawings, home office cost, B&O taxes, office engineering, estimating costs, additional overhead because of extended time, and any other cost incidental to the change in the Work. It shall be strictly limited in all cases to a reasonable amount, mutually acceptable,or if none can be agreed upon to an amount not to exceed the rates below:

(1) Projects less than $3 million: For projects where the Contract Award Amount is under $3 million, the following shall apply:

(a) Contractor markup on Contractor Work: For Contractor, for any Work actually performed by Contractor's own forces, sixteen (16) percent of the first $50,000 of the cost, and four (4) percent of the remaining cost, if any.

(b) Subcontractor markup for Subcontractor Work: For each Subcontractor (including lower-tier Subcontractors), for any Work actually performed by its own forces, sixteen (16) percent of the first $50,000 of the cost, and four (4) percent of the remaining cost, if any.

(c) Contractor markup for Subcontractor Work: For Contractor, for any work performed by its Subcontractor(s), six (6) percent of the first $50,000 of the amount due each Subcontractor, and four (4) percent of the remaining amount, if any.

(d) Subcontractor markup for lower-tier Subcontractor Work: For each Subcontractor, for any Work performed by its Subcontractor(s) of any lower tier, four (4) percent of the first $50,000 of the amount due the Sub-Subcontractor, and two (2) percent of the remaining amount, if any.

(e) Basis of cost applicable for markup: The cost to which overhead is to be applied shall be developed in accordance with Sections 7.02B.7.a-.e.

(2) Projects more than $3 million: For projects where the Contract Award Amount isequal to or exceeds $3 million, the following shall apply:

(f) Contractor markup on Contractor Work: For Contractor, for any Work actually performed by Contractor's own forces, twelve (12) percent of the first $50,000 of the cost, and four (4) percent of the remaining cost, if any.

(g) Subcontractor markup for Subcontractor Work: For each Subcontractor (including lower-tier Subcontractors), for any Work actually performed by its own forces, twelve (12) percent of the first $50,000 of the cost, and four (4) percent of the remaining cost, if any.

(h) Contractor markup for Subcontractor Work: For Contractor, for any Work performed by its Subcontractor(s), four (4) percent of the first $50,000 of the amount due each Subcontractor, and two (2) percent of the remaining amount, if any.

(i) Subcontractor markup for lower tier Subcontractor Work: For each Subcontractor, for any Work performed by its Subcontractor(s) of any lower tier, four (4) percent of the first $50,000 of the amount due the Sub-Subcontractor, and two (2) percent of the remaining amount, if any.

(j) Basis of cost applicable for markup: The cost to which overhead is to be applied shall be developed in accordance with Section 7.02B.7.a-.e.

g. Allowance for profit: Allowance for profit is an amount to be added to the cost of any change in Contract Sum, but not to the cost of change in Contract

Time for whichContractor has been compensated pursuant to the conditions set forth in Section 7.03. It shall be limited to a reasonable amount, mutually acceptable, or if none can be agreed upon, to an amount not to exceed the rates below:

(1) Contractor / Subcontractor markup for self-performed Work: For Contractor or Subcontractor of any tier for work performed by their forces, six (6) percent of the cost developed in accordance with Sections 7.02B.7.a-.e.

(2) Contractor / Subcontractor markup for Work performed at lower tier: For Contractor or Subcontractor of any tier for work performed by a Subcontractor of a lower tier, four (4) percent of the subcontract cost developed in accordance with Section 7.02B.7.a-.h.

h. Insurance and bond premiums: Cost of change in insurance or bond premium: This is defined as:

(1) Contractor's liability insurance: The cost of any changes in Contractor's liability insurance arising directly from execution of the Change Order; and

(2) Payment and Performance Bond: The cost of the additional premium for Contractor's bond arising directly from the changed Work.

The cost of any change in insurance or bond premium shall be added after overhead and allowance for profit are calculated in accordance with Subsections f.-.g, above.

C. Change Order Pricing – Unit Prices

1. Content of Owner authorization: Whenever Owner authorizes Contractor to perform Work on a unit-price basis, Owner's authorization shall clearly state:

a. Scope: Scope of work to be performed;

b. Reimbursement basis: Type of reimbursement including pre-agreed rates for material quantities; and

c. Reimbursement limit: Cost limit of reimbursement.

2. Contractor responsibilities: Contractor shall:

a. Cooperate with Owner and assist in monitoring the Work being performed. As requested by Owner, Contractor shall identify workers assigned to the Change Order Work and areas in which they are working;

b. Leave access as appropriate for quantity measurement; and

c. Not exceed any cost limit(s) without Owner's prior written approval.

3. Cost breakdown consistent with Fixed Price requirements: Contractor shall submit costs in accordance with Section 7.02B and satisfy the following requirements:

a. Unit prices must include overhead, profit, bond, and insurance premiums:

Unit prices shall include reimbursement for all direct and indirect costs of the Work, including overhead, profit, bond, and insurance costs; and

b. Owner verification of quantities: Quantities must be supported by field measurement statements signed by Owner.

D. Change Order Pricing – Time-and-Material Prices

1. Content of Owner authorization: Whenever Owner authorizes Contractor to perform Work on a time-and-material basis, Owner's authorization shall clearly state:

   a. Scope: Scope of Work to be performed;

   b. Reimbursement basis: Type of reimbursement, including pre-agreed rates, if any,for material quantities or labor; and

   c. Reimbursement limit: Cost limit of reimbursement.

2. Contractor responsibilities: Contractor shall:

   a. Identify workers assigned: Cooperate with Owner and assist in monitoring the Work being performed. As requested by Owner, identify workers assigned to the Change Order Work and areas in which they are working;

   b. Provide daily timesheets: Identify on daily time sheets all labor performed in accordance with this authorization. Submit copies of daily time sheets within two (2) working days for Owner's review.

   c. Allow Owner to measure quantities: Leave access as appropriate for quantity measurement;

   d. Perform Work efficiently: Perform all Work in accordance with this section as efficiently as possible; and

   e. Not exceed Owner's cost limit: Not exceed any cost limit(s) without Owner's prior written approval.

3. Cost breakdown consistent with Fixed Price requirements: Contractor shall submit costs in accordance with Section 7.02B and additional verification supported by:

   a. Timesheets: Labor detailed on daily time sheets; and

   b. Invoices: Invoices for material.

7.03 CHANGE IN THE CONTRACT TIME

A. COP requests for Contract Time: The Contract Time shall only be changed by a Change Order. Contractor shall include any request for a change in the Contract Time in its Change Order Proposal.

B. Time extension permitted if not Contractor's fault: If the time of Contractor's performance is changed due to an act of Force Majeure, or due to the fault or negligence of Owner or anyone for whose acts Owner is responsible, Contractor shall be entitled to make a request for an equitable adjustment in the Contract Time in accordance with the following procedure. No adjustment in the Contract Time shall be allowed to the extent Contractor's changed time of performance is due to the fault or negligence of Contractor, or anyone for whose

acts Contractor is responsible.

1. Notice and record keeping for Contract Time request: A request for an equitable adjustment in the Contract Time shall be based on written notice delivered within seven (7) Days of the occurrence of the event giving rise to the request. If Contractor believes it is entitled to adjustment of Contract Time, Contractor shall immediately notify Owner and begin to keep and maintain complete, accurate, and specific daily records. Contractor shall give Owner access to any such record and if requested, shall promptly furnish copies of such record to Owner.

2. Timing and content of Contractor's Notice: Contractor shall not be entitled to an adjustment in the Contract Time for any events that occurred more than seven (7) Days before Contractor's written notice to Owner. The written notice shall set forth, at a minimum, a description of: the event giving rise to the request for an equitable adjustment in the Contract Time; the nature of the impacts to Contractor and its Subcontractors of any tier, if any; and to the extent possible the amount of the adjustment in Contract Time requested. Failure to properly give such written notice shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.

3. Contractor to provide supplemental information: Within thirty (30) Days of the occurrence of the event giving rise to the request, unless Owner agrees in writing to allow an additional period of time to ascertain more accurate data, Contractor shall supplement the written notice provided in accordance with Section 7.03B.2 with additional supporting data. Such additional data shall include, at a minimum: the amount of delay claimed, itemized in accordance with the procedure set forth herein; specific facts, circumstances, and analysis that confirms not only that Contractor suffered the delay claimed, but that the delay claimed was actually a result of the act, event, or condition complained of, and that the Contract Documents provide entitlement to an equitable adjustment in Contract Time for such act, event, or condition; and supporting documentation sufficiently detailed to permit an informed analysis of the request by Owner. Failure to provide such additional information and documentation within the time allowed or within the format required shall, to the extent Owner's interests are prejudiced, constitute a waiver of Contractor's right to an equitable adjustment.

4. Contractor to proceed with Work as directed: Pending final resolution of any request in accordance with this Section 7.03C unless otherwise agreed in writing, Contractor shall proceed diligently with performance of the Work.

C. Contractor to demonstrate impact on critical path of schedule: Any change in the Contract Time covered by a Change Order, or based on a request for an equitable adjustment in the Contract Time, shall be limited to the change in the critical path of Contractor's schedule attributable to the change of Work or event(s) giving rise to the request for equitable adjustment. Any Change Order Proposal or request for an adjustment in the Contract Time shall demonstrate the impact on the critical path of the schedule. Contractor shall be responsible for showing clearly on the Progress Schedule that the change or event: had a specific impact on the critical path, and except in case of concurrent delay, was the sole cause of such impact; and could not have been avoided by resequencing of the Work or other reasonable alternatives.

D. Cost of change in Contract Time: Contractor may request compensation for the cost of a change in Contract Time in accordance with this Section 7.03D, subject to the following

conditions:

1. Must be solely fault of Owner or A/E: The change in Contract Time shall solely be caused by the fault or negligence of Owner (or A/E, if applicable);

2. Procedures: Contractor shall follow the procedure set forth in Section 7.03B;

3. Demonstrate impact on critical path: Contractor shall establish the extent of the change in Contract Time in accordance with Section 7.03C; and

4. Limitations on daily costs: The daily cost of any change in Contract Time shall be limited to the items below, less the amount of any change in the Contract Sum the Contractor may otherwise be entitled to pursuant to Section 7.02B.7.f for any change in the Work that contributed to this change in Contract Time:

    a. Non-productive supervision or labor: cost of nonproductive field supervision or labor extended because of delay;

    b. Weekly meetings and indirect activities: cost of weekly meetings or similar indirect activities extended because of the delay;

    c. Temporary facilities or equipment rental: cost of temporary facilities or equipment rental extended because of the delay;

    d. Insurance premiums: cost of insurance extended because of the delay;

    e. Overhead: general and administrative overhead in an amount to be agreed upon, but not to exceed three (3) percent of the Contract Award Amount divided by the originally specified Contract Time for each Day of the delay.

PART 8 – CLAIMS AND DISPUTE RESOLUTION

8.01 CLAIMS PROCEDURE

A. Claim is Contractor's remedy: If the parties fail to reach agreement on the terms of any Change Order for Owner-directed Work as provided in Section 7.01, or on the resolution of any request for an equitable adjustment in the Contract Sum as provided in Section 7.02 or the Contract Time as provided in Section 7.03, Contractor's only remedy shall be to file a Claim with Owner as provided in this section.

B. Claim filing deadline for Contractor: Contractor shall file its Claim within sixty (60) Days from Owner's final offer made in accordance with Section 7.01E, or by the date of Final Acceptance,whichever occurs first.

C. Claim must cover all costs and be documented: The Claim shall be deemed to cover all changes in cost and time (including direct, indirect, impact, and consequential) to which Contractor may beentitled. It shall be fully substantiated and documented. At a minimum, the Claim shall contain the following information:

    1. Factual statement of Claim: A detailed factual statement of the Claim for additional compensation and time, if any, providing all necessary dates, locations, and items of Work affected by the Claim;

    2. Dates: The date on which facts arose which gave rise to the Claim;

3. Owner and A/E employee's knowledgeable about Claim: The name of each employee of Owner (or A/E, if applicable) knowledgeable about the Claim;

4. Support from Contract Documents: The specific provisions of the Contract Documents which support the Claim;

5. Identification of other supporting information: The identification of any documents and the substance of any oral communications that support the Claim;

6. Copies of supporting documentation: Copies of any identified documents, other than the Contract Documents, that support the Claim;

7. Details on Claim for Contract Time: If an adjustment in the Contract Time is sought: the specific days and dates for which it is sought; the specific reasons Contractor believes an extension in the Contract Time should be granted; and Contractor's analysis of its Progress Schedule to demonstrate the reason for the extension in Contract Time;

8. Details on Claim for adjustment of Contract Sum: If an adjustment in the Contract Sum is sought, the exact amount sought and a breakdown of that amount into the categories set forth in, and in the detail as required by Section 7.02; and

9. Statement certifying Claim: A statement certifying, under penalty of perjury, that the Claim is made in good faith, that the supporting cost and pricing data are true and accurate to the best of Contractor's knowledge and belief, that the Claim is fully supported by the accompanying data, and that the amount requested accurately reflects the adjustment in the Contract Sum or Contract Time for which Contractor believes Owner is liable.

D. Owner's response to Claim filed: After Contractor has submitted a fully documented Claim that complies with all applicable provisions of Parts 7 and 8, Owner shall respond, in writing, to Contractor as follows:

1. Response time for Claim less than $50,000: If the Claim amount is less than $50,000, with a decision within sixty (60) Days from the date the Claim is received; or

2. Response time for Claim of $50,000 or more: If the Claim amount is $50,000 or more, with a decision within sixty (60) Days from the date the Claim is received, or with notice to Contractor of the date by which it will render its decision. Owner will then respond with a written decision in such additional time.

E. Owner's review of Claim and finality of decision: To assist in the review of Contractor's Claim, Owner may visit the Project site, or request additional information, in order to fully evaluate the issues raised by the Claim. Contractor shall proceed with performance of the Work pending final resolution of any Claim. Owner's written decision as set forth above shall be final and conclusive as to all matters set forth in the Claim, unless Contractor follows the procedure set forth in Section 8.02.

F. Continuing Contract performance: Pending final resolution of a Claim, and except as otherwise agreed in writing, Contractor shall proceed diligently with performance of the Contract and maintain Contractor's Construction Schedule, and the Owner shall continue to make payments in accordance with the Contract Documents.

G. Waiver of Contractor rights for failure to comply with this Section: Any Claim of the Contractor against the Owner for damages, additional compensation, or additional time, shall be conclusively deemed to have been waived by the Contractor unless made in accordance with the requirements of this Section.

8.02 LITIGATION

A. If Contractor disagrees with Owner's decision rendered in accordance with Section 8.01D, Contractor shall serve and file a lawsuit in an appropriate court within one-hundred and twenty (120) Days of Owner's decision. This requirement cannot be waived except by an explicit waiver signed by Owner. The failure to file a lawsuit within said one-hundred and twenty (120) Day period shall result in Owner's decision rendered in accordance with Section 8.01D being final and binding on Contractor and all of its Subcontractors.

B. At any time, either before or after a lawsuit has been commenced by Contractor in accordance with Section 8.02A, Owner may require Contractor to participate in further mediation or arbitration, or both, in any forum or format as determined by Owner.

C. Claims between Owner and Contractor, Contractor and its Subcontractors, Contractor (and A/E, if applicable), and Owner (and A/E, if applicable) shall, upon demand by Owner, be submitted in a single forum, or Owner may consolidate such Claims or join any of the above-named parties in the same forum.

8.03 CLAIMS AUDITS

A. Owner may audit Claims: All Claims filed against Owner shall be subject to audit at any time following the filing of the Claim. Failure of Contractor, or Subcontractors of any tier, to maintain and retain sufficient records to allow Owner to verify all or a portion of the Claim or to permit Owner access to the books and records of Contractor, or Subcontractors of any tier, shall constitute a waiver of the Claim and shall bar any recovery.

B. Contractor to make documents available: In support of Owner audit of any Claim, Contractor shall, upon request, promptly make available to Owner the following documents:

1. Daily time sheets and supervisor's daily reports;
2. Collective bargaining agreements;
3. Insurance, welfare, and benefits records;
4. Payroll registers;
5. Earnings records;
6. Payroll tax forms;
7. Material invoices, requisitions, and delivery confirmations;
8. Material cost distribution worksheet;
9. Equipment records (list of company equipment, rates, etc.);
10. Vendors', rental agencies', Subcontractors', and agents' invoices;
11. Contracts between Contractor and each of its Subcontractors, and all lower-tier Subcontractor contracts and supplier contracts;

12. Subcontractors' and agents' payment certificates;

13. Cancelled checks (payroll and vendors);

14. Job cost report, including monthly totals;

15. Job payroll ledger;

16. Planned resource loading schedules and summaries;

17. General ledger;

18. Cash disbursements journal;

19. Financial statements for all years reflecting the operations on the Work. In addition, the Owner may require, if it deems it appropriate, additional financial statements for three (3) years preceding execution of the Work;

20. Depreciation records on all company equipment, whether these records are maintained bythe company involved, its accountant, or others;

21. If a source other than depreciation records is used to develop costs for Contractor's internal purposes in establishing the actual cost of owning and operating equipment, all such other source documents;

22. All nonprivileged documents which relate to each and every Claim together with all documents which support the amount of any adjustment in Contract Sum or Contract Time sought by each Claim;

23. Work sheets or software used to prepare the Claim establishing the cost components for items of the Claim including but not limited to labor, benefits and insurance, materials, equipment, Subcontractors, all documents that establish the time periods, individuals involved, the hours for the individuals, and the rates for the individuals; and

24. Work sheets, software, and all other documents used by Contractor to prepare its bid.

C. Contractor to provide facilities for audit and shall cooperate: The audit may be performed by employees of Owner or a representative of Owner. Contractor, and its Subcontractors, shall provide adequate facilities acceptable to Owner, for the audit during normal business hours. Contractor, and all Subcontractors, shall make a good faith effort to cooperate with Owner's auditors.

PART 9 – TERMINATION OF THE WORK

9.01 TERMINATION BY OWNER FOR CAUSE

A. Notice to Terminate for Cause: Owner may, upon seven (7) Days' written notice to Contractor and to its surety, terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for cause upon the occurrence of any one or more of the following events:

1. Contractor fails to prosecute Work: Contractor fails to prosecute the Work or any portion thereof with sufficient diligence to ensure Substantial Completion of the Work within the Contract Time;

2. Contractor bankrupt: Contractor is adjudged bankrupt, makes a general assignment

for the benefit of its creditors, or a receiver is appointed on account of its insolvency;

3. Contractor fails to correct Work: Contractor fails in a material way to replace or correct Work not in conformance with the Contract Documents;

4. Contractor fails to supply workers or materials: Contractor repeatedly fails to supply skilled workers or proper materials or equipment;

5. Contractor failure to pay Subcontractors or labor: Contractor repeatedly fails to make prompt payment due to Subcontractors or for labor;

6. Contractor violates laws: Contractor materially disregards or fails to comply with laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction; or

7. Contractor in material breach of Contract: Contractor is otherwise in material breach of any provision of the Contract Documents.

B. Owner's actions upon termination: Upon termination, Owner may at its option:

1. Take possession of Project site: Take possession of the Project site and take possessionof or use all materials, equipment, tools, and construction equipment and machinery thereon owned by Contractor to maintain the orderly progress of, and to finish, the Work;

2. Accept assignment of Subcontracts: Accept assignment of subcontracts pursuant to Section 5.20; and

3. Finish the Work: Finish the Work by whatever other reasonable method it deems expedient.

C. Surety's role: Owner's rights and duties upon termination are subject to the prior rights and duties of the surety, if any, obligated under any bond provided in accordance with the Contract Documents.

D. Contractor's required actions: When Owner terminates the Work in accordance with this section, Contractor shall take the actions set forth in Section 9.02B and shall not be entitled to receive further payment until the Work is accepted.

E. Contractor to pay for unfinished Work: If the unpaid balance of the Contract Sum exceeds the cost of finishing the Work (including compensation for A/E's services, if applicable) and expenses made necessary thereby and any other extra costs or damages incurred by Owner in completing the Work, or as a result of Contractor's actions, such excess shall be paid to Contractor. If such costs exceed the unpaid balance, Contractor shall pay the difference to Owner. These obligations for payment shall survive termination.

F. Contractor and Surety still responsible for Work performed: Termination of the Work in accordance with this section shall not relieve Contractor or its surety of any responsibilities for Work performed.

G. Conversion of "Termination for Cause" to "Termination for Convenience": If Owner terminates Contractor for cause and it is later determined that none of the circumstances set forth in Section 9.01A exist, then such termination shall be deemed a termination for convenience pursuant to Section 9.02.

9.02 TERMINATION BY OWNER FOR CONVENIENCE

A. Owner Notice of Termination for Convenience: Owner may, upon written notice, terminate (without prejudice to any right or remedy of Owner) the Work, or any part of it, for the convenience of Owner.

B. Contractor response to termination Notice: Unless Owner directs otherwise, after receipt of a written notice of termination for either cause or convenience, Contractor shall promptly:

1. Cease Work: Stop performing Work on the date and as specified in the notice of termination;

2. No further orders or Subcontracts: Place no further orders or Subcontracts for materials, equipment, services or facilities, except as may be necessary for completion of such portion of the Work as is not terminated;

3. Cancel orders and Subcontracts: Cancel all orders and subcontracts, upon terms acceptable to Owner, to the extent that they relate to the performance of Work terminated;

4. Assign orders and Subcontracts to Owner: Assign to Owner all of the right, title, and interest of Contractor in all orders and subcontracts;

5. Take action to protect the Work: Take such action as may be necessary or as directed by Owner to preserve and protect the Work, Project site, and any other property relatedto this Project in the possession of Contractor in which Owner has an interest; and

6. Continue performance not terminated: Continue performance only to the extent not terminated.

C. Terms of adjustment in Contract Sum if Contract terminated: If Owner terminates the Work or any portion thereof for convenience, Contractor shall be entitled to make a request for an equitable adjustment for its reasonable direct costs incurred prior to the effective date of the termination, plus reasonable allowance for overhead and profit on Work performed prior to termination, plus the reasonable administrative costs of the termination, but shall not be entitled to any other costs or damages, whatsoever, provided however, the total sum payable upon termination shall not exceed the Contract Sum reduced by prior payments. Contractor shall be required to make its request in accordance with the provisions of Part 7.

D. Owner to determine whether to adjust Contract Time: If Owner terminates the Work or any portion thereof for convenience, the Contract Time shall be adjusted as determined by Owner.

PART 10 – MISCELLANEOUS PROVISIONS

10.01 GOVERNING LAW

Applicable law and venue: The Contract Documents and the rights of the parties herein shall be governed by the laws of the State of Washington. Venue shall be in the county in which Owner's administrative office is located, unless otherwise specified.

10.02 SUCCESSORS AND ASSIGNS

Bound to successors; Assignment of Contract: Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party shall assign the Work without written consent of the other, except that Contractor may assign the Work for security purposes, to a bank or lending institution authorized to do business in the State of Washington. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations set forth in the Contract Documents.

10.03 MEANING OF WORDS

Meaning of words used in Specifications: Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or to the code of any governmental authority, whether such reference be specific or by implication, shall be to the latest standard specification, manual, or code in effect on the date for submission of bids, except as may be otherwise specifically stated. Wherever in these Drawings and Specifications an article, device, or piece of equipment is referred to in the singular manner, such reference shall apply to as many such articles as are shown on the Drawings or required to complete the installation.

10.04 RIGHTS AND REMEDIES

No waiver of rights: No action or failure to act by Owner (or A/E, if applicable) shall constitute a waiver of a right or duty afforded them under the Contract Documents, nor shall action or failure to act constitute approval or an acquiescence in a breach therein, except as may be specifically agreed in writing.

10.05 CONTRACTOR REGISTRATION

Contractor must be registered or licensed: Pursuant to Chapter 39.06 RCW, Contractor shall be registered or licensed as required by the laws of the State of Washington, including but not limited to Chapter 18.27 RCW.

10.06 TIME COMPUTATIONS

Computing time: When computing any period of time, the day of the event from which the period of time begins shall not be counted. The last day is counted unless it falls on a weekend or legal holiday, in which event the period runs until the end of the next day that is not a weekend or holiday. When the period of time allowed is less than seven (7) days, intermediate Saturdays, Sundays, and legal holidays are excluded from the computation.

10.07 RECORDS RETENTION

Six-year records retention period: The wage, payroll, and cost records of Contractor, and its Subcontractors, and all records subject to audit in accordance with Section 8.03, shall be retained for a period of not less than six (6) years after the date of Final Acceptance.

10.08 THIRD-PARTY AGREEMENTS

No third-party relationships created: The Contract Documents shall not be construed to create a contractual relationship of any kind between any persons other than Owner and Contractor.

10.09 ANTITRUST ASSIGNMENT

Contractor assigns overcharge amounts to Owner: Owner and Contractor recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the purchaser. Therefore, Contractor hereby assigns to Owner any and all claims for such overcharges as to goods, materials, and equipment purchased in connection with the Work performed in accordance withthe Contract Documents, except as to overcharges which result from antitrust violations commencing after the Contract Sum is established and which are not passed on to Owner under a Change Order. Contractor shall put a similar clause in its Subcontracts, and require a similar clause in its Sub-Subcontracts, such that all claims for such overcharges on the Work are passed to Owner by Contractor.

10.10 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the designated representative as identified in the Contract Documents, or to an officer of the corporation for which it was intended if the designated representative no longer works for that party; or if delivered at, or sent by facsimile, email, registered or certified mail, or courier service providing proof of delivery to, the last business address known to the party giving notice. The date of written notice shall be the earlier of the date of personal delivery, actual receipt by facsimile or email, or three (3) calendar days after the date of postmark.

10.11 PUBLIC RECORDS ACT COMPLIANCE

The Contractor understands that the Owner is bound by the Washington Public Records Act, Chapter 42.56 RCW. The Contractor agrees to fully cooperate with the Owner in responding to public records requests. The Contractor shall promptly provide such records to the Owner as requested by the Owner or required by law for the Owner to fulfill its obligations in responding to public records requests. Such records shall be provided at no cost to the Owner. The Contractor shall cause any subcontract to contain this provision. This section shall survive expiration or termination of this Contract for any reason.

10.12 SUBSTITUTION OF PERSONNEL

The Contractor and the Owner have no present intention to substitute personnel, and the parties shall endeavor to minimize substitutions and maintain continuity of personnel, but each reserves the right to substitute its personnel for the purpose of carrying out its responsibilities under this Contract. Such substitution by the Contractor shall be subject to the approval of the Owner, which approval shall not be unreasonably withheld. If the Contractor substitutes personnel, it shall not charge the Owner for any extra costs incurred thereby, including, without limitation, costs incurred to familiarize new personnel with the Project. If requested by the Owner, the Contractor shall remove from performing the Work, without cost to the Owner or delay to the Work, any person whose removal the Owner reasonably requests. Nothing in this provision shall be construed to alter the independent contractor status of the Contractor.

10.13 SEVERABILITY

If, for any reason, any part, term or provision of this Agreement is held by a court of competent jurisdiction to be illegal, void, or unenforceable, the validity of the remaining provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular provision held to be invalid; provided, however, that if it should appear that any provision of the Contract Documents is in conflict with any statutory provision of the State of Washington, the provision shall be deemed modified to conform to such statutory provision.»

10.14 HEADINGS AND CAPTIONS

Headings for convenience only: All headings and captions used in these General Conditions are only for convenience of reference, and shall not be used in any way in connection with the meaning, effect, interpretation, construction, or enforcement of the General Conditions, and do not define the limit or describe the scope or intent of any provision of these General Conditions.

- END OF GENERAL CONDITIONS –

Last Revised: May 7, 2023.

SECTION 011000 – SUMMARY

PART 1 - GENERAL

1.1 PROJECT INFORMATION

A. Project Identification: District Office Board Room & 2nd Floor Office Remodel 2023-02-1001

1. Project Location: 503 N Sequim Ave, Sequim, WA 98382

B. Owner: Sequim School District No. 323

C. Architect: design2 last, Inc. Lauri Strauss, AIA LEED AP BD&C, design2 LAST, inc.

D. Architect's Consultants: Architect has retained the following design professionals who have prepared designated portions of the Contract Documents:

1. Listed on the drawing cover sheet

E. The Work consists of converting an office space on the first floor into a Board / Multi-purpose Room as well as a remodel of approximately 2000 s.f. of empty space on the second floor into administrative office space. (ADDENDUM 1)

1. ADDENDUM 1 CLARIFICATIONS:
   a. Any references to Elevator work are legacy verbiage and omitted from this scope of work.
   b. Fire Alarm to be by Owner. Coordinate with Owner's vendor during construction.
   c. Access Controls references are for information only for future project integration. All conduit and pull strings are to be installed as part of this project where referenced.
   d. All auto-operators and push buttons are to be installed as part of this project.

1.2 WORK RESTRICTIONS

A. Contractor's Use of Premises: During construction, Contractor will have full use of building indicated. Contractor's use of premises is limited only by Owner's right to perform work or employ other contractors on portions of Project and as follows:

1. Owner will occupy premises during construction. Perform construction during normal working hours **8 AM to 5 PM** Monday thru Friday, other than holidays), unless otherwise agreed to in advance by Owner. Clean up work areas and return to usable condition at the end of each work period.
2. Limits: Limit site disturbance, including earthwork and clearing of vegetation, to 40 feet (12.2 m) beyond building perimeter; 10 feet (3 m) beyond surface walkways, patios, surface parking, and utilities less than 12 inches (300 mm) in diameter; 15 feet (4.5 m) beyond primary roadway curbs and main utility branch trenches; and 25 feet (7.6 m)

beyond constructed areas with permeable surfaces (such as pervious paving areas, stormwater detention facilities, and playing fields) that require additional staging areas to limit compaction in the constructed area.

3. Limits: Limit site disturbance, including earthwork and clearing of vegetation, to 40 feet (12.2 m) beyond building perimeter; 15 feet (4.6 m) beyond surface walkways, patios, surface parking, and utilities; and 25 feet (7.6 m) beyond constructed areas with permeable surfaces that require additional staging areas to limit compaction in the constructed areas.
4. Driveways, Walkways, and Entrances: Keep parking lots and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.

B. On-Site Work Hours: Work hours are not limited for work and the contractor is authorized to work extended hours or weekends as determined by the contractor to meet the schedule needs. For testing and/or work where district staff are needed to coordinate work, this work will be limited to 8 AM TO 5 PM, (Monday thru Friday, other than holidays) unless agreed to in advance by Owner to schedule staff.

C. Nonsmoking Campus: Smoking is not permitted on the premises of the school campuses. No smoking is allowed within the property lines of the buildings. This restriction includes vaping.

D. School property Restrictions: All workers are bound by the restrictions for school property regarding allowable activities and actions. Profanity, harassment, or other forms of unprofessional behavior will warrant removal from the project at the discretion of the district.

E. Weapon Fre Zone Restriction: School Properties are weapon free zones. Adherence to this restriction is mandatory. Use of any tools or equipment which mimic or can be misinterpreted as discharging of weapons sounds (such as powder actuated fasteners) are prohibited without prior approval by the district.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012000 - PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 ALLOWANCES

A. Advise Architect of the date when selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.

B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

C. Purchase products and systems selected by Architect from the designated supplier.

D. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

E. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight and delivery to Project site.

F. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials under allowance shall be included as part of the Contract Sum and not part of the allowance.

1.2 UNIT PRICES

A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

B. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.

C. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

1.3 ALTERNATES

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

B. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

C. Notification: Immediately following award of the Contract, notify each party involved, in writing, whether alternates have been accepted, rejected, or deferred for later consideration.

1.4 PAYMENT PROCEDURES

A. Submit a Schedule of Values at least [seven] days before the initial Application for Payment. Break down the Contract Sum into at least one line item for each Specification Section in the Project Manual table of contents. Coordinate the schedule of values with Contractor's construction schedule.

1. Arrange schedule of values consistent with format of **AIA Document G703**
2. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
3. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
4. Provide separate line items in the schedule of values for initial cost of materials and for total installed value of that part of the Work.
5. Provide a separate line item in the schedule of values for each allowance.

B. Application for Payment Forms: Use forms which convey the same information and break down as the **AIA Document G702 and AIA Document G703** as forms for Applications for Payment.

C. Submit [one] copies of each application for payment according to the schedule established in Owner/Contractor Agreement.

1. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor.
2. With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
3. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.

    a. Include insurance certificates, proof that taxes, fees, and similar obligations were paid, and evidence that claims have been settled.
    b. Include affidavit of payment of debts and claims[**on AIA Document G706**].

c. Include affidavit of release of liens
d. Include consent of surety to final payment
e. Submit final meter readings for utilities, a record of stored fuel, and similar data as of the date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALLOWANCES (Not Used)

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUBSTITUTION PROCEDURES

A. Substitutions include changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

B. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form: Use **CSI Form 13.1A** or similar form which provides relevant information.
2. Submit requests within 5 days after the Notice of Award.
3. Identify product to be replaced and show compliance with requirements for substitutions. Include a detailed comparison of significant qualities of proposed substitution with those of the Work specified, a list of changes needed to other parts of the Work required to accommodate proposed substitution, and any proposed changes in the Contract Sum or the Contract Time should the substitution be accepted.

C. Architect will review proposed substitutions and notify Contractor of their acceptance or rejection. If necessary, Architect will request additional information or documentation for evaluation.

1. Architect will notify Contractor of acceptance or rejection of proposed substitution within 5 days of receipt of request, or 5 days of receipt of additional information or documentation, whichever is later.

D. Do not submit unapproved substitutions on Shop Drawings or other submittals.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 CONTRACT MODIFICATION PROCEDURES

A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions.".

B. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work.

1. Proposal Requests are not instructions either to stop work in progress or to execute the proposed change.
2. Within 10 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time.

C. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.

D. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor, for all changes to the Contract Sum or the Contract Time.

E. Architect may issue a Construction Change Directive. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

F. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 013000 - ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 PROJECT MANAGEMENT AND COORDINATION

A. Subcontract List: Submit a written summary identifying individuals or firms proposed for each portion of the Work.

B. Key Personnel Names: Within ten (10) days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. List e-mail addresses and telephone numbers.

C. Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work.

D. Requests for Information (RFIs): On discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI.

E. Schedule and conduct progress meetings at Project site at weekly. Notify Owner and Architect of meeting dates and times. Require attendance of each subcontractor or other entity concerned with current progress or involved in planning, coordination, or performance of future activities.

1. Contractor will record minutes and distribute to everyone concerned, including Owner and Architect.

1.2 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Architect's Digital Data Files: Electronic digital data files of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals.

1. Architect will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings.

a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.

B. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

1. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
2. Submit one [1] electronic copy of each action submittal to architect or Owner’s representative.
3. Submit one [1] electronic copy of each informational submittal to architect or Owner’s representative.
4. Architect will discard submittals received from sources other than Contractor.

C. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with unique identifier, including project identifier, Specification Section number, and revision identifier.
3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.

D. Identify options requiring selection by Architect.

E. Identify deviations from the Contract Documents on submittals.

F. Contractor's Construction Schedule Submittal Procedure:

1. Submit required submittals in the following format:

a. Working electronic copy of schedule file, where indicated.
b. PDF electronic file.

2. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.

a. Submit a working electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (initial or updated) and date on label.

3. Coordinate Contractor's construction schedule with the schedule of values, submittal schedule, progress reports, payment requests, and other required schedules and reports.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections.

1. Post electronic submittals as PDF electronic files directly to Architect.

a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

2. Submit electronic submittals via email as PDF electronic files.

a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

2.2 ACTION SUBMITTALS

A. Submit one (1) electronic copy of each submittal unless otherwise indicated.

B. Product Data: Mark each copy to show applicable products and options. Include the following:

1. Manufacturer's written recommendations, product specifications, and installation instructions.
2. Wiring diagrams showing factory-installed wiring.
3. Printed performance curves and operational range diagrams.
4. Testing by recognized testing agency.
5. Compliance with specified standards and requirements.

C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data. Submit on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches Include the following:

1. Dimensions and identification of products.
2. Fabrication and installation drawings and roughing-in and setting diagrams.
3. Wiring diagrams showing field-installed wiring.
4. Notation of coordination requirements.
5. Notation of dimensions established by field measurement.

D. Samples: Submit Samples for review of kind, color, pattern, and texture and for a comparison of these characteristics between submittal and actual component as delivered and installed. Include name of manufacturer and product name on label.

1. If variation is inherent in material or product, submit at least three (3) sets of paired units that show variations.

2.3 INFORMATIONAL SUBMITTALS

A. Informational Submittals: Submit one (1) electronic copy of each submittal unless otherwise indicated. Architect will not return copies.

B. Qualification Data: Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

C. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

2.4 DELEGATED DESIGN SERVICES

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit [**three**] <**Insert number**> copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.

1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

2.5 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type schedule within ten (10) days of date established for Notice of Award.

B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

C. Cost Correlation: Superimpose a cost correlation timeline, indicating planned and actual costs. On the line, show planned and actual dollar volume of the Work performed as of planned and actual dates used for preparation of payment requests.

D. Recovery Schedule: When periodic update indicates the Work is fourteen (14) or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and indicate date by which recovery will be accomplished.

PART 3 - EXECUTION

3.1 SUBMITTAL REVIEW

A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.

B. Architect will review each action submittal, make marks to indicate corrections or modifications required, will stamp each submittal with an action stamp, and will mark stamp appropriately to indicate action.

C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

D. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

3.2 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Updating: At weekly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.

1. As the Work progresses, indicate Actual Completion percentage for each activity.

B. Distribute copies of approved schedule to Owner, Architect, subcontractors, testing and inspecting agencies, and parties identified by Contractor with a need-to-know schedule responsibility. When revisions are made, distribute updated schedules to the same parties.

END OF SECTION 013000

SECTION 013516 - ALTERATION PROJECT PROCEDURES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Preliminary Conference for Alteration Work: Conduct a conference via electronic conference, record conference results; and distribute record copies.

1. Attendees: In addition to representatives of Owner, Architect, and Contractor, each specialist shall be represented.
2. Agenda: Discuss items of significance that could affect progress of alteration work, including review of the following:

    a. Fire prevention.
    b. Areas where existing construction is to remain and the required protection.
    c. Hauling routes.
    d. Sequence of alteration work operations.
    e. Storage, protection, and accounting for salvaged and specially fabricated items.
    f. Existing conditions and structural loading limitations.
    g. Collection of waste, protection of occupants and the public, and condition of other construction that affects or will affect the Work.

B. Coordination Meetings: Conduct coordination meetings specifically for alteration work at weekly intervals; record meeting results; and distribute record copies.

1. Attendees: In addition to representatives of Owner, Architect, and Contractor, each specialist, supplier, installer, and other entity concerned with progress of alteration work activities shall be represented.
2. Agenda: Review items of significance that could affect progress of alteration work. Include topics for discussion as appropriate to status of Project.

C. Specialist Qualifications: A firm regularly engaged in specialty work similar in nature and extent to work as specified in each Section and that has completed a minimum of three (3) recent projects with a record of successful in-service performance Supervisors shall be experienced in specialty work similar in nature and extent to that indicated for this Project.

D. Alteration Work Program: Prepare a written plan for Project, including protection of surrounding materials during operations. Include dust and noise control, means of egress, debris-hauling routes, and temporary protective barriers.

E. Fire-Prevention Plan: Prepare a written plan for preventing fires during the Work, including placement of fire-control devices during each phase or process.

F. Safety and Health Standard: Comply with ANSI/ASSE A10.6.

G. Salvaged Materials: Clean loose dirt and debris from salvaged items; crate and cushion items against damage during handling; and label contents of containers. Store and transport items to Owner's designated storage area.

H. Salvaged Materials for Reinstallation: Repair and clean items for reuse and reinstall items in locations indicated.

I. Discrepancies: Notify Architect of discrepancies between existing conditions and Drawings before proceeding with removal and dismantling work.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 PROTECTION

A. Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm resulting from alteration work or spillage.

1. Provide temporary barricades, barriers, directional signage, and covers over walkways to protect and exclude the public from areas where alteration work is being performed.
2. Erect temporary barriers to form and maintain fire-egress routes.
3. Contain dust and debris generated by alteration work, and prevent it from reaching the public or adjacent surfaces.
4. Provide shoring, bracing, and supports as necessary. Do not overload structural elements.
5. Do not apply chemicals during winds of sufficient force to spread them to unprotected surfaces.
6. Collect and dispose of runoff in a manner that prevents soil contamination, soil erosion, undermining of paving and foundations, damage to landscaping, or water penetration into building interior.

B. Protect existing materials, including floors along hauling routes, with temporary protections and construction.

1. Use covering materials and masking agents that will not stain or leave residue on surfaces. When no longer needed, promptly remove protective materials.

C. Comply with each product manufacturer's written instructions for protections and precautions.

D. Utility and Communications Services: Notify Owner; Architect; authorities having jurisdiction; and entities owning or controlling wires, conduits, pipes, and other services affected by alteration work before commencing operations. Disconnect and cap pipes and services as required by authorities having jurisdiction, and provide temporary services during interruptions to existing utilities.

E. Existing Drains: Prior to the start of work in an area, verify that drainage system is functioning properly. Notify Architect immediately of inadequate drainage or blockage. Do not begin work until the drainage system is functioning properly.

1. Prevent solids or other debris from entering the drainage system. Clean out drains and drain lines that become sluggish or blocked from alteration work.

3.2 PROTECTION FROM FIRE

A. Comply with NFPA 241 requirements unless otherwise indicated.

B. Fire Watch: When working with heat-generating equipment or combustible materials, station personnel to serve as a fire watch at each location where such work is performed. Fire-watch personnel shall have the authority to enforce fire safety. Station fire watch according to NFPA 51B and NFPA 241.

C. Fire-Control Devices: Maintain fire extinguishers, fire blankets, and rag buckets for disposal of rags with combustible liquids.

D. Sprinklers: Maintain sprinkler protection without interruption. While operations are performed close to sprinklers, shield them temporarily with guards and remove guards when nearby work is paused or completed.

3.3 GENERAL ALTERATION WORK

A. Record existing work before each procedure (preconstruction), and record progress during the work. Use digital preconstruction documentation photographs and/or video recordings.

B. Perform surveys of Project site as the Work progresses to detect hazards resulting from alterations.

C. Notify Architect of visible changes in the integrity of material or components, including cracks, movement, or distortion.

1. Do not proceed with the work in question until directed by Architect.

END OF SECTION 013516

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

B. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements, comply with the most stringent requirement. Refer uncertainties to Architect for a decision.

C. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum. The actual installation may exceed the minimum within reasonable limits. Indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision.

D. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems:

1. Seismic-force-resisting system, designated seismic system, or component listed in the designated seismic system quality-assurance plan prepared by Architect.
2. Main wind-force-resisting system or a wind-resisting component listed in the wind-force-resisting system quality-assurance plan prepared by Architect.

E. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

F. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, notices, receipts for fee payments, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

G. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated.

H. Testing Agency Qualifications: An independent agency with the experience and capability to conduct testing and inspecting indicated; and where required by authorities having jurisdiction, that is acceptable to authorities.

I. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

J. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect and Contractor of irregularities or deficiencies in the Work observed during performance of its services.
2. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
3. Do not perform any duties of Contractor.

K. Associated Services: Cooperate with testing agencies and provide reasonable auxiliary services as requested. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Security and protection for samples and for testing and inspecting equipment.

L. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

B. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

B. Abbreviations and Acronyms: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

1. AABC - Associated Air Balance Council; www.aabc.com.
2. AAMA - American Architectural Manufacturers Association; www.aamanet.org.
3. AAPFCO - Association of American Plant Food Control Officials; www.aapfco.org.
4. AASHTO - American Association of State Highway and Transportation Officials; www.transportation.org.
5. AATCC - American Association of Textile Chemists and Colorists; www.aatcc.org.
6. ABMA - American Bearing Manufacturers Association; www.americanbearings.org.
7. ACI - American Concrete Institute; (Formerly: ACI International); www.concrete.org.
8. ACPA - American Concrete Pipe Association; www.concrete-pipe.org.
9. AEIC - Association of Edison Illuminating Companies, Inc. (The); www.aeic.org.
10. AF&PA - American Forest & Paper Association; www.afandpa.org.
11. AGA - American Gas Association; www.aga.org.
12. AHAM - Association of Home Appliance Manufacturers; www.aham.org.
13. AHRI - Air-Conditioning, Heating, and Refrigeration Institute (The); www.ahrinet.org.
14. AI - Asphalt Institute; www.asphaltinstitute.org.
15. AIA - American Institute of Architects (The); www.aia.org.
16. AISC - American Institute of Steel Construction; www.aisc.org.
17. AISI - American Iron and Steel Institute; www.steel.org.
18. AITC - American Institute of Timber Construction; www.aitc-glulam.org.
19. AMCA - Air Movement and Control Association International, Inc.; www.amca.org.
20. ANSI - American National Standards Institute; www.ansi.org.
21. AOSA - Association of Official Seed Analysts, Inc.; www.aosaseed.com.
22. APA - APA - The Engineered Wood Association; www.apawood.org.
23. APA - Architectural Precast Association; www.archprecast.org.
24. API - American Petroleum Institute; www.api.org.
25. ARI - Air-Conditioning & Refrigeration Institute; (See AHRI).
26. ARI - American Refrigeration Institute; (See AHRI).
27. ARMA - Asphalt Roofing Manufacturers Association; www.asphaltroofing.org.
28. ASCE - American Society of Civil Engineers; www.asce.org.
29. ASCE/SEI - American Society of Civil Engineers/Structural Engineering Institute; (See ASCE).
30. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org.

31. ASME - ASME International; (American Society of Mechanical Engineers); www.asme.org.
32. ASSE - American Society of Safety Engineers (The); www.asse.org.
33. ASSE - American Society of Sanitary Engineering; www.asse-plumbing.org.
34. ASTM - ASTM International; (American Society for Testing and Materials International); www.astm.org.
35. ATIS - Alliance for Telecommunications Industry Solutions; www.atis.org.
36. AWEA - American Wind Energy Association; www.awea.org.
37. AWI - Architectural Woodwork Institute; www.awinet.org.
38. AWMAC - Architectural Woodwork Manufacturers Association of Canada; www.awmac.com.
39. AWPA - American Wood Protection Association; (Formerly: American Wood-Preservers' Association); www.awpa.com.
40. AWS - American Welding Society; www.aws.org.
41. AWWA - American Water Works Association; www.awwa.org.
42. BHMA - Builders Hardware Manufacturers Association; www.buildershardware.com.
43. BIA - Brick Industry Association (The); www.gobrick.com.
44. BICSI - BICSI, Inc.; www.bicsi.org.
45. BIFMA - BIFMA International; (Business and Institutional Furniture Manufacturer's Association); www.bifma.com.
46. BISSC - Baking Industry Sanitation Standards Committee; www.bissc.org.
47. BWF - Badminton World Federation; (Formerly: International Badminton Federation); www.bwfbadminton.org.
48. CDA - Copper Development Association; www.copper.org.
49. CEA - Canadian Electricity Association; www.electricity.ca.
50. CEA - Consumer Electronics Association; www.ce.org.
51. CFFA - Chemical Fabrics & Film Association, Inc.; www.chemicalfabricsandfilm.com.
52. CFSEI - Cold-Formed Steel Engineers Institute; www.cfsei.org.
53. CGA - Compressed Gas Association; www.cganet.com.
54. CIMA - Cellulose Insulation Manufacturers Association; www.cellulose.org.
55. CISCA - Ceilings & Interior Systems Construction Association; www.cisca.org.
56. CISPI - Cast Iron Soil Pipe Institute; www.cispi.org.
57. CLFMI - Chain Link Fence Manufacturers Institute; www.chainlinkinfo.org.
58. CPA - Composite Panel Association; www.pbmdf.com.
59. CRI - Carpet and Rug Institute (The); www.carpet-rug.org.
60. CRRC - Cool Roof Rating Council; www.coolroofs.org.
61. CRSI - Concrete Reinforcing Steel Institute; www.crsi.org.
62. CSA - Canadian Standards Association; www.csa.ca.
63. CSA - CSA International; (Formerly: IAS - International Approval Services); www.csa-international.org.
64. CSI - Construction Specifications Institute (The); www.csinet.org.
65. CSSB - Cedar Shake & Shingle Bureau; www.cedarbureau.org.
66. CTI - Cooling Technology Institute; (Formerly: Cooling Tower Institute); www.cti.org.
67. CWC - Composite Wood Council; (See CPA).
68. DASMA - Door and Access Systems Manufacturers Association; www.dasma.com.
69. DHI - Door and Hardware Institute; www.dhi.org.
70. ECA - Electronic Components Association; (See ECIA).
71. ECAMA - Electronic Components Assemblies & Materials Association; (See ECIA).
72. ECIA ? Electronic Components Industry Association; www.eciaonline.org
73. EIA - Electronic Industries Alliance; (See TIA).
74. EIMA - EIFS Industry Members Association; www.eima.com.

75. EJMA - Expansion Joint Manufacturers Association, Inc.; www.ejma.org.
76. ESD - ESD Association; (Electrostatic Discharge Association); www.esda.org.
77. ESTA - Entertainment Services and Technology Association; (See PLASA).
78. EVO - Efficiency Valuation Organization; www.evo-world.org.
79. FIBA - F?d?ration Internationale de Basketball; (The International Basketball Federation); www.fiba.com.
80. FIVB - F?d?ration Internationale de Volleyball; (The International Volleyball Federation); www.fivb.org.
81. FM Approvals - FM Approvals LLC; www.fmglobal.com.
82. FM Global - FM Global; (Formerly: FMG - FM Global); www.fmglobal.com.
83. FRSA - Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc.; www.floridaroof.com.
84. FSA - Fluid Sealing Association; www.fluidsealing.com.
85. FSC - Forest Stewardship Council U.S.; www.fscus.org.
86. GA - Gypsum Association; www.gypsum.org.
87. GANA - Glass Association of North America; www.glasswebsite.com.
88. GS - Green Seal; www.greenseal.org.
89. HI - Hydraulic Institute; www.pumps.org.
90. HI/GAMA - Hydronics Institute/Gas Appliance Manufacturers Association; (See AHRI).
91. HMMA - Hollow Metal Manufacturers Association; (See NAAMM).
92. HPVA - Hardwood Plywood & Veneer Association; www.hpva.org.
93. HPW - H. P. White Laboratory, Inc.; www.hpwhite.com.
94. IAPSC - International Association of Professional Security Consultants; www.iapsc.org.
95. IAS - International Accreditation Service; www.iasonline.org.
96. IAS - International Approval Services; (See CSA).
97. ICBO - International Conference of Building Officials; (See ICC).
98. ICC - International Code Council; www.iccsafe.org.
99. ICEA - Insulated Cable Engineers Association, Inc.; www.icea.net.
100. ICPA - International Cast Polymer Alliance; www.icpa-hq.org.
101. ICRI - International Concrete Repair Institute, Inc.; www.icri.org.
102. IEC - International Electrotechnical Commission; www.iec.ch.
103. IEEE - Institute of Electrical and Electronics Engineers, Inc. (The); www.ieee.org.
104. IES - Illuminating Engineering Society; (Formerly: Illuminating Engineering Society of North America); www.ies.org.
105. IESNA - Illuminating Engineering Society of North America; (See IES).
106. IEST - Institute of Environmental Sciences and Technology; www.iest.org.
107. IGMA - Insulating Glass Manufacturers Alliance; www.igmaonline.org.
108. IGSHPA - International Ground Source Heat Pump Association; www.igshpa.okstate.edu.
109. ILI - Indiana Limestone Institute of America, Inc.; www.iliai.com.
110. Intertek - Intertek Group; (Formerly: ETL SEMCO; Intertek Testing Service NA); www.intertek.com.
111. ISA - International Society of Automation (The); (Formerly: Instrumentation, Systems, and Automation Society); www.isa.org.
112. ISAS - Instrumentation, Systems, and Automation Society (The); (See ISA).
113. ISFA - International Surface Fabricators Association; (Formerly: International Solid Surface Fabricators Association); www.isfanow.org.
114. ISO - International Organization for Standardization; www.iso.org.
115. ISSFA - International Solid Surface Fabricators Association; (See ISFA).
116. ITU - International Telecommunication Union; www.itu.int/home.
117. KCMA - Kitchen Cabinet Manufacturers Association; www.kcma.org.

118. LMA - Laminating Materials Association; (See CPA).
119. LPI - Lightning Protection Institute; www.lightning.org.
120. MBMA - Metal Building Manufacturers Association; www.mbma.com.
121. MCA - Metal Construction Association; www.metalconstruction.org.
122. MFMA - Maple Flooring Manufacturers Association, Inc.; www.maplefloor.org.
123. MFMA - Metal Framing Manufacturers Association, Inc.; www.metalframingmfg.org.
124. MHIA - Material Handling Industry of America; www.mhia.org.
125. MIA - Marble Institute of America; www.marble-institute.com.
126. MMPA - Moulding & Millwork Producers Association; (Formerly: Wood Moulding & Millwork Producers Association); www.wmmpa.com.
127. MPI - Master Painters Institute; www.paintinfo.com.
128. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry Inc.; www.mss-hq.org.
129. NAAMM - National Association of Architectural Metal Manufacturers; www.naamm.org.
130. NACE - NACE International; (National Association of Corrosion Engineers International); www.nace.org.
131. NADCA - National Air Duct Cleaners Association; www.nadca.com.
132. NAIMA - North American Insulation Manufacturers Association; www.naima.org.
133. NBGQA - National Building Granite Quarries Association, Inc.; www.nbgqa.com.
134. NCAA - National Collegiate Athletic Association (The); www.ncaa.org.
135. NCMA - National Concrete Masonry Association; www.ncma.org.
136. NEBB - National Environmental Balancing Bureau; www.nebb.org.
137. NECA - National Electrical Contractors Association; www.necanet.org.
138. NeLMA - Northeastern Lumber Manufacturers Association; www.nelma.org.
139. NEMA - National Electrical Manufacturers Association; www.nema.org.
140. NETA - InterNational Electrical Testing Association; www.netaworld.org.
141. NFHS - National Federation of State High School Associations; www.nfhs.org.
142. NFPA - NFPA; (National Fire Protection Association); www.nfpa.org.
143. NFPA - NFPA International; (See NFPA).
144. NFRC - National Fenestration Rating Council; www.nfrc.org.
145. NHLA - National Hardwood Lumber Association; www.nhla.com.
146. NLGA - National Lumber Grades Authority; www.nlga.org.
147. NOFMA - National Oak Flooring Manufacturers Association; (See NWFA).
148. NOMMA - National Ornamental & Miscellaneous Metals Association; www.nomma.org.
149. NRCA - National Roofing Contractors Association; www.nrca.net.
150. NRMCA - National Ready Mixed Concrete Association; www.nrmca.org.
151. NSF - NSF International; (National Sanitation Foundation International); www.nsf.org.
152. NSPE - National Society of Professional Engineers; www.nspe.org.
153. NSSGA - National Stone, Sand & Gravel Association; www.nssga.org.
154. NTMA - National Terrazzo & Mosaic Association, Inc. (The); www.ntma.com.
155. NWFA - National Wood Flooring Association; www.nwfa.org.
156. PCI - Precast/Prestressed Concrete Institute; www.pci.org.
157. PDI - Plumbing & Drainage Institute; www.pdionline.org.
158. PLASA - PLASA; (Formerly: ESTA - Entertainment Services and Technology Association); www.plasa.org.
159. RCSC - Research Council on Structural Connections; www.boltcouncil.org.
160. RFCI - Resilient Floor Covering Institute; www.rfci.com.
161. RIS - Redwood Inspection Service; www.redwoodinspection.com.
162. SAE - SAE International; (Society of Automotive Engineers); www.sae.org.
163. SCTE - Society of Cable Telecommunications Engineers; www.scte.org.

164. SDI - Steel Deck Institute; www.sdi.org.
165. SDI - Steel Door Institute; www.steeldoor.org.
166. SEFA - Scientific Equipment and Furniture Association; www.sefalabs.com.
167. SEI/ASCE - Structural Engineering Institute/American Society of Civil Engineers; (See ASCE).
168. SIA - Security Industry Association; www.siaonline.org.
169. SJI - Steel Joist Institute; www.steeljoist.org.
170. SMA - Screen Manufacturers Association; www.smainfo.org.
171. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association; www.smacna.org.
172. SMPTE - Society of Motion Picture and Television Engineers; www.smpte.org.
173. SPFA - Spray Polyurethane Foam Alliance; www.sprayfoam.org.
174. SPIB - Southern Pine Inspection Bureau; www.spib.org.
175. SPRI - Single Ply Roofing Industry; www.spri.org.
176. SRCC - Solar Rating and Certification Corporation; www.solar-rating.org.
177. SSINA - Specialty Steel Industry of North America; www.ssina.com.
178. SSPC - SSPC: The Society for Protective Coatings; www.sspc.org.
179. STI - Steel Tank Institute; www.steeltank.com.
180. SWI - Steel Window Institute; www.steelwindows.com.
181. SWPA - Submersible Wastewater Pump Association; www.swpa.org.
182. TCA - Tilt-Up Concrete Association; www.tilt-up.org.
183. TCNA - Tile Council of North America, Inc.; (Formerly: Tile Council of America); www.tileusa.com.
184. TEMA - Tubular Exchanger Manufacturers Association, Inc.; www.tema.org.
185. TIA - Telecommunications Industry Association; (Formerly: TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance); www.tiaonline.org.
186. TIA/EIA - Telecommunications Industry Association/Electronic Industries Alliance; (See TIA).
187. TMS - The Masonry Society; www.masonrysociety.org.
188. TPI - Truss Plate Institute; www.tpinst.org.
189. TPI - Turfgrass Producers International; www.turfgrasssod.org.
190. TRI - Tile Roofing Institute; (Formerly: National Tile Roofing Manufacturing Association); www.tileroofing.org.
191. UBC - Uniform Building Code; (See ICC).
192. UL - Underwriters Laboratories Inc.; www.ul.com.
193. UNI - Uni-Bell PVC Pipe Association; www.uni-bell.org.
194. USAV - USA Volleyball; www.usavolleyball.org.
195. USGBC - U.S. Green Building Council; www.usgbc.org.
196. USITT - United States Institute for Theatre Technology, Inc.; www.usitt.org.
197. WASTEC - Waste Equipment Technology Association; www.wastec.org.
198. WCLIB - West Coast Lumber Inspection Bureau; www.wclib.org.
199. WCMA - Window Covering Manufacturers Association; www.wcmanet.org.
200. WDMA - Window & Door Manufacturers Association; www.wdma.com.
201. WI - Woodwork Institute; (Formerly: WIC - Woodwork Institute of California); www.wicnet.org.
202. WMMPA - Wood Moulding & Millwork Producers Association; (See MMPA).
203. WSRCA - Western States Roofing Contractors Association; www.wsrca.com.
204. WWPA - Western Wood Products Association; www.wwpa.org.

C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

1. DIN - Deutsches Institut f?r Normung e.V.; www.din.de.
2. IAPMO - International Association of Plumbing and Mechanical Officials; www.iapmo.org.
3. ICC - International Code Council; www.iccsafe.org.
4. ICC-ES - ICC Evaluation Service, LLC; www.icc-es.org.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Use Charges: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated.

B. Water and Electric Power: Available from Owner's existing system without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

C. Erosion- and Sedimentation-Control Plan: Submit plan showing compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.

D. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

E. Accessible Temporary Egress: Comply with applicable provisions in ICC A117.1.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Chain-Link Fencing: Minimum 2-inch, 0.148-inch- thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts and top and bottom rails.

B. Wood Enclosure Fence: Plywood, [**6 feet** [**8 feet**] high, framed with four 2-by-4-inch rails, with preservative-treated wood posts spaced not more than 8 feet apart.

2.2 TEMPORARY FACILITIES

A. Provide field offices, storage and fabrication sheds, and other support facilities as necessary for construction operations. Store combustible materials apart from building.

2.3 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.

1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
2. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of [**8**] <**Insert number**> at each return-air grille in system and remove at end of construction.

PART 3 - EXECUTION

3.1 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

B. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.

1. Toilets: Use of Owner's existing toilet facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.

C. Heating[**and Cooling**]: Provide temporary heating[**and cooling**] required for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

D. Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

3.2 SUPPORT FACILITIES INSTALLATION

A. Install project identification and other signs in locations [**indicated**] [**approved by Owner**] to inform the public and persons seeking entrance to Project.

B. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction.

C. Temporary Elevator Use: [**Use of elevators is not permitted**] [**See Section 142400 "Hydraulic Elevators" for temporary use of new elevators**].

D. Use of Owner's existing elevators will be permitted, provided elevators are cleaned and maintained in a condition acceptable to Owner. Provide protective coverings, barriers, devices, signs, or other procedures to protect elevator car and entrance doors and frame. At Substantial

Completion, restore elevators to condition existing before initial use, including replacing worn cables, guide shoes, and similar items of limited life.

3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

B. Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to [**erosion- and sedimentation-control Drawings**] [**requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent**].

C. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.

D. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.

E. Furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.

F. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

G. Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

H. Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by [**Owner**] [**and**] [**tenants**] from fumes and noise.

I. Install and maintain temporary fire-protection facilities. Comply with NFPA 241.

3.4 MOISTURE AND MOLD CONTROL

A. Before installation of weather barriers, protect materials from water damage and keep porous and organic materials from coming into prolonged contact with concrete.

1. Protect stored and installed material from flowing or standing water.
2. Remove standing water from decks.
3. Keep deck openings covered or dammed.

B. After installation of weather barriers but before full enclosure and conditioning of building, protect as follows:

1. Do not load or install drywall or porous materials into partially enclosed building.
2. Discard water-damaged material.
3. Do not install material that is wet.
4. Discard, replace, or clean stored or installed material that begins to grow mold.
5. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.

3.5 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion.

C. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period.

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

B. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced.

1. Show compliance with requirements for comparable product requests.
2. Architect will review the proposed product and notify Contractor of its acceptance or rejection.

C. Basis-of-Design Product Specification Submittal: Show compliance with requirements.

D. Compatibility of Options: If Contractor is given option of selecting between two or more products, select product compatible with products previously selected.

E. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Deliver products to Project site in manufacturer's original sealed container or packaging, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
3. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
4. Store materials in a manner that will not endanger Project structure.
5. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.

F. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. Provide products that comply with the Contract Documents, are undamaged, and, unless otherwise indicated, are new at the time of installation.

1. Provide products complete with accessories, trim, finish, and other devices and components needed for a complete installation and the intended use and effect.
2. Where products are accompanied by the term "as selected," Architect will make selection.
3. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.

B. Where the following headings are used to list products or manufacturers, the Contractor's options for product selection are as follows:

1. Products:

   a. Where requirements include "one of the following," provide one of the products listed that complies with requirements.
   b. Where requirements do not include "one of the following," provide one of the products listed that complies with requirements or a comparable product.

2. Manufacturers:

   a. Where requirements include "one of the following," provide a product that complies with requirements by one of the listed manufacturers.
   b. Where requirements do not include "one of the following," provide a product that complies with requirements by one of the listed manufacturers or another manufacturer.

3. Basis-of-Design Product: Provide the product named, or indicated on the Drawings, or a comparable product by one of the listed manufacturers.

C. Where Specifications require "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

D. Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

A. Architect will consider Contractor's request for comparable product when the following conditions are satisfied:

1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications.
3. List of similar installations for completed projects, if requested.
4. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017000 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 EXECUTION REQUIREMENTS

A. Cutting and Patching:

1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching.
2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
3. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities.

B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

1.2 CLOSEOUT SUBMITTALS

A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

B. Certified List of Incomplete Items: Final submittal at Final Completion.

C. Operation and Maintenance Data: Submit one copy (1) of manual.

D. PDF Electronic File: Assemble manual into a composite electronically indexed file. Submit on digital media.

E. Record Drawings: Submit one set (1) of marked-up record prints.

F. Record Digital Data Files: Submit data file and one set (1) of plots.

G. Record Product Data: Submit one copy (1) of each submittal.

1.3 SUBSTANTIAL COMPLETION PROCEDURES

A. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.

B. Submittals Prior to Substantial Completion: Before requesting Substantial Completion inspection, complete the following:

1. Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other sections, including project record documents, operation and maintenance manuals, property surveys, similar final record information, warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
3. Submit maintenance material submittals specified in other sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Architect.
4. Submit test/adjust/balance records.
5. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

C. Procedures Prior to Substantial Completion: Before requesting Substantial Completion inspection, complete the following:

1. Advise Owner of pending insurance changeover requirements.
2. Make final changeover of permanent locks and deliver keys to Owner.
3. Complete startup and testing of systems and equipment.
4. Perform preventive maintenance on equipment used prior to Substantial Completion.
5. Advise Owner of changeover in heat and other utilities.
6. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
7. Remove temporary facilities and controls.
8. Complete final cleaning requirements, including touchup painting.
9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will proceed with inspection or advise Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will advise Contractor of items that must be completed or corrected before certificate will be issued.

1.4 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting inspection for determining final completion, complete the following:

1. Submit a final Application for Payment.
2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved.
3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit pest-control final inspection report.

B. Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare final Certificate for Payment after inspection or will advise Contractor of items that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

PART 2 - PRODUCTS

2.1 MATERIALS

A. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

B. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

2.2 OPERATION AND MAINTENANCE DOCUMENTATION

A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information.

B. Organization: Unless otherwise indicated, organize manual into separate sections for each system and subsystem, and separate sections for each piece of equipment not part of a system.

C. Organize data into three-ring binders with identification on front and spine of each binder, and envelopes for folded drawings. Include the following:

1. Manufacturer's operation and maintenance documentation.
2. Maintenance and service schedules.
3. Maintenance service contracts. Include name and telephone number of service agent.
4. Emergency instructions.
5. Spare parts list and local sources of maintenance materials.
6. Wiring diagrams.
7. Copies of warranties. Include procedures to follow and required notifications for warranty claims

2.3 RECORD DRAWINGS

A. Record Prints: Maintain a set of prints of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued. Mark to show actual installation where installation varies from that shown originally. Accurately record information in an acceptable drawing technique.

1. Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings.

1. Format: Annotated PDF electronic file.

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities,[**mechanical and electrical systems,**] and other construction affecting the Work.

B. Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance.

1. Verify compatibility with and suitability of substrates.
2. Examine roughing-in for mechanical and electrical systems.
3. Examine walls, floors, and roofs for suitable conditions.

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

D. Take field measurements as required to fit the Work properly. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication.

E. Verify space requirements and dimensions of items shown diagrammatically on Drawings.

F. Surface and Substrate Preparation: Comply with manufacturer's written recommendations for preparation of substrates to receive subsequent work.

3.2 CONSTRUCTION LAYOUT AND FIELD ENGINEERING

A. Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks.

3.3 INSTALLATION

A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.

2. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
3. Maintain minimum headroom clearance of 96 inches (2440 mm) in occupied spaces and 90 inches (2300 mm) in unoccupied spaces.

B. Comply with manufacturer's written instructions and recommendations.

C. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

D. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed.

E. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place. Where size and type of attachments are not indicated, verify size and type required for load conditions.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.

F. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

G. Use products, cleaners, and installation materials that are not considered hazardous.

3.4 CUTTING AND PATCHING

A. Provide temporary support of work to be cut.

B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

C. Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.

D. Cutting: Cut in-place construction using methods least likely to damage elements retained or adjoining construction.

1. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

E. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.

1. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction in a manner that will minimize evidence of patching and refinishing.
2. Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance.

3. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

3.5 CLEANING

A. Clean Project site and work areas daily, including common areas. Dispose of materials lawfully.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
3. Remove debris from concealed spaces before enclosing the space.

B. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion:

1. Clean Project site, yard, and grounds, in areas disturbed by construction activities. Sweep paved areas; remove stains, spills, and foreign deposits. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
2. Sweep paved areas broom clean. Remove spills, stains, and other foreign deposits.
3. Remove labels that are not permanent.
4. Clean transparent materials, including mirrors. Remove excess glazing compounds.
5. Clean exposed finishes to a dust-free condition, free of stains, films, and foreign substances. Sweep concrete floors broom clean.
6. Vacuum carpeted surfaces and wax resilient flooring.
7. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and foreign substances. Clean plumbing fixtures. Clean light fixtures, lamps, globes, and reflectors.
8. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.

3.6 OPERATION AND MAINTENANCE MANUAL PREPARATION

A. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.

B. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

1. Prepare supplementary text if manufacturers' standard printed data are unavailable and where the information is necessary for proper operation and maintenance of equipment or systems.

C. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams.

3.7 DEMONSTRATION AND TRAINING

A. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system. Include a detailed review of the following:

1. Include instruction for basis of system design and operational requirements, review of documentation, emergency procedures, operations, adjustments, troubleshooting, maintenance, and repairs.

END OF SECTION 017000

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Action Submittals:

1. Waste Management Plan: Submit plan within seven (7) days of date established for commencement of the Work.

B. Informational Submittals:

1. Waste Reduction Progress Reports: Submit concurrent with each Application for Payment. Include total quantity of waste, total quantity of waste salvaged and recycled, and percentage of total waste salvaged and recycled.
2. Records of Donations and Sales: Receipts for salvageable waste donated or sold to individuals and organizations. . Indicate whether organization is tax exempt.
3. Recycling and Processing Facility Records: Manifests, weight tickets, receipts, and invoices.
4. Landfill and Incinerator Disposal Records: Manifests, weight tickets, receipts, and invoices.
5. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations.

C. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.

D. Waste Management Conference: Conduct conference at Project site to comply with requirements in Section 013000 "Administrative Requirements." Review methods and procedures related to waste management.

E. Waste Management Plan: Develop a waste management plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.

1. Salvaged Materials for Reuse: Identify materials that will be salvaged and reused.
2. Salvaged Materials for Sale: Identify materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
3. Salvaged Materials for Donation: Identify materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
5. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Achieve end-of-Project rates for salvage/recycling of 50% percent by weight of total nonhazardous solid waste generated by the Work.

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.

1. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

3.2 SALVAGING DEMOLITION WASTE

A. Salvaged Items for Reuse in the Work: Clean salvaged items and install salvaged items to comply with installation requirements for new materials and equipment.

B. Salvaged Items for Not permitted on Project site.

C. Salvaged Items for Owner's Use: Clean salvaged items and store in a secure area until delivery to Owner.

D. Doors and Hardware: Brace open end of door frames. Except for removing door closers, leave door hardware attached to doors.

E. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs.

F. Plumbing Fixtures: Separate by type and size.

G. Lighting Fixtures: Separate lamps by type and protect from breakage.

3.3 RECYCLING WASTE

A. General: Recycle paper and beverage containers used by on-site workers.

B. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

C. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.

1. Pulverize concrete to maximum **4-inch (100-mm)** size.

D. Wood Materials:

1. Sort and stack reusable members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
2. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
3. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

E. Metals: Separate metals by type.

F. Asphalt Shingle Roofing: Remove and dispose of nails, staples, and accessories.

G. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.

H. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.

I. Metal Suspension System: Separate metal members including trim, and other metals from acoustical panels and tile and sort with other metals.

J. Carpet: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.

1. Store clean, dry carpet in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.

K. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.

L. Conduit: Reduce conduit to straight lengths and store by type and size.

3.4 DISPOSAL OF WASTE

A. Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

B. Do not burn waste materials.

END OF SECTION 017419

DIVISION 02
Existing Conditions

SECTION 02 41 13 -SELECTIVE SITE DEMOLITION

PART 1 - GENERAL

1.01 Description: Work includes, but is not limited to the following:

Selective Demolition of Asphalt Paving, Concrete Paving, Curbs, Ramps, Chainlink Fencing, and Cast-in-Place Concrete.

1.02 Related Sections: Related requirements may be found in, but not limited to, the following sections.

Section 01 56 26 - Temporary Fencing
Section 01 56 39 - Temporary Tree & Plant Protection
Section 01 57 13 - Construction Stormwater Control
Section 01 57 19 - Temporary Environmental Pollution Control

1.03 References: This section references the latest revisions of the following documents. They are a part of this section as specified and modified. In case of conflict between the requirements of this section and those of the listed documents, the requirements of this section prevail.

A. WSDOT Standard Specifications for Road, Bridge, and Municipal Construction (most recent edition).

B. SMC Title 22.800, Stormwater, Grading, & Drainage Control Code, Volume 2 “Construction Stormwater Control Technical Requirements Manual” (most recent edition).

1.04 Handling of Hazardous Waste: Per Section 01 74 19 Part 1.05A, discovery of Unacceptable or Hazardous or Dangerous Waste will be considered a Changed Condition. Upon discovery of Hazardous Waste, the Contractor must stop work and notify the Owner. If the Owner determines that Contractor shall handle and dispose of Hazardous Waste, Contractor must provide required certifications and insurance.

For the handling and disposal of Hazardous and/or Dangerous Waste materials the following requirements apply:

A. The Contractor’s disposal company and transporter must have their TSD State and Federal Waste Generation ID’s and must be currently certified to handle the specified waste substances.

B. The Contractor or disposal sub-contractor must be capable of both recycling of usable materials and recovery/disposal of Hazardous/Dangerous Waste substances.

1.05 Existing Conditions:

A. Underground utilities and elements: Locate all underground utilities and elements prior to digging and/or driving stakes. Take care, to neither disturb nor damage any existing above ground or underground utilities or elements. The Contractor must call Utility Notification Center @ (811) or (800) 424-5555 or click www.callbeforeyoudig.org for utility location at or near the Public Rights-of-Way / Property Lines.

B. The Contractor must meet with the Engineer to verify location of utilities with the Contractor’s location services. Verify that all appropriate services have been disconnected.

C. Utility Shutoffs: Coordinate all work with other Division 01 requirements. Do not shut off or cap utilities without prior notice. Keep streets, sidewalks and site clean and free from debris at all times. Keep both street and site drainage systems open for free passage of runoff at all times. Provide siltation control and catch basin protection as required by Best Managements Practices and Drainage Codes as required and/or directed by the Engineer.

D. Objectionable Noises: Limit use of air hammers, back-up alarms and other noisy equipment as much as possible. Conform to local governing requirements and Section 01 57 19 of these Specifications.

PART 2 – PRODUCTS *(Not Used)*

PART 3 - EXECUTION

3.01 Protection of Facilities: Follow all procedures in Section 01 76 00, for protection of drainage structures, utilities, trees, and other facilities during demolition work.

3.02 Demolish Asphalt Paving:

Identify areas of existing AC paving to be removed for approval of the Engineer prior to commencing this work. When markings are approved, provide a clean, sawn edge through a minimum of 2/3 of the thickness of the material to be removed to protect adjacent paving to remain. Use care to protect edge to remain as saw-cut edge will remain as a finished edge against new Asphalt Paving work (Section 32 12 16). Water, debris, and slurry generated during saw-cutting will be contained for appropriate disposal – no materials from saw-cutting (including water) shall enter nearby storm drains. Completely remove AC paving, including base rock, to a total depth of _6___".

3.03 Demolish Concrete Paving:

Identify areas of existing Concrete Paving to be removed for approval of the Engineer prior to commencing this work. When markings are approved, provide a clean, sawn edge through a minimum of 2/3 of the thickness of the material to be removed to protect adjacent paving to remain. Use care to protect edge to remain as saw-cut edge will remain as a finished edge against new Concrete work (Section 32 13 13). Water, debris, and slurry generated during saw-cutting will be contained for appropriate disposal – no materials from saw-cutting (including water) shall enter nearby storm drains. Completely remove Concrete paving, including base rock, to a total depth of _8__".

3.04 Demolish Chain Link Fencing:

Where indicated on the drawings, remove chain link fencing only to the limits defined, or the nearest approved post. Identify the last post to remain and replace with new terminal post. Remove all necessary hardware, railings, posts, and footings. Backfill footing excavations with approved fill as required.

3.05 Demolish Cast-in-Place Concrete:

Identify areas of existing Cast-in-Place Concrete to be removed by marking and offsetting as appropriate with grease pencil or paint for approval of the Engineer prior to commencing this work. When markings are approved, provide a clean, saw-cut edge through a minimum of 2/3 of the thickness of the material to be removed to protect adjacent concrete to remain. Use care to protect edge to remain as saw-cut edge will remain as a finished edge against new Concrete work (Section 03 30 00). Water, debris, and slurry generated during saw-cutting will be contained for appropriate disposal – no materials from saw-cutting (including water) shall enter nearby storm drains. Completely remove Concrete including base rock, to a total depth of __8_".

3.06 Disposal of Materials: The Contractor must, in a manner consistent with all government regulations, dispose of the refuse resulting from demolition. In no case shall refuse material be left on the project site, or be buried in embankments or trenches on the project site. All effort must be made to recycle materials whenever possible. Maintain hauling routes clean and free of any debris resulting from work of this Section.

END OF SECTION

SECTION 02 41 13.23 - SITE UTILITY REMOVAL

PART 1 - GENERAL

1.01 Description:

Capping and plugging of drainage pipes and structures, water lines, electrical equipment, and other utility connections. Disposal of materials from the site.

1.02 Related Sections: All work of the Contract shall be performed in compliance with the requirements of this Section and with the Sections listed below.

Section 02 41 13 – Selective Site Demolition
Section 33 34 00 - Storm Drainage Utilities

1.03 Existing Conditions:

A. All existing utilities that are not scheduled for removal shall be protected, per the requirements of the Division 1 Specification Sections that apply.

B. The Contractor shall verify all site conditions before beginning work. Sequim School District No. 323 assumes no responsibility for actual conditions of existing utilities. Drawings of existing facilities are available for information only and do not necessarily reflect the actual conditions. The Contractor shall verify locations of existing utilities prior to proceeding with any work.

PART 2 - PRODUCTS

2.01 Salvageable materials: All items of salvageable value shall be salvaged and/or disposed of by the Contractor and shall become the Contractor's property, with the exception of items including but not limited to: maintenance holes, cleanouts, catch basins, irrigation heads, valves, valve boxes, wiring, light fixtures, etc. Those items shall be determined as salvageable after inspection by the Engineer. Those items identified for salvage shall be returned to Sequim School District.

PART 3 - EXECUTION

3.01 Disconnection of Utilities:

A. Underground utilities and elements: Locate all underground utilities and elements prior to digging and/or driving stakes. Take care, to neither disturb nor damage any existing above ground or underground utilities or elements. The Contractor shall call **Utility Notification Center @ (811) or (800) 424-5555 or click www.callbeforeyoudig.org** for utility location at or near the Public Rights-of-Way / Property Lines.

B. Verify that all appropriate services have been disconnected.

C. Utility Shutoffs: Coordinate all work with other Division 1 requirements. Do not shut off or cap utilities without prior notice. Keep streets, sidewalks and site clean and free from debris at all times. Keep both street and site drainage systems open for free passage of runoff at all

times. Provide siltation control and catch basin protection as required by Best Managements Practices and Drainage Codes as required and/or directed by the Engineer.

D. Existing irrigation pipe shall be abandoned in the ground in locations where the pipe does not conflict with the proposed drainage and irrigation piping Work. In areas where existing irrigation pipe conflicts with proposed piping, the irrigation pipe shall be cut and removed completely from the site and disposed of.

E. The disconnection of electrical equipment shall be done by a licensed electrician, prior to beginning electrical demolition.

F. Existing site storm drains and catch basins, as indicated on the plans or as directed in the field, shall be kept open and operable at all times. Catch basins shall be protected from silt by filter fabric insert 'sock' during construction, per Section 01 57 13. Catch basins or pipes that become blocked shall be cleaned immediately by the Contractor.

G. Dispose of all waste material at an approved disposal facility. All efforts should be made to recycle concrete and asphalt materials.

3.02 Removal of Existing Irrigation Heads:

A. Locate all existing irrigation heads within the limits of grading or as otherwise indicated on the contract drawings by the following means:
1. Note the location of all operable irrigation heads and their respective Control Zones directly on the Record Drawings.

B. Carefully record the head locations and the remaining risers and swing joints by surveying their actual locations onto the record drawings. In addition, stake these locations in the field until such time as the replacement of the irrigation heads has been accomplished.

C. Remove the irrigation heads carefully.

D. Cap the remaining risers or swing joints tightly to prevent contamination of the remaining irrigation system.

E. Upon completion and approval of the Earthwork, coordinate the re-installation or replacement of the irrigation heads as described in Section 32 80 00 - Irrigation Systems.

3.03 Irrigation Pipe: Existing irrigation pipe shall be abandoned in the ground in locations where the pipe does not conflict with the proposed drainage and irrigation piping work. In areas where existing irrigation pipe conflicts with proposed piping, the irrigation pipe shall be cut and removed completely from the site and disposed of properly. Capping of existing irrigation pipes to remain shall be done according to Section 32 80 00 - Irrigation Systems.

3.04 Dispose of all non-salvageable waste material at an approved disposal facility. All efforts should be made to recycle concrete and asphalt materials.

3.05 Protection of Facilities: Follow all procedures in Section 01 56 39 for protection of trees and other facilities during demolition work.

END OF SECTION

SECTION 02 41 19 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Items indicated to be removed and salvaged remain Owner's property. Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse. Include fasteners or brackets needed for reattachment elsewhere.

B. Predemolition Photographs: Show existing conditions of adjoining construction and site improvements. Submit before Work begins.

C. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

D. It is not expected that hazardous materials will be encountered in the Work. If hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with EPA regulations and with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 DEMOLITION

A. Maintain services/systems indicated to remain and protect them against damage during selective demolition operations. Before proceeding with demolition, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of the building.

B. Locate, identify, shut off, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

C. Refrigerant: Remove refrigerant from mechanical equipment to be selectively demolished according to 40 CFR 82 and regulations of authorities having jurisdiction.

D. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

E. Protect walls, ceilings, floors, and other existing finish work that are to remain. Erect and maintain dustproof partitions. Cover and protect furniture, furnishings, and equipment that have not been removed.

F. Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

G. Provide temporary weather protection to prevent water leakage and damage to structure and interior areas.

H. Requirements for Building Reuse:

1. Maintain existing building structure (including structural floor and roof decking) and envelope (exterior skin and framing, excluding window assemblies and nonstructural roofing material) not indicated to be demolished; do not demolish such existing construction beyond indicated limits.
2. Maintain existing interior nonstructural elements (interior walls, doors, floor coverings, and ceiling systems) not indicated to be demolished; do not demolish such existing construction beyond indicated limits.

I. 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.

J. Remove demolition waste materials from Project site. Do not burn demolished materials.

K. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 02 41 19

DIVISION 06
Wood and Plastics

SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: ICC-ES evaluation reports for wood-preservative treated wood metal framing anchors.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: Provide dressed lumber, S4S, marked with grade stamp of inspection agency.

B. Engineered Wood Products: Acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.

1. Allowable Design Stresses: Engineered wood products shall have allowable design stresses, as published by manufacturer, that meet or exceed those indicated. Manufacturer's published values shall be demonstrated by comprehensive testing.

2.2 TREATED MATERIALS

A. Preservative-Treated Materials: AWPA U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.

1. Use treatment containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.
2. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent.
3. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

B. Provide preservative-treated materials for items indicated on Drawings, and the following:

1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
2. Wood sills, blocking, furring, and similar concealed members in contact with masonry or concrete.
3. Wood framing members that are less than 18 inches above the ground.
4. Wood floor plates that are installed over concrete slabs-on-grade.

C. Fire-Retardant-Treated Materials: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the

test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.

1. Use Exterior type for exterior locations and where indicated.
2. Use Interior Type A unless otherwise indicated.
3. For enclosed roof framing, framing in attic spaces, and where high-temperature fire-retardant treatment is indicated, provide material with design adjustment factors of not less than 0.85 for modulus of elasticity and 0.75 for extreme fiber in bending for Project's climatological zone.
4. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent.
5. Identify with appropriate classification marking of a testing and inspecting agency acceptable to authorities having jurisdiction.

2.3 MISCELLANEOUS LUMBER

A. Miscellaneous Dimension Lumber: Standard, Stud, or No. 3 grade with 15 percent maximum moisture content of any species. Provide for nailers, blocking, and similar members.

B. Concealed Boards: Mixed southern pine, No. 2: SPIB; or Western woods, Standard: WCLIB; or No. 3 Common: WWPA; with 15 percent maximum moisture content.

2.4 MISCELLANEOUS PRODUCTS

A. Fasteners: Size and type indicated. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

1. Power-Driven Fasteners: CABO NER-272.
2. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

B. Metal Framing Anchors: Structural capacity, type, and size indicated.

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:

   a. Simpson Strong-Tie Co., Inc.

2. Use anchors made from hot-dip galvanized steel complying with ASTM A 653/A 653M, G60 coating designation for interior locations where stainless steel is not indicated.
3. Use anchors made from stainless steel complying with ASTM A 666, Type 304 for exterior locations and where indicated.

C. Sill Sealer: Closed-cell neoprene foam, 1/4 inch thick.

D. Flexible Flashing: Self-adhesive product consisting of a butyl rubber compound, bonded to a backing sheet to produce an overall thickness of not less than 0.025 inch.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.

B. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.

C. Do not splice structural members between supports unless otherwise indicated.

D. Securely attach rough carpentry to substrates, complying with the following:

1. CABO NER-272 for power-driven fasteners.
2. Published requirements of metal framing anchor manufacturer.
3. Table 2304.9.1, "Fastening Schedule," in the IBC.

END OF SECTION 061000

SECTION 062000 - FINISH CARPENTRY

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Samples for moldings and trim.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Lumber: DOC PS 20 and grading rules of inspection agencies certified by American Lumber Standards Committee Board of Review.

B. Softwood Plywood: DOC PS 1.

2.2 INTERIOR STANDING AND RUNNING TRIM

A. Interior Softwood Lumber Trim: C Select white woods.

1. Maximum Moisture Content: 15 percent.

B. Interior Hardwood Lumber Trim: Clear, kiln-dried, red oak or white maple.

C. Wood Moldings: WMMPA WM 4 made to patterns in WMMPA WM 12 from kiln-dried stock.

1. Softwood Moldings for Transparent Finish: Eastern white, Idaho white, lodgepole, ponderosa, radiata, or sugar pine or Western red cedar.
2. Hardwood Moldings for Transparent Finish: Red oak or White maple.
3. Moldings for Painted Finish: P-Grade eastern white, Idaho white, lodgepole, ponderosa, radiata, or sugar pine.
4. Chair Rail: WM 297.

2.3 MISCELLANEOUS MATERIALS

A. Fasteners for Exterior Finish Carpentry: Stainless-steel.

B. Glue: Aliphatic-resin, polyurethane, or resorcinol wood glue recommended by manufacturer.

1. Wood glue shall have a VOC content of 30 g/L or less.
2. Use waterproof resorcinol glue for exterior applications.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Condition interior finish carpentry in installation areas for 24 hours before installing.

B. Prime and backprime lumber for painted finish exposed on the exterior. Cut to length and prime ends.

C. Install finish carpentry level, plumb, true, and aligned with adjacent materials. Scribe and cut to fit adjoining work. Refinish and seal cuts.

1. Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining exterior finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.

D. Install standing and running trim with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Do not use pieces less than 24 inches long except where necessary. Stagger joints in adjacent and related trim. Cope at returns and inside corners and miter at outside corners.

E. Select and arrange paneling for best match of adjacent units. Install with uniform tight joints.

END OF SECTION 062000

SECTION 064600 - WOOD TRIM

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Shop Drawings and AWI Quality Certification Program certificates.

B. Fabricator Qualifications: Certified participant in AWI's Quality Certification Program.

C. Installer Qualifications: Fabricator of products.

D. Environmental Limitations for Interior Wood Trim: Do not deliver or install interior wood trim until building is enclosed, wet work is completed, and HVAC system is operating.

PART 2 - PRODUCTS

2.1 WOOD TRIM

A. Quality Standard: AWI, AWMAC, and WI's "Architectural Woodwork Standards."

B. Interior Trim for Transparent Finish: Custom grade, made from red oak or white hardwoods.

C. Interior Trim for Opaque Finish: Custom grade, made from any closed-grain hardwood.

2.2 MATERIALS

A. Wood Moisture Content for Interior Woodwork: 8 to 13 percent.

B. Medium-Density Fiberboard: ANSI A208.2, Grade 130, made with binder containing no urea formaldehyde.

C. Particleboard: ANSI A208.1, Grade M-2, made with binder containing no urea formaldehyde.

D. Blocking and Shims: Softwood or hardwood lumber, kiln dried.

E. Water-Repellent Preservative-Treated Materials: Comply with AWPA N1 (dip, spray, flood, or vacuum-pressure treatment) for woodwork items indicated to receive water-repellent preservative treatment.

2.3 FABRICATION

A. Complete fabrication to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

B. Backout or groove backs of flat trim members and kerf backs of other wide, flat members, except for members with ends exposed in finished work.

2.4 SHOP PRIMING

A. Shop prime wood trim for opaque finish with one coat of specified wood primer.

B. Backprime with one coat of sealer or primer, compatible with finish coats. Apply two coats to surfaces installed in contact with concrete or masonry and to end-grain surfaces.

2.5 SHOP FINISHING OF INTERIOR WOOD TRIM

A. Finishes: Same grades as items to be finished.

B. Shop finish transparent-finished interior wood trim at fabrication shop.

1. Apply one coat of sealer or primer to concealed surfaces of wood trim. Apply two coats to end-grain surfaces.
2. Apply a wash coat sealer to wood trim made from closed-grain wood before staining and finishing.
3. After staining, if any, apply paste wood filler to open-grain woods and wipe off excess. Tint filler to match stained wood.

C. Transparent Finish:

1. System - 4: Water-based latex acrylic.
2. Sheen: Satin.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Before installation, condition wood trim to average prevailing humidity conditions in installation areas.

B. Install wood trim to comply with referenced quality standard for grade specified.

C. Install wood trim level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.

D. Scribe and cut wood trim to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

E. Anchor wood trim to anchors or blocking built into or directly attached to substrates. Fasten with countersunk concealed fasteners and blind nailing. Use fine finishing nails or finishing screws for exposed nailing, countersunk and filled flush with woodwork.

F. Exterior Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Do not use pieces less than 36 inches long, except where shorter single-length pieces are necessary. Scarf running joints and stagger in adjacent and related members.

G. Interior Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Do not use pieces less than 36 inches long, except where shorter single-length pieces are necessary. Scarf running joints and stagger in adjacent and related members.

END OF SECTION 064600

DIVISION 08
Openings

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data and Shop Drawings.

PART 2 - PRODUCTS

2.1 HOLLOW METAL DOORS AND FRAMES

A. Hollow Metal Doors and frames.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. Ceco Door
   b. Adams Rite
   c. Baron Steel Doors and frames
   d. Curries

B. Doors: Complying with SDI A250.8 for level and model and SDI A250.4 for physical-endurance level indicated, 1-3/4 inches thick unless otherwise indicated.
1. Exterior Doors: Level 2 and Physical Performance Level B (Heavy Duty), Model 1 (Full Flush), metallic-coated steel sheet faces.

   a. Thermal-Rated (Insulated) Doors: Where indicated, provide doors with thermal-resistance value (R-value) of not less than R-11 when tested according to ASTM C 1363.

2. Hardware Reinforcement: Fabricate according to SDI A250.6 with reinforcement plates from same material as door face sheets.

C. Frames: ANSI A250.8; conceal fastenings unless otherwise indicated.

1. Steel Sheet for Interior Frames: 0.042-inch- minimum thickness.
2. Steel Sheet for Exterior Frames: 0.053-inch- minimum thickness.
3. Interior Frame Construction: Full profile welded.
4. Exterior Frame Construction: Full profile welded.
5. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcement plates from same material as frames.
6. Frame Anchors: Not less than 0.042 inch thick.

D. Glazing Stops: Nonremovable stops on outside of exterior doors and on secure side of interior doors; screw-applied, removable, glazing stops on inside, fabricated from same material as door face sheet in which they are installed.

E. Door Silencers: Three on strike jambs of single-door frames and two on heads of double-door frames.

F. Grout Guards: Provide where mortar might obstruct hardware operation.

G. Prepare doors and frames to receive mortised and concealed hardware according to SDI A250.6 and BHMA A156.115.

H. Reinforce doors and frames to receive surface-applied hardware.

I. Prime Finish: Manufacturer's standard, factory-applied coat of lead- and chromate-free primer complying with SDI A250.10 acceptance criteria.

2.2 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, suitable for exposed applications.

B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, free of scale, pitting, or surface defects.

C. Frame Anchors: ASTM A 879/A 879M, 4Z coating designation; mill phosphatized.

1. For anchors built into exterior walls, sheet steel complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.

D. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install hollow metal frames to comply with SDI A250.11.

B. Install doors to provide clearances between doors and frames as indicated in SDI A250.11.

C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying rust-inhibitive primer.

END OF SECTION 081113

SECTION 081433 - STILE AND RAIL WOOD DOORS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data, including factory-finishing specifications and Samples for factory-finished doors.

PART 2 - PRODUCTS

2.1 STILE AND RAIL DOORS

A. Low-Emitting Materials: Provide doors made with adhesives and composite wood products that do not contain urea formaldehyde.

B. Interior Doors: Stock doors complying with WDMA I.S.6, Premium or Select grade made from red oak or manufacturer's standard softwood species with panels of same species or a wood-based panel product with flat panels.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

a. ETO Doors Corp.
b. Karona by JELD-WEN.
c. Masonite Architectural.
d. VT Industries, Inc.

2.2 FABRICATION AND FINISHING

A. Factory-fit doors to suit frame-opening sizes and to comply with referenced quality standard.

1. Provide 1/8-inch clearance at jambs, heads, and meeting stiles and 1/2 inch at bottom. At thresholds, provide 3/8-inch clearance.
2. Comply with NFPA 80 for fire-resistance-rated doors.

B. Factory-machine doors for hardware that is not surface applied.

C. Factory-finish wood doors with manufacturer's standard stain and two-coat conversion varnish finish in color selected.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install door frames level, plumb, true, and aligned with adjacent materials. Countersink fasteners, fill surface flush, and sand smooth.

B. Align and fit doors in frames with uniform clearances and bevels indicated below. Machine doors for hardware. Seal cut surfaces after fitting and machining.

1. Provide 1/8-inch clearance at jambs, heads, and meeting stiles and 1/8 inch at bottom. At thresholds, provide 1/4-inch clearance from bottom of door.

C. Align factory-fitted doors in frames for uniform clearances.

END OF SECTION 081433

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals:
   1. Hardware schedule and keying schedule.
   2. Manufacturers product information

PART 2 - PRODUCTS

2.1 HARDWARE

A. Fire-Resistance-Rated Assemblies: Provide products that comply with NFPA 80 and are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction for applications indicated. On exit devices provide label indicating "Fire Exit Hardware."

B. Hinges:

   1. Heavy-duty, stainless-steel, ball-bearing hinges with stainless-steel pins for exterior.
   2. Nonremovable hinge pins for public corridor exposure.
   3. Three hinges for 1-3/4-inch-thick doors 90 inches or less in height; four hinges for doors more than 90 inches in height.

C. Locksets and Latchsets:

   1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      a. Corbin Russwin
      b. Sargent
      c. Yale
   2. BHMA A156.3, Grade 1 for exit devices.
   3. BHMA A156.13, Series 1000, Grade 1 for mortise locks and latches.
   4. Lever handles on locksets and latchsets,
   5. Provide trim on exit devices matching locksets.

D. Key locks to Owner's existing master-key system.

   1. Cylinders with six-pin tumblers.
   2. Provide construction keying.
   3. Provide key control system, including cabinet.

E. Closers:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. Corbin Russwin
   b. Norton
   c. Rixson
   d. Sargent
   e. Yale

2. Mount closers on interior side (room side) of door opening. Provide regular-arm, parallel-arm, or top-jamb-mounted closers as necessary.
3. Adjustable delayed opening (accessible to people with disabilities) feature on closers.

F. Provide wall stops or floor stops for doors without closers.

G. Hardware Finishes:

1. Hinges: Matching finish of lockset/latchset.
2. Locksets, Latchsets, and Exit Devices: Satin brass, clear coated.
3. Closers: Matching finish of lockset/latchset.
4. Other Hardware: Matching finish of lockset/latchset.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Mount hardware in locations required to comply with governing regulations and according to SDI A250.8 and DHI WDHS.3.

B. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet.

C. Deliver keys to Owner.

3.2 HARDWARE SCHEDULE

A. Hardware Set No. Indicated on drawings:

END OF SECTION 087100

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This section includes the following types of automatic door operators:

1. Full energy power door operators for swinging doors.

B. Related Sections:

1. Division 7 Sections for caulking to the extent not specified in this section.
2. Division 8 Section “Aluminum-Framed Entrances and Storefronts” for entrances furnished separately in Division 8 Section.
3. Division 8 Section “Sliding Automatic Entrances” for single and bi-parting sliding automatic entrance doors with sidelites.
4. Division 8 Section “Door Hardware” for hardware to the extent not specified in this Section.
5. Division 26 and 28 Sections for electrical connections including conduit and wiring for automatic entrance door operators and access control devices.

1.3 REFERENCES

A. References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
2. ICC/IBC - International Building Code.
3. CUL – Approved for use in Canada.
4. NFPA 70 - National Electrical Code.
5. NFPA 80 - Fire Doors and Windows.
6. NFPA 101 - Life Safety Code.
7. NFPA 105 - Installation of Smoke Door Assemblies.

B. American National Standards Institute (ANSI) / Builders Hardware Manufacturers Association (BHMA).

1. ANSI/BHMA A156.10 American National Standard for Power Operated Pedestrian Doors.
2. ANSI/BHMA A156.19 Standards for Power Assist and Low Energy Power Operated Doors.

C. Underwriters Laboratories (UL).

1. UL Listed R-9469 Fire Door Operator with Automatic Closer.
2. UL10C – Positive Pressure Fire Tests of Door Assemblies.
3. UL 325 - Standard for Safety for Door, Drapery, Gate, Louver, and Window Operators and Systems.
4. UL991 Listed - Tests for Safety-Related Controls Employing Solid-State Device.
5. UL244A – Solid – State Controls for Appliances.
6. UL1998 – Software in Programmable Components.
7. UL1310 – Class 2 Power Units.

D. Canadian Standards Association (CSA).

1. CAN/CSA-C22.2 NO 223-M91 – Power Supplies With Extra-Low-Voltage Class 2 Outputs.
2. CAN/CSA-C22.2 NO 223-M92 – Operators and Systems of Doors, Gates, Draperies, and Louvers.

E. American Association of Automatic Door Manufacturers (AAADM).

F. American Society for Testing and Materials (ASTM).

1. ASTM B221 Standard Specification for Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire, Profiles and Tubes.
2. ASTM B209 Standard Specification for Aluminum and Aluminum Alloy Sheet and Plate.

G. American Architectural Manufacturers Association (AAMA).

1. AAMA 611 Voluntary Specification for Anodized Architectural Aluminum.

H. National Association of Architectural Metal Manufacturers (NAAMM).

1. Metal Finishes Manual for Architectural Metal Products.

I. International Code Council (ICC).

1. IBC: International Building Code Building Code.
2. CBC: California Building Code.

1.4 DEFINITIONS

A. Double Egress Doors: A pair of doors that swing with the two doors moving in opposite directions with no mullion between them.

B. Double Swing Doors: A pair of doors that swing with the two doors moving in opposite directions with a mullion between them; each door functioning as a single swing door.

C. Activation Device: Device that, when actuated, sends an electrical signal to the door operator to activate the operation of the door.

1. Knowing act: Consciously initiating the opening of a power operated door using acceptable methods including wall mounted switches such as push plates and controlled access devices such as keypads, card readers and key switches.

D. Safety Device: A device that detects the presence of an object or person within a zone where contact could occur and provides a signal to stop the movement of the door.

E. AAADM: American Association of Automatic Door Manufacturers.

1.5 PERFORMANCE REQUIREMENTS

A. General: Provide automatic door operators that have been designed and fabricated to comply with specified performance requirements, as demonstrated by testing manufacturer's corresponding standard systems.

B. Automatic door equipment accommodates medium to heavy pedestrian traffic and have the following minimum performance characteristics:

1. Up to 700 pound (317.5 kg) weight of doors, 48 inches (1219 mm) maximum door width per operator.

C. Operator capable of operating within temperature ranges of -31° F to 160° F (-35° C to 71° C).

D. Opening Force requirements for Egress Doors: In the event of power failure to the operator, swinging automatic entrance doors shall open with a manual force, not to exceed 30lbf (133N) applied at 1" (25 mm) from the latch edge of the door.

E. Break Away Device: Swinging automatic entrances shall require no more than 50 lbf (222 N) applied 1" (25 mm) from the latch edge of the door. When the door(s) is opened in the breakout mode, powered operated components excluding spring power shall not operate the doors.

F. Closing Time:

1. Doors shall be field adjustable to close from 90 degrees to 10 degrees in 2 seconds or longer as applicable per ANSI/BHMA A156.10 standards.
2. Doors shall be field adjusted to close from 10 degrees to fully closed in not less than 1.5 seconds.

1.6 SUBMITTALS

A. Comply with Division 01 - Submittal Procedures.

B. Product Data: Manufacturer's product sheets including installation details, material descriptions, dimensions of individual components and profiles, fabrication, operational descriptions and finishes.

C. Shop Drawings: Submit manufacturer's shop drawings, including elevations, sections and details, indicating dimensions, materials, operator, motion/presence sensor control device, anchors, hardware, finish, options and accessories.

1. Indicate required clearances, and location and size of each field connection.
2. Indicate locations and elevations of entrances showing activation and safety devices.
3. Wiring Diagrams: For power, signal, and activation / safety device wiring.

D. Samples: Submit manufacturer's samples of aluminum finish.

E. Manufacturers Field Reports: Submit manufacturer's field reports from AAADM certified technician of inspection and approval of doors for compliance with ANSI/BHMA A156.10 after completion of installation.

F. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door opening installation in quantity as required in Division 01, Closeout Submittals. The manual to include the name, address, and contact information of the manufacturers providing the hardware and their nearest service representatives. The final copies delivered after completion of the installation test to include spare parts list.

G. Warranties and Maintenance: Special warranties and maintenance agreements specified in this Section.

1.7 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 10 years of documented experience in manufacturing of doors and equipment of similar to that indicated for this Project and that have a proven record of successful in-service performance.

1. A manufacturer with company certificate issued by AAADM.

B. Installer Qualifications: Installers, trained by the primary product manufacturers, with a minimum 5 years documented experience installing and maintenance of units similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

C. Certified Inspector Qualifications: Certified by AAADM.

D. Source Limitations for Automatic Operators: Obtain each type of door operator and sensor components specified in this Section from a single source, same manufacturer unless otherwise indicated.

E. Certifications: Operators shall be certified by the manufacturer to meet performance design criteria in accordance with the following standards.

1. ANSI/BHMA A156.10 American National Standard for Power Operated Pedestrian Doors.
2. NFPA 101 - Life Safety Code.
3. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems.
4. UL Listed R-9469 Fire Door Operator with Automatic Closer.

F. Emergency Exit door requirements: Comply with requirements of authorities having jurisdiction for automatic entrance doors serving as a required means of egress.

1.8 COORDINATION

A. Coordinate door operators with doors, frames and related work to ensure proper size, thickness, hand, function and finish. Coordinate hardware for automatic entrances with hardware required for rest of the project.

B. Electrical System Roughing-in: Coordinate layout and installation of power door operators with connections to power supplies and access control system as applicable.

1.9 WARRANTY

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Automatic Door Operators shall be free of defects in material and workmanship for a period of one (1) year from the date of physical completion.

C. During the warranty period a factory-trained technician shall perform service and affect repairs. An inspection shall be performed after each adjustment or repair.

D. During the warranty period all warranty work, including but not limited to emergency service, shall be performed during normal business hours.

E. Manufacturer shall have in place a dispatch procedure that shall be available 24 hours a Day, 7 Days a week for emergency call back service.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Manufacturer: Series 8100 Electromechanical Automatic Swing Door Operator as detailed shall be supplied by record-usa, Monroe, N.C. All equipment must meet the requirements of the American National Standard for High Energy Power Operated Doors, ANSI/BHMA A156.10-2005 and be adjustable to meet ANSI/BHMA A156.19-2002 Standard for Low Energy Power Operated Doors.

B. Requests for substitutions will be considered in accordance with provisions of Section 01 25 00.

C. Provide all door operators from a single manufacturer.

2.2 AUTOMATIC SWING DOOR OPERATOR

A. Model: Series 8100 Electromechanical Automatic Swing Door Operator (Basis of Design):

1. Configuration: Operator to control single swinging doors and pairs of swinging doors as indicated on the drawings and specified below:
   a. Traffic Pattern: Two way.
   b. Pairs of Doors: Double Egress Doors.
2. Automatic Operator: Electro-mechanical, non-handed operator, powered by 24 volt, 1/4 hp motor. Operator shall be adjustable to compensate for different manual push forces as required.
   a. Automatic operator shall be capable of operating and controlling up to a 700 pound (317.5 kg) door, 48 inches (1219 mm) in width.
   b. Surface Mounted Operator:
      1) Bottom Load Operator Housing: Operator is contained in a 6 inch (152.4 mm) x 6 inch (152.4 mm) high, extruded aluminum housing with removable bottom cover.
      2) Surface Mounted Housing: Continuous for full width of door.
      3) Connecting Hardware: Surface mounted operators to have a steel arm from the operator, mounted to the top face of the swing door.
      4) UL Listed R-9469 Fire Door Operator with Automatic Closer (surface mounted operator).
3. Door Operation:
   a. Opening Cycle: The adjustable speed operator mechanically powers the drive shaft and the torque control maintains constant speed throughout the opening cycle regardless of stack pressures or wind speed. Operator shall allow manual door operation with operational forces as indicated to fully open the door applied at 1” (25 mm) from the latch edge of the door.
      1) Manual push force shall be adjustable from 5 lbf to 30 lbf maximum.

b. Hold Open: The operator shall stop and hold the door open at the selected door opening angle for an adjustable period of time (1.5 seconds to 30 seconds).
c. Closing Cycle: Spring close with speed controlled power assist.
    1) Upon loss of power, dynamic braking will control the door insuring controlled closing.
    2) Selectable Torque Control: Automatically adjusts torque without changing the closing speed of the operator.
        a) When the torque control is activated, the closing speed shall remain constant regardless of stack pressures or wind speed.
        b) Torque Cancellation: The torque control is deactivated whenever there is a signal received from door mounted sensors.
        c) The torque control is disabled during manual use of the door.
d. Wind Force Dampening: The operator electromechanically counteracts wind forces, slowing down the door movement to safely open or close the door.
e. Stack Pressure Compensation: Operator shall counteract positive stack pressures, negative stack pressures, and sudden changes of stack pressures. The operator never allows the door to open or close faster than the speed control settings, regardless of pressures.
f. Obstruction Control: The operator will stop and reverse the door movement.
g. Electric Lock Management:
    1) Internal module for electrified locking integration.
    2) Electric Lock Output: Selectable 12 VDC, maximum 1200 mA / 24 VDC, maximum 600 mA.
    3) Lock monitoring prevents operator(s) from opening door(s) until release of electrified lock.
    4) Operator pulls door closed before opening, automatically unjamming electric latch hardware.
    5) Sequenced operation between operators for pairs of doors allowing lock release and astragal coordination.
h. Lock Retry Circuit: If attempt to fully close the door is unsuccessful, the operator will automatically reverse open 10 degrees and reclose in an attempt to successfully close the door.
i. Selectable Alarm Reset: The operator can be field set so that after receiving an alarm signal, the operator will not accept any activation impulses and will operate only as a manual door closer until manually reset.
j. Electronic Controls: Solid state integrated circuit controls the operation and switching of the swing power operator. The electronic control provides low voltage power supply for all means of actuation. The controls include time delay (1 to 30 seconds) for normal cycle.
k. Control Switch: Automatic door operators shall be equipped with the following type of multi-position function switch:
    1) 3 position rocker switch mounted on end cap (On-Auto-Hold).

4. Operator Interface:

a. Safety Sensor Integration for overhead presence safety device and door mounted reactivation safety sensors.

2.3 ACTIVATION DEVICES

A. General: Provide activation devices in accordance with ANSI/BHMA A156.10 standards, for condition of exposure and for long-term, maintenance-free operation under normal traffic load for type of occupancy indicated. Coordinate activation and devices with door operation and door operator mechanisms.

B. Knowing Act Activation Device:

1. Push Plate: Radio controlled, wireless, 4-1/2 inch square stainless steel push plate switches engraved with "Push to Open" with a blue handicap logo.
2. Secondary activation: Where activation is by a “knowing act” device, provide a secondary activation sensor as required by ANSI/BHMA A156.10.

2.4 SAFETY DEVICES

A. General: Provide safety devices in accordance with ANSI/BHMA A156.10 standards, for condition of exposure and for long-term, maintenance-free operation under normal traffic load for type of occupancy indicated. Coordinate safety devices with door operation and door operator mechanisms.

B. Presence Detection Systems and Safety Devices:

1. Basis of design is from Besam I-Adapt Flex Safety Sensor System A101, Combination of an Overhead Presence Sensor (OPS) and a Door Mounted Presence Sensor (DMPS) as specified:]
   a. Overhead Presence Sensor (OPS): Header mounted, overhead presence sensor utilizing infrared technology for detection; adjustable to provide detection field sizes and functions required by ANSI/BHMA A156.10. Unit to provide the following two independently adjustable patterns of detection:
      1) The door closed position covering the area on the swing side of the door.
      2) The door open position including an area of detection that reaches through the threshold toward the non-swing side of the door.
      3) The unit is not active during the door closing cycle.
   b. Door Mounted Presence Sensor (DMPS): Door mounted infrared presence safety device (mounted at top of each door); adjustable to provide detection field sizes and functions required by ANSI/BHMA A156.10.
      1) The door mounted presence detector shall be mounted on the swing (pull) side of the door (1 sensor per leaf), providing detection on one side of the door only.

a) On “knowing act” double egress doorways, the door mounted presence detector shall be mounted on the approach (push) side of the door (1 sensor per leaf).

2) Unit to provide detection during the travel of the door.

3) Upon detection the sensor shall provide a signal to stop or reverse the door action.

2.5 ALUMINUM FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Automatic Operator Enclosure:

1. Anodized Finish:
   a. AAMA 611, Clear, AA- M12C22A41, Class I, 0.018 mm.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, wall and floor construction, and other conditions affecting performance.

B. Examine roughing-in for electrical source power to verify actual locations of wiring connections.

C. Proceed only after such discrepancies or conflicts have been resolved.

3.2 INSTALLATION

A. Do not install damaged components. Fit joints to produce hairline joints free of burrs and distortion. Rigidly secure non-movement joints.

B. Operators: Install automatic operators plumb and true in alignment with established lines and grades without warp or rack of framing members and doors. Anchor securely in place.

1. Install surface mounted hardware using concealed fasteners to greatest extent possible.
2. Set headers, carrier assemblies, tracks, operating brackets and guides level and true to location with anchorage for permanent support.

C. Door Operators: Connect door operators to electrical power distribution system as specified in Division 26 Sections.

D. Sealants: Comply with requirements specified in division 7 Section “Joint Sealants” to seal between the operator housing and the adjacent wall surface.

E. Signage: Apply signage on both sides of each door and sidelite as required by ANSI/BHMA A156.10 and manufacturers installation instructions.

3.3 FIELD QUALITY CONTROL

A. Manufacturers Field Services:

1. Manufacturer’s representative shall provide technical assistance and guidance for installation of doors.
2. Before placing doors into operation, AAADM certified technician shall inspect and approve doors for compliance with ANSI/BHMA A156.10. Certified technician shall be approved by manufacturer.

3.4 ADJUSTING

A. Adjust door operators, controls and hardware for smooth and safe operation and for weather tight closure. Adjust doors in compliance with ANSI/BHMA A156.10.

3.5 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by automatic operator installation.

B. Clean metal surfaces promptly after installation. Remove excess sealants, compounds, dirt and other substances. Repair damages finish to match original finish.

3.6 DEMONSTRATION

A. Engage a factory-authorized representative to train Owner's maintenance personnel to adjust, operate, and maintain safe operation of the door.

END OF SECTION

DIVISION 09
Finishes

SECTION 092216 - NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Resistance-Rated Assemblies: Provide materials and construction identical to those tested in assemblies per ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.

B. STC-Rated Assemblies: Provide materials and construction identical to those tested in assemblies per ASTM E 90 and classified per ASTM E 413 by a qualified independent testing and inspecting agency.

2.2 METAL FRAMING AND SUPPORTS

A. Steel Framing Members, General: ASTM C 754.

1. Steel Sheet Components: ASTM C 645. Thickness specified is minimum uncoated base-metal thickness.
2. Protective Coating: ASTM A 653/A 653M, G40, hot-dip galvanized zinc coating.

B. Framing Systems:

1. Studs and Runners: In depth indicated and 0.033 inch thick unless otherwise indicated.
2. Flat Strap and Backing: 0.027 inch thick.
3. Hat-Shaped, Rigid Furring Channels: In depth indicated and 0.033 inch thick.
4. Resilient Furring Channels: 1/2 inch deep, with single- or double-leg configuration.
5. Cold-Rolled Furring Channels: 0.053 inch thick, 3/4 inch deep.

C. Suspension Systems:

1. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.062-inch diameter, or double strand of 0.048-inch-diameter wire.
2. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, and 0.162-inch diameter.
3. Carrying Channels: Cold-rolled steel, 0.053 inch thick, 2 inches deep.
4. Furring Channels: Resilient furring channels, 1/2 inch deep, with single- or double-leg configuration.
5. Grid Suspension System for Gypsum Board Ceilings: Interlocking, direct-hung system.

2.3 ACCESSORIES

A. General: Comply with referenced installation standards.

1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

B. Isolation Strip at Exterior Walls: foam gasket.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install steel framing to comply with ASTM C 754."
1. Gypsum Board Assemblies: Also comply with ASTM C 840.

B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.

C. Isolate steel framing from building structure, except at floor, to prevent transfer of loading imposed by structural movement.

1. Where studs are installed directly against exterior walls, install isolation strip between studs and wall.

D. Fire-Resistance-Rated Assemblies: Comply with requirements of listed assemblies.

E. Install suspension systems level to within 1/8 inch in 12 feet.

END OF SECTION 092216

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Resistance-Rated Assemblies: Provide materials and construction identical to those tested in assemblies per ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.

B. STC-Rated Assemblies: Provide materials and construction identical to those tested in assemblies per ASTM E 90 and classified per ASTM E 413 by a qualified independent testing and inspecting agency.

2.2 PANEL PRODUCTS

A. Provide in maximum lengths available to minimize end-to-end butt joints.

B. Interior Gypsum Board: ASTM C 1396/C 1396M, in thickness indicated, with manufacturer's standard edges. Type X all locations and Sag-resistant type for ceiling surfaces.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

    a. American Gypsum.
    b. Armstrong Ceiling & Wall Solutions.
    c. Certainteed; SAINT-GOBAIN.
    d. Georgia-Pacific Gypsum LLC.
    e. Gold Bond Building Products, LLC provided by National Gypsum Company.
    f. PABCO Gypsum.
    g. USG Corporation.

2.3 ACCESSORIES

A. Trim Accessories: ASTM C 1047, formed from galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized-steel sheet. For exterior trim, use accessories formed from hot-dip galvanized-steel sheet, plastic, or rolled zinc.

1. Provide cornerbead at outside corners unless otherwise indicated.
2. Provide LC-bead (J-bead) at exposed panel edges.
3. Provide control joints where indicated.

B. Aluminum Accessories: Extruded-aluminum accessories indicated with Class II, clear anodic finish; AA-C12C22A31.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

a. Fry Reglet Corporation.
b. Gordon Inc.
c. Pittcon Industries.
d. Tamlyn.

C. Joint-Treatment Materials: ASTM C 475/C 475M.

1. Joint Tape: Paper unless otherwise recommended by panel manufacturer.
2. Joint Compounds: Drying-type, ready-mixed, all-purpose compounds.
3. Skim Coat: For final coat of Level 5 finish, use high-build interior coating product designed for application by airless sprayer and to be used instead of skim coat to produce Level 5 finish.
4. Cementitious Backer Unit Joint-Treatment Materials: Products recommended by cementitious backer unit manufacturer.

D. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.

1. Low-Emitting Materials: Comply with - IgCC.

E. Acoustical Sealant for Exposed and Concealed Joints: Nonsag, paintable, nonstaining latex sealant complying with ASTM C 834.

1. Low-Emitting Materials: Comply with - IgCC.

F. Sound-Attenuation Blankets: ASTM C 665, Type I (unfaced).

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install gypsum board to comply with ASTM C 840.

1. Isolate gypsum board assemblies from abutting structural and masonry work. Provide edge trim and acoustical sealant.
2. Single-Layer Fastening Methods: Fasten gypsum panels to supports with screws.

3. Multilayer Fastening Methods: Fasten base layers and face layer separately to supports with screws.

B. Install cementitious backer units to comply with ANSI A108.11.

C. Fire-Resistance-Rated Assemblies: Comply with requirements of listed assemblies.

D. Finishing Gypsum Board: ASTM C 840.

1. At concealed areas, unless a higher level of finish is required for fire-resistance-rated assemblies, provide Level 1 finish: Embed tape at joints.
2. At substrates for tile, provide Level 2 finish: Embed tape and apply separate first coat of joint compound to tape, fasteners, and trim flanges.
3. Unless otherwise indicated, provide Level 4 finish: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges.
4. Where indicated, provide Level 5 finish: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges. Apply skim coat to entire surface.

E. Glass-Mat, Water-Resistant Backing Panels: Finish according to manufacturer's written instructions.

F. Cementitious Backer Units: Finish according to manufacturer's written instructions.

G. Texture Finish Application: Mix and apply finish using powered spray equipment, to produce a uniform texture free of starved spots or other evidence of thin application or of application patterns.

END OF SECTION 092900

SECTION 095113 - ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data and Samples.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Seismic Standard: Acoustical panel ceiling shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

2.2 ACOUSTICAL PANELS

A. Acoustical panels: Match existing panels in corridors

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
   a. Armstrong:
      1) Basis of design for Loft space, LYRA PB
   b. USG Corporation.

B. Classification: As follows, per ASTM E 1264:
1. Pattern: D (fissured).
2. LRC: Not less than 0.85.
3. NRC: Not less than 0.90.
4. CAC: Not less than 40.
5. Surface-Burning Characteristics: Class A.

C. Recycled content: Not less than 70%

D. Mold- and mildew-resistant surface

E. Washable, Impact-resistant, Scratch-resistant, Soil-resistant, Sag-resistant

F. Color: White or match existing.

G. Edge Detail: Square.

H. Thickness: 3/4 inch.

I. Modular Size: 24 by 24 inches or 24 by 48 inches, as indicated.

2.3 CEILING SUSPENSION SYSTEM

A. Suspension system: Match existing panels in corridors

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
   a. Armstrong
   b. USG Corporation.

B. Ceiling Suspension System: Wide-face, direct-hung system; ASTM C 635, heavy-duty structural classification.

1. Face Design: Flat, flush.
2. Face Finish: Painted white.

C. Attachment Devices: Sized for 5 times the design load indicated in ASTM C 635, Table 1, Direct Hung, unless otherwise indicated. Comply with seismic design requirements.

D. Wire Hangers, Braces, and Ties: Zinc-coated carbon-steel wire; ASTM A 641/A 641M, Class 1 zinc coating, soft temper.

1. Size: Provide yield strength at least 3 times the hanger design load (ASTM C 635, Table 1, Direct Hung), but not less than 0.135-inch- diameter wire.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install acoustical ceilings to comply with ASTM C 636/C 636M and seismic design requirements indicated, according to manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."

1. Fire-Rated Assembly: Install fire-rated ceiling systems according to tested fire-rated design.

B. Install acoustical panels with undamaged edges and fit accurately into suspension system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide a neat, precise fit.

C. Arrange directionally patterned acoustical units as indicated on Drawings.

END OF SECTION 095113

SECTION 096513 - RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product data and Samples.

B. Extra Materials: Deliver to Owner at least 10 linear feet of each type and color of resilient wall base installed.

PART 2 - PRODUCTS

2.1 RESILIENT BASE

A. Thermoset Rubber Base: ASTM F 1861, Type TS (rubber, vulcanized thermoset), Group I (solid, homogeneous).

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

a. Flexco.
b. Johnsonite; a Tarkett company.
c. Roppe Corporation.

B. Style: Cove (base with toe).

C. Minimum Thickness: 0.125 inch.

D. Height: 4 inches.

E. Lengths: coils in manufacturer's standard lengths.

F. Outside Corners: Job formed or preformed.

G. Inside Corners: Job formed or preformed.

2.2 INSTALLATION ACCESSORIES

A. Stair-Tread-Nose Filler: Two-part epoxy compound recommended by resilient tread manufacturer to fill nosing substrates that do not conform to tread contours.

B. Adhesives: Water-resistant type recommended by manufacturer to suit floor covering and substrate conditions indicated.

1. Low-Emitting Materials: Comply with Section 018113.33 - Sustainable Design Requirements - IgCC.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Prepare horizontal surfaces according to ASTM F 710. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.

B. Adhesively install resilient wall base and accessories.

C. Install wall base in maximum lengths possible. Apply to walls, columns, pilasters, casework, and other permanent fixtures in rooms or areas where base is required.

D. Install stair-tread-nose filler to nosing substrates that do not conform to tread contours.

E. Install reducer strips at edges of floor coverings that would otherwise be exposed.

END OF SECTION 096513

SECTION 096813 - TILE CARPETING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product data and Samples.

B. Extra Materials: Deliver to Owner carpet tiles equal to 5 percent of each type and color installed, packaged with protective covering for storage.

PART 2 - PRODUCTS

2.1 CARPET TILE:

A. First and Second Floor Corridors

1. Manufacturers: Subject to compliance with requirements, provide products by the following:
   a. Interface, “Net Effects” B701 (25cm x 1m)

2. Fiber Content: 100 percent recycled content type 6 nylon.

3. Face Construction: Tufted Sheared.

4. Density: 4,759.

5. Pile Thickness: 0.174 in., 4.4 mm for finished carpet tile.

6. Primary Backing: GlasBac RE Tile.

7. Critical Radiant Flux Classification: Not less than 0.45 W/sq. cm per ASTM E 648.

8. Emissions: Provide carpet that complies with testing and product requirements of CRI's "Green Label Plus" program.

B. Loft meeting room

1. Manufacturers: Subject to compliance with requirements, provide products by the following:
   a. Interface, “Net Effects” B603 (50cm x 50cm)

2. Fiber Content: 100 percent recycled content type 6 nylon.

3. Face Construction: Tufted Pattern Loop.

4. Density: 6,273.

5. Pile Thickness: 0.132 in., 3.4 mm for finished carpet tile.

6. Primary Backing: GlasBac RE Tile.

7. Critical Radiant Flux Classification: Not less than 0.45 W/sq. cm per ASTM E 648.

8. Emissions: Provide carpet that complies with testing and product requirements of CRI's "Green Label Plus" program.

2.2 INSTALLATION ACCESSORIES

A. Carpet Tile Adhesives: Pressure-sensitive type that complies with flammability requirements for installed carpet tile and is recommended by carpet tile manufacturer for conditions indicated for releasable installation.

1. Low-Emitting Materials: Comply with Sustainable Design Requirements - ASHRAE 189.1.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with CRI 104.

B. Carpet Tile Installation Method: As recommended by manufacturer.

1. Install borders parallel to walls.

END OF SECTION 096813

EXTERIOR PAINTING SECTION 09 91 13

PART 1 - GENERAL

1.01 Description: The Work must include the preparation of surfaces and the application of finishes as specified. Applications include but are not limited to the repair and/or painting of pavement striping and other applications as needed. A finish schedule must be submitted to the Engineer before any work may commence. Protect all existing work from damage and thoroughly clean worksite of all remnants and residues upon completion of Work of this Section.

1.02 Related Sections:

Section 32 12 16 - Asphalt for Paving for Service Roads and Parking Lots

1.03 Reference Standards:

A. Conform to requirements of the following Reference Standards or as modified and supplemented herein:

1. International Building Code (IBC)
2. Sequim Building Codes and Regulations (SBC)
3. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications.
4. Master Painters Institute Architectural Painting Specification Manual (MPI)
5. ASTM-A123/A123M Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
6. ASTM-A780 Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
7. ASTM D6386 - Standard Practice for Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Hardware Surfaces for Painting
8. ANSI/ASTM D16 - Definitions of Terms in Relation to Paint, Varnish, Lacquer, and Related Products.
9. ASTM D523 - Standard Test Method for Specular Gloss.
10. ASTM D6763 - Standard Guide for Testing Exterior Wood Stains.
11. ASTM D5324 - Standard Guide for Testing Water-Borne Architectural Coatings
12. Green Seal GS-11 Standard for Paints, Coatings, Stains, and Sealers
13. Master Painters Institute Architectural Painting Specification Manual (MPI)
14. Structural Steel Painting Council, Surface Preparations Specifications (SSPC)
15. The WSDOT Standard Specifications for Road, Bridge and Municipal Construction (most recent edition).

1.04 Qualifications:

A. Product Manufacturer: Company specializing in manufacturing quality paints and finish products, with no less than five years' experience in the industry.

B. Applicator: Must be a company specializing in commercial painting and finishing, with no less than five years of documented experience in the industry.

1.05 Definitions: Refer to and conform to ANSI/ASTM D16 for interpretation of terms used in this Section.

1.06 Submittals: Prior to preparation, delivery of product, or shop application, submit:

A. Documentation: Prior to preparation, delivery of product, or shop application, submit complete documentation of materials to be used, including at minimum:

1. Product Data: For each type of product, provide manufacturer's commercial literature, indicating VOC content. Include preparation requirements and application instructions.
2. Safety Data Sheets (SDSs)
3. Provide color charts or samples of available colors where no color is specified.
4. Application Instructions from Manufacturer
5. Operations and Maintenance Data from Manufacturer.

1.07 Field Samples: Provide field samples as directed by the Engineer.

1.08 Delivery, Storage and Handling Procedures:

A. Deliver, store, and protect products following manufacturer's directions. Deliver products to the site in sealed and labeled containers, then inspect to verify.

B. Store in a safe location, out of pedestrian and vehicular traffic and protected from weather and extreme temperatures. Any containers or components that are visibly damaged prior to use must not be used and must be replaced.

C. Store materials not in use in tightly covered containers. Maintain containers in clean condition, free of foreign materials and residue.

D. Remove rags and waste from storage areas daily.

E. Container labeling must include manufacturer's name, type of paint, brand name, brand code, coverage, surface preparation, drying time, cleanup, color designation, and instructions for mixing and reducing.

F. Take precautionary measures to prevent fire hazards and spontaneous combustion.

G. Provide SDSs for all products used on site.

1.09 Environmental Requirements:

A. Provide continuous ventilation and heating facilities to maintain surface and ambient temperatures above 45°F for 24 hours before and 48 hours after application of finishes, unless required otherwise by manufacturer's instructions.

B. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50°F and 95°F, or as required per product instructions, whichever temperature range is more limited.

C. Do not apply paints when relative humidity exceeds 50 percent; at temperatures less than 5°F above the dew point temperature; or to damp, wet, or soiled surfaces. Follow product instructions if they are more limiting.

PART 2 - PRODUCTS

2.01 General Requirements:

A. Unless otherwise specified, furnish paint, varnish, stain, enamel, lacquer, fillers and related products for primer, intermediate and finish coats, of a type, brand and manufacturer listed in the Standard Specifications.

B. Materials not specifically noted in the Standard specifications, and required for the work, such as linseed oil, shellac, thinners, or other materials required for the work, must be of quality not less than required by applicable published Federal or State Specifications and Standards.

C. Acceptable Suppliers of paint and other coating products include Sherwin Williams, Miller, Rodda, Daly's, or approved equal. Use only professional quality paint systems.

D. All materials must be lead-free. Materials containing chlorinated compounds must be identified in advance to the Engineer by the Contractor and are subject to approval by the Engineer.

E. Coatings must be ready-mixed, except field-catalyzed coatings. Process pigments to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.

F. Coatings must have good flow and brushing properties, capable of drying or curing free of streaks or sags.

G. Accessory materials include linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve the specified finishes or commercial quality. Such materials containing chlorinated compounds must be identified in advance to the Engineer by the Contractor, and are subject to approval by the Engineer.

H. MPI Standards: Products must be approved by the Master Painters Institute (MPI) and comply with applicable MPI standards.

I. Material Compatibility:

1. Materials for use within each paint system must be compatible with one another and the surface to be coated, both during application and under subsequent service conditions. Products must be applied and utilized as recommended by the manufacturer, based on testing and field experience.

2. For each coat in a paint system, products must be guaranteed by the topcoat manufacturer as acceptable for use in the paint system and on the substrate or surface indicated.

J. VOC Emissions: Formaldehyde emissions must not exceed 9 ug/m^3 or 7 ppb, whichever is less.

2.02 Visual Characteristics

A. Sheen:

1. Where gloss or sheen is specified or is listed as a standard for approval for the project, the terms refer to tested luster, shine or sheen of the dry film and for purposes of this specification are defined as follows, when tested with a 60-degree reflector meter.
   a. Flat: 10-degree gloss or less.
   b. Eggshell: 11 to 19-degree gloss.
   c. Satin: 20 to 30-degree gloss.
   d. Semi-gloss: 31 to 74-degree gloss.
   e. Gloss: 75-degree gloss or more.
2. Where sheen is not specified otherwise, provide satin sheen.

B. Texture: Unless otherwise specified, finish of paint must be smooth and free from texture. Use the appropriate method of applying paint to avoid texturing the surface.

C. Color:

1. Match Existing Surfaces: Unless specified otherwise, for projects being constructed in or adjacent to existing buildings and structures, Facilities Paint Shop must be contacted to provide existing paints and color information to match colors at the project site. Any changes to pre-existing color schemes must be identified in advance to the Engineer by the Contractor, and must be approved by the Engineer.

2.03 Specific Products:

A. Primer shall be approved rust-inhibitive primer in accordance with Sequim SD Standards.

B. Pavement Marking material must be Thermoplastic in accordance with Section 9-29.3 of the current version of the WSDOT Standard Specifications. Thermoplastic materials must also include any and all priming compounds that may be required or recommended by the specific manufacturer.
   i. Type A – Liquid Hot Applied Thermoplastic
   ii. Type B – Pre-formed Fused Thermoplastic

C. Zinc-rich paints must contain either between 65% to 69% metallic zinc by weight or greater than 92% metallic zinc by weight in dry film. Paints containing zinc dust are classified as organic or inorganic, depending on the binder they contain. Inorganic binders are particularly suitable for paints applied in touch-up applications of undamaged hot-dip galvanized areas.

D. Zinc Spray (Metallizing) material must be zinc powder or zinc wire, with a nominal purity of 99.5% pure or better.

E. Zinc-Based Solder must be a zinc-based alloy in either a stick or powder form, in accordance with ASTM A780.

PART 3- EXECUTION

3.01 Items, Substrates, and Surfaces for Painting:

A. Surfaces To Be Painted

1. All items identified in the schedule provided in Subsection 3.07 below.
2. Paint all exposed surfaces whether or not colors are designated, except where surface or material is specifically indicated not to be painted or to remain natural.
3. Where an item or surface is not specifically mentioned or excluded, treat equivalently to similar adjacent materials or surfaces.

B. Surfaces Not Requiring Painting

1. Plants, soils, and other such natural or landscaping materials.
2. Pre-treated wood products not included in the schedule provided in Subsection 3.07 below.

3.02 Preparation:

A. Follow manufacturer's recommendations for application of approved products, including but not limited to surface preparation and use of primer as applicable.

B. Examine substrates and conditions for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

C. Correct any defects and/or surface flaws that will detrimentally impact paint finish or appearance.

D. Clean all surfaces to be painted.

E. Shellac and seal marks or stains which may bleed through surface finishes.

F. Impervious surfaces: Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove mildew by scrubbing with solution of tri-sodium phosphate (or TSP substitute) and bleach. Rinse with clean water and allow surface to dry. Liquids must be collected, if necessary, for disposal to sanitary sewer. Liquids must not enter the storm drain system. Ensure liquids are disposed to a sanitary sewer.
2. Remove incompatible primers and reprime substrate with compatible primers, or apply tie coat as required to produce paint systems indicated.

G. Asphalt, Creosote or Bituminous Surfaces scheduled for paint finish: Remove foreign particles to permit adhesion of finishing materials. Apply compatible sealer or primer.

H. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.

I. Surfaces Scheduled for Thermoplastics: All surfaces must be clean, dry and free from oil, grease, antifreeze, loose sand, aggregate and chipping/peeling existing striping.

1. Concrete Surface scheduled for Thermoplastics: Curing compounds used on new concrete must be mechanically abraded off prior to striping. Use primer as recommended by product

manufacturer. Concrete must be allowed to cure a minimum of 14 days before thermoplastic installation.

2. Asphalt, Creosote or Bituminous Surfaces scheduled for Thermoplastics: Allow new asphalt surfaces to cure for a minimum of 14 days before thermoplastic installation.

3.03 Protection:

A. Protect site elements near or adjacent to painted areas from damage or disfiguration.

B. Repair any damage to other surfaces caused by work of this Section.

C. Furnish drop cloths, shields and protective methods to prevent spray or droppings from disfiguring other surfaces.

3.04 Application

A. General:

1. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."

B. Pavement Markings: Furnish and install pavement markings on paved surfaces at locations shown on the Drawings, or where designated by the Engineer. Pavement markings must be installed in compliance with Section 8-22 of the current version of the WSDOT Standard Specifications. Surface preparation, including application of primer, must be in accordance with Section 8-22.3(2) of the Standard Specifications.

3.05 Quality Control:

A. The Contractor must verify that surfaces are ready to receive work as instructed by the product manufacturer, examine surfaces scheduled to be finished prior to commencement of work, and report any condition that may potentially affect proper application. Substrate must be approved by the Engineer prior to beginning application of coating.

B. Any painted or coated surface that does not, in the sole opinion of the Engineer, meet Contract requirements in terms of color, texture, sheen, uniformity, or other visible elements must be corrected to the satisfaction of the Engineer at the Contractor’s sole expense.

C. Painted/coated surfaces that show blisters, cracks, peeling, rust, or other defects typically associated with inadequate surface preparation must be stripped of paint/coating and repainted/recoated in accordance with the Contract, including correct surface preparation, at the Contractor’s sole expense.

D. Third Party Paint System Inspection and Testing: The Owner may engage the services of a qualified testing and inspecting agency to inspect and test painted surfaces to determine conformance with surface preparation and paint application requirements. Such testing may include but not be limited to measurement of dry film thickness.

1. The Contractor must touch up and restore painted surfaces damaged by testing.

2. If inspection and test results show that the paint system does not comply with Contract requirements and/or the paint manufacturer's written recommendations, the Contractor must

pay for the testing and apply additional coats of paint and/or other corrective measures as recommended by the Third Party inspecting agency.

3.06 Cleaning:

A. As work proceeds, promptly remove paint and other products where spilled, splashed or spattered. Do not scratch or damage adjacent finished surfaces.

B. At end of each workday, maintain premises free of unnecessary accumulation of tools, equipment, surplus materials, and debris.

C. Collect cotton waste, cloths, and other materials which could constitute a fire hazard; place in closed metal containers and remove daily from site.

D. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

E. At completion of construction activities of other trades, touch up and restore damaged or defaced painted/coated surfaces.

F. Remove the over-spray from all surfaces not scheduled to receive paint, using methods appropriate to the material. Completely remove all masking materials, including adhesive residues. Dispose of all materials and containers in an approved manner.

G. Remove empty paint containers from site. Upon project completion, remove all paint containers from the site and deliver unopened paint stock cans as specified in Paragraph 1.10.

END OF SECTION

SECTION 099123 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals:

1. Product Data:
2. Paint Draw Downs.

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

C. Extra Materials: Deliver to Owner 1 gal. of each color and type of finish-coat paint used on Project, in containers, properly labeled and sealed.

PART 2 - PRODUCTS

2.1 PAINT

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

    a. Sherwin Williams.
    b. Miller Paint Co.
    c. Behr
    d. Dunn Edwards

B. MPI Standards: Provide materials that comply with MPI standards indicated and listed in its "MPI Approved Products List."

1. Primer Sealer, Institutional Low Odor/VOC: MPI #149.
2. Primer, Latex, for Interior Wood: MPI #39.
3. Primer Sealer, Alkyd, Interior: MPI #45.
4. Latex, Interior, (Gloss Level 2): MPI #44.
5. Latex, High-Performance Architectural, (Gloss Level 2): MPI #138.
6. Latex, High-Performance Architectural, Semigloss (Gloss Level 5): MPI #141.
7. Alkyd, Interior, Flat (Gloss Level 1): MPI #49.
8. Alkyd, Interior, Semigloss (Gloss Level 5): MPI #47.
9. Alkyd, Interior, Gloss (Gloss Level 6): MPI #48.

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

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

D. Low-Emitting Materials: Comply with Section 018113.33 - Sustainable Design Requirements - IgCC.

E. Colors: As selected.

PART 3 - EXECUTION

3.1 PREPARATION

A. Comply with recommendations in MPI's "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

B. Remove hardware, lighting fixtures, and similar items that are not to be painted. Mask items that cannot be removed. Reinstall items in each area after painting is complete.

C. Clean and prepare surfaces in an area before beginning painting in that area. Schedule painting so cleaning operations will not damage newly painted surfaces.

3.2 APPLICATION

A. Comply with recommendations in MPI's "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

B. Paint exposed surfaces, new and existing, unless otherwise indicated.

1. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces.
2. Paint surfaces behind permanently fixed equipment or furniture with prime coat only.
3. Paint the back side of access panels.
4. Color-code mechanical piping in accessible ceiling spaces.
5. Do not paint prefinished items, items with an integral finish, operating parts, and labels unless otherwise indicated.

C. Apply paints according to manufacturer's written instructions.

1. Use brushes only where the use of other applicators is not practical.
2. Use rollers for finish coat on interior walls and ceilings.

D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

1. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

3.3 INTERIOR PAINT APPLICATION SCHEDULE

A. Wood: Existing painted wood surfaces.
   1. Semigloss Institutional Low-Odor/VOC Latex: Two coats over latex primer for wood: MPI INT 6.3V.

B. Gypsum Board:
   1. Gloss Level 2 High-Performance Architectural Latex: Two coats over latex primer/sealer: MPI INT 9.2B.

C. Ceilings:

   1. Flat Latex: One coat over primer/sealer: MPI INT 9.1A

END OF SECTION 099123

SECTION 099300 - STAINING AND TRANSPARENT FINISHING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals:

1. Product Data:
2. Samples.

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

C. Extra Materials: Deliver to Owner 1 quart of each color and type of stain and transparent finish used on Project, in containers, properly labeled and sealed.

PART 2 - PRODUCTS

2.1 STAINED AND TRANSPARENT FINISHES

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. Sherwin Williams
   b. Behr
   c. Benjamin Moore
   d. PPG

B. MPI Standards: Provide materials that comply with MPI standards indicated and listed in its "MPI Approved Products List."

1. Wood Filler Paste: MPI #91.
2. Alkyd, Sanding Sealer, Clear: MPI #102.
3. Stain, Semitransparent, for Interior Wood: MPI #90.
4. Varnish, Water Based, Clear, Semigloss (Gloss Level 5): MPI #129.
5. Danish Oil: MPI #92.

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

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

D. Low-Emitting Materials: Comply with Section 018113.33 - Sustainable Design Requirements - IgCC.

E. Colors: As selected.

PART 3 - EXECUTION

3.1 PREPARATION

A. Comply with recommendations in MPI's "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

B. Remove hardware, lighting fixtures, and similar items that are not to be finished. Mask items that cannot be removed. Reinstall items in each area after finishing is complete.

C. Clean and prepare surfaces in an area before beginning finishing in that area. Schedule finishing so cleaning operations will not damage newly finished surfaces.

3.2 APPLICATION

A. Comply with recommendations in MPI's "MPI Architectural Painting Specification Manual" applicable to substrates indicated.

B. Finish exposed surfaces unless otherwise indicated.

C. Apply stains and transparent finishes according to manufacturer's written instructions.

D. Apply stains and transparent finishes to produce surface films without color irregularity, cloudiness, holidays, lap marks, brush marks, runs, ropiness, or other imperfections. Use multiple coats to produce a smooth surface film of even luster.

3.3 INTERIOR STAIN AND CLEAR FINISH APPLICATION SCHEDULE

A. Wood substrates, nontraffic surfaces, including wood trim architectural woodwork doors.

1. Semitransparent Stain: Two coats: MPI INT 6.1G
2. Gloss Water-Based Varnish over Stain: Three coats over stain: MPI INT 6.1R.
3. Danish Oil: Two coats: MPI INT 6.3M.

END OF SECTION 099300

DIVISION 12
Furnishings

SECTION 122413 - ROLLER WINDOW SHADES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data and Samples.

PART 2 - PRODUCTS

2.1 ROLLER WINDOW SHADES

A. Basis of Design: Mecho, Mecho/5, double bracket

B. Provide shadeband material passing flame-resistance testing according to NFPA 701.

C. Fabrication: Comply with WCMA A 100.1. Fabricate shadebands without battens or seams to extent possible except as follows:

1. Where width-to-length ratio of shadeband is equal to or greater than 1:4, provide battens and seams at uniform spacings along shadeband length.

D. Manually Operating Roller Shades: Chain-and-clutch with bead chains.

E. Shadeband Materials:

1. Light-Filtering Fabric: 100% Thermoplastic Olefin (TPO) – (room side)
2. Light-Blocking Fabric: 50% Acrylic Coating and 50% Polyester – (window side)
3. Roll Width: 126 inches.
4. Openness Factor: 5 percent.
5. Color: As selected by Architect from manufacturer's full range.

F. Installation Accessories:

1. Front fascia.
2. Exposed headbox.
3. Endcap covers.
4. Recessed shade pocket.
5. Closure panel and wall clip.
6. Side channels and bottom (sill) channel or angle with light seal.
7. Color and Finish: As selected from manufacturer's full range.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install roller shades level, plumb, and aligned with adjacent units according to manufacturer's instructions.

1. Opaque Shadebands: Located so shadeband is not closer than 2 inches to interior face of glass. Allow clearances for window operation hardware.

B. Adjust roller shades to operate smoothly and easily throughout entire operational range.

END OF SECTION 122413

DIVISION 31
Earthwork

SECTION 31 00 00 - EARTHWORK

PART 1- GENERAL

1.01 Description: Provide all labor, materials, and equipment to perform the following work of the Contract, including incidentals related to that work and coordination and support of other work specified elsewhere in the Contract Documents:

A. Safety Monitoring & Response.
B. Protection of Existing Features and Work in Progress.
C. Survey for horizontal and vertical control of all work of the Contract.
D. Grading and compaction as required achieving lines and grades on Drawings.
E. Excavation and backfill of trenches for Utilities, including; Irrigation Systems, Potable Water Systems, Storm/Sub-surface Drainage Systems, Sanitary Sewer Systems and Electrical Conduit to lines and grades as shown on the Drawings.
F. Grading & Compaction of sub-grade and base aggregates for Concrete, Concrete Masonry Unit and Asphalt Paving.
G. Placement and compaction of Structural Soils.
H. Removing materials from the site which are in excess of that which is required.
I. Coordinate Earthwork operations for Walls, Abutments, Footings, Building Foundations and other work associated with the project.
J. Coordinate Earthwork operations with environmental requirements in accordance with Section 01 57 19 Temporary Environmental Pollution Control regarding the relic on-site landfill.

1.02 References:

A. WSDOT Standard Plans and Specifications for Road, Bridge and Municipal Construction (most recent edition).
B. R.C.W. - Chapter 39.04.180 Public Works/Trench Excavations - Safety Systems Required.
C. R.C.W. - Chapter 49.17 WISHA. WAC 296-155 - Safety Standards for Construction Work.

1.03 Related Sections: Coordinate related work specified in other parts of the Project Manual, including but not limited to following:

Section 01 56 26 - Temporary Fencing
Section 01 56 39 - Temporary Tree & Plant Protection
Section 01 57 13 - Construction Stormwater Control
Section 02 41 13 - Selective Site Demolition
Section 32 91 13 – Soil Preparation
Section 33 34 00 - Storm Drainage Utilities

1.04 Quality Assurance:

A. The Contractor is responsible for verifying the quality of the work and shall perform compaction and density tests on request of the Engineer to check compliance with these specifications. A copy of the test reports shall be furnished to the Engineer.

B. The Engineer's Testing Agency may perform compaction and density tests to verify compliance with these specifications.

C. The Engineer may require that an independent testing laboratory test imported materials at any time. If the material is found to be non-compliant with the Contract, the Contractor shall bear the cost of testing, removal of all non-compliant materials from the Project Site, and replacement of the materials with materials meeting the requirements of the Contract. If the materials tested are found to be compliant with the requirements of the Contract, the Owner will reimburse the Contractor for costs incurred by testing plus mark-ups as allowed for elsewhere in the Contract.

D. It is the responsibility of the Contractor to verify the accuracy of all survey information provided by the Owner prior to commencing excavations or filling operations. Commencement of these operations constitutes acceptance of the survey information as appropriate to meet the intent of the Contract.

E. Submittals:

1. Safety Products:
   a. Submit for the Engineer's approval manufacturers product data for each worker safety product specified.
   b. Provide current calibration certificates for each piece of mechanical monitoring equipment to be used in the work. Perform field testing of equipment for the Engineers approval prior to commencing excavation.
2. Bulk Materials: The Engineer shall approve in principle all products used in the execution of this section prior to their importation to the Project Site. Submit a particle gradation analysis in graph and table form for each product specified. Approval of the Engineer of an analysis does not constitute approval of the actual product, which may be subject to additional testing at any time per paragraph 1.04.C above.

1.05 Existing Conditions: Documentation regarding existing conditions, in addition to the current survey supplied in the Contract Drawings, includes the following;

A. Other Available Information: Other information regarding utilities belonging to jurisdictions other than the Owner may be obtained through the City of Sequim.

1.06 Manufacturer's Qualifications: The Contractor shall cause the materials that are to be furnished under this section to be the product of firms that are experienced in the manufacture of the specified materials.

PART 2 - PRODUCTS

2.01 General:

A. Prior to the importation of any materials, the Contractor shall provide the Engineer with a certified test lab report of the sieve analysis of each aggregate product. The Engineer shall be the final determining factor in establishing compliance with sieve requirements. No material shall be brought onto the job site until the initial sieve analysis has been approved in writing by the Engineer.

B. During the course of importation of materials, the Contractor shall be responsible for continually checking the materials to ensure that they continue to meet the Specifications.

2.02 Safety, Monitoring, & Response Products and Equipment: The Contractor shall provide barricades, safety guards, temporary fencing, signage and/or other methods to secure trenches, open excavations, and other unsafe conditions resulting from this construction. Undertake work in full compliance with all applicable regulatory requirements.

2.03 Storm Drainage Backfill:

A. Solid Pipe/Tight Line (Non-rigid PVC or HDPE Pipe):

1. Bedding in solid pipe storm drainage trenches, shall be CSTC (aka 5/8" crushed rock, bearing no naturally occurring or worn surfaces), meeting the following particle gradation:

Sieve Size	Percent Passing
5/8" square sieve	100
1/2" square sieve	75-100
1/4" square sieve	0-25

2. Backfill for solid piped drainage shall be of native soils occurring on-site, only if those soils meet or exceed the gradation standards for Gravel Base (aka Bank Run Gravel), per the WSDOT Standard Specifications (most recent edition) Section 9-03.10, or as approved by the Engineer.

2.05 Pavement Base Aggregate: For use as imported base course for Concrete, Asphalt, and Concrete Masonry Unit Paving;

A. Shall be CSTC (5/8" minus crushed rock), bearing no naturally occurring or worn surfaces, per WSDOT Standard Specifications (most recent edition) in accordance with Section 9-03.9(3). Gradation of the base course shall be:

Sieve Size	Percent Passing
5/8" square sieve	100
1/4" square sieve	55 - 75
No. 40 sieve	8 - 24
No. 200 sieve wet	10.0 maximum wet

2.06 Selected Backfill (Common Fill): Where on-site soils prove to be insufficient in quantity or quality to achieve design sub-grades and compaction levels, imported fills may be accepted upon approval of the Engineer. Selected Backfill (Common Fill) shall be Gravel Base (Bank Run Gravel), available from a recognized commercial source meeting the following sieve gradation, per the WSDOT Standard Specifications (most recent edition) Section 9-03.10.

Sieve Size	Percent Passing
3" square sieve	95 - 100
1/4" square sieve	25 - 75
No. 200 sieve wet	0 - 5

A. Organic content shall be no greater than 8% dry weight.

B. Variations to this particle gradation may be considered dependent on the application.

C. Submit to the Engineer a written request to import Selected Backfill (Common Fill) including the total volume of import anticipated (or range) and the source including name, address, and phone number of supplier, and geographic source of the material proposed to be imported.

2.07 Utility Pipe Tracer Tape: Shall be detectable below ground surface and color coded, with utility name printed on the tape. Conductive Warning Tape is required over all water, sewer, drainage, irrigation pipe and electrical conduit. Tape shall be manufacturer's standard permanent, bright-colored, continuous printed plastic tape, aluminum backed, intended for direct-burial service. Tape shall be not less than 3" wide x 4 mils thick.

Tape Schedule: Piping	Color	Wording
Sanitary Sewer	Green	Caution - Sanitary Sewer
Storm Drain	Green	Caution - Storm Drain
Irrigation Systems	Blue	Caution - Irrigation
Domestic Water	Blue	Caution - Water
Electrical Conduit	Red	Caution - Electrical

PART 3- EXECUTION

3.01 Safety Monitoring & Response: In addition to all current State and Local Safety Requirements;

A. Maintain conformance to the Contractors Health and Safety Plan.

3.02 Protection of Existing Facilities:

A. Refer to Division 1 Specifications, for information pertinent to the protection of all existing facilities.

B. It is understood that there will be interfering utilities, service laterals and other underground pipes, drains or structures encountered that are not shown, or areas shown incorrectly on the plans, or have not been previously discovered in the field. Contractor agrees this is a normal and usual occurrence in the construction of underground improvements. Furthermore, Contractor understands and agrees that work in some cases must be done in close proximity to said utilities and underground pipes, drains and structures not shown or shown incorrectly on the plans, which may require a change in operations and may cause sloughing of the trench, additional traffic control, additional pavement and backfill costs and time. The Contractor agrees that these occurrences are usual and ordinary, and are reflected in the bid and plan of operation.

C. Contractor agrees to provide for these conflicts and interferences and agrees to provide for a reasonable amount of time for design changes and/or utility relocations due to said interferences.

D. Repair and or replacement of damaged facilities to the Engineer’s satisfaction will be accomplished at the Contractor's expense.

3.03 Protection of Work In Progress: It is the responsibility of the Contractor to protect all work in progress from damage due to extremes of cold, moisture, or drying, or mechanical damage from equipment traffic or foot traffic. Alert the Engineer to the presence or likelihood of conditions that

may adversely affect the quality of the work, the physical structure of soils, or transport of site soils off-site.

A. Do not work frozen soils.

B. Protect soils from excessive moisture. During periods of prolonged precipitation, take aggressive steps to avoid over-saturation, erosion, or homogenization of soils by covering with protective plastic sheeting, collection and controlled dewatering, detention for sediment removal, and allowing excessively wetted soils to remain fallow until approved by the Engineer as appropriate for continued work. It shall be the Contractor's sole responsibility for soils that are contaminated by the weather and/or by his/her construction activities.

C. Apply supplemental moisture to overly dry soils.

D. Do not operate heavy equipment near excavations where trench wall or cut-slope failure may result.

3.04 Earthwork - General:

A. Removal of materials beyond indicated sub-grade elevations or dimensions without specific direction of the Engineer is not authorized. Unauthorized excavation, as well as remedial work directed by the Engineer, shall be at the Contractor's expense.

B. Stability of excavations:
1. Sides of excavations to be vertical as shown on the Drawings. Maintain sides of excavations in a clean and safe condition until completion of back filling.
2. Shoring and bracing are required at excavations deeper than 4 feet below adjacent existing grade. All shoring and bracing shall conform to the requirements of the WSDOT Standard Specifications (most recent edition) and requirements of the Washington Industrial Safety and Health Act.

C. Dewatering: Prevent surface and subsurface water from flowing into excavations and from flooding project site. Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rain water and water removed from excavations to collecting or run-off areas. If required, line ditches and sumps with coarse-grained material that acts as a filter. Do not use trench excavations as temporary drainage ditches. All dewatering shall conform to the requirements of the City of WSDOT Standard Specifications (most recent edition)

D. Material Storage: Stockpile satisfactory excavated materials where directed, until required for backfill or fill. Place, grade, and shape all stockpiles for proper drainage.

E. Locate and retain soil materials away from edge of excavations and drip lines of trees to remain.

F. Dispose of excess soil material and waste materials as herein specified.

3.05 Grading:

A. Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finished surface within specified areas. Smooth finished surface

within specified tolerances, compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades. Finish surfaces free from irregular surface changes.

B. Landscape planting, lawns, and other landscape repair areas finish grade to be minus 1/2 inch from adjacent paving surfaces with smooth transition to adjacent grades.

3.06 Excavation:

A. Layout: All work shall be surveyed and staked by the Contractor as required to complete earthwork. Maintain all benchmarks, control monuments and stakes, whether newly established or previously existing. Protect from damage and dislocation. If necessary to disturb existing benchmarks, re-establish in a safe place. Notify Engineer a minimum of 3 days prior to excavation of work areas. Engineer shall inspect staking and layout of work.

B. Excavation for Trenches: Provide neat trenches to the depth, slope (where appropriate) and width as indicated in the Contract Drawings. Allow for import of surfacing materials and bedding. Provide clean, smooth trench walls and trench floors.

3.07 Excavation Safety Systems:

A. Provide all trench excavation in excess of 4 feet in depth with a safety system conforming to the referenced requirements.

3.08 Compaction:

A. General: Control soil compaction during construction providing minimum percentage of density specified for area classification. Do not allow equipment traffic to overly compact areas beyond specified percentages. Remediate over-compaction as directed by the Engineer including ripping, re-grading and re-compaction or over-excavation and in-kind replacement per plan.

B. Percentage of Maximum Density Requirements: Compact soil to not less than the following percentages for maximum density for soils which exhibit a well-defined moisture density relationship (cohesive soils) determined in accordance with ASTM D698; and not less than the following percentages of relative density; determined in accordance with ASTM 4253, for soils which will not exhibit a well-defined moisture density relationship (cohesionless soils).

1. Backfill:
   a. Solid Piped Drainage Bedding under pipe- 95%
   b. Solid Piped Drainage Bedding over pipe - 75%
   c. Solid Piped Drainage Backfill - 95%
   d. Perforated Piped Drainage Bedding and Top Lift, water settle, 75%.
   e. Over excavation Backfill of Existing Sub-grade to remain - 95%
2. Sub-grades:
   a. Sub-grade soils in lawn areas - 75%
   b. Sub-grade soils in landscape planting areas - 70%
   c. Import aggregate base material in paving areas - 95%.
3. Surface Fills:
   a. Planting Soils - 70%

b. Structural Soils - 95%
c. Fills on slopes exceeding 3:1, to prevent erosion – shall be determined on a project by project basis based on recommendations by the Engineer and the Geo-technical Engineer of Record for the project.

C. Moisture Control:

1. Where sub-grade or lift of soil material must be moisture conditioned before compaction, uniformly apply water to surface of sub-grade, or layer of soil material, to prevent free water appearing on surface during or subsequent to compaction operations.
2. Before compaction, moisten or aerate each layer as necessary to provide optimum content. Compact each layer to required percentages of maximum dry density or relative dry density for each area classification.
3. Do not perform compaction operations on excessively wetted soils.

3.09 Trench Backfill:

A. Place fill materials in specified lifts to required sub-grade elevations, for each area classification as described in this Section.

B. Backfill excavations as promptly as work permits, but not until completion of the following:

1. Inspection, testing, approval, and recording locations of underground utilities.
2. Removal of shoring and bracing, and back filling of voids with satisfactory materials.
3. Removal of trash and debris.

C. Placement and Compaction: Place backfill and fill materials in layers of 2’ maximum loose depth for material compacted by heavy compaction equipment and 1’ maximum loose depth for material compacted by hand operated tampers. All compaction shall be by mechanical methods. Water settling may be used for Perforated Piped Drainage aggregates only. Do not place backfill for fill material on surfaces that are overly wet or dry, frozen, or graded inconsistently.

E. Solid Piped Drainline Trench Backfill:

1. Provide a single, consistent 4” compacted lift of Solid Piped Drainline Trench Bedding.
2. Coordinate the installation of Solid Piped Drainlines per the requirements of Section 33 34 00 - Storm Drainage Utilities.
3. Upon approval of the Engineer of installation of Solid Piped Drainlines, install an additional single lift of Solid Piped Drainage Bedding in a thickness allowing a minimum 4” compacted cover over crown of Solid Pipe.
4. Complete installation with specified native soils or approved Common Fill compacted to design sub-grade.

3.10 Pavement Base Backfill:

A. Provide a minimum 6” compacted lift of specified Pavement Base Aggregate true to the elevations either described or implied in the Contract Drawings or as required to match

adjacent existing pavements or landscapes, and a minimum of 4” beyond the horizontal layout lines of pavement or as indicated on the Contract Drawings.

B. Pavement Bases shall be graded such that upon approval of compaction, the surface of the Base is at the correct elevation to receive pavement to design finished grade.

3.11 Backfill of Over-excavations: Backfill over-excavations with approved excess native soils or approved Common Fill true to the design elevations per the Contract Drawings unless otherwise directed. Install and compact to specified rates in lifts not exceeding 8” of loose material.

3.12 Disposal of Excess and Waste Materials: Remove from the Owner's property, all waste materials, including unacceptable excavated material, trash and debris, excess stockpiled material, surplus materials, and any other debris or waste associated with the execution of the work and dispose of it off site in a legal and timely manner. Provide dump receipts from an approved dumpsite if directed.

END OF SECTION

DIVISION 32
Exterior Improvements

SECTION 32 12 16 ASPHALT PAVING FOR SERVICE ROADS & PARKING LOTS

PART 1 - GENERAL

1.01 Description: Furnish all material, labor, services and related items required to complete work indicated on Drawings and specified herein. The items of work to be performed shall include but may not be limited to the following; asphalt patching, installation of tack coat and fabric, and the import, placement, and compaction of asphalt paving.

1.02 Related Sections: Coordinate related work specified in other parts of the Project Manual, including but not limited to following:

Section 01 56 39 - Temporary Tree, Vegetation & Soil Protection
Section 01 57 13 – Construction Stormwater Control
Section 02 41 13 - Selective Site Demolition
Section 31 00 00 - Earthwork
Section 32 11 23 - Mineral Aggregates
Section 32 11 26 -Sub-grade Preparation for Asphalt Paving
Section 32 23 13.16 - Grade Adjustment for Utility Structures

1.03 References: This section references the latest revisions of the following documents. They are a part of this section as specified and modified. In case of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.

A. AASHTO M17 - Mineral Filler for Bituminous Paving Mixtures

B. The WSDOT Standard Specifications for Road, Bridge and Municipal Construction (most recent edition).

1.04 Quality Assurance: The Contractor must have five (5) years experience in work of this nature and have the equipment and personnel required for the work specified. The Contractor must acquaint themselves with all work related to site improvements and other work. Payment for testing under this section shall be as follows:

A. Payment for testing under this section shall be as follows:

1. The first run of any test of a given sample of workmanship will be paid for by the Owner. Where possible, the Engineer will perform the initial test. In the event that the Engineer’s capabilities are insufficient to perform the test in a timely manner, the test will be performed by the Contractor at a reasonable cost to the Owner.
2. In the event the sample of workmanship is found to be deficient in some way as a result of the initial test, the contractor shall remove from the project site(s) that work or material, and provide work or material as specified and with satisfactory test results at no additional cost to the Owner.

B. Test Reports shall be done under the supervision of the Contractor and in accordance with the General and Supplementary Conditions of the Contract. Tests must be performed by a certified testing agency or licensed laboratory. The Engineer may require execution of tests described below, at the Contractors expense. Two copies of the results of each test shall be submitted to the Engineer for approval prior to continuation of the work to be tested, unless

otherwise directed. The following testing methods shall be performed according to the WSDOT Standard Specifications (most recent edition),

1. ASTM C131 Test Method for Resistance to Degradation of Small Size Course Aggregate.
2. ASTM D1557 Test Method for Moisture Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb (4.54 kg) Rammer and 18-in (457 mm) Drop.
3. WSDOT Test Method of test for Determination of Method 705 Degradation Value.
4. WSDOT Test Maximum Specific Gravity of Bituminous Paving Mixtures Method 113.
5. Other tests as may be referenced elsewhere in this Section.

1.05 Submittals:

A. The Contractor shall submit to the Engineer written materials containing the following information: Materials to be used and the proposed method of application and procedures to be followed.

B. Fabrics: Submit manufacturer's product specifications and recommended installation procedures to the Engineer for approval prior to delivery to the project site.

C. Fine Aggregate for Hot Mix Asphalt (HMA): The Contractor shall submit to the Engineer, for approval prior to delivery to the project site(s), a single 1/2 cubic foot sample in a secure container. Attach to the container the supplier name, address, and telephone number, batch number (if applicable), date, and sieve analysis.

PART 2 - PRODUCTS

2.01 Base Aggregate: Crushed Surfacing Top Course (5/8" Minus) Mineral Aggregate per WSDOT Standard Specification (most recent edition). The sand equivalent shall be 40% (max.) and the L.A. Abrasion shall be 35% (max.). Gradation of the base course shall be as follows:

Sieve Size	Percent Passing
5/8" square sieve	100
1/4" square sieve	55 - 75
No. 40 sieve	8 - 24
No. 200 sieve	0 - 10

2.02 Geo-textile Fabric: Fabric installed as a protective membrane over existing asphalt paving shall be a needle-punched non-woven polypropylene fabric having the following minimum properties in the weakest principal direction:

Property	Minimum Value	Test Method
Weight	3.6 oz./sq. yd.	ASTM D3776
Tensile Strength	90 lbs.	ASTM D4632-91
Tensile Elongation	50%	ASTM D4632-90
Asphalt Retention	0.20 gal./sq.yd.	Phillips Procedure, Task Force 25, Method 8, TX DOT 3099 (or equivalent)
Melting Point	300 degrees F	ASTM D 276-87

The fabric used shall be "Petromat" by Amoco Fabrics and Fibers Company distributed by Charles R. Watts Company, 4121 - 6th Ave. NW, Seattle, WA, phone (206) 783-8400, or approved equal.

2.03 Hot Mix Asphalt (HMA) Wearing Course:

A. HMA - Class A.

B. Mineral Aggregate: Mineral Aggregate shall meet the requirements of the WSDOT Standard Specifications (most recent edition, HMA Aggregate Gradations and shall meet the following requirements:

Sieve Size	% Passing
1/2" Square	100
3/8" Square	90-100
U.S. #4	90 Max.
U.S. #8	3-67
U.S. #200	2.0 - 7.0

C. Bituminous Materials:

1. HMA furnished under these specifications shall not have been distilled at a temperature high enough to injure by burning or to produce flecks of carbonaceous matter, and upon arrival at the work, shall show no signs of separation into lighter and heavier components.
2. HMA shall be Medium Curing Liquid Asphalt, meeting or exceeding the characteristics defined in the WSDOT Standard Specifications, and the following additional requirements:

Characteristic	Value Range
Mineral Filler	3.0 - 7.0%
Hot Mix Asphalt	4.0 - 7.5% of total mixture
Sand - Silt Ratio	5.5 - 10.5

PART 3- EXECUTION

3.01 Barriers: The Contractor shall erect and maintain barricades, canopies, guards, and warning signs to the extent required by law and as is prudent for the protection of the public and protection of the work.

3.02 New HMA Paving (including patching):

A. In areas of new paving, or where existing paving has been removed during the demolition phase of work, new asphaltic concrete paving shall be placed over compacted base aggregate. Recycled asphalt or other recycled paving materials shall not be used as sub-base materials.

B. Place base aggregate as required to attain a total depth of 6 inches and compact to 95 percent density.

1. Patching: If existing base material does not meet requirements for density, Contractor shall remove the existing base material in the areas to be patched and install new base aggregate to a depth of 6 inches and compact to 95 percent density.

2. New HMA Pavement: Place a minimum of 6 inches of base aggregate and compact to 95% density.

C. Install new HMA - Class B, per paragraph 3.06. Minimum HMA thickness shall be 3 inches.

1. New HMA patching shall meet the grade of adjacent existing asphaltic concrete paving (to remain). Edges of new and existing pavement shall be flush without ridges or gaps; tack sealed as required and shall be tamped at a 45 degree angle on all exposed edges.
2. New HMA pavement edges shall be tapered to meet existing or proposed grades as required or as directed by the Engineer.

3.03 Existing Asphalt Paving Preparation: Existing asphalt paving to receive the new wearing course of asphaltic concrete shall be thoroughly cleaned of all dirt, water and oil to the satisfaction of the Engineer. Cracks 1/8 inch wide or greater shall be cleaned and filled with bituminous material or by a method approved by the Engineer. Large cracks, faults or potholes shall be repaired as specified above for New Asphalt Pavement (patching).

3.04 Tack Coat:

A. All new asphalt pavement patching shall abut existing asphalt pavement that has been machine saw-cut prior to patching operations. The new asphalt shall be allowed sufficient time to cure (min. 24 hrs.) before applying the tack coat. The tack cost shall be applied in an even manner, adequately covering the joints in all directions. All asphalt pavement areas shall be cleaned prior to beginning the tack coat applications.

B. An asphalt tack coat shall be applied uniformly in controlled amounts throughout areas to receive paving fabric. Apply tack coat at the rate of 0.20 - 0.30 gallons per square yard (optimum application rate is 0.25 gallons per square yard) using a mechanical distributor meeting the requirements of the WSDOT Standard Specifications. Tack coat application rates may be monitored by the Engineer to verify compliance with this paragraph.

C. The allowable temperature range for tack coat material is 290 - 325 degrees Fahrenheit.

D. Where the new HMA paving abuts a curb or gutter, cold pavement joint, trimmed meet line, or any metal surface, a thin tack coat of asphalt shall be applied on the vertical face of the abutting surface by hand painting prior to paving. The application on the contact surfaces shall be thin and uniform in order to avoid an accumulation of excess HMA in puddles. The Contractor shall not apply the tack coat on vertical contact surfaces above the finished height of the asphalt concrete being placed. Tack coat to extend three inches beyond the edge of fabric area.

3.05 Fabric: Install paving fabric throughout the entire area to be paved with asphaltic concrete pavement. Install all paving fabrics to the manufacturer's specifications as submitted to, and approved by, the Engineer. Equipment used for placement of paving fabric shall be designed and constructed specifically for fabric placement.

3.06 Hot Mix Asphalt:

A. Placement: A course of HMA shall be installed to the lines and grades as indicated on the drawings. The hot plant mix shall have an installation temperature of 275-300 degrees. Compaction thickness shall be as shown on Drawings but in no case shall the compacted thickness be less than 3 inches in areas that are to be used as parking lots, service roads, ramps, and other load bearing surfaces. Compaction shall be accomplished by rolling with a powered steel wheel tandem roller weighing not less than 3, and not more than 5 tons; the finish roller weighing not less than 1 ton. The hot plant mix shall be spread by methods and in a manner to produce a uniform density and thickness to meet a tolerance of 1/4 inch in 10 feet measured in any direction.

B. In locations where more than one lift of HMA is specified on the Drawings, the base lift shall not exceed 3 inches in depth.

3.07 Curing and Cleaning: New HMA pavement must be completely cured (minimum of seven days of warm, dry weather, longer if cold or damp), prior to application of any materials. Pavement needs to be clean and free of all foreign matter. A high-pressure washer, air broom or hand sweeper shall be used as required. Removal of grease and oil may require the use of a strong detergent only as approved by the Engineer. After using detergents the surface must be thoroughly flushed with water and removed from the site while not allowing the detergent to enter the storm sewer system.

END OF SECTION

CONCRETE PAVING
PART 1 - GENERAL

1.01 Description: Furnish all material, labor, services and related items required to complete concrete paving work indicated on drawings and/or specifications. The items of work to be performed shall include but are not necessarily limited to:

Concrete flatwork, slabs, sidewalks, curbs, ramps, accessible paving, pads, post bases, and associated work.

1.02 Related Sections:

Section 31 00 00 - Earthwork

1.03 References: This section references the latest revisions of the following documents. They are a part of this section as specified and modified. In case of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail. Other references are as follows:

A. American Association of State Highway and Transportation Officials (AASHTO) “Standard Specifications for Highway Materials and Methods of Sampling and Testing”

B. WSDOT Standard Specifications for Road, Bridge and Municipal Construction (most recent edition).

1.04 Submittals: The Contractor shall submit to the Engineer materials containing the following information:

A. Procedures to be used in the construction under this Section with regard to the division of labor and the responsibilities of the Contractor and all sub-contractors involved.

B. Furnish samples, manufacturer's product data, test reports, and materials certifications for Portland cement products, expansion joint materials, fillers, sealants, etc.

C. Provide mock-up of concrete finishes, colors, and joints on a sheet of plywood, minimum 48 inches square. Concrete mock up shall be provided for the Engineer’s review a minimum of 48 hours in advance of concrete delivery.

1.05 Quality Assurance:

A. The Contractor shall provide, at the request of the Engineer, original supplier invoices for concrete. Concrete found not to be consistent with these specifications shall be removed from the project site(s) unless otherwise approved by the Engineer. The Engineer may copy the original invoices and then return them to the Contractor in a timely manner.

B. Prior to commencing the work of this Section, the Contractor shall verify the accuracy of layout and grading. Verify that all sub-grade and base course aggregate conditions are as specified. Notify the Engineer of any discrepancies and coordinate the correction of those discrepancies with other trades as necessary.

C. Notify Engineer a minimum of 48 hours prior to any concrete pour for inspection of base course aggregates, forms, reinforcing steel, and placement of joint materials. Anticipate pours to provide adequate time for inspection without causing delays to other trades.

D. Protect all finished work. Vandalized work will be rejected by the Engineer and repaired/replaced by the Contractor at their expense, as directed by the Engineer.

PART 2 - PRODUCTS

2.01 Concrete Mix: Non-Roadway Cement Concrete, High Strength per the WSDOT Standard Specifications for Road, Bridges, and Municipal Construction (most recent edition). The concrete shall have the characteristics as follows:

28 day compressive strength	4,000 psi
94# Sacks Cement per Cubic Yard (see "Cement", below)	6
dry Fine Aggregate (Type 6) (see "Aggregates", below)	230 lb/sack
dry Coarse Aggregate (Type 5) (see "Aggregates", below)	320 lb/sack
Max. Water / Cementitious Material ratio	0.49 %
Slump (per ASTM C143)	2 – 3.5 inches

2.02 Portland Cement: Use only Type II Portland Cement, as specified in the WSDOT Standard Specifications (most recent edition), and AASHTO M 85.

2.03 Aggregates:

A. Fine Aggregate shall be washed sand, per the WSDOT Standard Specifications (most recent edition). Fine Aggregates shall consist of sand or other inert materials, or combinations thereof, having hard, strong, durable particles, free from an adherent coating. The Fine Aggregate shall be washed thoroughly to remove clay, loam, alkali, organic matter, or other deleterious matter. Mineral Aggregate Type 6 Particle Gradation shall be as follows:

Sieve Size	% Passing
#4	95 - 100
#8	68 - 86
#16	47 - 65
#30	27 - 42
#50	9 - 20
#100	0 - 7
#200 (wet)	0 - 2.5

B. Coarse Aggregate shall be 1” washed gravel), per the WSDOT Standard Specifications (most recent edition). Coarse Aggregate shall consist of gravel, crushed stone, or other inert material or combination thereof having hard, strong, and durable pieces free from adherent coatings. Coarse Aggregate shall be washed to thoroughly remove clay, silt, bark, sticks, alkali, organic matter, or other deleterious material. Mineral Aggregate Type 5 Particle Gradation shall be as follows:

Sieve Size	% Passing
1-1/2” Square	100
1" Square	95 - 100

1/2" Square	25 - 60
#4	0 - 10
#8	0 - 5
#200	0 -0.5

Cement and coarse and fine aggregate weights shall be in accordance with the tolerances outlined in Section 5-05.3(1) Conformance to Mix Design of the WSDOT Standard Specifications for Road, Bridge, and Municipal Construction (most recent edition).

2.04 Forms: Forms shall be made of steel, wood, or other suitable materials and shall be of size and strength to resist movement during concrete placement. Use straight forms, free of defects. Use flexible spring steel forms or laminated boards to form curved edges if specified.

2.05 Steel Reinforcement:

A. Welded wire mesh to be furnished in flat sheets not rolls, unless otherwise specified or approved. Gauge and opening size to be outlined per the Drawings. If not specified, wire mesh reinforcement should have the following characteristics:

Gauge range:	10 – 16
Mesh Opening:	2” –6”

B. Reinforcing bars to be deformed steel bars, ASTM A 615, Grade 60, sized per the Drawings.

2.06 Expansion Joint Materials:

A. Joint Filler: Pre-formed non-extruding resilient material; ASTM D1752, Type I, 3/8 inch wide by depth required to bring top surface within 1/2 inch of slab surface.

B. Joint Sealer: Self-leveling polyurethane; ASTM C920, Type M, Grade SL, Class 25 (color shall match concrete color).

2.07 Curing Materials: Curing shall be per the WSDOT Standard Specifications (most recent edition), or as approved by the Engineer.

2.08 ADA Ramp Detectable Warning Strip: The warning strip shall be a vitrified polymer composite tile with epoxy polymer composition with an ultra violet stabilized coating of aluminum oxide particles. The tactile warning tile shall be 2 feet long by 4 feet wide Armor Tile by Engineered Plastics Inc. (916) 549-9700, or approved equal. Color: Yellow. Refer to WSDOT and Sequim SD Standard Details.

PART 3 - EXECUTION

3.01 Barriers: The Contractor shall erect and maintain barricades, canopies, guards, lights and warning signs to the extent required by law and as is prudent for the protection of the public and protection of the work.

3.02 Form Construction:

A. Set forms to required grades and alignments rigidly braced and secured. Install sufficient quantity of forms to allow continuous progress of work and so that forms can remain in place at least 24 hours after concrete placement.

B. Check completed formwork for grade and alignment to following tolerances:

1. Top of forms not more than 1/8” in 10 feet.
2. Vertical faces, on longitudinal axis, not more than 1/4" in 10 feet.

C. Clean forms after each use and coat with form release agent as often as required to ensure separation from concrete without damage.

3.03 Reinforcement:

A. Locate and place reinforcement as indicated on the contract drawings. Support reinforcing steel or wire fabric with pre-cast concrete blocks at spacing that will ensure minimum deflection of the reinforcement.

3.04 Utility Sleeves:

A. Pipe trenches located under areas of existing or new paving shall have sleeves installed. Sleeves shall extend 12” beyond the pavement on each side. Trenches shall be back-filled with sand (6 inches above and 4 inches below the pipe) and compacted in layers to 95% compaction, using manual or mechanical tamping devices. Trenches for piping shall be compacted to equal the compaction of the existing adjacent undisturbed soil and shall be left in firm unyielding condition. All trenches shall be left flush with the adjoining grade. The Contractor shall set in place; cap and pressure test all piping under paving prior to paving work.

3.05 Concrete Placement:

A. Do not place concrete until sub-base, forms, and reinforcement have been checked for line and grade. Moisten sub-base if required to provide a uniform dampened condition at time concrete is placed.

B. The concrete shall be placed and spread uniformly between the forms and thoroughly compacted with a steel shod strike-board.

C. After the concrete has been thoroughly compacted and leveled, it shall be floated with wood floats and finished at the proper time with a metal float.

3.06 Joints:

A. All Joints shall be edged with a quarter-inch (1/4") radius edger, and sidewalk edges with a half-inch (1/2") radius edger or saw cut as directed by the Engineer in the field.

B. Expansion Joint placement shall be 10' to 15' spacing (with no more than approx. 200 square feet or pavement between expansion joints), with control joint spacing equal and alternating

in between. Provide Joints as shown on the Contract Drawings or as directed by the Engineer in the field.

C. Provide Expansion Joints, dividing the concrete areas as indicated on the Drawings:

1. Provide pre-molded 3/8" joint filler for expansion joints abutting concrete curbs, catch basins, manholes, inlets, structures, walks and other fixed objects as applicable or as indicated in the Contract Drawings.
2. Expansion Joints shall be located and placed according to the Contract Drawings, and sufficiently supported to ensure final placement perpendicular to the finished surface of the pavement.
3. Extend joint fillers full width and depth of joint and not less than 1/2 inch or more than 1 inch below finished surface where joint sealer is indicated. Furnish joint fillers in one-piece lengths for full width being placed, wherever possible. Where more than one length is required, lace or clip joint filler sections together. Protect top edge of joint filler during concrete placement with a metal or plastic temporary strip. Remove protection after concrete has been placed on both sides of joint before sealant is applied.

D. Provide Control Joints, dividing the concrete areas as indicated on the Drawings.

1. Form Control Joints in fresh concrete by grooving top portion with a recommended cutting tool and finishing edges with a jointer.
2. Saw Control Joints into hardened concrete using power saws equipped with shatterproof abrasive or diamond rimmed blades. Cut joints into concrete as soon as surface will not be torn, abraded, or otherwise damaged by cutting action.

3.07 Concrete Finishing:

A. After striking off and consolidating concrete, smooth surface by screening and floating. Use hand methods only where mechanical floating is not possible. Adjust floating to compact surface irregularities, and refloat repaired area to provide a continuous smooth finish.

B. After completion of floating and trowelling when excess moisture or surface sheen has disappeared, complete finishing as follows:

1. Light broom finish, by drawing fine hair broom across concrete surface, perpendicular to line of traffic after the tooled grid is installed. The Engineer's decision will be final on acceptance of joint finishing details and surface finishes.

3.08 Curing: Protect and cure finished concrete paving, complying with applicable requirements of the References specified in this Section. Use only pre-approved curing and sealing compound or moisture curing method.

3.09 Clean-up:

A. Repair and replace broken or defective concrete as directed by the Engineer.

B. Protect concrete from damage until acceptance of work. Exclude traffic from pavement for at least fourteen (14) days after placement. When construction traffic is permitted, maintain

pavement as clean as possible by removing surface stains and spillage of materials as they occur.

C. Sweep concrete pavement and wash free of stains, discoloration, dirt and other foreign material just prior to final inspection.

END OF SECTION

SECTION 32 23 13.16 -GRADE ADJUSTMENT FOR UTILITY STRUCTURES

PART 1 - GENERAL

1.01 SECTION INCLUDES:

A. Work consisting of adjusting new and existing maintenance holes, catch basins, inlets, valve chambers, water meter boxes, handholes, and similar Utility Structures encountered during the Work to a new grade elevation.

1. The requirements of this Section apply to Utility Structures constructed from pre-cast concrete sections, masonry brick or blocks, and cast-in-place concrete.

1.02 RELATED SECTIONS:

Section 31 00 00 - Earthwork
Section 32 11 23 - Mineral Aggregates

1.03 REQUIREMENTS:

A. All work shall comply with WSDOT Standard Specifications for Road, Bridge and Municipal Construction (most recent edition).

B. The work shall include adjustment by removing or installing ring extensions; by removing and installing adjustment brick; by removing or adding a vertical riser section to the Utility Structure; by removing and rebuilding a portion of the existing structure; or by any combination of the preceding methods.

C. Publicly Owned Utility Structures shall be adjusted to finished grade by the Contractor.

D. Privately Owned Utilities are generally in the streets and road Rights of Way pursuant to franchises or to rights claimed under the laws of the United States of America, or the State of Washington and, therefore, these utility agencies are responsible for all adjustments and relocations of their own facilities.

1. The Contractor shall schedule the Work so that utility adjustments by others can be accomplished without undue delay.

1.04 SUBMITTALS:

A. Epoxy: Submit a Manufacturer’s Certificate of Compliance and catalog cut stating the proposed epoxy provides acceptable bonding performance for the intended application.

PART 2 – PRODUCTS

2.01 GENERAL:

A. Material used in the adjustment of existing Utility Structures shall meet the requirements for new construction specified in the Specification Section applicable to the item being adjusted.

2.02 ADJUSTMENT RING EXTENSIONS:

A. Adjustment ring extensions shall meet the following requirements of the WSDOT Standard Plans and Specifications (most recent edition).

1. Rings and ring extensions shall be manufactured from cast iron ASTM A 48, Class 30 or ductile iron ASTM A 536, Grade 80-55-06.
2. Rings and covers shall be free of defects such as porosity, pitting, shrink cavities, cold shuts, cracks, and other surface defects which would impair serviceability.
3. Repair of defects by welding or by the use of "smooth-on plasticized metals" or similar Material will not be accepted.
4. Manufacturer shall certify that the product conforms to the requirements of these Specifications.
    a. In accordance with "Source of Supply and Quality of Materials" Paragraph of "Control of Work" Article of Section 00 72 00 - General Conditions, where source of Material is different from manufacturer, the Contractor shall also provide the name and location of the manufacturer.
5. Upon request of the Engineer, the manufacturer shall furnish at the foundry standard ring and covers for use by Inspectors in testing fit and seating.
6. All manhole rings shall be labeled with the name or symbol of the manufacturer and the type of Material.

2.03 EPOXY:

A. Epoxy used to secure manhole castings for ring extensions to existing frames shall be per epoxy manufacturer's recommendations for the material application.

PART 3 - EXECUTION

3.01 ADJUSTMENT OF UTILITY STRUCTURES, GENERAL:

A. The Engineer will establish approximate grade elevation for the tops of existing utility Structures requiring adjustment. The final alignment and grade elevation shall be established from adjacent roadway surfaces, forms, or such offset hubs as may be provided by the Engineer.

B. Except where adjustment is to be made by ring extension, the Contractor shall remove the pavement around the casting; remove the casting and install or remove leveling or adjustment brick or block; or shall excavate around the utility structure, remove a portion of it as necessary and rebuild the structure to meet the new grade elevation.
    1. Pavement removal shall be kept to the minimum amount required to facilitate the adjustment.
    2. Adjustment of a Drainage Structure to finished grade elevation, by whatever method, shall result in a finished Structure meeting the requirements for new construction as specified in the WSDOT Standard Plan and Specifications (most recent edition).
    3. The overall distance between the top of the casting to the bottom of the adjustment brick shall be not more than 26 inches.

C. Where a Water Main casting adjustment is required and the concrete pavement or concrete rigid pavement base is to be made thicker, the Contract will specify whether or not a new Water Main casting is required.

1. If a new Water Main casting is required, the Contractor shall comply with the requirements in "Furnishing Castings" Article of this Section; otherwise, adjustment of Water Main castings shall be by either brick or concrete block.
2. The adjustment of Water Main castings with ring extensions will not be allowed.

D. When a ring extension is specified in the Contract, it shall be epoxied securely to the existing frame.

1. All frame and ring extension surfaces to receive the epoxy shall be thoroughly cleaned with a wire brush prior to the application of epoxy.

E. When adjustment is made by adding or removing leveling bricks, all joints in the bricks shall be filled with mortar and the casting seated in mortar on the top brick course.

F. After the Utility Structure has been adjusted to grade, and the Structure made watertight by plastering with mortar cement, all voids around the Structure shall be backfilled and compacted with imported Gravel Base/Bank Run Gravel. The casting shall then be secured in place with a tapered layer of concrete or asphalt, as applicable.

G. The Contractor shall adjust to finish grade, water meter boxes encountered in the planting strip and sidewalk area.

3.02 UNPAVED STREET GRADING PROJECTS:

A. New maintenance holes, catch basins and similar Structures constructed in conjunction with street grading Projects which are to be surfaced with gravel or crushed stone shall be constructed to a point approximately 8 inches below the Sub-grade and covered with a temporary wood cover.

B. Existing maintenance holes encountered shall be cut off and covered in a similar manner as above.

C. The Contractor shall carefully reference all manholes so that they may be easily found upon completion of the street work.

D. After placing the gravel or crushed stone surfacing, the utility Structures and utility castings shall be constructed to the finished grade of the roadway surface.

1. Excavation necessary for bringing utility castings to grade shall center about the utility structure and be held to the minimum area necessary.
2. After completion of the utility structure adjustment and after the structure is made watertight by plastering with mortar cement, the void around the maintenance hole shall be backfilled with imported Mineral Aggregate Type 17- Bank Run Gravel and thoroughly compacted.

E. Where bituminous surface treatment is to be placed, the manhole castings shall be installed from ½ inch to 1 inch higher than the rock surfacing so that the top of the casting matches the finished roadway surface.

3.03 CEMENT CONCRETE PAVING PROJECTS:

A. Manholes, catch basins and similar Structures shall be constructed or adjusted in the same manner as outlined in "Adjustment of Utility Structures, General" Article of this Section except that the final adjustment shall be made and the cast iron frame set after the forms have been placed and checked.

B. In placing the concrete pavement, extreme care shall be taken not to alter the position of the casting in any way.

C. All castings installed in and requiring new concrete pavement or rigid concrete base pavement, shall comply with the requirements of the WSDOT Standard Plans and Specifications (most recent edition).

D. Finished rigid pavement shall incorporate reinforcing steel around the casting as specified in the WSDOT Standard Plan and Specifications (most recent edition).

E. See "Adjustment of Utility Structures, General" Article of this Section for Water Main casting adjustment requirements.

3.04 ASPHALT CONCRETE PAVING PROJECTS:

A. Utility Structures requiring adjustment of frames to match finish grade shall be adjusted prior to the start of the final paving operation.

B. The tops of existing utility Structure frames shall be raised or lowered to match the finish grade.

1. Immediately after adjustment of the frame to finish grade in lanes that are to remain open to traffic, the Contractor shall install temporary asphalt transition tapers around the Structure frame to provide a safe usable surface for traffic.

2. The Contractor shall maintain the asphalt tapers and shall furnish, install, and maintain warning signs.

3. The Contractor shall remove the asphalt tapers immediately prior to the start of paving operations.

C. Inside surfaces of adjusted Structure frame and bricks or rings which are disturbed or damaged by the adjustment, as well as the new adjustment area shall be mortared to give a smooth, watertight surface.

3.05 ASPHALT RESURFACING PROJECTS:

A. Adjustment of manholes, catch basins, and similar Structures on asphalt resurfacing Projects shall meet the requirements of "Asphalt or Concrete Paving Projects" Article of this Section.

3.06 STORM AND SANITARY SEWER OR WATER PROJECTS:

A. Manholes, catch basins, gate valve Structures and other similar type Structures being constructed in conjunction with Sewer or water Projects on improved Streets shall be brought to final grade as outlined in this Section.

3.07 ESTABLISHMENT OF GRADE FOR TOP OF MAINTENANCE HOLE:

A. The Engineer will establish the grade for top of manholes, catch basins and similar Structures; however, these grades will be approximate only.

B. The Contractor shall allow adjustment of frame and frame extensions in accordance with the WSDOT Standard Plans and Specifications (most recent edition).

C. The Engineer assumes no responsibility in this regard, except when the final grade is set.

3.08 ADJUSTMENT OF INLETS:

A. The final alignment and grade of frames for new and old inlets to be adjusted to grade shall be established from the forms or from adjacent pavement surfaces.

B. The final adjustment of the inlet frame and frame extension shall be performed in similar manner to that described for maintenance holes.

C. On asphalt concrete paving Projects using curbs and gutters, that portion of the frame not embedded in the gutter section shall be solidly embedded in concrete.

1. The concrete shall extend a minimum of 6 inches beyond the edge of the frame and shall be left 1½ inches below the top of the frame so that the wearing course of asphalt concrete pavement butts against the frame.

2. The existing concrete pavement and edge of the casting shall be painted with hot asphalt cement.

D. Adjustments in the inlet structure frame and frame extension shall be made in the same manner and of the same Material as that required for new inlets.

E. The inside of the inlet frame and frame extension shall be plastered smooth.

3.09 ADJUSTMENT OF MONUMENTS, AND FRAME AND COVER:

A. Monuments and monument castings shall be adjusted to grade in the same manner as for maintenance holes.

3.10 ADJUSTMENT OF VALVE BOX CASTINGS:

A. Adjustment of valve box castings and Water Main castings shall be as specified in “Adjustment of Utility Structures, General” and “Furnishing Castings” Articles of this Section.

3.11 FURNISHING CASTINGS:

A. Where adjustment of existing utility Structures is required and the Drawings indicate that the existing castings be replaced, the Contractor shall furnish new castings of the type specified on the Drawings with the exception of Water Main castings.

B. Casting shall include frame and grate, or ring and cover unless the specified otherwise in other technical Sections.

3.12 ADJUST BY SHAFTING:

A. Adjustment of existing utility casting and Structure shall be by shafting when the casting remains the same and one of the following conditions exists:

1. The casting is to be raised, resulting in a total depth of the adjustment brick zone greater than the maximum allowable as indicated in the WSDOT Standard Plans and Specifications (most recent edition)..

2. The casting is to be lowered more than the depth of the existing adjustment brick or in excess of 16 inches.

B. Work required shall include excavation, removal of the existing frame and cover, leveling bricks, cone section or flat slab of the utility structure.

1. The Contractor shall add to or remove from the utility structure as appropriate, the vertical riser section having the least dimension, unless otherwise indicated on the Drawings, to allow the structure to be adjusted to the new grade elevation.
2. The cone section or flat slab shall be reinstalled, adjustment bricks installed, and the existing frame and cover reset.
3. The surrounding void shall be backfilled and compacted the WSDOT Standard Plans and Specifications (most recent edition).

END OF SECTION

SECTION 32 91 13 - SOIL PREPARATION

PART 1 - GENERAL

1.01 Description: The work includes the furnishing and installation of soil and/or amendments for lawn areas, athletic fields, or landscape planting areas.

1.02 Reference Sections:

Section 31 00 00 - Earthwork
Section 32 92 19.16 - Hydroseeding
Section 32 93 00 - Landscape Planting

1.03 Quality Assurance: All products supplied shall comply with applicable state and local codes.

1.04 Submittals:

A. Submittal Procedure

At least 10 Working Days prior to placement of any soils specified in this Section, the Contractor shall submit to the Engineer the following. All test results shall be from samples sampled and tested less than 90 days prior to date of submittal.

1. **Aggregate and Loam Analysis.** Grain size analysis results of the Mineral Aggregate or Sandy Loam portion of each soil mix, performed by an accredited laboratory in accordance with ASTM D 422, Standard Test Method for Particle Size Analysis of Soils.
2. **Compost Analysis.** Quality analysis results for the compost portion of each soil mix performed in accordance with STA standards, as specified in this Section.
3. **Mix Analysis.** Test results from an accredited soil laboratory, including the following parameters:
    a. Total Nitrogen and Soluble Nitrogen (NO3 + NH3)
    b. Phosphorous
    c. Potassium
    d. pH
    e. Organic Matter % (Loss on Ignition method)
    f. Conductivity
    g. Calcium
    h. Sulfur
    i. Boron
    j. Weed seed (for General Turf Area Soil and High Performance Turf Mixes)
4. **Recommendations.** Fertilizer and amendment recommendations for the specified plant type (turf, shrubs/groundcovers, or annuals: with special provisions for Bioretention applications) and soil application depth; from the accredited laboratory, an accredited Soil Scientist or Agronomist.
5. **Mix Samples (see below)**
6. **Manufacturer.** The Manufacturer's Certificate(s) of Compliance from the Supplier of the soil mix, and (if different) the Suppliers of the compost, including their name(s) and address(es).
7. **Laboratory Information.** Include the following information about the testing laboratories:
    a. name of laboratory(ies) including contact person(s),
    b. address(es),
    c. phone contact(s),
    d. e-mail address(es),

e. qualifications of laboratory and personnel including date of current certification by STA, ASTM, AASHTO, or approved equal.

Note: Soil analysis tests shall be current (no more than 90 days old), shall be performed by a local (Puget Sound Region) testing lab and shall be done for the final soil mix, not individual components. Soil mix samples shall meet or exceed the Specifications prior to delivery to the job site and shall not require on-site mixing or substantial chemical alteration after delivery unless otherwise approved by the Engineer.

B. Sample submittals:

1. One ten (10) pound bag of each soil mix or one five (5) gallon container of each soil type used on the project.
2. One ten (10) pound bag or five (5) gallon of compost sample.

C. Acceptance:

1. Acceptance of Soils Prior to Placement. The Contractor shall not place any soils or soil mixes specified in this Section until the Engineer has reviewed and confirmed the following:
2. Soil mix delivery ticket(s). Delivery tickets shall show that the full delivered amount of soil matches the product type, volume and Manufacturer named in the submittals.
3. Visual match with submitted samples. Delivered product will be compared to the submitted sample, to verify that it matches the submitted sample. The Engineer may inspect any loads of soil on delivery and stop placement if it is determined that the delivered soil does not appear to match the submittals; and require sampling and testing of the delivered soil, before authorizing soil placement. All testing costs shall be the responsibility of the Contractor.

1.05 Project Conditions:

A. The existing site soils shall be amended for lawn, planting beds, bioretention cells, or as otherwise shown on the drawings.

B. Keep streets, sidewalks and site clean, free from debris and affected drains open and free flowing at all times. Protect drains with filter fabric covers during construction. Appropriate erosion control measures shall be employed.

PART 2 - PRODUCTS

2.01 Soil Materials:

The following soils and soil mixes are specified on the Drawings or by the Engineer, according to project needs.

A. Topsoil
A general purpose mix of Sandy Loam and compost as needed to meet minimum organic matter content requirements. Similar to Washington State Department of Transportation's Topsoil Type A specification.

1. **Source.** Topsoil Type A shall consist of an imported Sandy Loam as defined by the United States Department of Agriculture Classification System, and documented by a Particle Size Analysis performed by an accredited laboratory.
2. **Organic Content.** Topsoil Type-A shall have an organic matter content of at least 5% by dry weight where turf will be installed, and at least 10% by dry weight for all other landscape areas. Organic matter shall be determined by Loss-on-Ignition test (ASTM D2974, or TMECC 05.07A). If additional organic content is needed meet these requirements, soil shall be amended with Compost.
3. In addition to meeting the particle size requirements of USDA Sandy Loam, Topsoil Type-A shall meet the following sieve specifications:

Sieve Size	Percent Passing (weight)
1”	100%
1/2”	>90%
No.10	>70%

4. **Contaminants.** Topsoil Type-A shall be free from: Materials toxic to plant growth; visible seeds, rhizomes or roots; any County-listed noxious weeds, or invasive root-propagating plants including but not limited to horsetail, ivy, clematis, knotweed, etc. Soil found to contain these prohibited viable plant materials shall be removed and replaced at the Contractor’s expense
5. **Testing and Submittals.** Testing and submittals shall comply with all provisions of this Section.

B. Reused Amended Site Soil

Soil from the Project Site that is either, amended in place, or moved/stockpiled during grading operations and then amended with compost as needed to meet minimum organic matter content requirements.

1. **Source.** Reused Amended Site Soil shall be native topsoil taken from within the Project Site, either from areas where construction excavation is to be performed; from borrow, pit, or quarry sites strippings; or other designated sources. The general limits of the Material to be utilized for topsoil will be indicated in the Contract. The Engineer will make the final determination of the areas where the most suitable Material exists within these general limits, and depth of excavation. The Contractor shall reserve this Material for the specified use.
2. **Unwanted Vegetation.** In the production of Reused Amended Site Soil, all vegetative matter shall become a part of the topsoil, except large brush and trees over 4 feet in height, Prior to removal, the Contractor shall mow or otherwise reduce the height of the native vegetation such to a height not exceeding 1 foot. Plants on the King County Noxious Weed Lists or invasive root-propagating plants including but not limited to horsetail, ivy, clematis, knotweed, etc., shall not be incorporated in the topsoil. Such plants shall be removed and disposed.
3. **Organic content.** The final Reused Amended Site Soil shall have a minimum organic matter content by dry weight of 5% for areas where turf will be installed, and 10% for all other landscape areas. Organic matter shall be determined by Loss-on-Ignition test (ASTM D2974, or TMECC 05.07A). Native site topsoil shall be amended with Compost if more organic content is needed to meet these requirements. Compost amendment requirements may be added at default rates of 22% by volume for turf or 38% for planting beds (1.75” amendment tilled to 8” depth for turf, 3” amendment

tilled to 8" depth for beds); or calculated based on tests of the soil and compost, using the Soil Amendment Rate Calculator at http://your.kingcounty.gov/solidwaste/compost-calculator.htm or similar calculator available at http://www.soilsforsalmon.org/excel/Compost_Calculator.xls.

4. **Stockpiling.** Designated Material shall be placed at locations approved by the Engineer that do not interfere with the construction of the Project. The Contractor shall take all precautions to avoid disturbing the existing ground beyond the Project Site or other areas designated by the Engineer.
5. **Testing and Submittals.** Testing and submittals shall comply with all provisions of this Section.

D. Planting Soil

An imported soil mix for planting beds, planted medians and planting strips.

1. **Mix.** Planting soil shall consist of a mix of 2 to 3 parts Sandy Loam soil and 1 part compost by volume. The resulting mix shall contain approximately 8-15% organic matter by weight, tested by the Loss on Ignition method.
2. **Sandy Loam.** Shall be imported and shall be as defined by the United States Department of Agriculture Classification System, and documented by a Particle Size Analysis performed by an accredited laboratory. The sandy loam fraction of mix shall be screened through a ½" mesh, to remove all rocks, plant parts and other debris.
3. **Compost.** Compost used shall meet the definition of Compost in this Section.
4. **Contaminants.** Sandy Loam shall be free from: Materials toxic to plant growth; visible seeds, rhizomes or roots; for any King County-listed noxious weeds, or invasive root-propagating plants including but not limited to horsetail, ivy, clematis, knotweed, etc.
5. **Testing and Submittals.** Testing and submittals shall comply with all provisions of this Section.

2.02 Compost

A. General

1. Quality. Compost production and quality shall comply with Chapter 173-350 WAC, and meet the criteria below:
2. Regulatory Standards. Compost products shall be the result of the biological degradation and transformation of feedstocks as specified below, under controlled conditions designed to promote aerobic decomposition, per WAC 173-350-220, which is available at http://apps.leg.wa.gov/wac/default.aspx?cite=173-350-220

B. Submittals. The Contractor shall submit the following information to the Engineer for approval:

1. A copy of the Solid Waste Handling Permit issued to the supplier by the Jurisdictional Health Department as per WAC 173-350 (Minimum Functional Standards for Solid Waste Handling).
2. The Supplier shall verify in writing, and provide lab analyses that the Materials comply with the processes, testing, and standards specified in WAC 173-350 and these Specifications. An independent STA Program certified laboratory shall perform the analysis.
3. A list of the feedstock by percentage present in the final compost product.

4. A copy of the producer's current STA certification as issued by the U.S. Composting Council.
5. Acceptance shall be based upon a satisfactory Test Report from an independent STA program certified laboratory and the sample(s) submitted to the Engineer.

C. Testing Requirements. The compost Supplier shall test all compost products within 90 Calendar Days prior to application, at the Suppliers expense. Samples shall be collected using the Seal of Testing Assurance (STA) sample collection protocol, available from the U.S. Composting Council, Phone: 631-737-4931, www.compostingcouncil.org. The sample shall be tested by an independent STA Program certified laboratory. A copy of the approved independent STA Program laboratory test report shall be submitted to the Engineer prior to initial application of the compost.

D. Gradation. Compost shall meet the following size gradations when tested in accordance with the U.S. Composting Council "Testing Methods for the Examination of Compost and Composting" (TMECC) Test Method 02.02-B, "Sample Sieving for Aggregate Size Classification":

1. Fine Compost. Fine Compost, typically used for soil amendment, shall meet the following gradation by dry weight:

	Min.	Max.
Percent passing 2"	100%	
Percent passing 1"	99%	100%
Percent passing 5/8"	90%	100%
Percent passing 1/4"	75%	100%

2. Coarse Compost. Coarse Compost, typically used for erosion control or surface mulching, shall meet the following gradation by dry weight:

	Min.	Max.
Percent passing 3"	100%	
Percent passing 1"	90%	100%
Percent passing 3/4"	70%	100%
Percent passing 1/4"	40%	60%

E. Other Physical Properties

1. **pH.** The pH shall be between 6.0 and 8.5 when tested in accordance with TMECC 04.11-A; "1:5 Slurry pH".
2. **Physical Contaminants.** Manufactured inert material (concrete, ceramics, metal, etc.) shall be less than 1.0 percent by weight as determined by TMECC 03.08-A "percent dry weight basis". Film plastics shall be 0.1% or less, by dry weight.
3. **Organic Content.** Minimum organic matter content shall be 40 percent by dry weight basis as determined by TMECC 05.07A; "Loss-On-Ignition Organic Matter Method".
4. **Salinity.** Soluble salt contents shall be less than 5.0 mmhos/cm tested in accordance with TMECC 04.10-A; "1:5 Slurry Method, Mass Basis".
5. **Maturity.** Maturity shall be greater than 80% in accordance with TMECC 05.05-A; "Germination and Vigor". The Engineer may also evaluate compost for maturity using the Solvita Compost Maturity Test at time of delivery. Fine Compost shall score a number 6 or

above on the Solvita Compost Maturity Test. Coarse Compost shall score a 5 or above on the Solvita Compost Maturity Test.

6. **Stability,** Stability shall be 7 or below in accordance with TMECC 05.08-B; "Carbon Dioxide Evolution Rate".
7. **Feedstocks.** The compost product shall contain a minimum of 65 percent by volume from recycled plant waste as defined in WAC 173-350-100 as "Yard waste", "Crop residues", and "bulking agents". A maximum of 35 percent by volume of" post-consumer food waste" as defined in WAC 173-350-100 may be substituted for recycled plant waste. A minimum of 10% food waste in compost is required. The Engineer may approve compost products containing up to 35% biosolids or manure feedstocks for specific projects or soil blends, but these feedstocks are not allowed unless specified, and not allowed in compost used for Bioretention Soils.
8. **C:N.** Fine Compost shall have a carbon to nitrogen ratio of less than 25:1 as determined using TMECC 04.01 "Total Carbon" and TMECC 04.02D; "Total Kjeldhal Nitrogen". The Engineer may specify a C:N ratio up to 35:1 for projects where the plants selected are entirely Puget Sound native species. Compost may be mixed with fir or hemlock bark meeting requirements of 9-14.4(3) to raise the C:N ratio above 25:1. Coarse Compost shall have a carbon to nitrogen ratio between 20:1 and 45:1.

PART 3 - EXECUTION

3.01 Preparation of Sub-grade:

Subgrade work shall proceed only under dry weather conditions or by approval of the Engineer.

A. Rip, disc, or scarify undisturbed or compacted sub-grade soils to a minimum depth of 12 inches. Sub-grade elevations shall be as follows:

1. For Lawn Areas – Establish sub-grade elevation 4 inches below finished grade. After establishing subgrade, rip subgrade with minimum 13 inch long shank ripper attachment pulled behind a tractor with minimum 20 horse power.
2. For Landscape Planting Areas – Establish sub-grade elevation 6 inches below finished grade. After establishing subgrade, rip subgrade with minimum 13 inch shank ripper attachment pulled behind a tractor with minimum 20 horse power.

3.02 Placing Soil and Soil Amendments:
The placement of soils and soil amendments shall proceed only under dry weather conditions or by approval of the Engineer.

A. For General Lawns Areas:

1. Place 4 inches of specified General Turf Area Soil and rototill soil thoroughly into top 6 inches of prepared sub-grade using a rototiller with minimum 8 inch long tines. The soil profile shall be a minimum of ten (10) inches deep of thoroughly homogenized mix of imported soils and site soils.
2. Incorporate specified Lime and Fertilizers by broadcasting over entire the seeded area at an even distribution and rate, then broom rake the fertilizer into the top inch of specified or amended soil at rates as follows.

a. Dolomite Lime: Recommended application Rate: Incorporate fifty (50) pounds of Dolomite Lime per 1,000 square feet in direct broadcast application.
b. Starter Fertilizer: Recommended Application Rates: For (10-20-20): (Bag size = 50lbs.)
For Hand or Mechanical seeding apply at 1lb. of (N)/1000s.f. (10lbs. blended material/1000 s.f.) in direct broadcast applications.
For Hydroseeding areas, see Section 32 92 19.16.
c. Maintenance Fertilizer: Recommended Application Rates: For (16-16-16): (Bag size = 50lbs.)
For all seeded areas apply at 1lb. (N)/1000s.f. (5.3lbs./1000s.f. of blended material) in seeded areas.

B. For Landscape Planting Areas:

1. Place 6 inches of Planting Soil and thoroughly rototill soil into top 8 inches of prepared sub-grade using a rototiller with minimum 12 inch long tines.
2. Broadcast Planting Fertilizer at a rate of one-half pound (1/2#) of nitrogen per 1,000 square feet after placement and before rototilling of planting soils.

3.03 Fine Grading:

A. Perform fine grading to attain finish grades as shown on the Plans.

B. Rake out all rocks, roots, sticks and other debris larger than 1-inch diameter or sticks longer than 3 inches long. Leave surface even and readily able to accommodate lawn or planting installation.

C. Compact prepared soil with water filled drum or equal compactor to reach compaction levels between 85 to 95 percent density. Do not over –compact soil by over working or driving vehicles over the prepared soil.

3.04 Inspections: The Contractor shall notify the Engineer least 48 hours in advance of the time of inspection required for completion of soil preparation before seeding of lawn and landscape planting.

END OF SECTION

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10241 REGISTERED ARCHITECT
LAURA M. STRAUSS
STATE OF WASHINGTON
LAURI STRAUSS, AIA, LEED AP BD&C

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SEQUIM SD #323
Office Board Room & 2nd Floor Office Remodel
503 N Sequim Ave, Sequim, WA 98382

ABBREVIATIONS

A		DISP	DISPENSER / DISPOSAL	HVAC	HEATING VENTILATION AIR CONDITIONING	OH	OVERHEAD	STL	STEEL
ACT	ACOUSTICAL CEILING TILE	DN	DOWN			OPNG	OPENING	STO	STORAGE
ADJ	ADJACENT	DWG	DRAWING(S)	I		OPP	OPPOSITE	STS	SELF TAPPING SCREW
AFF	ABOVE FINISH FLOOR	E		IBC	INTERNATIONAL BUILDING CODE	ORIG	ORIGINAL	T	
AFP	ACOUSTICAL FOAM PANELS	EA	EACH	ID	INTERIOR DESIGN	P		TB	TOWEL BAR
ALT	ALTERNATE	ELEC	ELECTRIC	INFO	INFORMATION	PAF	POWER ACTIVATED FASTENERS	TEMP	TEMPORARY
ALUM	ALUMINUM	EQ	EQUAL	INSUL	INSULATION	PLAM	PLASTIC LAMINATE	THK	THICK
ANOD	ANNODIZED	EQUIP	EQUIPMENT	INT	INTERIOR	PLWD	PLYWOOD	THRU	THROUGH
APPROX	APPROXIMATE	EXG	EXISTING	J		PREFAB	PRE FABRICATED	TLT	TOILET
B		EXP JT	EXPANSION JOINT	JAN	JANITOR	PREFIN	PRE FINISHED	TO	TOP OF
BD	BOARD	EXT	EXTERIOR	JT	JOINT	PT	PAINT	TPD	TOILET PAPER DISPENSER
BLDG	BUILDING	F		K		PTD	PAPER TOWEL DISPENSER	TPTN	TOILET PARTITION
BLKG	BLOCKING	FD	FLOOR DRAIN	KIT	KITCHEN	PTN	PARTITION	TR	TRASH RECEPTACLE
BOD	BOTTOM OF DECK	FDN	FOUNDATION	L		Q		TYP	TYPICAL
BOT	BOTTOM	FE	FIRE EXTINGUISHER	LAM	LAMINATED	QT	QUARRY TILE	TZO	TERRAZZO
C		FEC	FIRE EXTINGUISHER CABINET	LAV	LAVATORY	R		U	
CAB	CABINET(S)	FF	FINISH FLOOR	LF	LINEAR FEEET	RAD	RADIUS	UC	UNDER COUNTER / UNDER CABINET
CJ	CONROL JOINT	FIN	FINISH	M		RB	RUBBER	UNFIN	UNFINISHED
CL	CENTER LINE	FLR	FLOOR	MATL	MATERIAL	RBB	RUBBER BASE	UON	UNLESS OTHERWISE NOTED
CLG	CEILING	FOC	FACE OF CABINET	MAX	MAXIMUM	RBT	RUBBER TILE		
CLO	CLOSET	FOF	FACE OF FINISH	MBL	MARBLE	RCP	REFLECETED CEILING PLAN	V	
CLR	CLEAR	FOS	FACE OF STUD	MDF	MEDIUM DENSITY FIBERBOARD			VAR	VARIES
COL	COLUMN	FOW	FACE OF WALL	MECH	MECHANICAL	REF	REFERENCE	VCT	VINYL COMPOSITION TILE
CONC	CONCRETE	G		MFG	MANUFACTURER	REINF	REINFORCING		
COR	CONTRACTING OFFICERS REPRESENTATIVE	GA	GAUGE	MIN	MINIMUM	REQD	REQUIRED	VERT	VERTICAL
CORR	CORRIDOR	GALV	GALVANIZED	MIR	MIRROR	RESIL	RESILIENT	VEST	VESTIBULE
CPT	CARPET	GB	GRAB BAR	MISC	MISCELLANEOUS	S		W	
CPTT	CARPET TILES	GEN	GENERAL	MS	METAL STUD	SAN	SANITARY	W/	WITH
CT	CERAMIC TILE	GLU-LAM	GLUE LAM BEAM	MTD	MOUNTED	SCHED	SCHEDULE	W/O	WITHOUT
D		GWB	GYPSUM WALL BOARD	MTL	METAL	SD	SOAP DISPENSER	WC	WATER CLOSET
DBL	DOUBLE	GYP	GUPSUM	N		SF	SQUARE FOOT	WD	WOOD
DEG	DEGREE	H		NA	NOT APPLICABLE	SHT	SHEET	WR	WATER RESISTANT
DEMO	DEMOLITION	HDWR	HARDWARE	NAP	NAPKIN	SHWR	SHOWER	WWF	WELDED WIRE FABRIC
DF	DRINKING FOUNTAIN	HM	HOLLOW METAL	NIC	NOT IN CONTRACT	SIM	SIMILAR		
DIA	DIAMETER	HORIZ	HORIZONTAL	NOM	NOMINAL	SND	SANITARY NAPKIN DISPOSAL		
DIFF	DIFFERENCE			NTS	NOT TO SCALE	SS	SOLID SURFACE		
DIM	DIMENSION			O		SST	STAINLESS STEEL		
				OC	ON CENTER	STD	STANDARD		
				OD	OUTSIDE DIAMETER				

1 / A101 — SECTION CALLOUT MARK

1 / A101 — DETAIL CALLOUT MARK

A7.01 1 / 1 — ELEVATION CALLOUT MARK

4 A7.02 2 / 3 — INTERIOR ELEVATION CALLOUT MARK

Room Name
101 — ROOM TITLE TAG

NOTE:
DIMENSIONS OF THIS TYPE SHOWN ARE EXISTING, FIELD VERIFY

DIMENSION TYPE

1010 — DOOR TAG

11 — WINDOW TAG

XX — WALL TYPE TAG

P1 — FINISH COLOR TAG REFERENCE COLOR SCHEDULE

X — SHEET NOTE TAG: Sheet notes apply to all locations within the project scope. Notes indicated with sheet note tag apply to specific areas as indicated on the Plan

NORTH — REFERENCE NORTH ARROW

EXIT PATH

ACCESSIBLE ROUTE

CODE ANALYSIS

Sequim Municipal Code through Ordinance 2022-018, passed June 27, 2022
2018 IEBC, 2018 IMC, 2018 UPC, 2018 IFC, AND 2018 WSEC, AND ASSOCIATED LOCAL BUILDING CODE AMENDMENTS. ALSO ICC/ANSI/117.1-2009.

PARCEL	**# 03-30-19-11-0055**
ZONING	**S_R4-8**
LEGAL DESCRIPTION	**PTN S2 NENE EXC EASES AND EXC DEEDED R/W**
SITE AREA	**6.74 ACRES (293,594 S.F.)**

EXISTING FIRST FLOOR AREA	6657 SF
EXISTING SECOND FLOOR AREA	7492 SF
TOTAL BUILDING AREA	14,296 SF

SUMMARY OF EXISTING BUILDING:
2 STORIES ABOVE GRADE PLANE - LEVELS 1 & 2
USE / OCCUPANCY: B

CHAPTER 11
IEBC 1101 - THE ELEVATOR ADDITION DOES NOT CREATE OR EXTEND ANY NON-CONFORMITIES IN THE BUILDING.
IEBC 1102.1 - THE PROJECT IS INTERIOR CONSTRUCITON ONLY AND DOES NOT INCREASE THE ALLOWABLE HEIGHT (40'-0") OF THE BUILDING.
IEBC 1102.2 - THE PROJECT IS INTERIOR CONSTRUCITON ONLY AND DOES NOT ADD TO THE BUILDING SQUARE FOOTAGE IN COMPLIANCE WITH THE EXCEPTION FOR NONOCCUPIABLE APPENDAGES.
IEBC 1103.1 - THE EXISTING GRAVITY LOAD CAPACITY IS NOT BEING ALTERED, WITH NO CHANGES TO THE BUILDING ENVELOPE OR STRUCTURL SYSTEM
IEBC 1104 - DOES NOT APPLY TO OCC GROUP B.
IEBC 1105 - DOES NOT APPLY TO OCC GROUP B.
IEBC 1106 - DOES NOT APPLY TO OCC GROUP B.

TENANT IMPROVEMENT OCCUPANY: GROUP B

EXISTING CONSTRUCTION TYPE:	V - B
AUTOMATIC SPRINKLER SYSTEM:	PARTIAL
TENANT IMPROVEMENT AREA TOTAL	2866 SF
1st FLOOR BOARD ROOM	1097 SF
1st FLOOR TOILET ROOMS	620 SF
2nd FLOOR OFFICE	1149 SF

OFFICE WORK QUALIFIES AS LEVEL 2 ALTERATION PER IEBC 603.1
COMPLIANCE WITH CH 7 ALTERATIONS AND CH 8 REQUIRED

CHAPTER 7
IEBC 701.2 - IMPROVEMENTS IN THE OFFICE WILL NOT MAKE THE BUILDING LESS SAFE THAN ITS EXISTING CONDITIONS.
IEBC 702.2 - CARPET SHALL BE MINIMUM CLASS II PER 804 OF THE IBC.
IEBC 703 - THE CURRENT LEVEL OF FIRE PROTECTION WILL BE MAINTAINED
IEBC 704 - THE CURRENT MEANS OF EGRESS WILL BE MAINTAINED
IEBC 705 - DOES NOT APPLY
IEBC 706 - EXISTING GRAVITY LOAD-CARRYING STRUCTURAL ELEMENTS ARE AFFECTED LESS THAN 5% - DOES NOT APPLY
IEBC 707 - ALTERATIONS COMPLY WITH WSEC.

CHAPTER 8
IEBC 801 - NEW CONSTRUCTION COMPONENTS AND SYSTEMS COMPLY WITH THE IBC.
IEBC 802.1 - EXISTING VERTICAL OPENINGS ARE NOT WITHIN THE WORK AREA OF THIS PROJECT. DOES NOT APPLY.
IEBC 802.4 - INTERIOR FINISHES IN THE IMPROVED SPACES WILL COMPLY WITH IBC REQUIREMENTS.
IEBC 802.5 - THERE ARE NO AREAS IN THE WORK AREA ABOVE 30" OFF THE FLOOR. DOES NOT APPLY.
IEBC 803 - FIRE SPRINKLERS ARE NOT INSTALLED THROUGHOUT THE STORY - ALTHOUGH THE ENCLOSED STAIRWELL ACCESSED FROM THE WORK AREA HAS AN EXISTING SRRINKLER SYSTEM.
IEBC 803.4 - AN APPROVED FIRE ALARM SYSTEM WILL BE INSTALLED IN THE ALTERED AREA AND CONNECTED TO THE EXISTING ALARM SYSTEM.
IEBC 804 - DOES NOT APPLY TO OCC GROUP B.
IEBC 805 - THE MEANS OF EGRESS IS FOR ONLY ONE TENANT. DOES NOT APPLY. THE OCCUPANCY OF THE BUILDING IS NOT BEING CHANGED AND THE EXISTING MEANS OF EGRESS ARE NOT WITHIN THE WORK AREA.
IEBC 805.4 - THE ALTERATION OF THE OFFICE SPACE WILL INCLUDE 2 EXIT DOORS SWINGING IN THE DIRECTION OF TRAVEL FROM THE ROOM. BOTH DOORS WILL BE EQUIPPED WITH CLOSERS AND PANIC DEVICES. THE TRAVEL DISTANCE TO AN EXIT IS LESS THAN 75'
IEBC 805.5 - NEW CORRIDOR DOORS ARE FLUSH, SOLID CORE WOOD WITH A 20 MINUTE RATING.
IEBC 805.6 - DOES NOT APPLY - NO DEAD END COORIDORS IN THE PROJECT.
IEBC 805.7 - ARTIFICIAL LIGHTING PROVIDED IS COMPLIANT WITH IBC.
IEBC 805.8 - EXIT SIGNS PROVIDED ARE COMPLIANT WITH IBC.
IEBC 806 - EXISTING GRAVITY LOAD-CARRYING STRUCTURAL ELEMENTS ARE AFFECTED LESS THAN 5% - DOES NOT APPLY
IEBD 807 - ALL NEWLY INSTALL ELECTRICAL WIRING AND EQUIPMENT COMPLIES WITH NFPA 70.
IEBC 808 - ALL ALTERED OR NEWLY INSTALLED MECHANICAL EQUIPMENT COMPLIES WITH 808.1 AND 808.2.
IEBC 809 - DOES NOT APPLY
IEBC 810 - ALTERATIONS COMPLY WITH WSEC.

SCOPE OF WORK

THE ADMINISTRAITON OFFICE FOR THE SEQUIM SCHOOL DISTRICT 323 IS LOCATED AT 503 N SEQUIM AVE. THE DISTRICT HAS DETERMINED A NEED PROVDE A BOARD/MEETING ROOM ON THE FIRST FLOOR AND MOVE OFFICE SPACE TO THE SECOND FLOOR IN AN EMPTY SPACE OF APPROXIMATELY 2000 S.F.

THE FIRST FLOOR OPEN OFFICE SPACE WILL BE ENLARGED AND REFINISHED.
- THE PARTIAL DIVIDING WALL WILL BE COPLETELY REMOVED.
- A DOUBLE DOOR WILL BE ADDED FOR EXITING THE BACK OF THE ROOM.
- NEW CARPET WILL REPLACE THE EXITING.
- NEW ACOUSTICAL CEILING WILL BE INSTALLED WITH NEW LIGHT FIXTURES.
- THE HVAC TO THIS ROOM WILL BE CONNECTED TO THE 2ND FLOOR OFFICE SPACE.

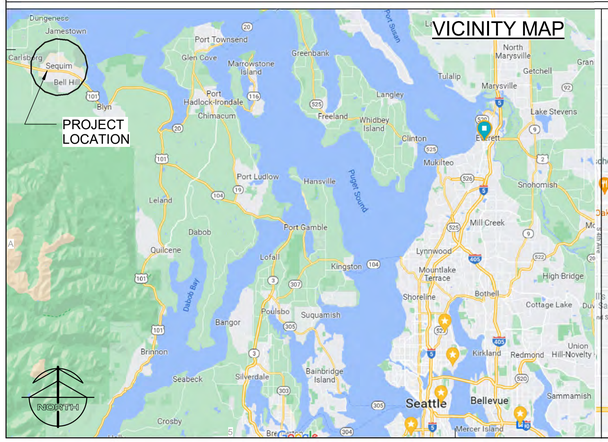
2ND FLOOR OFFICE SPACE WILL BE RENOVATED TO MAKE THIS ROOM A CODE COMPLIANT SPACE, AND THERMAL CONTROL FOR A COMFORTABLE AND SECURE OFFICE SPACE.
- NEW CARPET WILL BE INSTALLED OVER THE EXISTING VAT GLUE-DOWN TILES.
- THE WALL BETWEEN THE CORRIDOR AND THE ROOM WILL BE REBUILT FOR BETTER SOUND CONTROL.
- THE EXISTING LIGHT FIXTURES IN THE ROOM WILL BE REMOVED.
- A NEW CEILING WILL BE INSTALLED.
- THE TWO EXISTING END WALLS WILL BE FURRED OUT WITH RESILIENT CHANNELS AND A FINISH LAYER OF GYPSUM BOARD.
- A NEW, DEDICATED SPLIT SYSTEM HEAT PUMP WITH SUPPLEMENTAL ELECTRIC HEATING TO SERVE THESE OFFICES, ADJACENT CORRIDOR, AND FIRST FLOOR BOARD ROOM IS BEING ADDED.
- WIRING AND OUTLETS WILL BE ADDED TO MEET THE TECHNOLOGY NEEDS OF THE DISTRICT.
- THE ROOMS WILL BE RE-PAINTED IN THEIR ENTIRETY.

ACCESSIBILITY SCOPE
- 1ST FLOOR TOILET ROOMS WILL BE RECONFIGURED AS NECCESSARY TO COMPLY WITH THE 2010 ADA CODE
- AUTOMATIC DOOR OPERATORS WILL BE ADDED TO THE SOUTH ENTRY DOOR AND THE WEST ENTRY DOOR AT THE AUDITORIUM.
- A NEW DRINKING FOUNTAIN WILL BE INSTALLED WITH CANE DETECTION RAILS ON EACH SIDE.
- THE SOUTH PARKING LOT WILL BE RESTRIPED AND SIGNED WITH AN ACCESSIBLE PARKING SPACE AT THE END NEAR THE RAMP ENTRY.

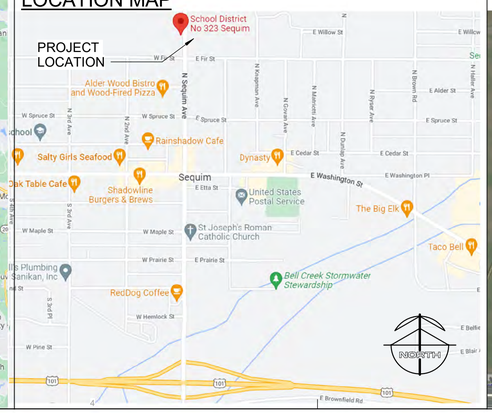
ALL CONSTRUCTION WILL COMPLY WITH CURRENT BUILDING CODES AS LISTED IN THE CODE ANALYSIS.

NOTE:
DRAWINGS USE BACKGROUND PLAN IMAGES FOR CLARITY OF CONTEXT OF WORK THAT ARE FOR INFORMATION ONLY, AND NOT PART OF THIS WORK.

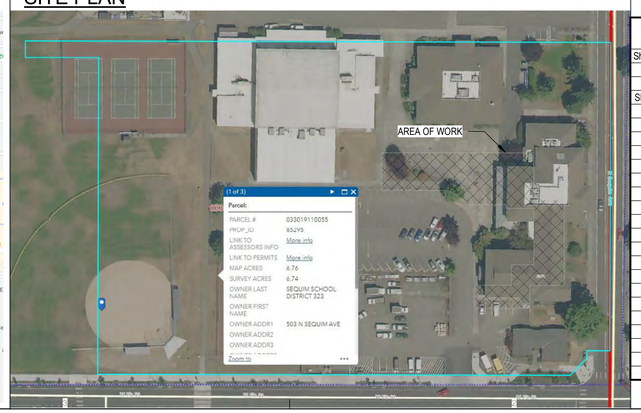
VICINITY MAP



LOCATION MAP



SITE PLAN



DRAWING INDEX

SHEET LIST		SHEET LIST	
Sheet Number	Sheet Name	Sheet Number	Sheet Name
G-1.0	COVER SHEET, INDEX & SCOPE OF WORK	M-0.1	MECHANICAL LEGENDS & NOTES
SHEET 1 of 1	TOPOGRAPHIC SURVEY	M-0.2	MECHANICAL SCHEDULES
C1.0	CIVIL GENERAL NOTES	M-1.1	MECHANICAL FIRST FLOOR DEMO PLAN
C2.0	TREE PROTECTION AND CSC PLAN	M-1.2	MECHANICAL SECOND FLOOR DEMO PLAN
C2.1	TREE PROTECTION AND CSC DETAILS	M-2.1	MECHANICAL FIRST FLOOR PLAN
C3.0	PAVING PLAN	M-2.2	MECHANICAL SECOND FLOOR PLAN
C3.1	DETAIL PAVING PLAN	M-3.1	MECHANICAL DETAILS
C4.0	CIVIL DETAILS	M-4.1	MECHANICAL SPECIFICATIONS
D-1.0	OVERALL FLOOR PLANS - EXISTING	M-4.2	MECHANICAL SPECIFICATIONS CONT
D-1.1	1ST & 2ND FLOOR DEMOLITION PLANS	M-4.3	MECHANICAL SPECIFICATIONS CONT
A-1.0	OVERALL FLOOR PLANS	E-0.1	ELECTRICAL LEGENDS AND NOTES
A-1.1	1ST FLOOR BOARD ROOM PLAN & RCP	E-0.2	ELECTRICAL LEGENDS AND NOTES
A-1.2	1ST FLOOR BOARD ROOM ELEVATIONS	E-0.3	LUMINAIRE SCHEDULE
A-1.3	1ST FLOOR BOARD ROOM ELEVATIONS	E-0.4	SINGLE LINE DIAGRAM & FEEDER SCHEDULE
A-1.4	WOMENS TOILET ROOM PLAN & ELEVATIONS	E-0.5	PANEL SCHEDULE
A-1.5	MENS TOILET ROOM PLANS & ELEVATIONS	E-1.0	OVERALL ELECTRICAL FIRST FLOOR PLAN
A-1.6	ENTRY DOOR & STAIRS / DETAILS	E-1.1	OVERALL ELECTRICAL SECOND FLOOR PLAN
A-2.1	2ND FLOOR OPEN OFFICE PLAN & RCP	E-1.2	1ST FLOOR POWER AND LIGHTING PLANS
A-2.2	2ND FLOOR OPEN OFFICE INTERIOR ELEVATIONS	E-1.3	2ND FLOOR POWER AND LIGHTING PLANS
A-6.0	SCHEDULES / WALL TYPES	E-1.4	ENLARGED ELECTRICAL FLOOR PLANS
A-8.0	MISCELLANEOUS DETAILS	E-2.1	ELECTRICAL DETAILS
I-1.0	FURNITURE PLANS	E-3.1	ELECTRICAL SPECIFICATIONS
		E-3.2	ELECTRICAL SPECIFICATIONS CONT.

REVISION SCHEDULE

#	DESCRIPTION	DATE
1	ASDDENDUM #1	8-22-2023

JOB NO.	2023-323
DATE	06-21-2023
DRAWN	ghm
REVIEWED	lms

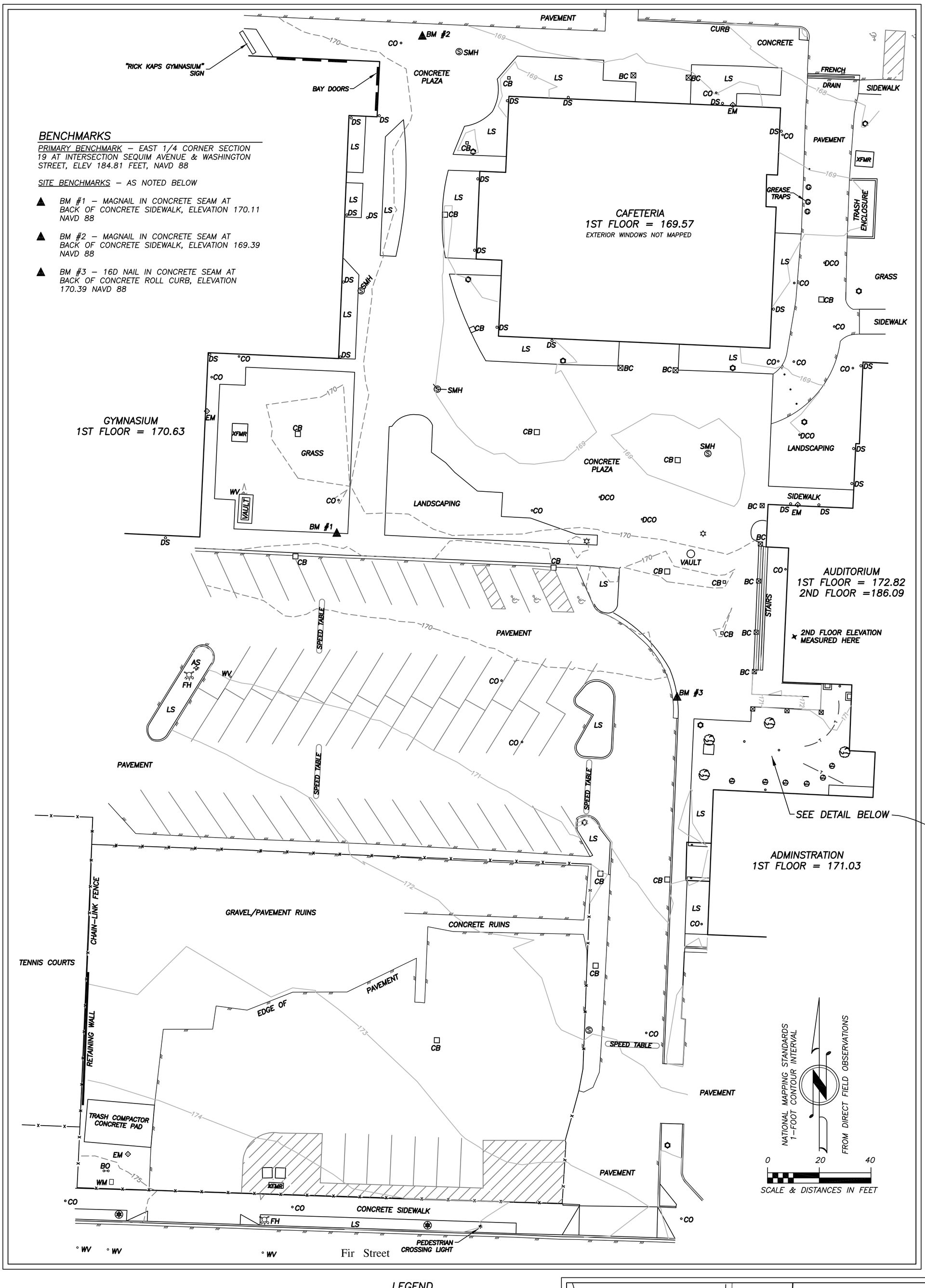
SHEET NAME
COVER SHEET, INDEX & SCOPE OF WORK

SHEET NO.
G-1.0

Sequim School District

a Topographic Survey located on the Sequim High School Campus

Section 19, Township 30 North, Range 3 West, W.M., Sequim, Washington



NOTES

1. THE PURPOSE OF THIS SURVEY IS TO AID IN CIVIL ENGINEERING DESIGN OF IMPROVEMENTS TO THE SEQUIM HIGH SCHOOL CAMPUS. THIS SURVEY IS BASED ON THE WASHINGTON COORDINATE SYSTEM GRID, NORTH ZONE, NAD83(91) AND THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) PER TIES TO GEOMPT NUMBERS 03302970, 03303011, 03303031, 03303041 AND WEGENAST (NOW DESTROYED BY CONSTRUCTION) AS RECORDED IN BOOK 39 OF SURVEYS, PAGE 86. ALL BEARINGS ARE RELATIVE TO SAID GRID. ALL DISTANCES ARE REDUCED TO SAID GRID USING A COMBINED SCALE FACTOR OF 0.99993691. TO OBTAIN GROUND DISTANCES, MULTIPLY DISTANCES SHOWN HEREON BY 1.0000630.

2. THIS SURVEY COMPLIES WITH W.A.C. 332–130–100 AND WAS ACCOMPLISHED IN JUNE–JULY, 2022 BY FIELD TRAVERSE METHODS USING A TOPCON GPT 9001A 1–SECOND ROBOTIC TOTAL STATION CALIBRATED AT THE CLALLAM COUNTY BASELINE ON MARCH 6, 2020. SOME DISTANCES MEASURED WITH A STEEL TAPE.

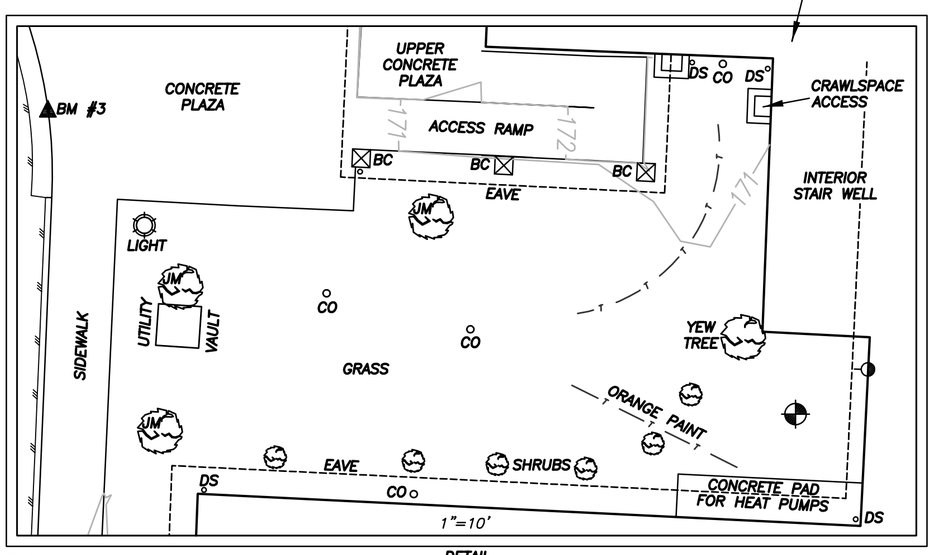
3. ALL FIELD DATA WAS PROCESSED USING STAR*NET–PRO LEAST SQUARES SURVEY NETWORK ADJUSTMENT PROGRAM, VERSION 6.0.31, TO TEST FOR CONFORMANCE WITH CHAPTER 332–130–085 (0.07 FEET AT 95% CONFIDENCE LEVEL) AND 332–130–090 (LINEAR CLOSURE), WAC. USING A STANDARD DEVIATION OF 0.02 NEZ ON CONTROL MONUMENTS MENTIONED ABOVE, THE RESULTANT ADJUSTMENT PASSED THE CHI–SQUARE TEST AT THE 5% LEVEL WITH AN COMBINED ERROR FACTOR OF 0.764, AN UPPER/LOWER BOUNDS OF 0.700/1.300 AND LINEAR CLOSURE OF 1:252,290.

4. THE SURVEYED PARCELS MAY BE SUBJECT TO EASEMENTS OR OTHER ENCUMBRANCES EITHER RECORDED OR UNRECORDED NOT SHOWN HEREON. THIS SURVEY HAS NOT DETERMINED THE EXISTENCE OF ALL SUCH EASEMENTS OR ENCUMBRANCES OR THEIR EFFECT ON THE SURVEYED PARCEL EXCEPT AS SPECIFICALLY SHOWN HEREON.

5. ANY UTILITIES SHOWN HEREON ARE BASED ON A COMBINATION OF A PARTIAL UTILITY LOCATE AN ABOVE GROUND OBSERVATIONS. THESE LOCATIONS SHOULD BE CONSIDERED APPROXIMATE AND INCOMPLETE.

LEGEND

AS	AUTO–SPRINKLER
BC	BRICK COLUMN
BM	BENCHMARK
BO	WATER BLOW OFF
CB	CATCH BASIN
CO	CLEANOUT
DCO	DRAINAGE CLEAN OUT
DS	DOWNSPOUT
EM	ELECTRIC METER
FH	FIRE HYDRANT
JM	JAPANESE MAPLE
LS	LANDSCAPING
SMH	SEWER MANHOLE
WM	WATER METER
WV	WATER VALVE
XFMR	PUD TRANSFORMER/CABINET
☼	AREA LIGHT
———	FACE OF BUILDING
——x——	CHAIN–LINK FENCE
————	EDGE OF PAVEMENT
————	STRIPING
⊕	PIN FLAG MARKED "HAND AUGER"
◑	UNDERGROUND 1.5–INCH METAL PIPE RISER



DETAIL

July 24, 2022 11:34:44 a.m.
Drawing: \\JLS04\PROJECTS\0330\19\2236 SEQ SCHOOL DIST\DELIVERABLES\2236_CAD.DWG

A SURVEY IN THE SE, NE, NE OF SECTION 19, TOWNSHIP 30 NORTH, RANGE 3 WEST, W.M.
CITY OF SEQUIM, CLALLAM COUNTY, WASHINGTON

DATE:	06/29/2022
SCALE:	1"=20'
DRAWN BY:	RHJ
PLAT CHECKED BY:	RHJ
SHEET	1 OF 1

Sequim High School School
July, 2022

ROB JOHNSTON STATE OF WASHINGTON 37531 REGISTERED PROFESSIONAL LAND SURVEYOR
07/24/2022

JOHNSTON Land Surveying
PO Box 158, Carlsborg, WA 98324
360.460.8539
www.johnstonlandsurveying.com

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR LICENSED TO PRACTICE IN THE STATE OF WASHINGTON AND DECLARE THAT THIS MAP CORRECTLY REPRESENTS A SURVEY PERFORMED UNDER MY SUPERVISION AT THE REQUEST OF THE SEQUIM SCHOOL DISTRICT IN JUNE, 2022.

ROB JOHNSTON PLS 37531

19(30–3)

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE 2023 WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION; WSDOT STANDARD PLANS, 2023 EDITION; AND CITY OF SEQUIM ENGINEERING STANDARDS. A COPY OF THESE DOCUMENTS SHALL BE ON SITE DURING CONSTRUCTION.
2. A COPY OF THE APPROVED PLANS MUST BE ON SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
3. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR WORK WITHIN THE PUBLIC RIGHT OF WAY.
4. PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SCHEDULE AND ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE DISTRICT REPRESENTATIVE. THE CONTRACTOR SHALL NOTIFY THE DISTRICT'S REPRESENTATIVE OF THE PRECONSTRUCTION MEETING TIME AND LOCATION.
5. PAVED SURFACES INCLUDING ROADWAYS, SIDEWALKS, AND CURBS THAT ARE DAMAGED BY CONSTRUCTION SHALL BE REPAIRED AS REQUIRED BY THE CITY OF SEQUIM.
6. DATUM: HORIZONTAL: WANZ NAD 83/91, VERTICAL: NAVD-88 AS ESTABLISHED BY THE SITE SURVEY.
7. THE CONTRACTOR SHALL NOTIFY THE FIRE DEPARTMENT DISPATCHER TWENTY-FOUR (24) HOURS IN ADVANCE OF ALL WATER SERVICE INTERRUPTIONS, HYDRANT SHUTOFFS, AND STREET CLOSURES OR OTHER ACCESS BLOCKAGE. THE CONTRACTOR SHALL ALSO NOTIFY THE DISPATCHER OF ALL NEW, RELOCATED, OR ELIMINATED HYDRANTS RESULTING FROM THIS WORK.
8. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.
9. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL CASTINGS AND UTILITIES DURING CONSTRUCTION AND SHALL CONTACT THE UNDERGROUND UTILITIES LOCATOR SERVICE (1-800-424-5555) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
10. THE CONTRACTOR SHALL ADJUST ALL EXISTING MANHOLE RIMS, DRAINAGE STRUCTURE LIDS, VALVE BOXES, AND UTILITY ACCESS STRUCTURES TO FINISH GRADE WITHIN AREAS AFFECTED BY THE PROPOSED IMPROVEMENTS.
11. THE CONTRACTOR SHALL PROVIDE FOR ALL COMPACTION TESTS REQUIRED BY THE INSPECTOR OR DISTRICT REPRESENTATIVE.
12. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE TRAFFIC CONTROL MANUAL. A TRAFFIC CONTROL PLAN WILL BE PREPARED AND IMPLEMENTED BY THE CONTRACTOR TO CONTROL VEHICULAR AND PEDESTRIAN ACCESS AND PROVIDE THE CONTRACTOR ACCESS TO THE AREA OF WORK. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SIGNS, FENCING, FLAGGERS AND ANY OTHER MEASURES NEEDED TO CONTROL TRAFFIC AND MAINTAIN SAFE ACCESS FOR THE PUBLIC AND ALLOW ACCESS FOR MATERIALS, EQUIPMENT AND LABORER TO COMPLETE THE WORK AS INDICATED.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SIGNAGE, FENCING BARRIER AND OTHER SAFETY MEASURES NEEDED TO SECURE ALL CONSTRUCTION AREAS AS NECESSARY TO PROTECT THE PUBLIC AND WORKERS IN THE VICINTY OF THE SITE AT ALL TIMES.

SURVEY NOTES

UNDERGROUND UTILITIES AND EXISTING IMPROVEMENTS SHOWN ARE BASED UPON A SURVEY PREPARED BY A SURVEY BY SEQUIM SD IN 2022 AND RECORD DRAWINGS. NO WARRANTY OR GUARANTEE OF ACCURACY OR COMPLETENESS IS EITHER IMPLIED OR EXPRESSED. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS HAVE BEEN SHOWN ON THIS DRAWING FOR THE PURPOSE OF ASSISTING THE CONTRACTOR IN LOCATING SAID UTILITIES AND IMPROVEMENTS IN THE FIELD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING WITH APPROPRIATE AGENCIES THAT MAY HAVE UNDERGROUND UTILITIES AND IMPROVEMENTS WITHIN THE PROJECT LIMITS AND FOR CHECKING LOCATIONS IN THE FIELD. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY AND ALL DAMAGE TO UNDERGROUND UTILITIES AND IMPROVEMENTS RESULTING FROM HIS OPERATION.

CONSTRUCTION SEDIMENT CONTROL (CSC) NOTES

1. CONSTRUCTION EROSION CONTROL MEASURES MUST BE IN PLACE AND APPROVED BY THE DISTRICT'S REPRESENTATIVE PRIOR TO ANY EARTH DISTURBANCE.
2. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY SEDIMENTATION COLLECTION FACILITIES TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE NATURAL OR PUBLIC DRAINAGE SYSTEM. AS CONSTRUCTION PROGRESSES AND UNEXPECTED (SEASONAL) CONDITIONS DICTATE, MORE SILTATION CONTROL FACILITIES MAY BE REQUIRED TO ENSURE COMPLETE SILTATION CONTROL OF THE PROJECT. THEREFORE, DURING THE COURSE OF CONSTRUCTION IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES THAT MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES.
3. THE IMPLEMENTATION OF THESE CSC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE CSC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
4. IF THE BOUNDARIES OF THE ENVIRONMENTALLY CRITICAL AREA LIMITS ARE SHOWN ON THE PLANS, THEY SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
5. THE CSC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS.
6. THE CSC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE CSC FACILITIES SHALL BE UPGRADED (E.G. ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS.
7. THE CSC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
8. ANY AREA STRIPPED OF VEGETATION, INCLUDING ROADWAY EMBANKMENTS, WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 15 DAYS, SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED CSC METHODS (E.G. SEEDING, MULCHING, NETTING, EROSION BLANKETS, ETC.).
9. ANY AREA NEEDING CSC MEASURE, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN FIFTEEN (15) DAYS.
10. THE CSC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A STORM EVENT.
11. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
12. STABILIZED CONSTRUCTION ENTRANCES AND WASH PADS SHALL BE INSTALLED BY THE CONTRACTOR AS REQUIRED TO PREVENT SOIL AND SEDIMENT FROM BEING TRACKED OR CARRIED OFF-SITE, AND SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
13. WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, STERILE FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE (E.G. ANNUAL OR PERENNIAL RYE APPLIED AT APPROXIMATELY 80 POUNDS PER ACRE).
14. WHERE MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, ARBORIST'S MULCH SHALL BE APPLIED AT A MINIMUM THICKNESS OF FOUR INCHES.
15. PROVIDE PERMANENT EROSION CONTROL SYSTEM. LANDSCAPE ALL EXPOSED EARTH SURFACES WITH SUITABLE VEGETATION TO PREVENT EROSION.

INFILTRATION BMP CONSTRUCTION NOTES:

1. MINIMIZE SITE DISTURBANCE AT THE LOCATION OF THE INFILTRATION BMPS AND IN UP-GRADIENT AREA.
2. DO NOT USE THE INFILTRATION BMPS AS SEDIMENT CONTROL FACILITIES.
3. FURNISH AND INSTALL TEMPORARY SURFACE STABILIZATION MEASURES SUCH AS PLYWOOD, STEEL PLATES, OR OTHER PADS TO DISTRIBUTE LOADS AND PREVENT DAMAGE TO THE CHAMBERS OR COMPACTION OF SOILS AT EXISTING INFILTRATION FACILITIES.
4. FOLLOWING COMPLETION OF THE WORK, REMOVE ALL TEMPORARY SURFACE STABILIZATION MEASURES PROTECTING THE INFILTRATION FACILITIES.

CALL 48 HOURS
BEFORE YOU DIG
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EROSION CONTROL/CONSTRUCTION SEQUENCE

1. ARRANGE AND ATTEND PRE-CONSTRUCTION MEETING WITH DISTRICT AND DISTRICT'S REP. AND CITY INSPECTOR AS REQUIRED BY THE PERMIT.
2. CONTRACTOR'S SURVEYOR TO ESTABLISH AND STAKE OUT CONTROL POINTS FOR WORK.
3. ERECT STRAW WATTLES, SILT FENCE, AND INLET PROTECTION.
4. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE, IF REQUIRED.
5. CLEAR AND GRUB AREA.
6. REMOVE EXISTING PAVEMENT, SURFACE FEATURES AND MISCELLANEOUS ITEMS AS NOTED.
7. COORDINATE REMOVAL AND CAPPING OF EXISTING UTILITY LINES WITH APPROPRIATE PURVEYOR.
8. GRADE SITE PER PLAN, IF REQUIRED.
9. STABILIZE GRADED AREAS WITH TEMPORARY EROSION CONTROL MEASURES AS REQUIRED.
10. CONSTRUCT PAVING IMPROVEMENTS.
11. MULCH REMAINING DISTURBED AREAS AND COORDINATE WITH FINAL RESTORATION AND PLANTING.
12. RETURN SILTATION CONTROL AREAS TO ORIGINAL GROUND CONDITIONS.
13. REMOVE REMAINING TEMPORARY EROSION/SEDIMENTATION CONTROL ONLY AFTER SITE HAS BEEN STABILIZED AND THE DISTRICT'S REPRESENTATIVE HAS APPROVED THE REMOVAL.

ABBREVIATIONS

AC – ASPHALT CONCRETE
AGGR. – AGGREGATE
B&B – BALLED AND BURLAPPED
BOE – BOTTOM OF EXCAVATION
BS – BOTTOM OF STAIR
BW – BOTTOM OF WALL
CB – CATCH BASIN
CEM. CONC. – CEMENT CONCRETE
CI – CAST IRON
CL B – CLASS B
C.O. – CLEAN OUT
COORD. – COORDINATE
CSTC– CRUSHED SURFACING TOP COURSE
DCVA – DOUBLE CHECK VALVE ASSEMBLY
DEM – DEMOLISH
DF – DRINKING FOUNTAIN
DI – DUCTILE IRON
DWY – DRIVEWAY
ESC – EROSION AND SEDIMENT CONTROL
EX – EXISTING
FF – FINISHED FLOOR
FG – FINISHED GRADE
FH – FIRE HYDRANT
FM – FORCE MAIN
FL – FLANGE
F.O.I.C. – FURNISHED BY OWNER INST. BY CONT.
GV – GATE VALVE
HDPE – HIGH DENSITY POLYETHYLENE
HMA – HOT MIX ASPHALT
I.E. – INVERT ELEVATION
IRR – IRRIGATION
LF – LINEAL FEET
MECH. – MECHANICAL
MH – MANHOLE
MIN. – MINIMUM
MINER. – MINERAL
N.I.C. – NOT IN CONTRACT
P.O.C. – POINT OF CONNECTION
PRV – PRESSURE RED. VALVE
PS – PUMPING STATION
PSD – PUBLIC STORM DRAIN
RED – REDUCER
SD – STORM DRAIN
SIM – SIMILAR
SL – SLEEVE
SS – SANITARY SEWER
TS – TOP OF STAIR
TW – TOP OF WALL
TYP– TYPICAL
UG – UNDERGROUND
W/ – WITH
W/O – WITHOUT

JOHN W. RUNDLE
STATE OF WASHINGTON
21551
REGISTERED
PROFESSIONAL ENGINEER
5/18/2023

WR Consulting, Inc.

SEQUIM SD #323
Office Board Room and 2nd Floor Office Remodel
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SHEET NAME
CIVIL GENERAL NOTES

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C-1.0

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LEGEND

- SILT/FILTER FENCE
- INLET PROTECTION
- COMPOST SOCK
- TEMPORARY CONSTRUCTION FENCING
- TREE PROTECTION FENCING

TREE PROTECTION AND DEMOLITION NOTES:

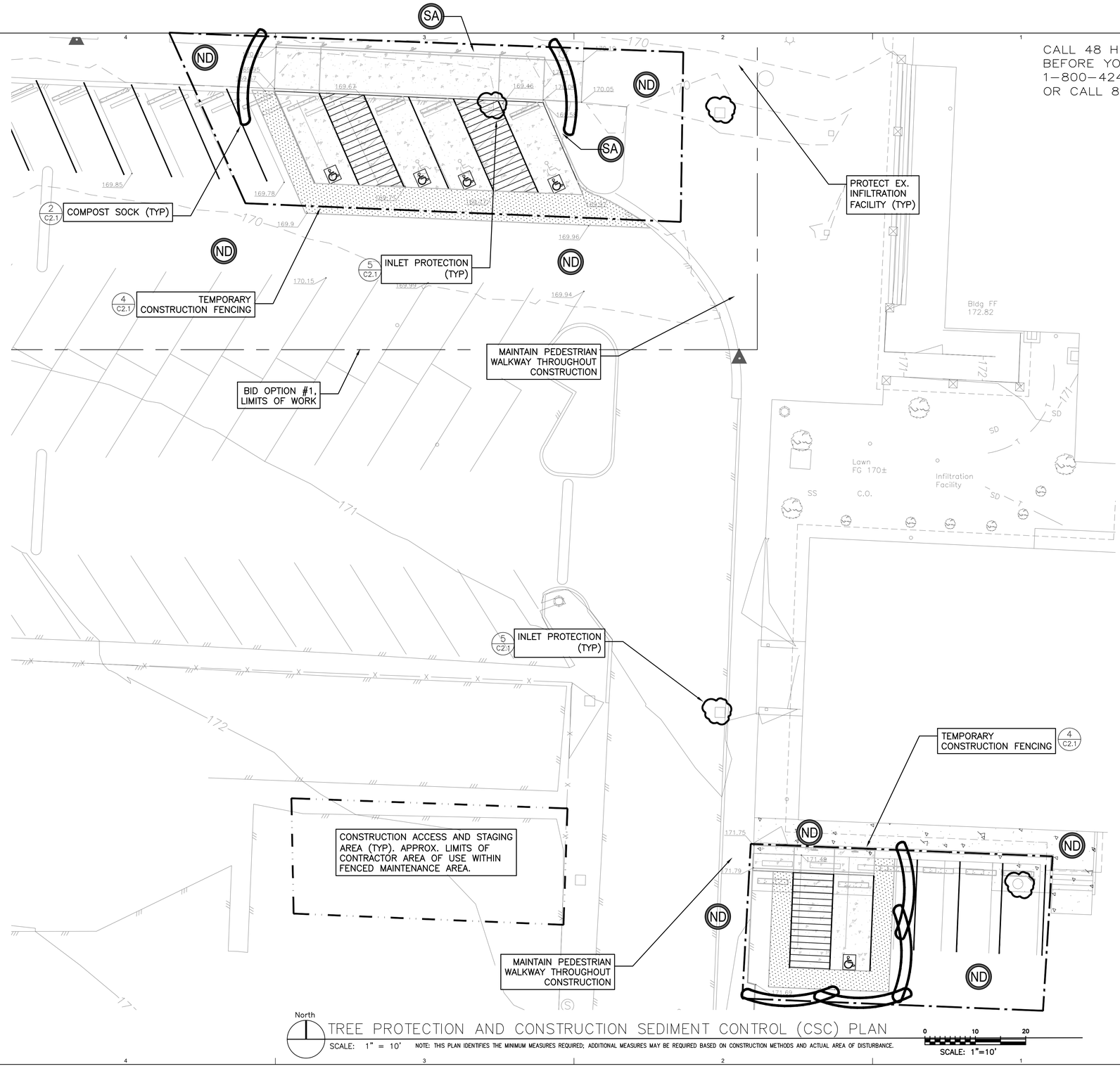
1. ALL PAVING, DRAINAGE AND OTHER SITE STRUCTURES AND FURNISHINGS SHALL BE REMOVED AND RELOCATED AS NEEDED TO CONSTRUCT THE IMPROVEMENTS AS INDICATED.
2. ADDITIONAL PLANT OR TREE REMOVAL OTHER THAN THE AREAS INDICATED SHALL NOT BE PERMITTED WITHOUT REVIEW AND APPROVAL BY THE DISTRICT STAFF PRIOR TO THEIR REMOVAL.

UTILITY PROTECTION NOTES:

1. ALL EXISTING UTILITIES INCLUDING UG POWER, MECHANICAL EQUIPMENT, SANITARY SEWERS, STORM DRAINS AND INFILTRATION FACILITIES SHALL BE PRESERVED AND PROTECTED FROM DAMAGE.
2. ADJUST GRADES OF EXISTING UTILITIES AS REQUIRED TO MATCH FINISHED GRADES (TYP).

LEGEND

- (SA) SOIL AMENDMENT
- (ND) NOT DISTURBED



North

TREE PROTECTION AND CONSTRUCTION SEDIMENT CONTROL (CSC) PLAN

SCALE: 1" = 10' NOTE: THIS PLAN IDENTIFIES THE MINIMUM MEASURES REQUIRED; ADDITIONAL MEASURES MAY BE REQUIRED BASED ON CONSTRUCTION METHODS AND ACTUAL AREA OF DISTURBANCE.

0 10 20
SCALE: 1"=10'

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SHEET NAME
TREE PROTECTION AND CSC PLAN

SHEET NO.
C-2.0

CONSTRUCTION STORMWATER CONTROL (CSC) GENERAL NOTES

1. THE APPLICANT SHALL DESIGNATE AN EROSION AND SEDIMENT CONTROL (ESC) SUPERVISOR WHO SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPS). FOR LARGE CONSTRUCTION PROJECTS, THE ESC SUPERVISOR SHOULD BE A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL). PROVIDE THE NAME AND PHONE NUMBER OF THE ESC SUPERVISOR TO THE SITE INSPECTOR AT THE FIRST GROUND DISTURBANCE INSPECTION.
2. BMPS SHALL BE INSTALLED PRIOR TO STARTING CONSTRUCTION TO ENSURE SEDIMENT-LADEN WATER DOES NOT LEAVE THE PROJECT SITE OR ENTER ROADSIDE DITCHES, STORM DRAINS, SURFACE WATERS, OR WETLANDS.
3. THE BMPS INCLUDED IN THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. THE APPLICANT IS RESPONSIBLE FOR ENSURING THAT BMPS ARE MODIFIED AS NEEDED FOR UNEXPECTED STORM EVENTS OR OTHER UNFORESEEN CIRCUMSTANCES, AND TO ACCOUNT FOR CHANGING SITE CONDITIONS.
4. ANY AREAS OF DISTURBED SOIL THAT WILL NOT BE WORKED FOR TWO CONSECUTIVE DAYS DURING THE WET SEASON (OCT 1 TO APRIL 30) OR SEVEN DAYS DURING THE DRY SEASON (MAY 1 TO SEPT 30) SHALL BE IMMEDIATELY STABILIZED WITH APPROVED BMPS METHODS (E.G. STRAW, MULCH, PLASTIC COVERING, COLD MIX, ETC.)
5. CITY STREETS AND SIDEWALKS SHALL BE KEPT CLEAN AT ALL TIMES. NO MATERIAL SHALL BE STORED ON CITY STREETS OR SIDEWALKS WITHOUT APPROVAL BY THE CITY OF SEQUIM.
6. POLLUTION CONTROL MEASURES SHALL BE FOLLOWED TO ENSURE THAT NO LIQUID PRODUCTS OR CONTAMINATED WATER ENTERS ANY STORM DRAINAGE FACILITIES OR OTHERWISE LEAVES THE PROJECT SITE. ANY HAZARDOUS MATERIALS OR LIQUID PRODUCTS THAT HAVE THE POTENTIAL TO POLLUTE RUNOFF SHALL BE STORED AND DISPOSED OF PROPERLY.
7. ENSURE THAT WASHOUT FROM CONCRETE TRUCKS IS PERFORMED OFF-SITE OR IN DESIGNATED CONCRETE WASHOUT AREAS ONLY. DO NOT WASH OUT CONCRETE TRUCKS ONTO THE GROUND, OR TO STORM DRAINS OR OPEN DITCHES. DO NOT DUMP EXCESS CONCRETE ONSITE, EXCEPT IN DESIGNATED CONCRETE WASHOUT AREAS.
8. ALL AREAS OF DISTURBED SOIL SHALL BE FULLY STABILIZED WITH THE APPROPRIATE SOIL AMENDMENT AND COVER MEASURES AT COMPLETION OF THE PROJECT. TYPICAL COVER MEASURES INCLUDE LANDSCAPING OR HYDROSEED WITH MULCH.

CONSTRUCTION STORMWATER CONTROL (CSC) PLAN REQUIREMENTS / NARRATIVE

SHOW TEMPORARY AND PERMANENT BEST MANAGEMENT PRACTICES (BMPS) IN THE PLAN VIEW OF THIS SHEET THAT WILL ACCOMPLISH THE MINIMUM REQUIREMENTS DESCRIBED IN THE NARRATIVE BELOW. THE BMPS SHOWN IN THE PLAN VIEW OF THIS PLAN ARE THE MINIMUM REQUIRED. ADDITIONAL BMPS ARE REQUIRED WHEN MINIMUM CONTROLS ARE NOT SUFFICIENT TO PREVENT EROSION OR TRANSPORT OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE.

- MARK CLEARING LIMITS
- RETAIN TOP LAYER AND NATIVE VEGETATION
- ESTABLISH CONSTRUCTION ACCESS
- PROTECT DOWNSTREAM PROPERTIES AND RECEIVING WATERS
- PREVENT EROSION AND SEDIMENT TRANSPORT FROM THE SITE
- STABILIZE SOILS
- PROTECT SLOPES
- PROTECT STORM DRAINS
- STABILIZE CHANNEL AND OUTLETS
- CONTROL POLLUTANTS
- CONTROL DEWATERING
- MAINTAIN AND INSPECT BMPs
- EXECUTE CONSTRUCTION STORMWATER CONTROL PLAN
- MINIMIZE OPEN TRENCHES
- PHASE THE PROJECT
- INSTALL PERMANENT FLOW CONTROL AND WATER QUALITY FACILITIES
- PROTECT STORMWATER BMPs PRIOR TO, DURING, AND AFTER CONSTRUCTION

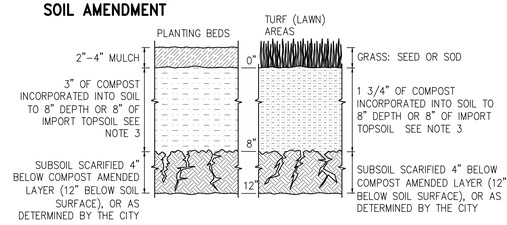
POST CONSTRUCTION SOIL MANAGEMENT PLAN

AT THE END OF PROJECT, ALL AREAS DISTURBED AND NOT COVERED WITH A HARD SURFACE MUST BE AMENDED PER THE SOIL AMENDMENT DETAIL BELOW AND PROBE TO 12-INCHES AT THE SITE FINAL INSPECTION.

LABEL ALL AREAS DISTURBED AND NOT COVERED WITH A HARD SURFACE AS ONE OF THE FOLLOWING: SA (SOIL AMENDMENT AREA) or ND (NON-DISTURBED AREA).

- NON-DISTURBED AREA (ND): VEGETATED AREAS THAT WILL NOT BE SUBJECT TO LAND DISTURBING ACTIVITY DO NOT REQUIRE SOIL AMENDMENT IF THEY ARE FENCED AND CONTINUOUSLY PROTECTED THROUGHOUT CONSTRUCTION. THE FENCING MUST BE IN PLACE AT THE FIRST GROUND DISTURBANCE INSPECTION. NO DISTURBANCE, INCLUDING VEHICLE TRAFFIC OR MATERIAL STORAGE, IS ALLOWED IN THESE AREAS UNTIL FINAL INSPECTION.
- SOIL AMENDMENT AREA (SA): VEGETATED OR COMPOST AREAS (TURF AND LANDSCAPE) MUST BE AMENDED PER THE SOIL AMENDMENT DETAIL. THIS INCLUDES AREAS IMPACTED BY CLEARING AND GRADING, STOCKPILING, SITE ACCESS, PATHWAYS AND MATERIALS OR EQUIPMENT STORAGE.

SOIL AMENDMENT

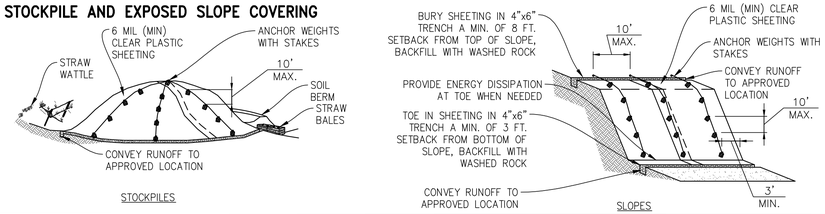


NOTES:

1. POST CONSTRUCTION SOIL AMENDMENT IS REQUIRED ON ALL AREAS NOT COVERED BY HARD SURFACE WHERE SOIL IS DISTURBED DURING CONSTRUCTION.
2. SOIL AMENDMENT MUST PASS A 12 INCH MINIMUM PROBE TEST.
3. IMPORT TOPSOIL, IF REQUIRED FOR RESTORATION OF ALL DISTURBED AREAS

SYMBOL: (SA) AREA REQUIRING SOIL AMENDMENT (ND) NON-DISTURBED AREA (SOIL AMENDMENT NOT REQUIRED)

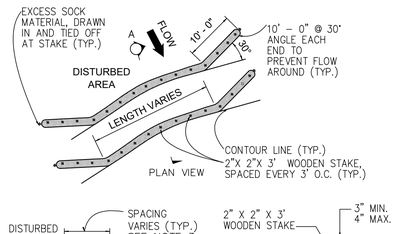
STOCKPILE AND EXPOSED SLOPE COVERING



SYMBOL: (SP)

1 / C2.1 PLASTIC COVERING DETAIL
SCALE: N.T.S.

COMPOST SOCK



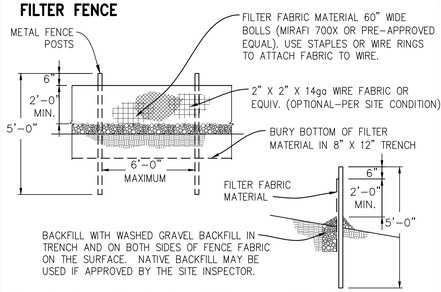
(SHOWN AS SLOPE PROTECTION)

1. COMPOST SOCK SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION 9.14.4(9). COMPOST SOCK SHALL BE A MINIMUM OF 10" IN DIAMETER OR SIZED TO SUIT CONDITIONS AS SPECIFIED BY THE ENGINEER.
2. ALWAYS INSTALL COMPOST SOCK PERPENDICULAR TO SLOPE AND ALONG CONTOUR LINES.
3. REMOVE SEDIMENT FROM THE UP SLOPE SIDE OF THE COMPOST SOCK WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE COMPOST SOCK.
4. MAY BE USED IN PLACE OF FILTER FENCE FOR PREMIER CONTROL.

SYMBOL: (CS)

2 / C2.1 COMPOST SOCK DETAIL
SCALE: N.T.S.

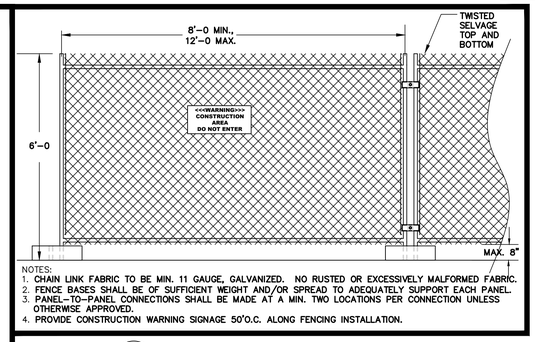
FILTER FENCE



NOTE: ANGLE SILT FENCE BACK UP THE SLOPE AT THE END OF RUN.

SYMBOL: (FF)

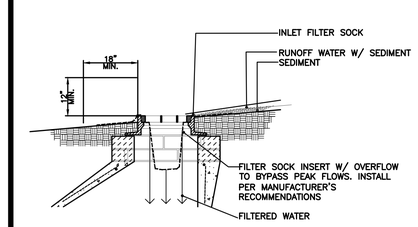
3 / C2.1 FILTER FENCE DETAIL
SCALE: N.T.S.



NOTES:

1. CHAIN LINK FABRIC TO BE MIN. 11 GAUGE, GALVANIZED. NO RUSTED OR EXCESSIVELY MALFORMED FABRIC.
2. FENCE BASES SHALL BE OF SUFFICIENT WEIGHT AND/OR SPREAD TO ADEQUATELY SUPPORT EACH PANEL.
3. PANEL-TO-PANEL CONNECTIONS SHALL BE MADE AT A MIN. TWO LOCATIONS PER CONNECTION UNLESS OTHERWISE APPROVED.
4. PROVIDE CONSTRUCTION WARNING SIGNAGE 50'O.C. ALONG FENCING INSTALLATION.

4 / C2.1 CONSTRUCTION FENCING DETAIL
SCALE: N.T.S.



SYMBOL:

5 / C2.1 INLET FILTER PROTECTION DETAIL
SCALE: N.T.S.

TRENCHING/EXCAVATION

ZONE A (CRITICAL ROOT ZONE)

NO DISTURBANCE ALLOWED WITHOUT SITE SPECIFIC INSPECTION AND APPROVAL OF METHODS TO MINIMIZE ROOT DAMAGE.

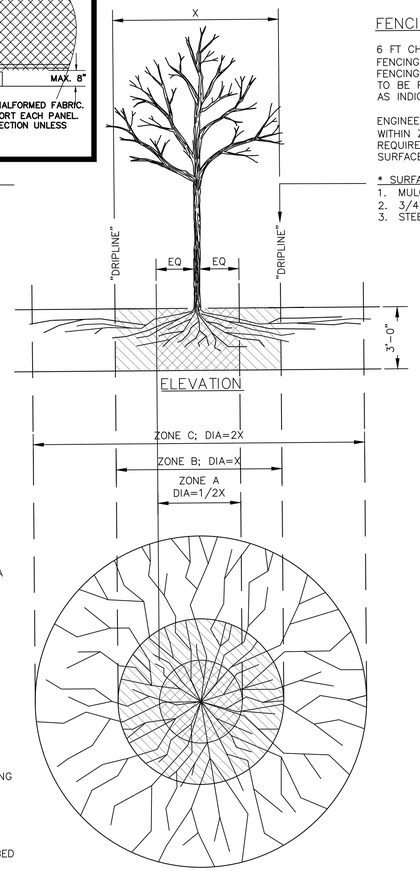
1. DISTRICT REPRESENTATIVE (DR) MUST BE ON-SITE TO OBSERVE THE EXCAVATION.
2. SEVERANCE OF ROOTS LARGER THAN 2" IN DIAMETER REQUIRES DR'S APPROVAL.
3. TUNNELING OR HYDRO-EXCAVATING IN ACCORDANCE WITH THE DETAILS IS REQUIRED TO INSTALL LINES BELOW ROOTS THAT ARE NOT APPROVED FOR CUTTING OR REMOVAL.

ZONE B (DRIPLINE)

1. NOTIFY DR 48 HOURS IN ADVANCE OF ANY WORK WITHIN THE DRIPLINE.
2. OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO DRS APPROVAL; SURFACE PROTECTION MEASURES* REQUIRED.
3. TRENCHING ALLOWED AS FOLLOWS:
   - SEVERANCE OF ROOTS LARGER THAN 2"DIA REQUIRES DR'S APPROVAL.
   - EXCAVATION BY HAND, AIR-SPADE OR HYDRAULIC METHODS MAY BE REQUIRED.
   - LIMIT TRENCH WIDTH. DO NOT DISTURB ZONE A.
   - MAINTAIN 2/3 OR MORE OF ZONE B IN UNDISTURBED CONDITION.
4. TUNNELING MAY BE REQUIRED FOR TRENCHES DEEPER THAN 3'-0".

ZONE C (FEEDER ROOT ZONE)

1. OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO DR'S APPROVAL. SURFACE PROTECTION MEASURES MAY BE REQUIRED
2. TRENCHING WITH HEAVY EQUIPMENT ALLOWED AS FOLLOWS, UNLESS NOTED OTHERWISE:
   - MINIMIZE TRENCH WIDTH
   - MAINTAIN 2/3 OR MORE OF ZONE C IN UNDISTURBED CONDITION



FENCING/ROOT PROTECTION

6 FT CHAIN LINK TEMPORARY CONSTRUCTION FENCING OR ALTERNATIVE 48" ORANGE PLASTIC FENCING WITH T-POSTS AS APPROVED BY ENGINEER TO BE PROVIDED AND MAINTAINED AT DRIPLINE OR AS INDICATED ON SHEET C2.0.

ENGINEER'S APPROVAL REQUIRED FOR USE/ACCESS WITHIN ZONE B. PERMISSION FOR USE/ACCESS REQUIRES SURFACE PROTECTION* FOR ALL UNPAVED SURFACES WITHIN ZONE B

* SURFACE PROTECTION MEASURES
1. MULCH LAYER, 6" DEPTH
2. 3/4" PLYWOOD
3. STEEL PLATES

6 / C2.1 TREE PROTECTION DETAIL
SCALE: N.T.S.

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JOHN W. RUNDLE — STATE OF WASHINGTON — 21551 — REGISTERED PROFESSIONAL ENGINEER
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TREE PROTECTION AND CSC DETAILS

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C-2.1

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STATE OF WASHINGTON
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PAVING PLAN

SHEET NO.
C-3.0

VAN ACCESSIBLE PARKING SIGN AT STALL, NO PARKING SIGN AT AISLE (TYP)

RESTRIPE STALLS

NORTH ACCESSIBLE STALLS (TOTAL OF 4) SEE SHEET C3.1

BID OPTION #1, LIMITS OF WORK

SOUTH ACCESSIBLE STALL (TOTAL OF 1) SEE SHEET C3.1

VAN ACCESSIBLE PARKING SIGN AT STALL, NO PARKING SIGN AT AISLE (TYP)

RESTRIPE STALLS

Bldg FF 172.82

Lawn FG 170±

Infiltration Facility

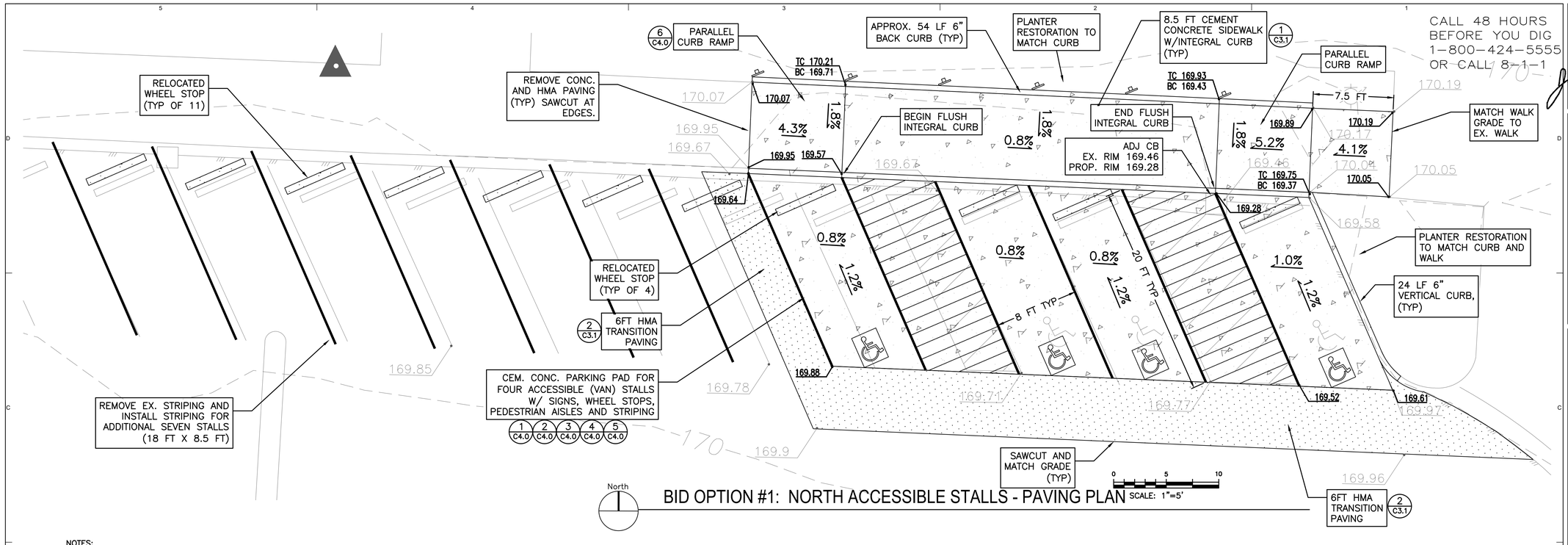
SS C.O.

SD

North

PAVING SITE PLAN

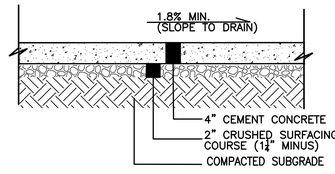
0 10 20
SCALE: 1"=10'



BID OPTION #1: NORTH ACCESSIBLE STALLS - PAVING PLAN

NOTES:

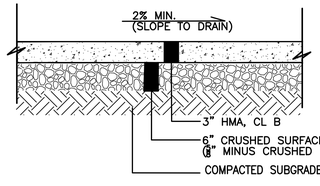
1. EXPANSION JOINTS AT MAX. 10 FT INTERVALS; MATCH EXISTING.
2. LIGHT BROOM FINISH OR EXPOSED AGGREGATE TO MATCH EXISTING WEATHERED SURFACE.



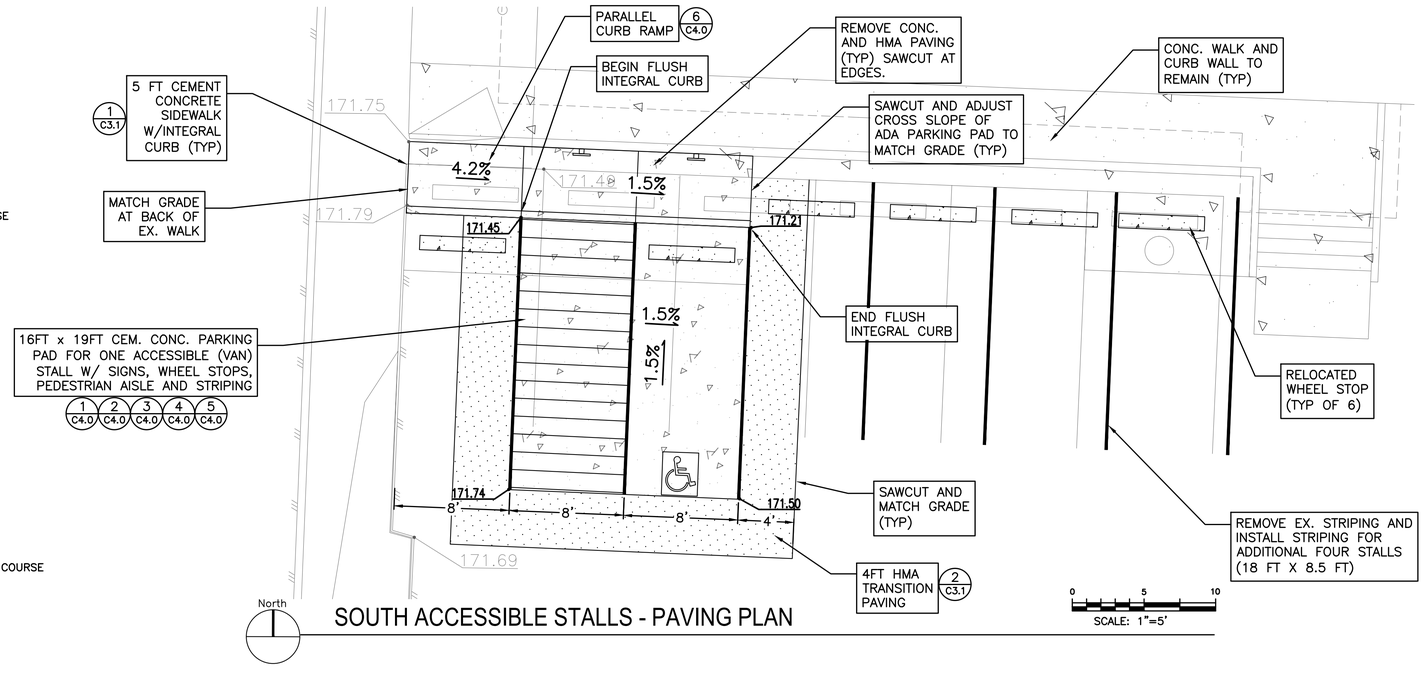
1 C3.1 CEMENT CONCRETE WALK DETAIL
NTS

NOTES:

1. TACK COAT AT ALL JOINTS (TYP).



2 C3.1 HMA (HOT-MIXED ASPHALT PAVING DETAIL
NTS



SOUTH ACCESSIBLE STALLS - PAVING PLAN

JOHN W. RUNDELL — STATE OF WASHINGTON — 21551 — REGISTERED PROFESSIONAL ENGINEER
5/18/2023

WR Consulting, Inc.

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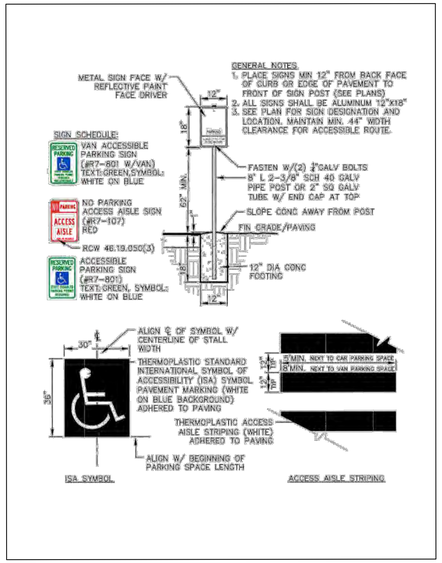
REVISION SCHEDULE		
#	DESCRIPTION	DATE
	ISSUED FOR CONSTRUCTION	

JOB NO.	2023-323
DATE	5-22-2023
DRAWN	JWR
REVIEWED	WR Consulting, Inc.

SHEET NAME
DETAIL PAVING PLANS

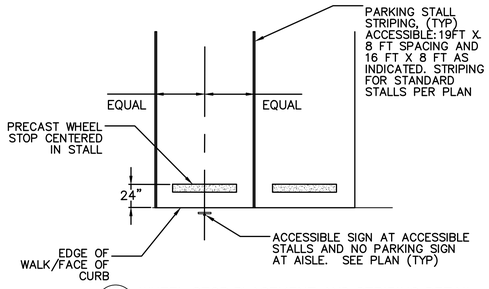
SHEET NO.
C-3.1



1 C4.0 SIGNS AND STRIPING AT ACCESSIBLE STALLS
NTS

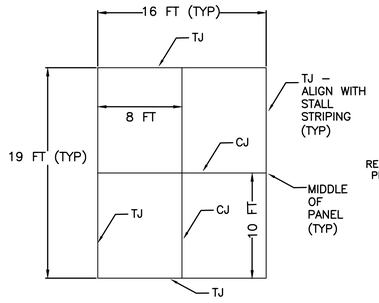
PAVEMENT STRIPING NOTES:

1. PAVEMENT STRIPING SHALL BE THERMOPLASTIC MATERIAL ACCORDANCE WITH SECTION 9-29 OF THE COS STANDARD SPECIFICATIONS.
2. PAVEMENT STRIPING SHALL BE APPLIED IN ACCORDANCE WITH SECTION 8-22 OF THE COS STANDARD SPECIFICATIONS.



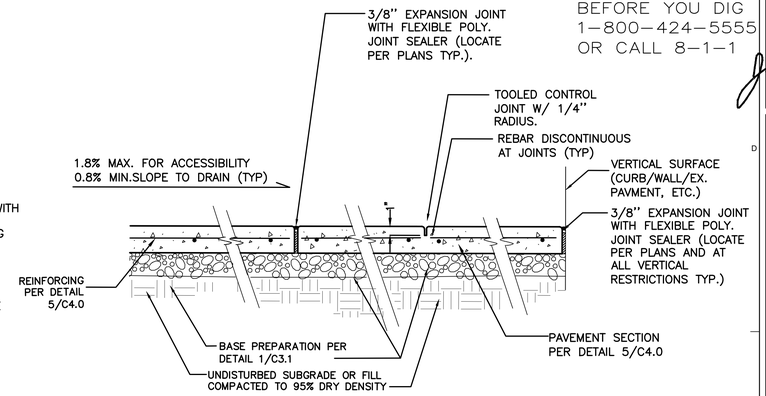
2 C4.0 WHEEL STOP PLACEMENT AND STRIPING DETAIL
NTS

NOTE: ADJUST CJ AND TJ SPACING TO ALIGN WITH ACCESSIBLE STALL STRIPING



TYP ACCESSIBLE STALL JOINT LAYOUT

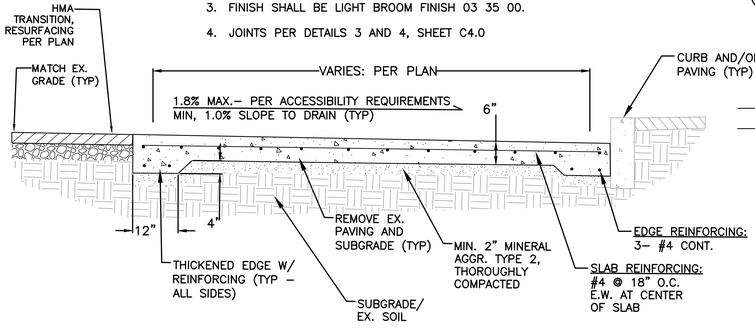
3 C4.0 CEM. CONC. PARKING JOINT DETAIL
NTS



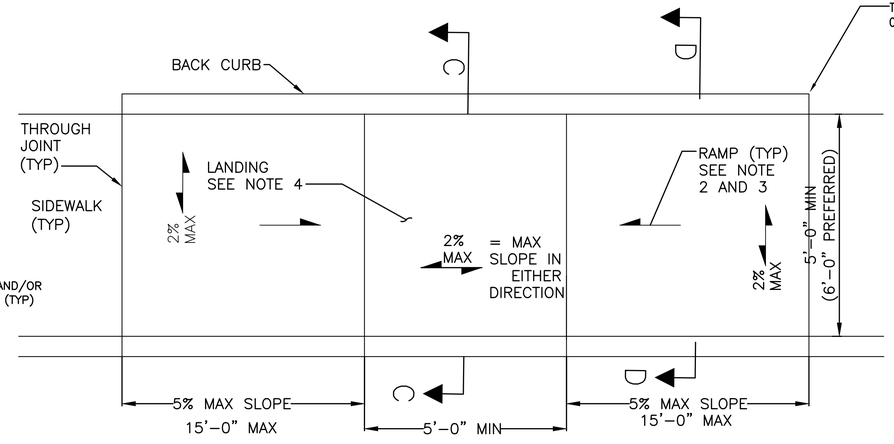
4 C4.0 CEM. CONC. PAVING JOINT DETAIL
NTS

CONCRETE PAVING NOTES:

1. FOR ACCESSIBLE SURFACES, MAXIMUM SLOPE IN ANY DIRECTION SHALL BE 1.8% AND 1.0% MIN. FOR DRAINAGE.
2. 28 DAY CONCRETE STRENGTH: Fc=4,000 PSI
3. FINISH SHALL BE LIGHT BROOM FINISH 03 35 00.
4. JOINTS PER DETAILS 3 AND 4, SHEET C4.0

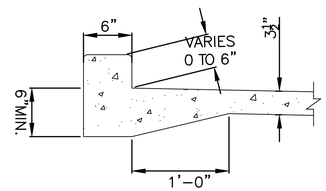


5 C4.0 PARKING - CEMENT CONC. PAVING DETAIL
NTS

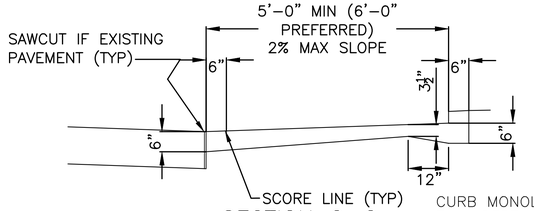


NOTES:

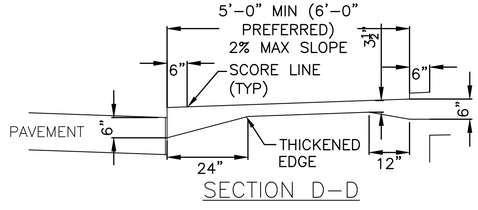
1. DETECTABLE WARNING TRUNCATED DOME SURFACES AS INDICATED ON PLAN. (TYP)
2. MINIMUM RAMP AND LANDING DIMENSIONS INDICATED ON PLANS.
3. RAMP CENTERLINE(S) SHALL BE PARALLEL TO THE ALIGNMENT OF THE FACE OF CURB. THE WIDTH OF THE RAMP SHALL BE 5'–0".
4. SHARED LOWER CURB RAMP LANDING SHALL HAVE A MINIMUM WIDTH OF 5'–0". SLOPE OF THE LANDING SHALL BE BETWEEN 0.5% AND 2% IN ANY DIRECTION.
5. RAMP SURFACE SHALL HAVE A HEAVY BROOM BRUSHED SURFACE RADIAL/PERPENDICULAR TO THE CURB.



BACK CURB DETAIL



SECTION C–C



SECTION D–D

CURB MONOLITHIC WITH RAMP. NEW PAVEMENT BLOCKED OUT FULL DEPTH. EXISTING PAVEMENT REMOVED AT FACE OF CURB

6 C4.0 PARALLEL CURB RAMP DETAIL
NTS

CALL 48 HOURS BEFORE YOU DIG
1–800–424–5555
OR CALL 8–1–1

JOHN W. RUNDELL — STATE OF WASHINGTON — 21551 — REGISTERED PROFESSIONAL ENGINEER
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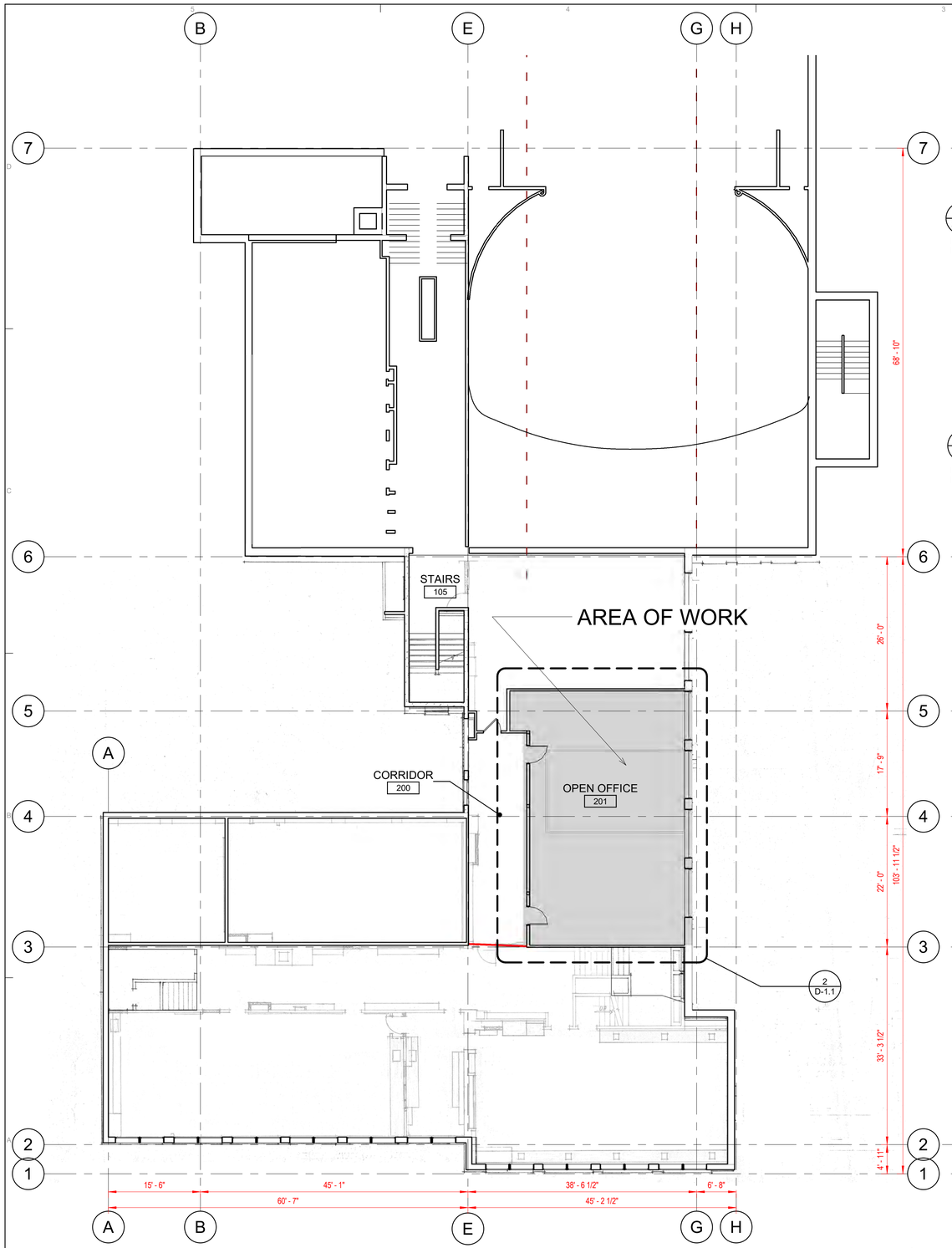
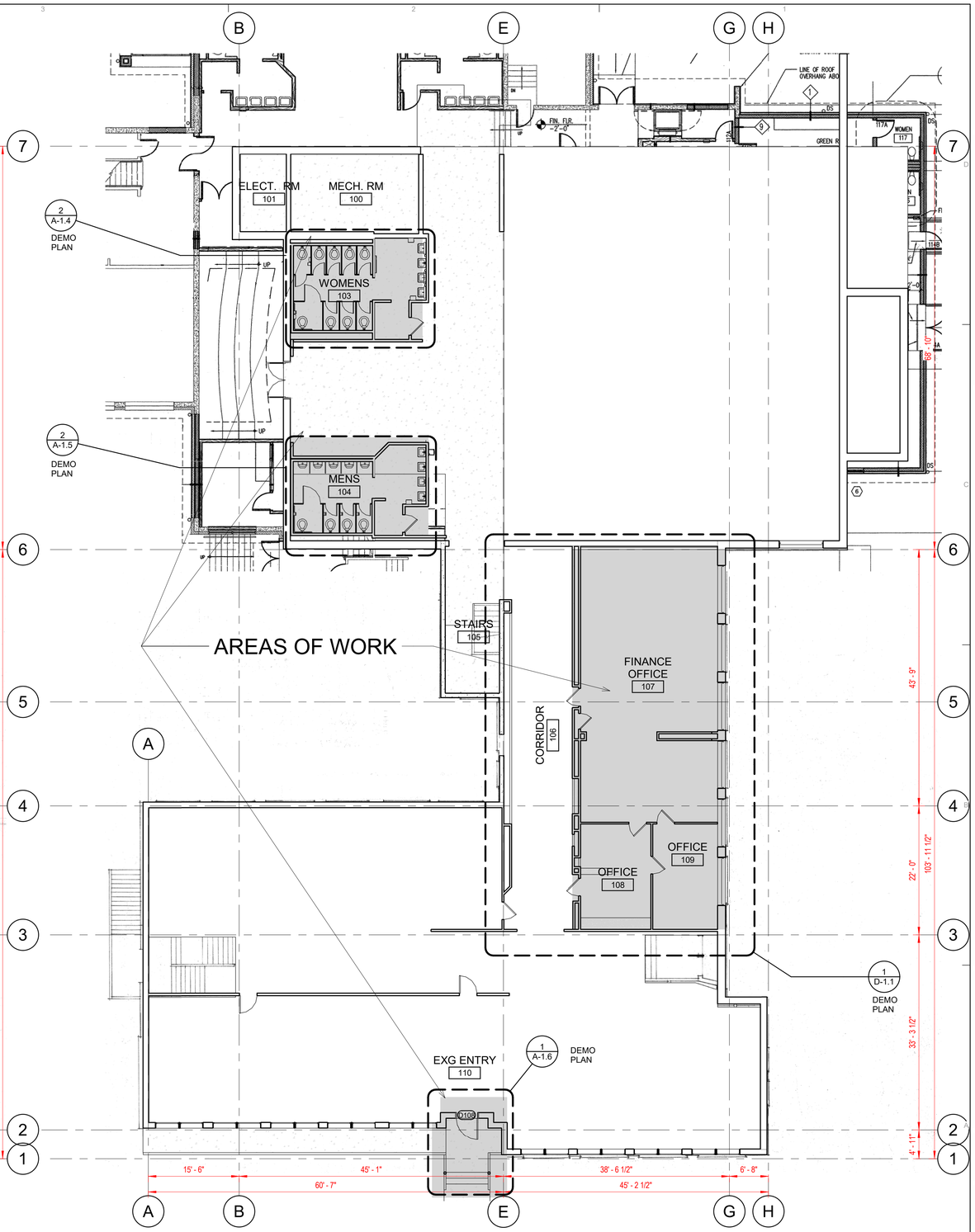
SHEET NAME
CIVIL DETAILS

SHEET NO.
C-4.0



2 OVERALL 2ND FLOOR PLAN - EXISTING

SCALE: 3/32" = 1'-0"



1 OVERALL 1ST FLOOR PLAN - EXISTING

SCALE: 3/32" = 1'-0"

10241 REGISTERED ARCHITECT
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STATE OF WASHINGTON
LAURI STRAUSS, AIA, LEED AP BD&C

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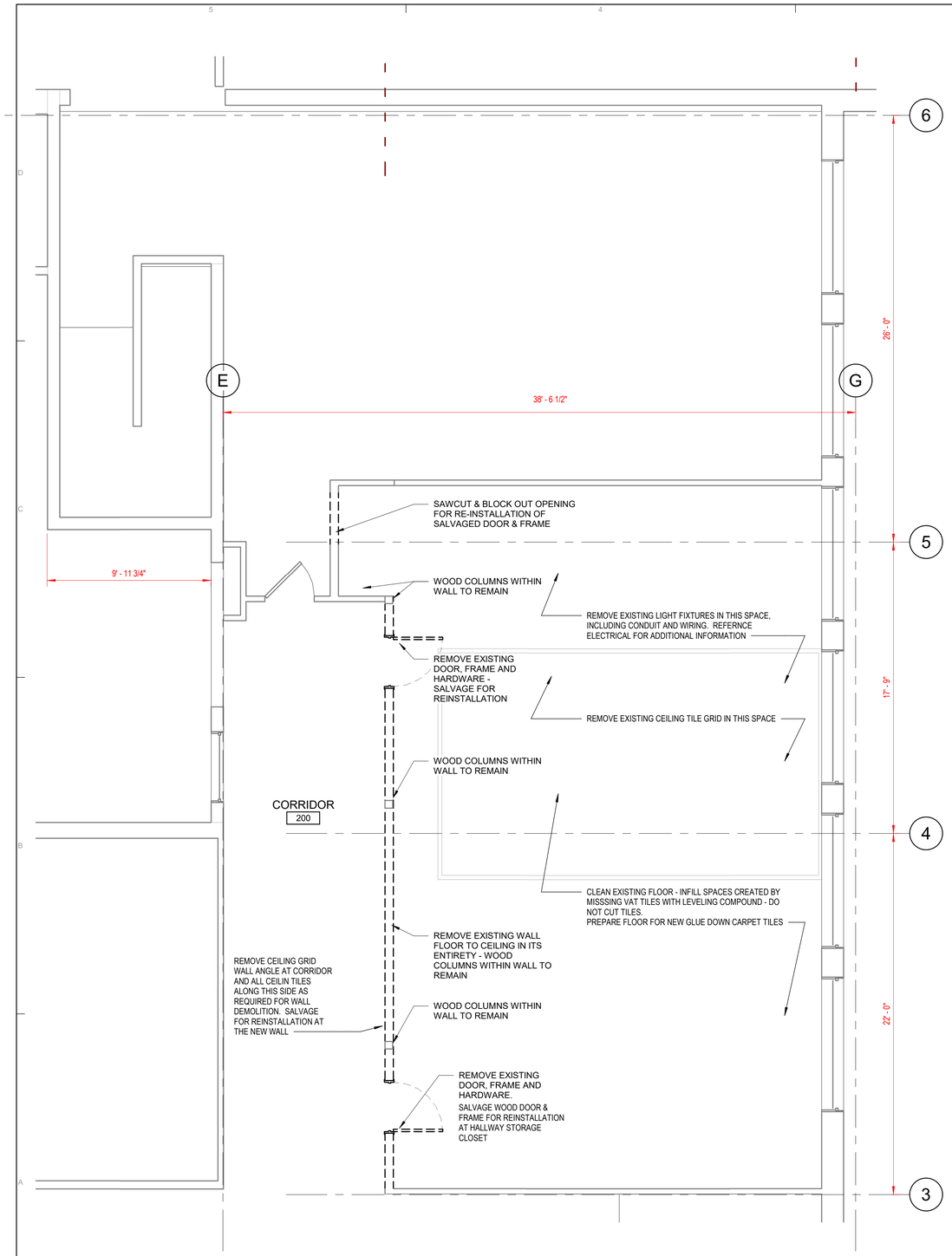
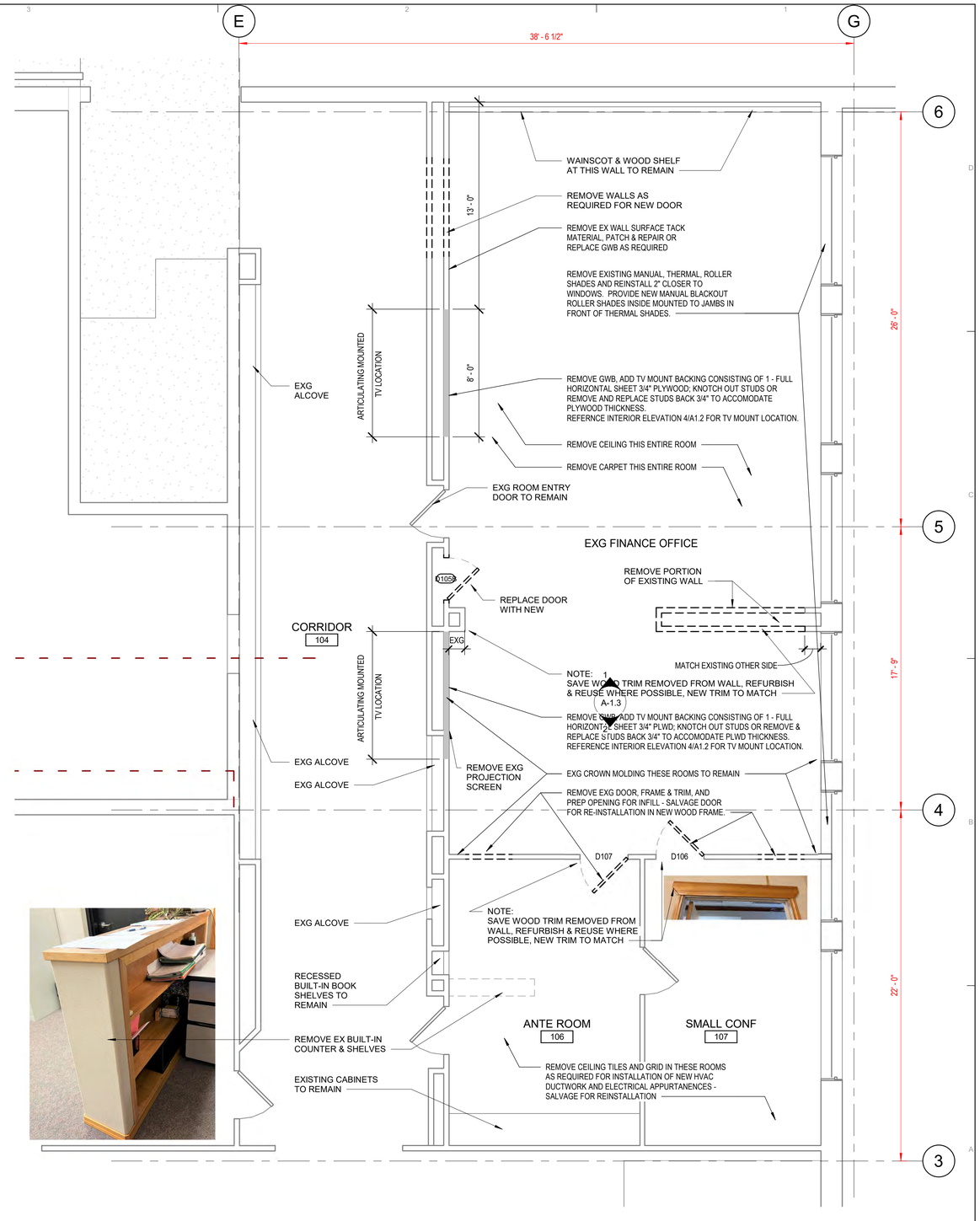
DATE	06-21-2023
DRAWN	ghm
REVIEWED	lms

SHEET NAME
OVERALL FLOOR PLANS - EXISTING

SHEET NO.
D-1.0



2 2ND FLOOR OFFICE DEMO PLAN
SCALE: 1/4" = 1'-0"



1 1ST FLOOR BOARD ROOM DEMO PLAN
SCALE: 1/4" = 1'-0"

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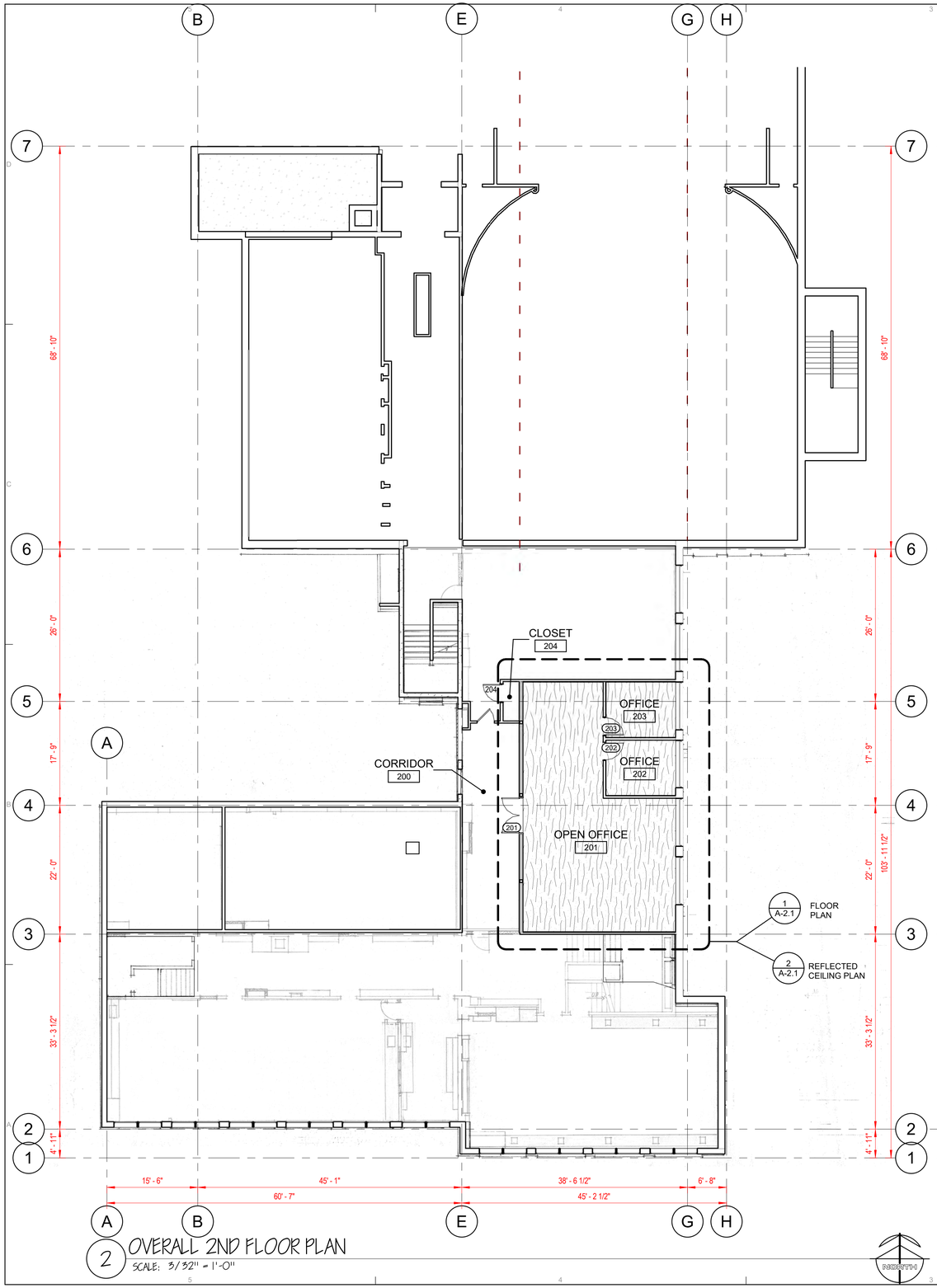
JOB NO.	2023-323
DATE	06-21-2023
DRAWN	ghm
REVIEWED	lms

SHEET NAME
1ST & 2ND FLOOR DEMOLITION PLANS

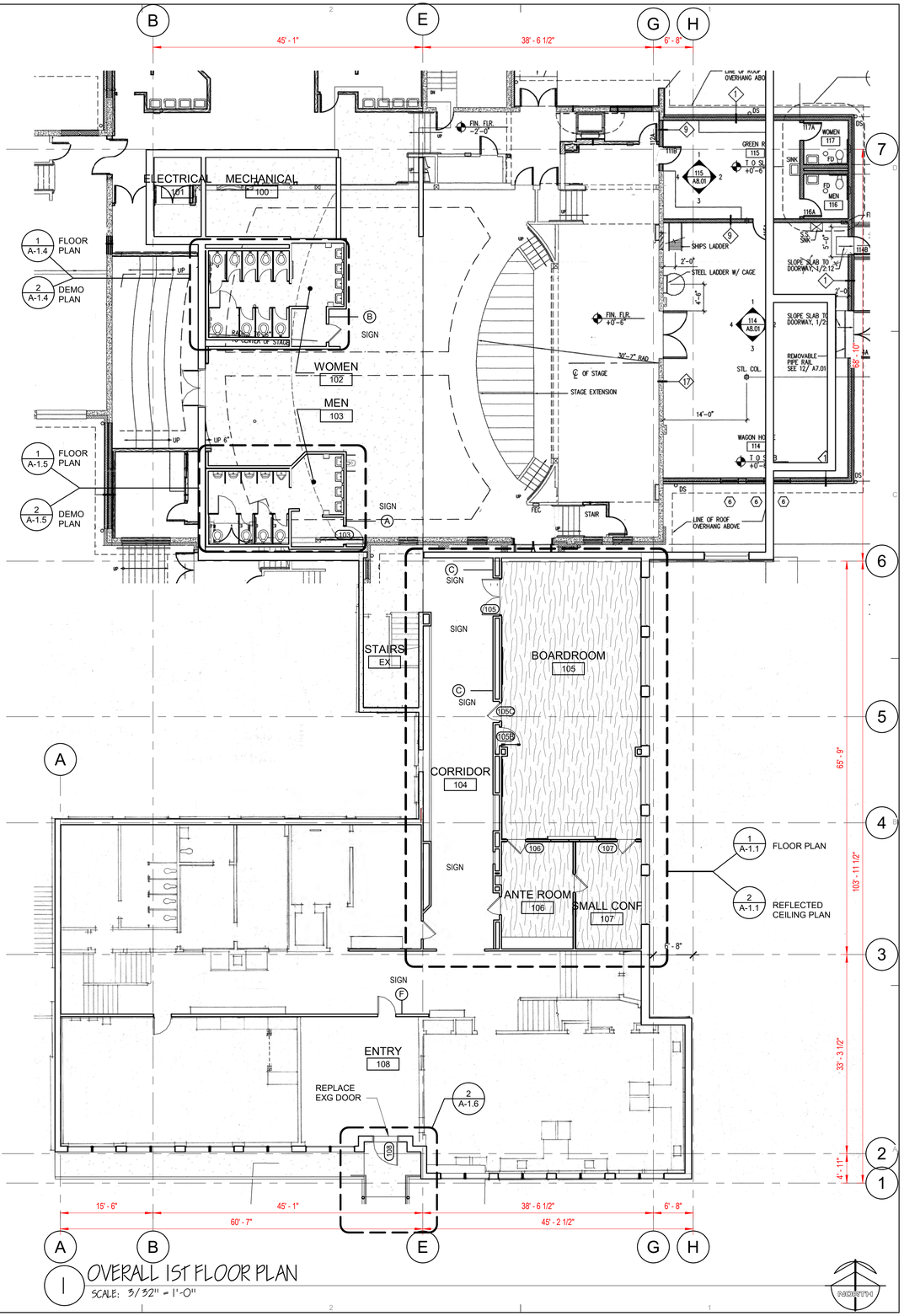
SHEET NO.
D-1.1



2 OVERALL 2ND FLOOR PLAN

SCALE: 3/32" = 1'-0"

NORTH



1 OVERALL 1ST FLOOR PLAN

SCALE: 3/32" = 1'-0"

NORTH

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DATE	06-21-2023
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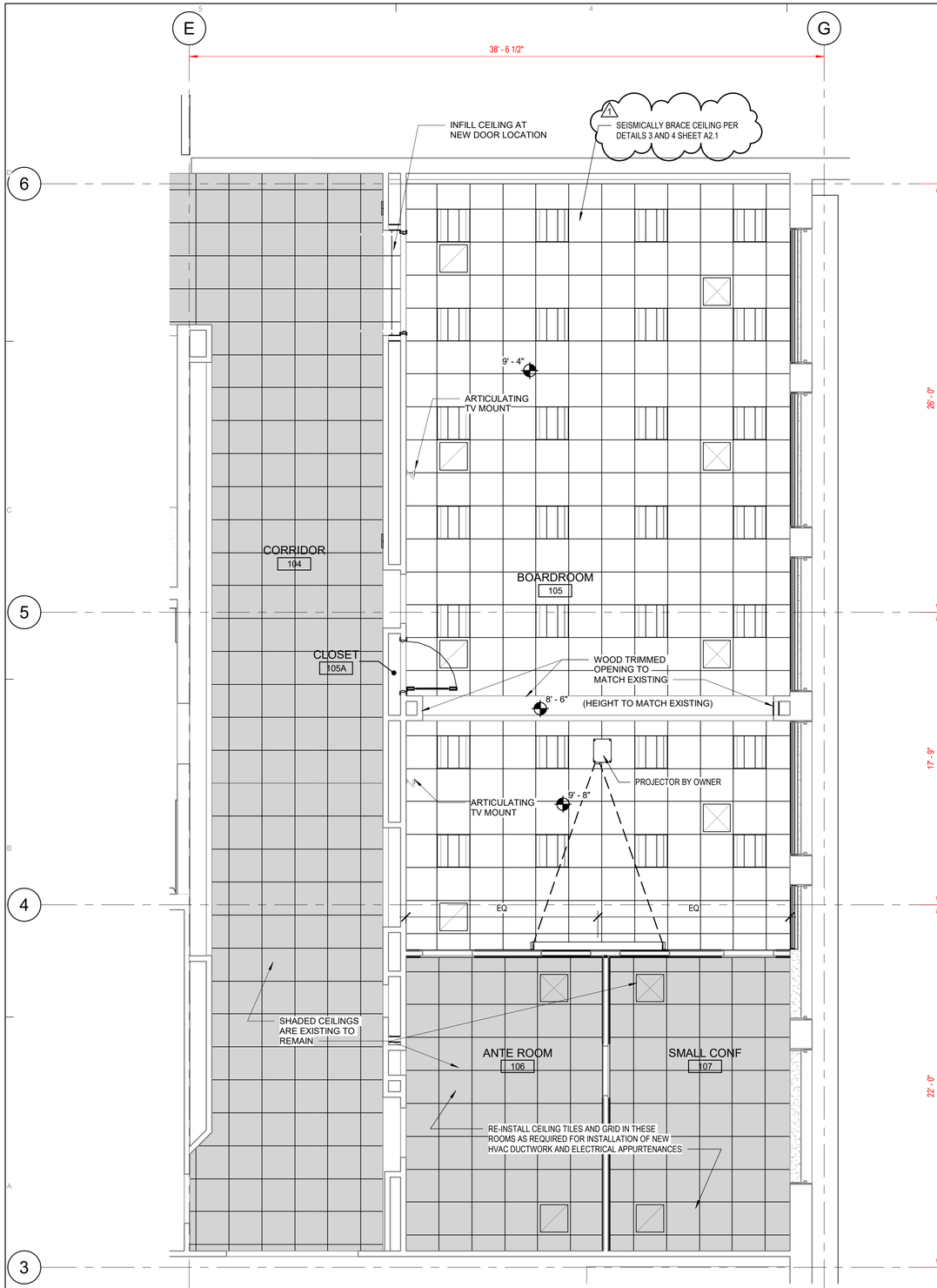
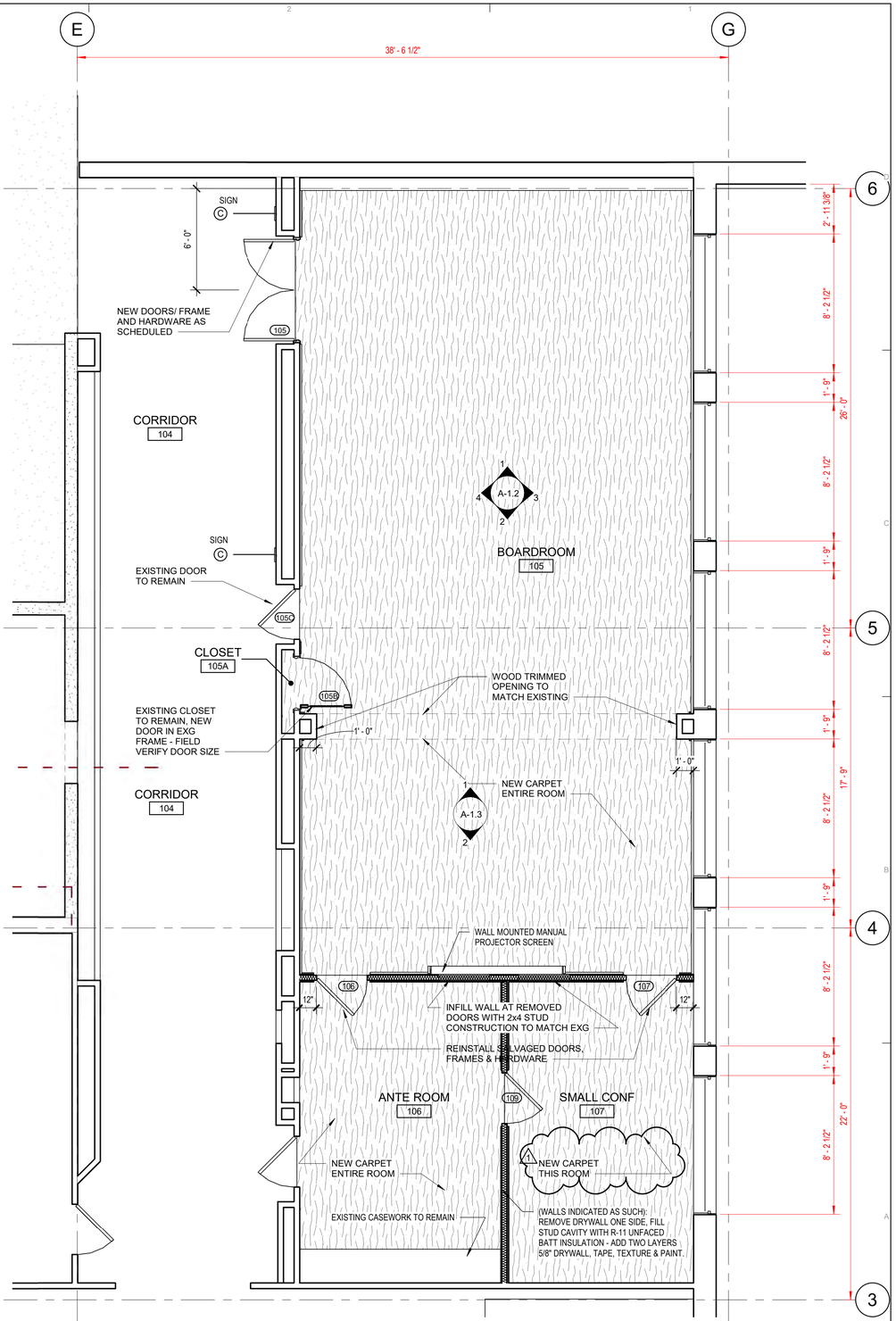
SHEET NAME
OVERALL FLOOR PLANS

SHEET NO.
A-1.0



2 1ST FLOOR BOARD ROOM CEILING PLAN

SCALE: 1/4" = 1'-0"



1 1ST FLOOR BOARD ROOM PLAN

SCALE: 1/4" = 1'-0"

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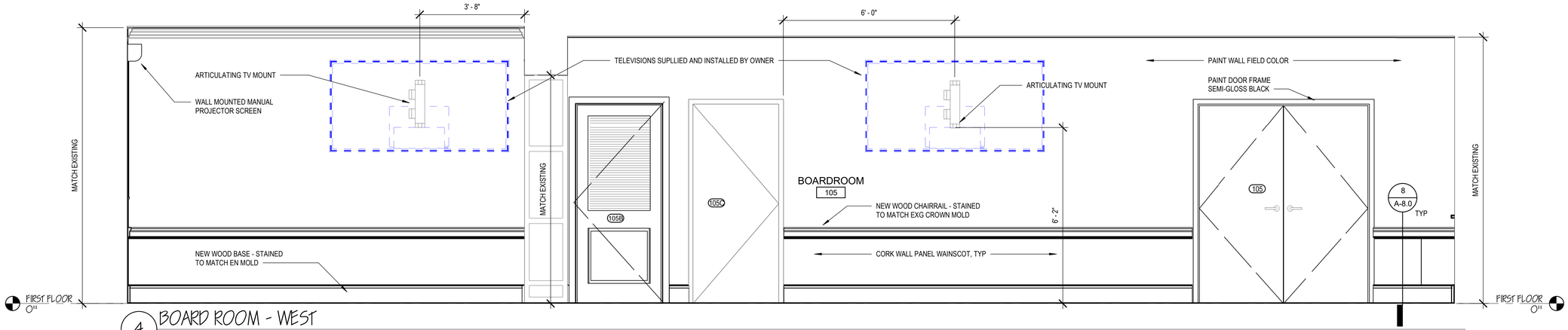
#	DESCRIPTION	DATE
1	ASDDENDUM #1	8-22-2023

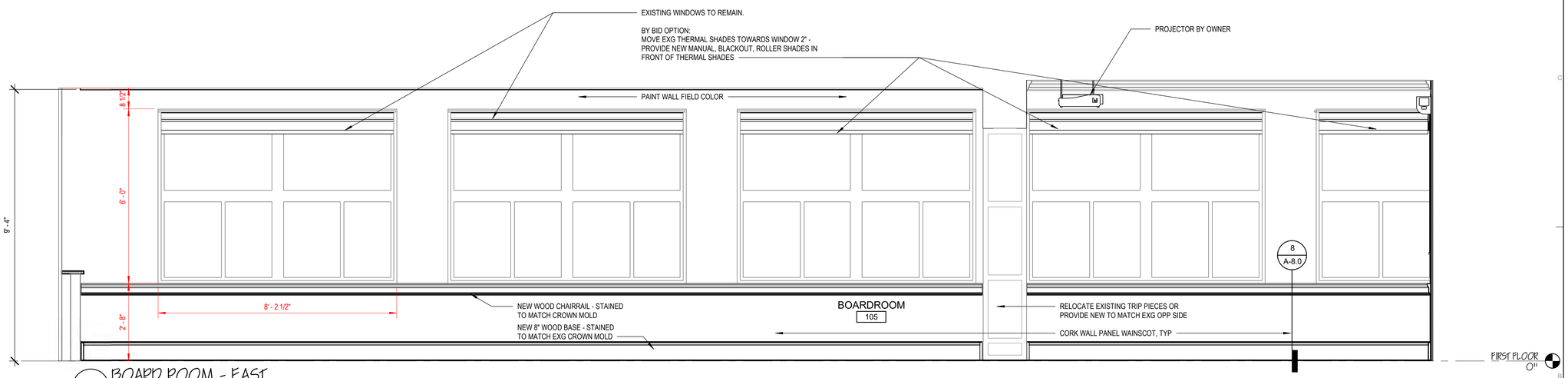
JOB NO.	2023-323
DATE	06-21-2023
DRAWN	ghm
REVIEWED	lms

SHEET NAME
1ST FLOOR BOARD ROOM PLAN & RCP

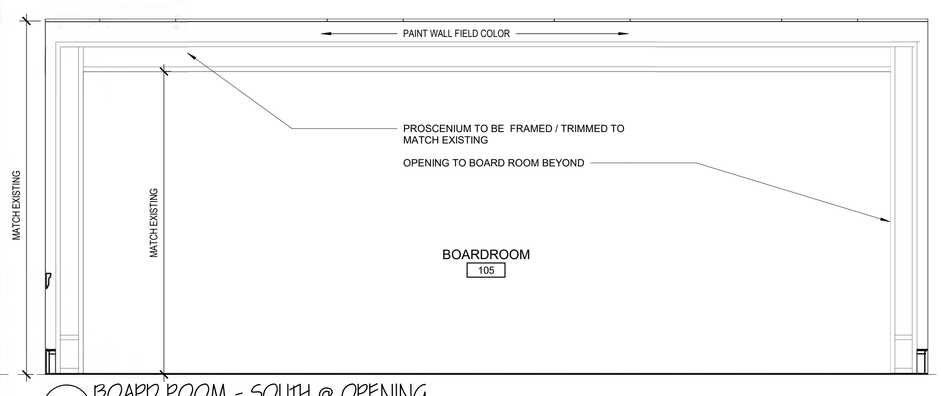
SHEET NO.
A-1.1



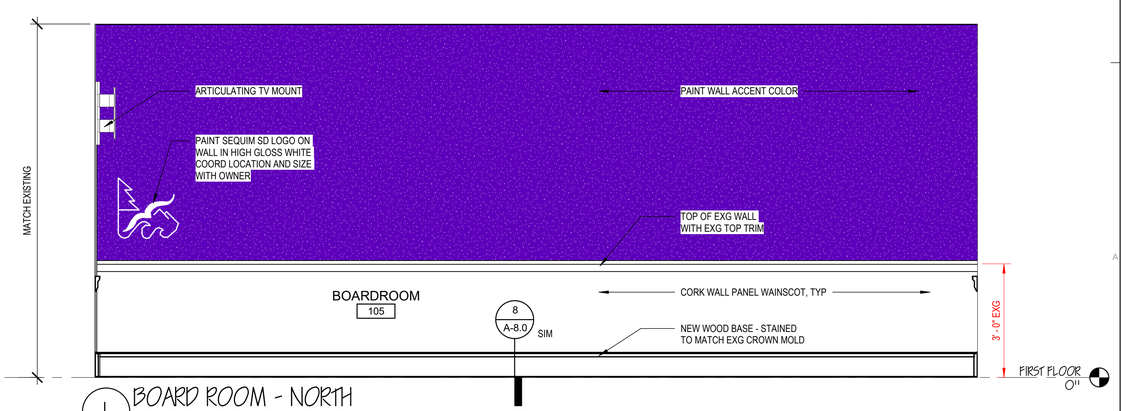
4 BOARD ROOM - WEST
SCALE: 1/2" = 1'-0"



3 BOARD ROOM - EAST
SCALE: 1/2" = 1'-0"



2 BOARD ROOM - SOUTH @ OPENING
SCALE: 1/2" = 1'-0"



1 BOARD ROOM - NORTH
SCALE: 1/2" = 1'-0"

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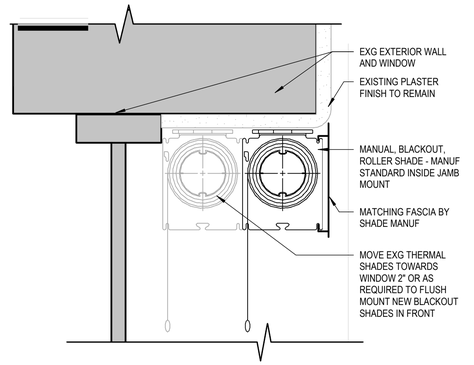
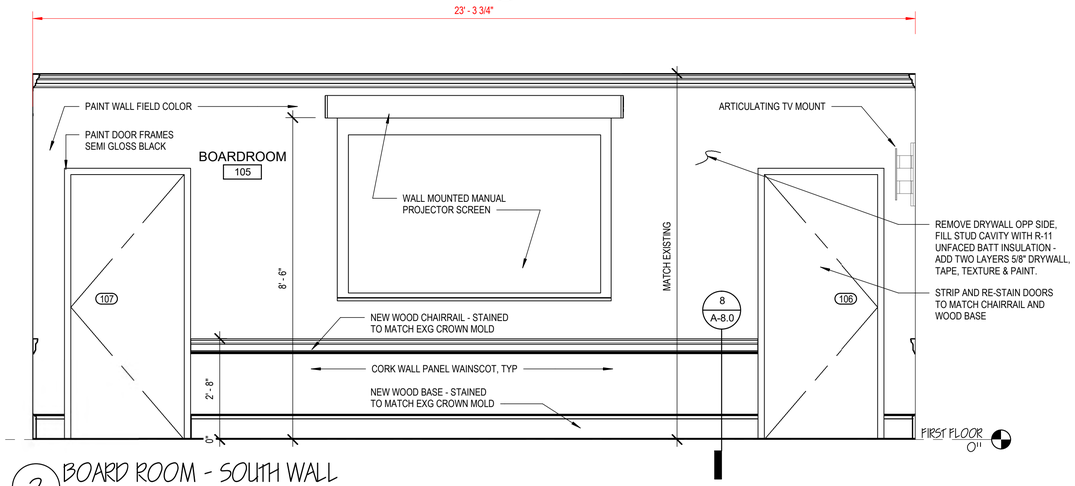
SHEET NAME
1ST FLOOR BOARD ROOM ELEVATIONS

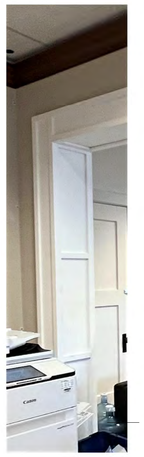
SHEET NO.
A-1.2

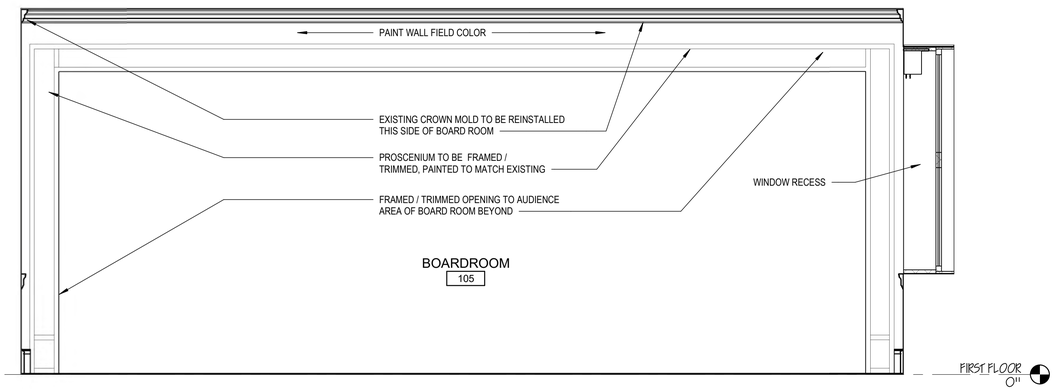


3 EXT HEAD @ ROLLER SHADE - BID OPTION
SCALE: 3" = 1'-0"



2 BOARD ROOM - SOUTH WALL
SCALE: 1/2" = 1'-0"





1 BOARD ROOM - NORTH @ OPENING
SCALE: 1/2" = 1'-0"

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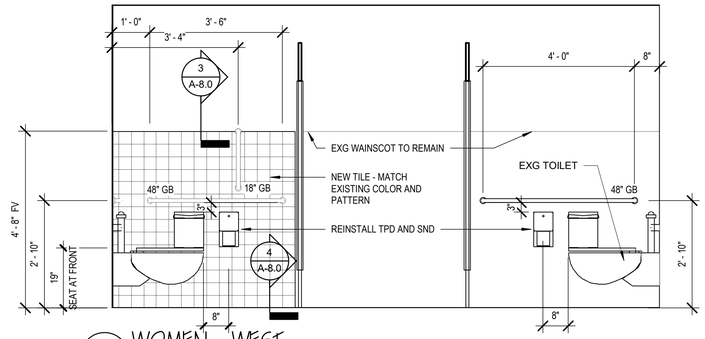
REVIEWED	lms

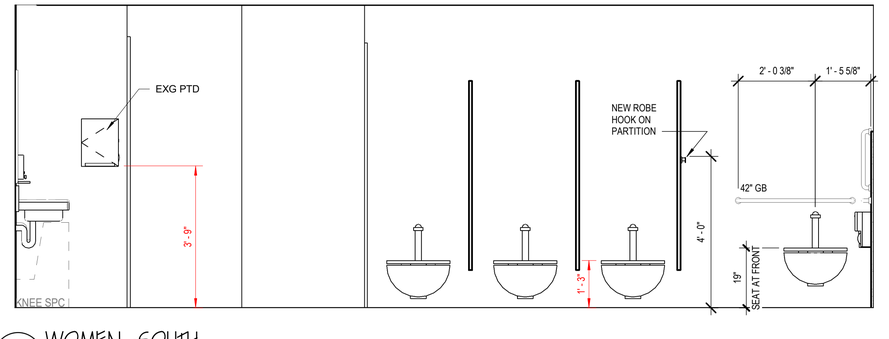
SHEET NAME
1ST FLOOR BOARD ROOM ELEVATIONS

SHEET NO.
A-1.3



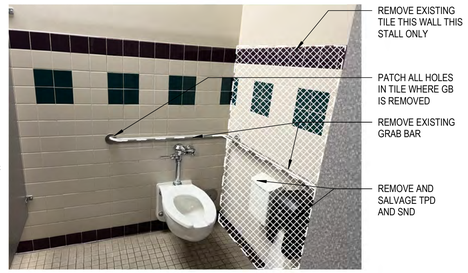
6 WOMEN - WEST

SCALE: 1/2" = 1'-0"



5 WOMEN -SOUTH

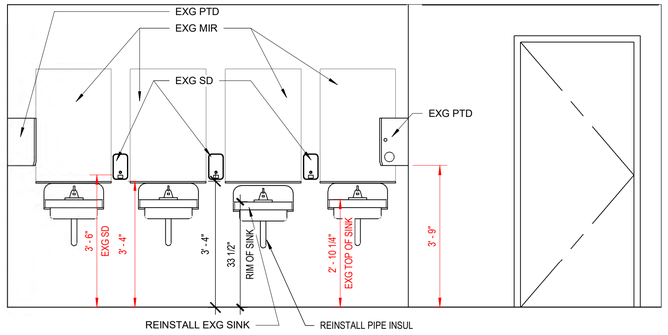
SCALE: 1/2" = 1'-0"



- REMOVE EXISTING TILE THIS WALL THIS STALL ONLY
- PATCH ALL HOLES IN TILE WHERE GB IS REMOVED
- REMOVE EXISTING GRAB BAR
- REMOVE AND SALVAGE TPD AND SND

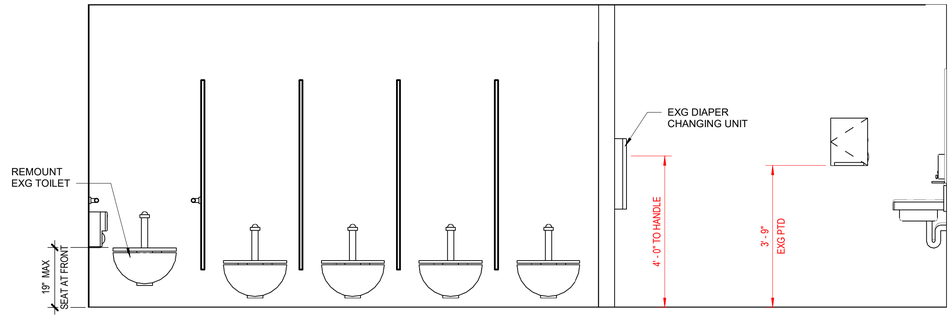
7 EXG WOMENS TOILET DEMO

SCALE: 1/4" = 1'-0"



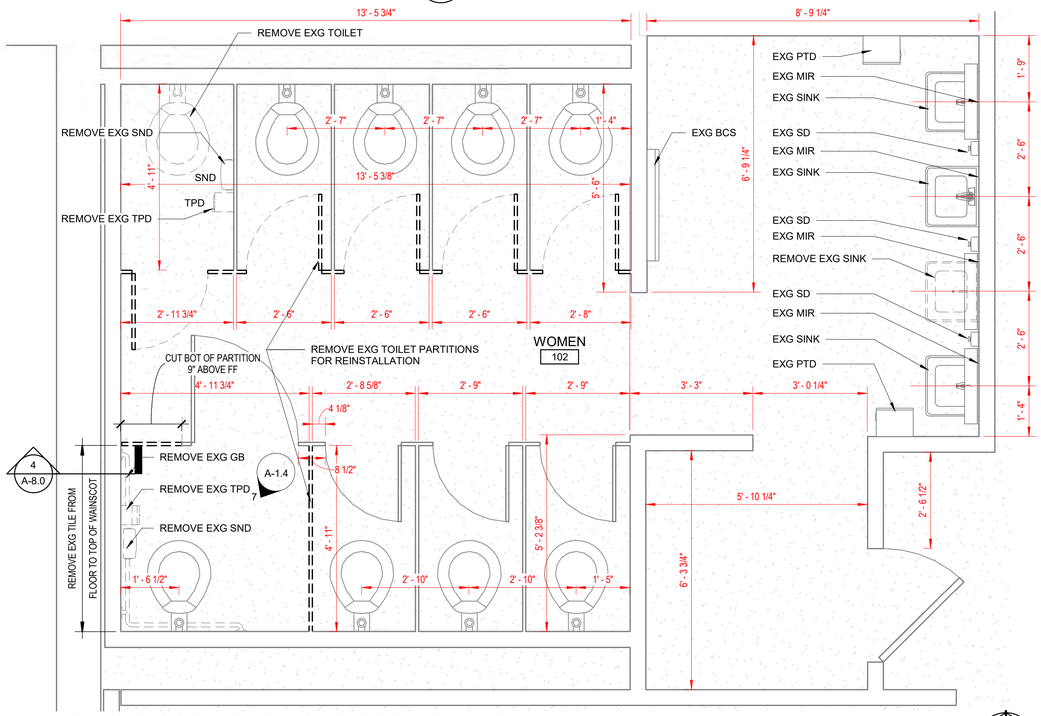
4 WOMEN - EAST

SCALE: 1/2" = 1'-0"



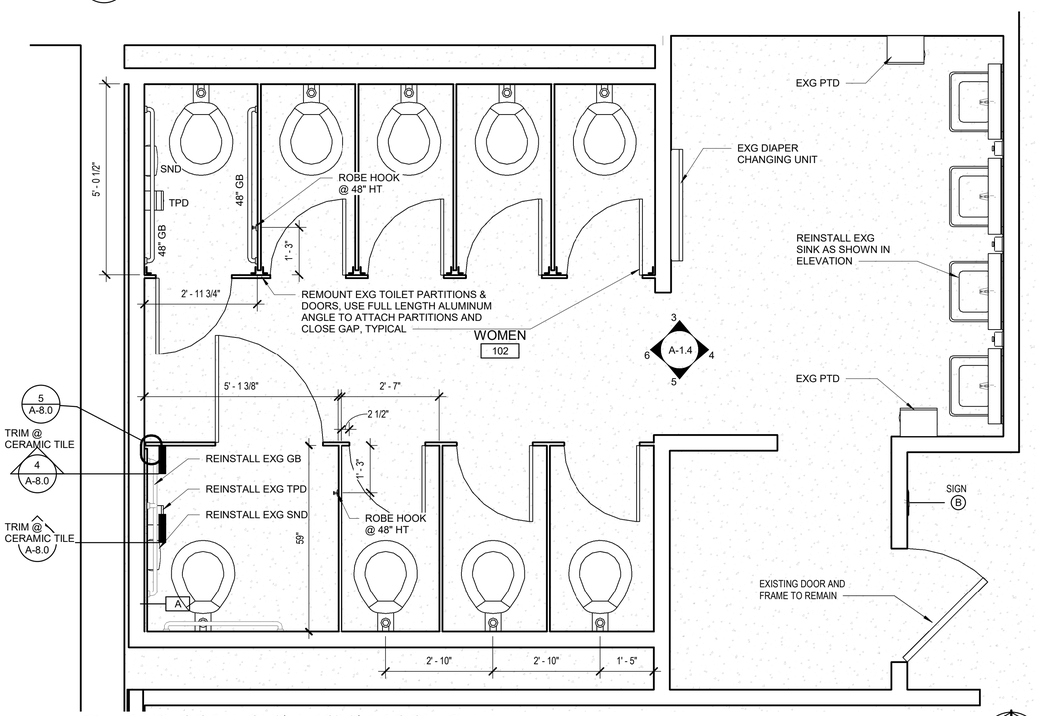
3 WOMEN - NORTH

SCALE: 1/2" = 1'-0"



2 1ST FLOOR WOMEN TOILET ROOM DEMO PLAN

SCALE: 1/2" = 1'-0"



1 1ST FLOOR WOMEN TOILET ROOM PLAN

SCALE: 1/2" = 1'-0"

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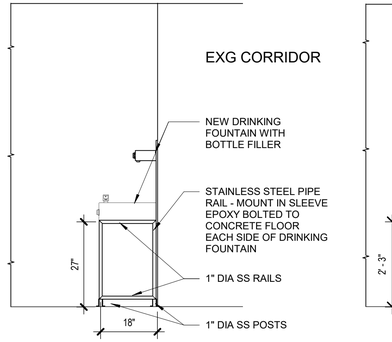
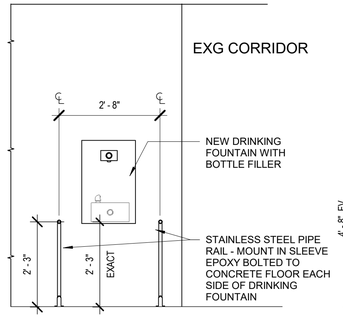
SHEET NAME
WOMENS TOILET ROOM PLAN & ELEVATIONS

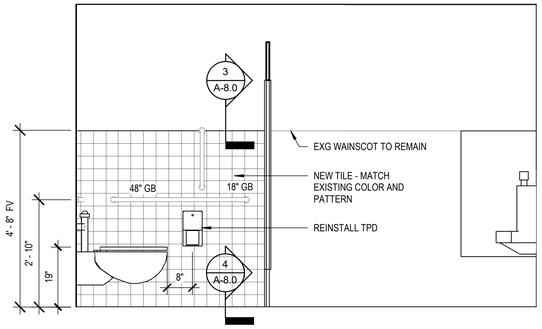
SHEET NO.
A-1.4



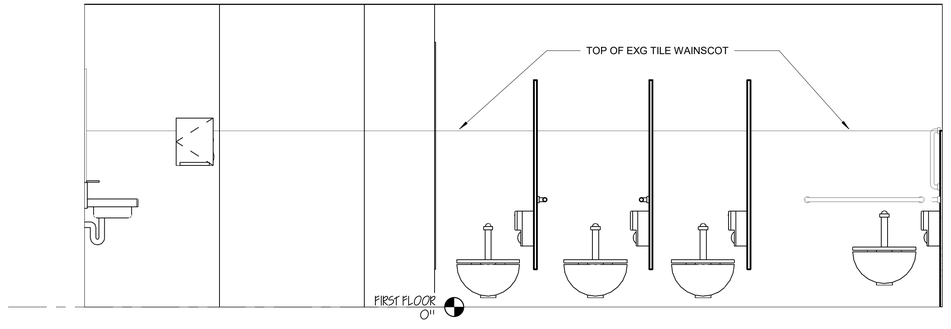
9 DRINKING FOUNTAIN - SIDE
SCALE: 1/2" = 1'-0"



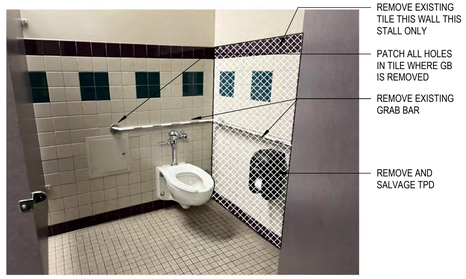
8 DRINKING FOUNTAIN - FROINT
SCALE: 1/2" = 1'-0"



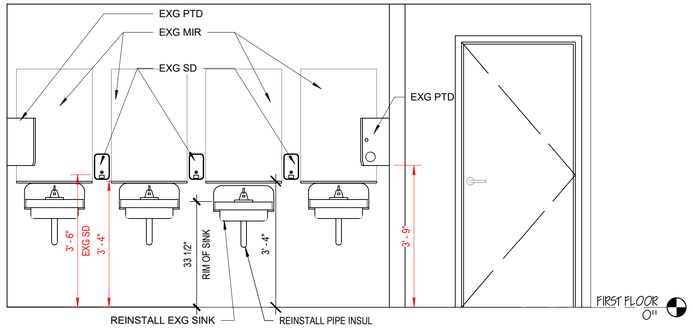
7 MEN - WEST
SCALE: 1/2" = 1'-0"



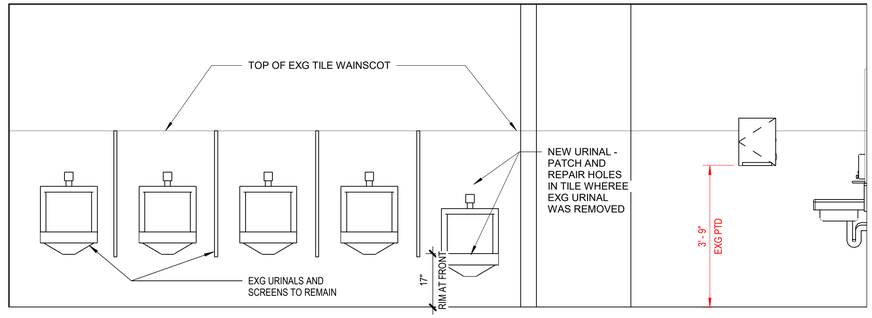
6 MEN - SOUTH
SCALE: 1/2" = 1'-0"



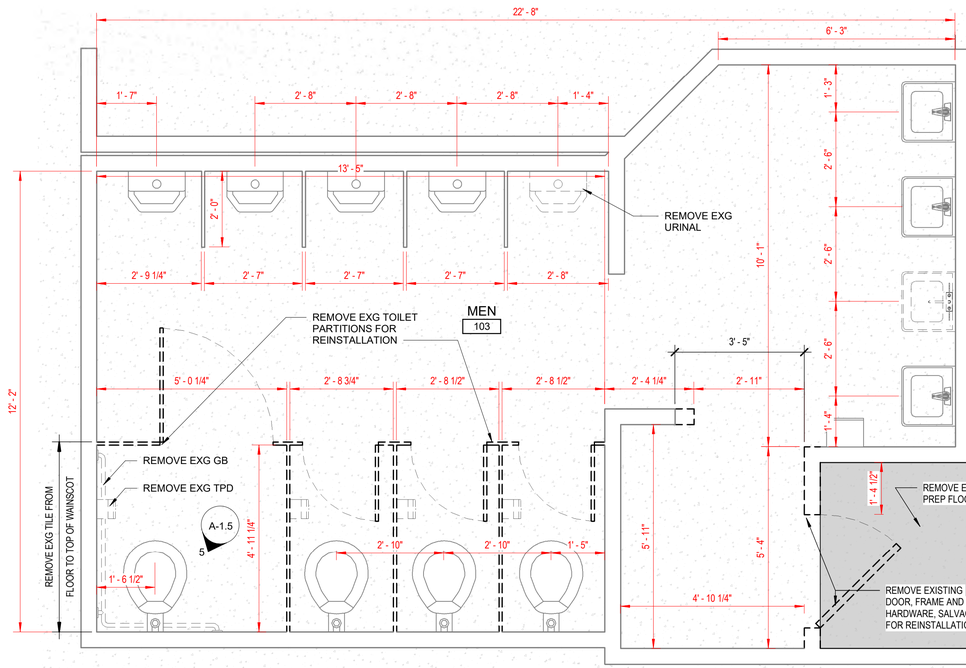
5 EXG MENS TOILET DEMO
SCALE: 1/4" = 1'-0"



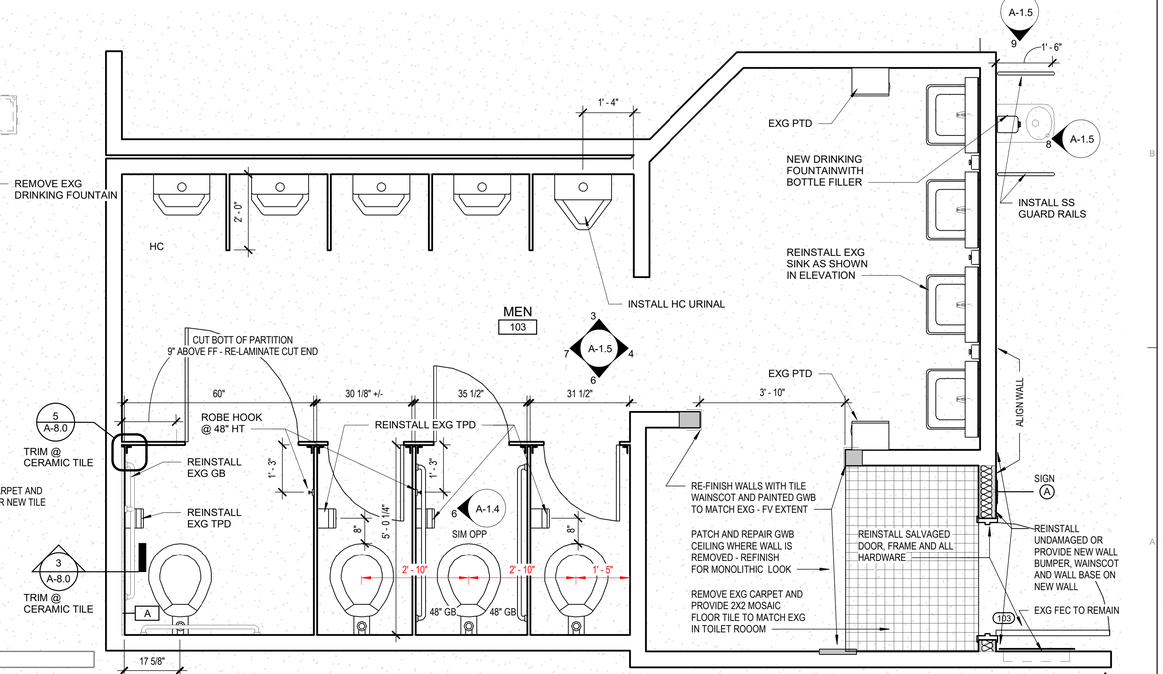
4 MEN - EAST
SCALE: 1/2" = 1'-0"



3 MEN - NORTH
SCALE: 1/2" = 1'-0"



2 1ST FLOOR MEN TOILET ROOM DEMO PLAN
SCALE: 1/2" = 1'-0"



1 1ST FLOOR MEN TOILET ROOM PLAN
SCALE: 1/2" = 1'-0"

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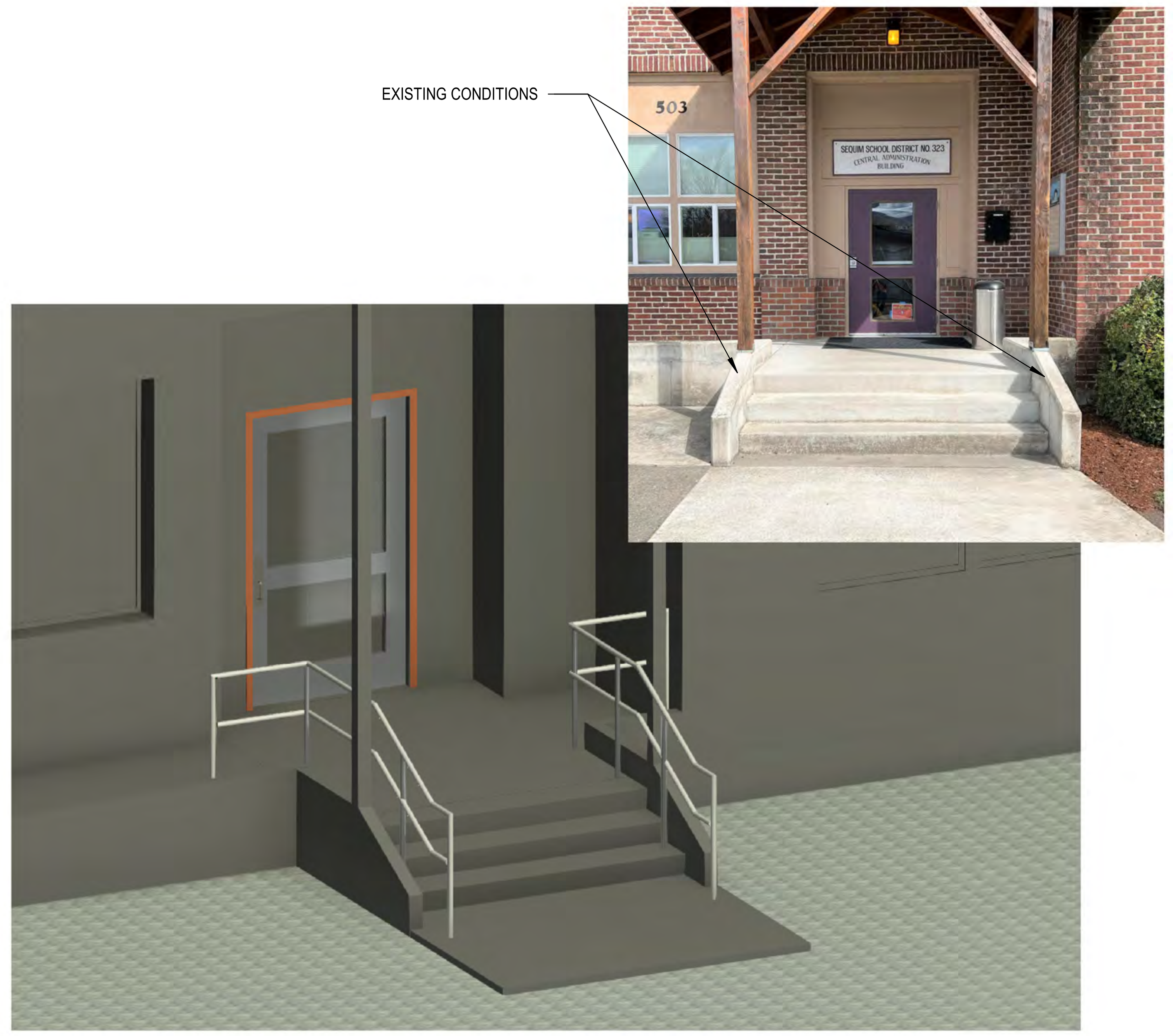
REVISION SCHEDULE

#	DESCRIPTION	DATE

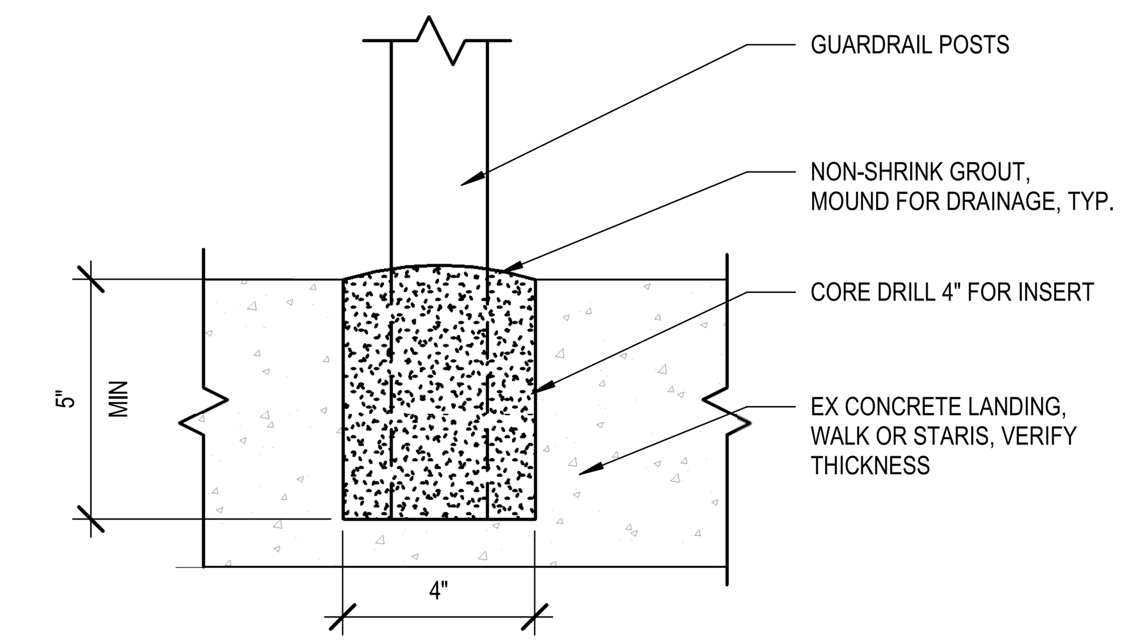
JOB NO.	2023-323
DATE	06-21-2023
DRAWN	ghm
REVIEWED	lms

SHEET NAME
MENS TOILET ROOM PLANS & ELEVATIONS

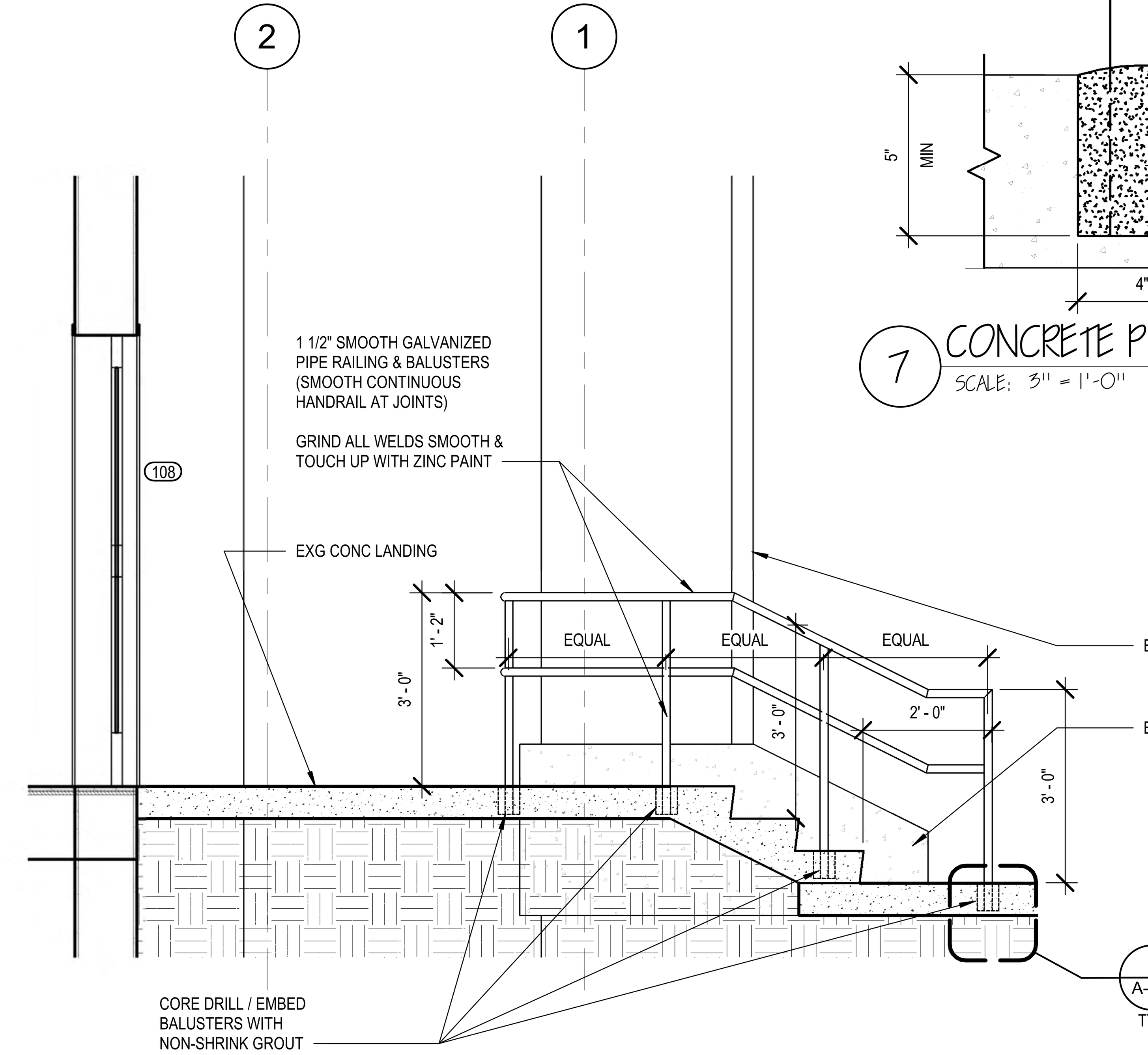
SHEET NO.
A-1.5



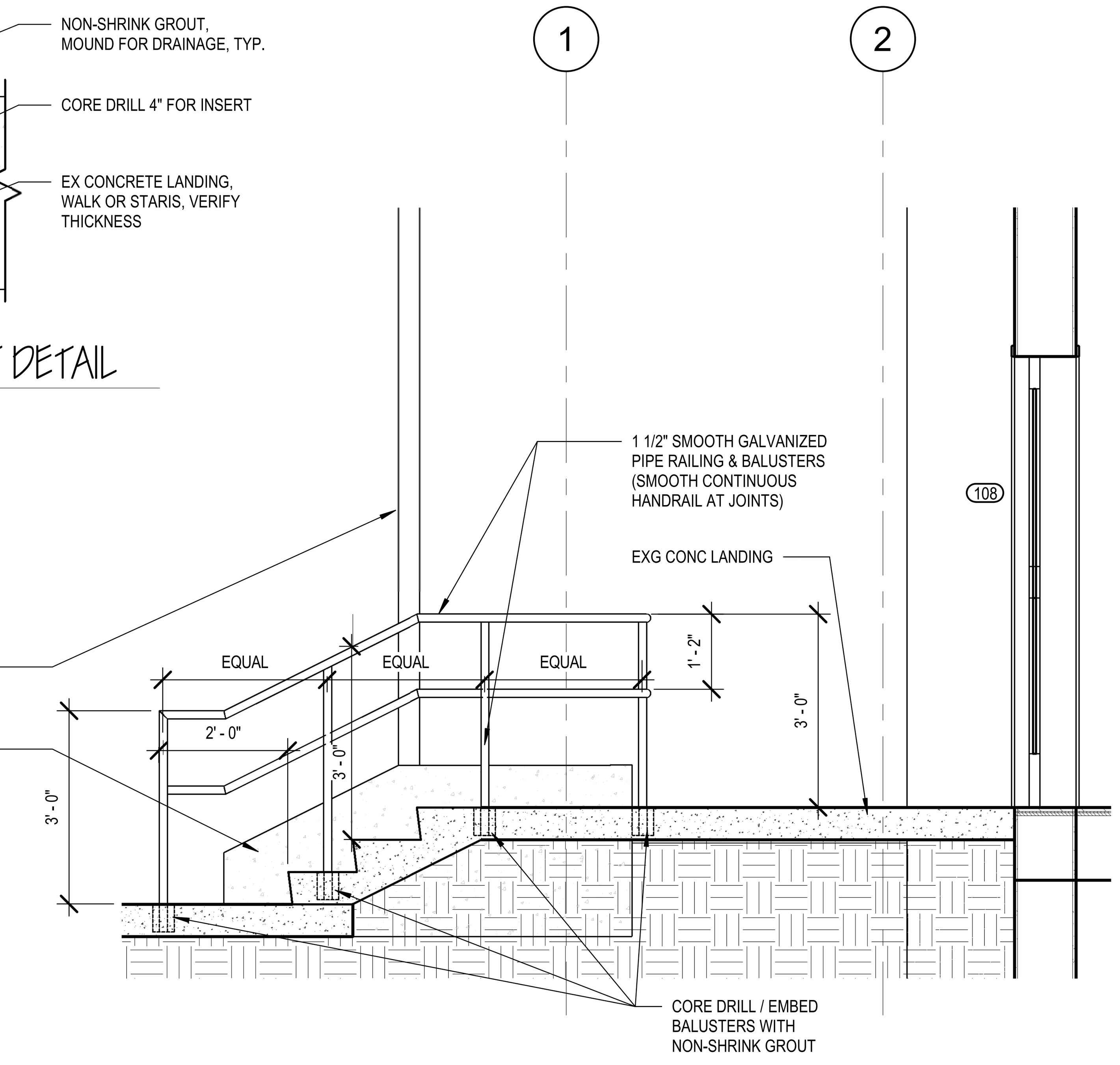
6 ENTRY DOOR & STAIRS - 3D
SCALE: 12" = 1'-0"



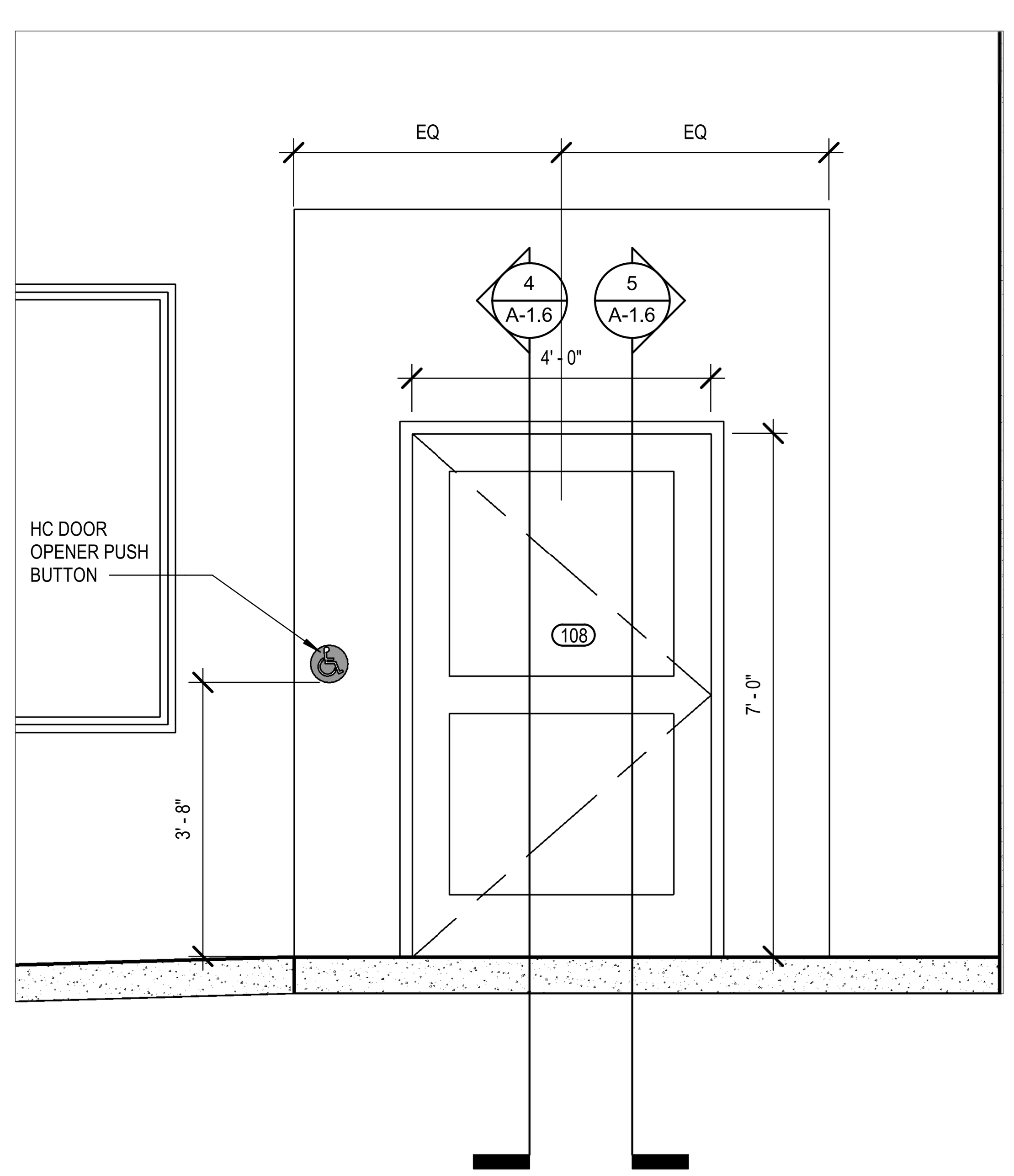
7 CONCRETE POST INSERT DETAIL
SCALE: 3" = 1'-0"



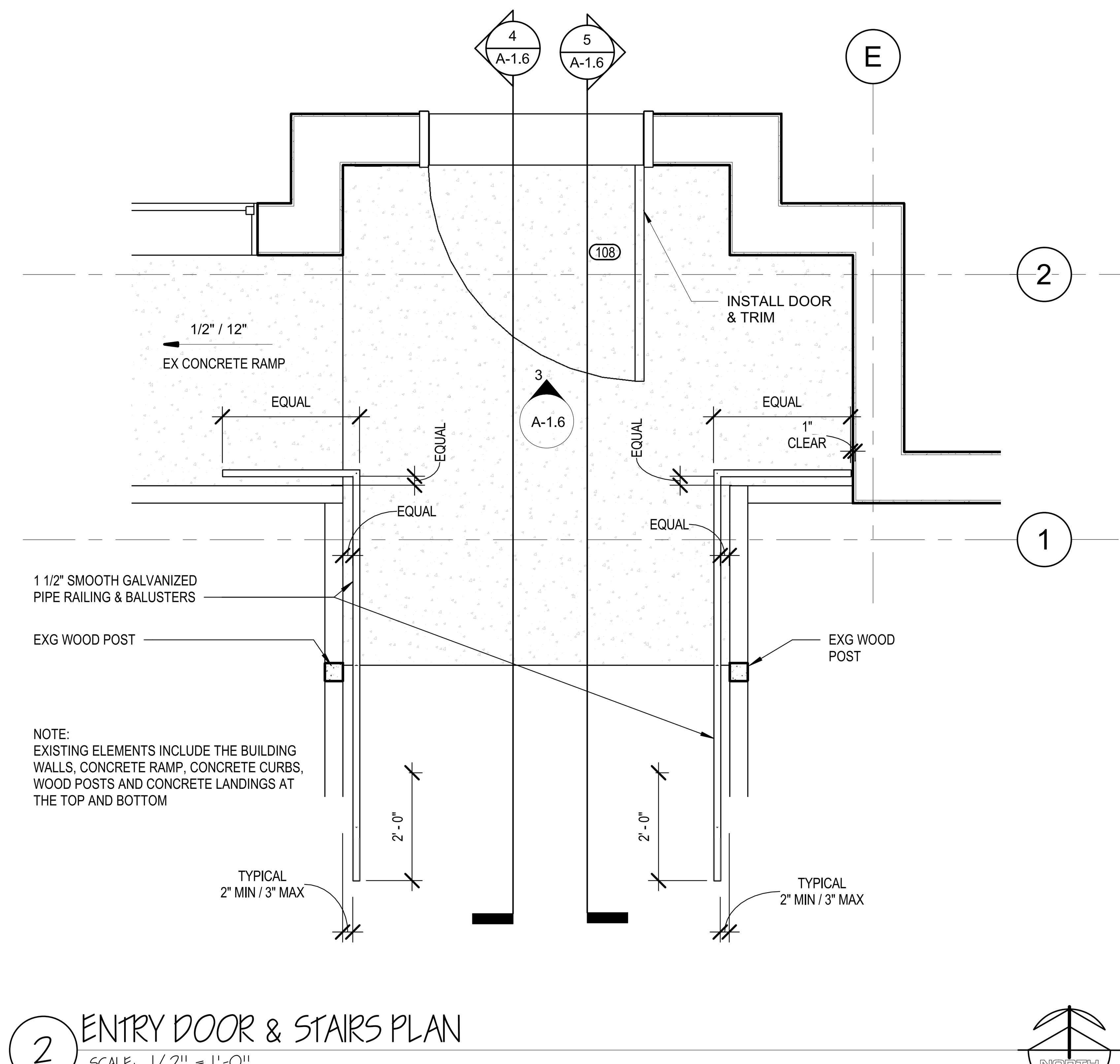
5 ENTRY DOOR & STAIRS SECTION LOOKING EAST
SCALE: 1/2" = 1'-0"



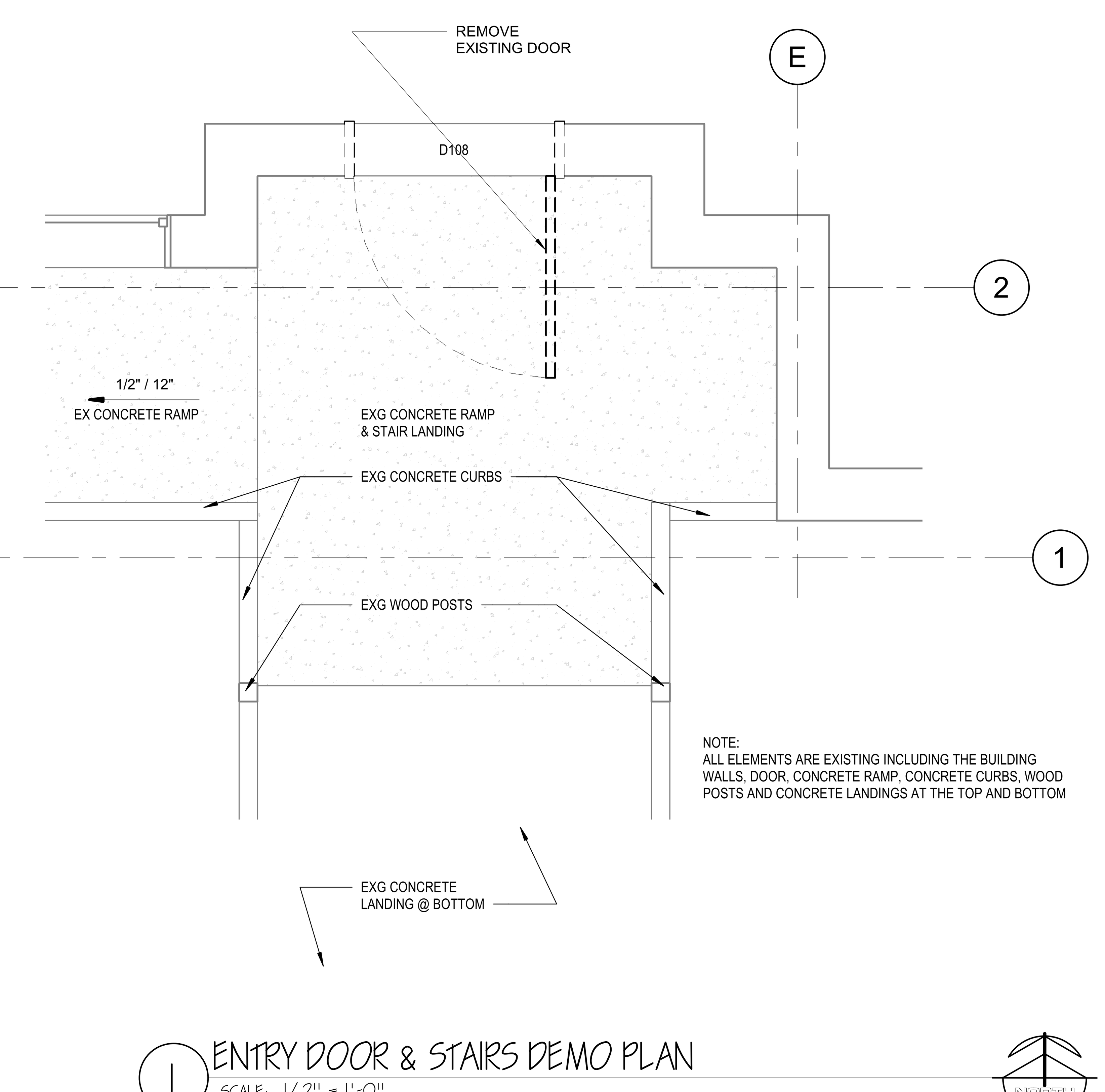
4 ENTRY DOOR & STAIRS SECTION LOOKING WEST
SCALE: 1/2" = 1'-0"



3 ENTRY DOOR ELEVATION
SCALE: 1/2" = 1'-0"



2 ENTRY DOOR & STAIRS PLAN
SCALE: 1/2" = 1'-0"



1 ENTRY DOOR & STAIRS DEMO PLAN
SCALE: 1/2" = 1'-0"

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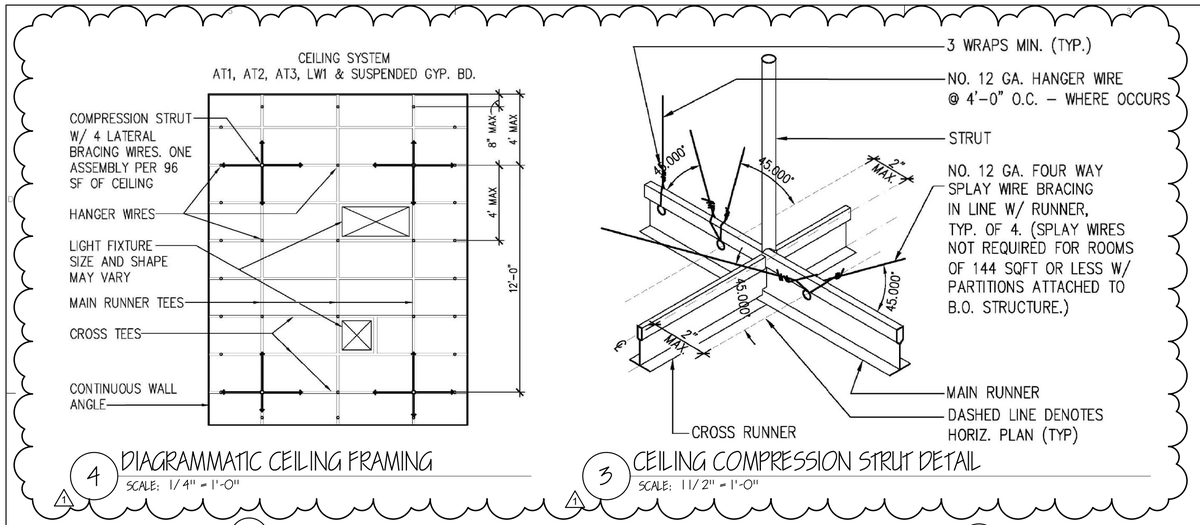
JOB NO.	2023-323
DATE	06-21-2023
DRAWN	ghm
REVIEWED	lms

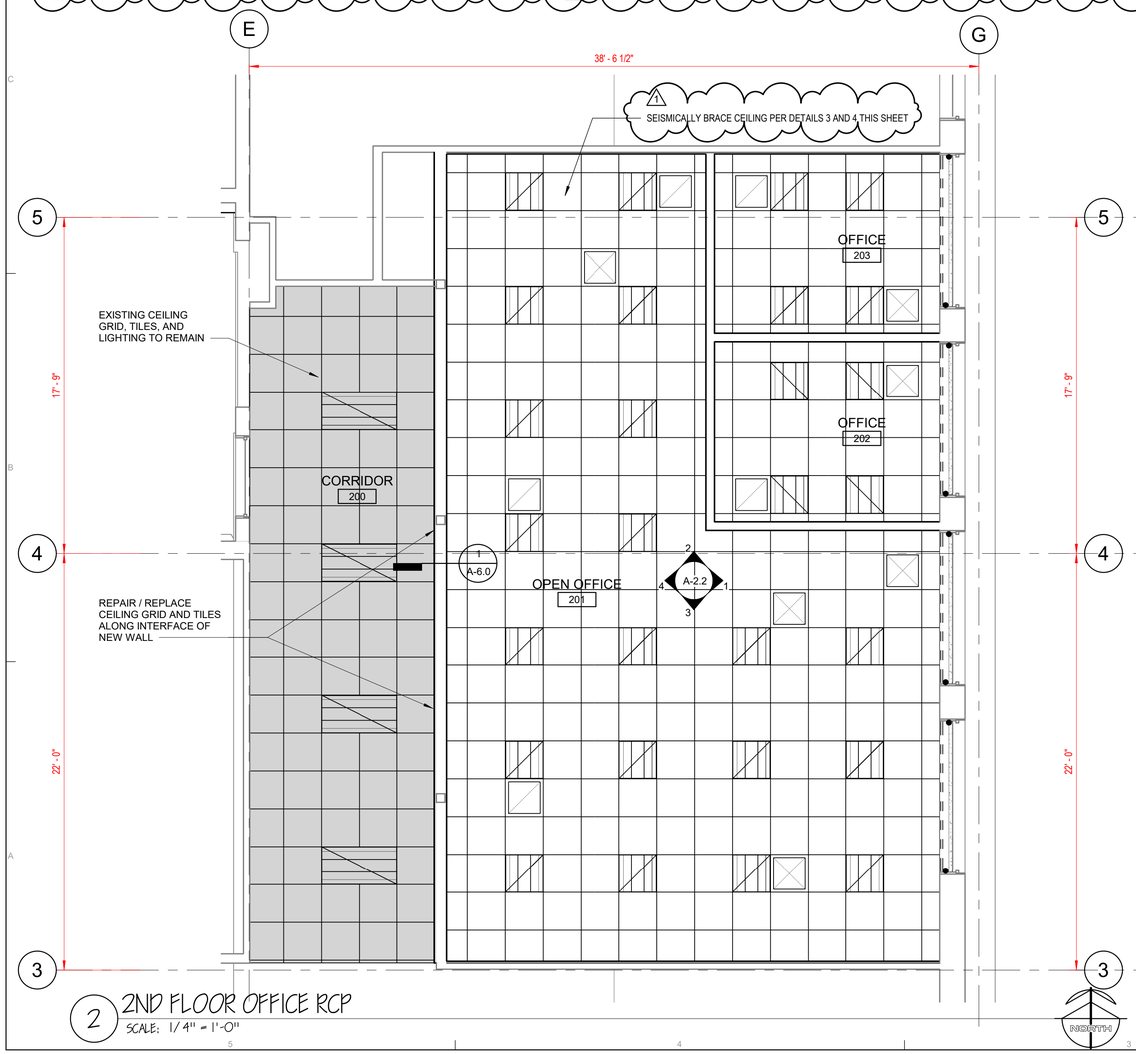
SHEET NAME
ENTRY DOOR & STAIRS / DETAILS

SHEET NO.
A-1.6

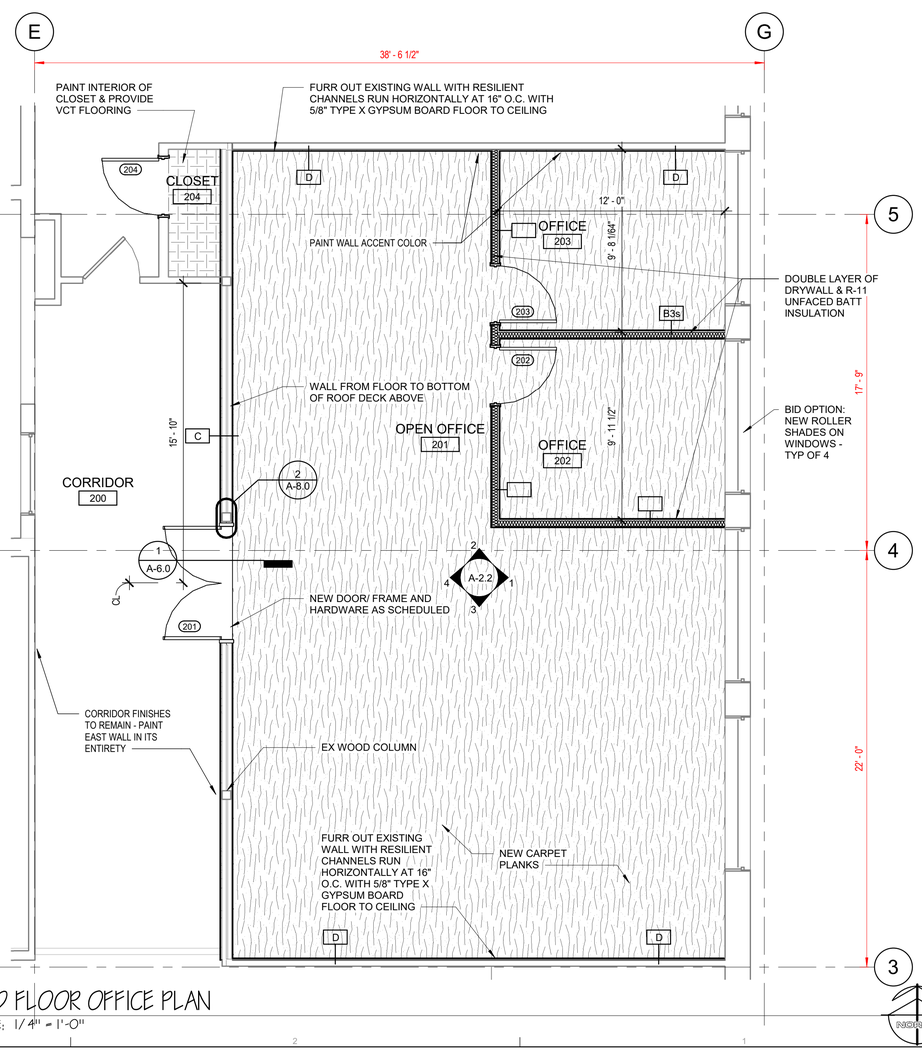


4 DIAGRAMMATIC CEILING FRAMING
SCALE: 1/4" = 1'-0"

3 CEILING COMPRESSION STRUT DETAIL
SCALE: 1 1/2" = 1'-0"



2 2ND FLOOR OFFICE RCP
SCALE: 1/4" = 1'-0"



1 2ND FLOOR OFFICE PLAN
SCALE: 1/4" = 1'-0"

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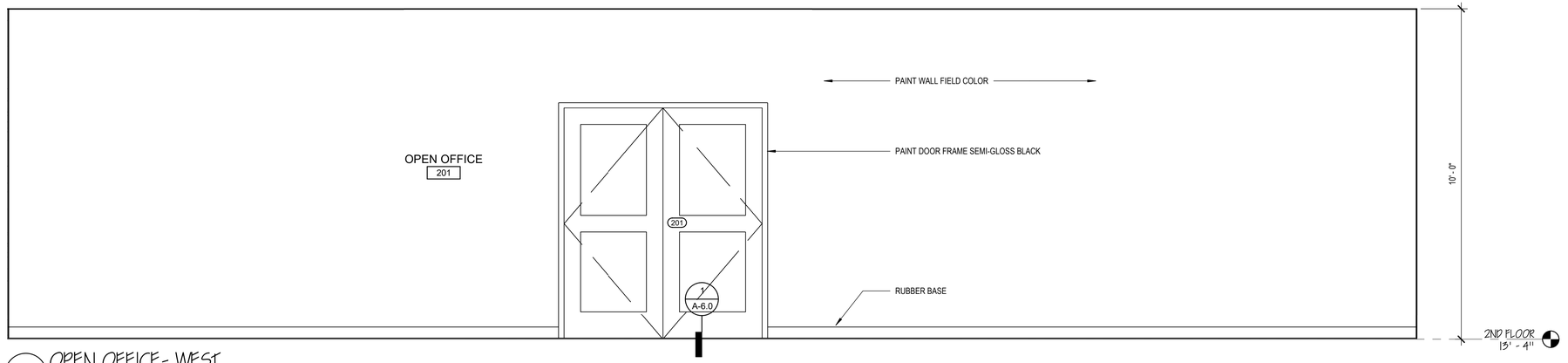
REVISION SCHEDULE

#	DESCRIPTION	DATE
1	ASDDENDUM #1	8-22-2023

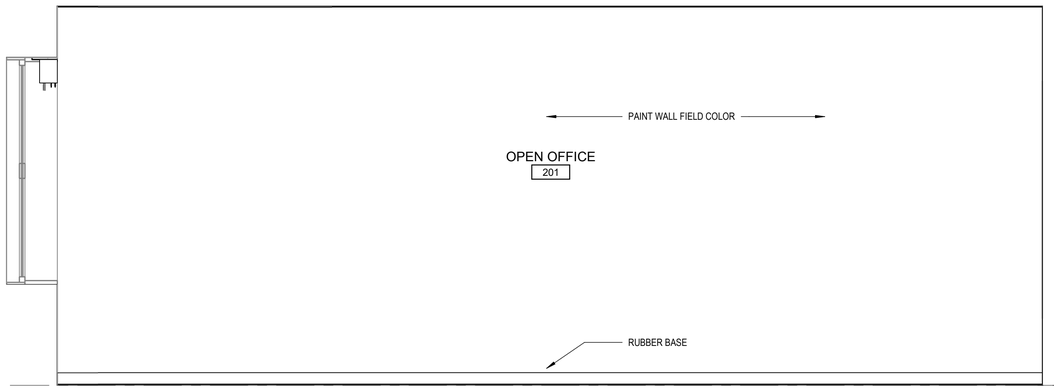
JOB NO.	2023-323
DATE	06-21-2023
DRAWN	ghm
REVIEWED	lms

SHEET NAME
2ND FLOOR OPEN OFFICE PLAN & RCP

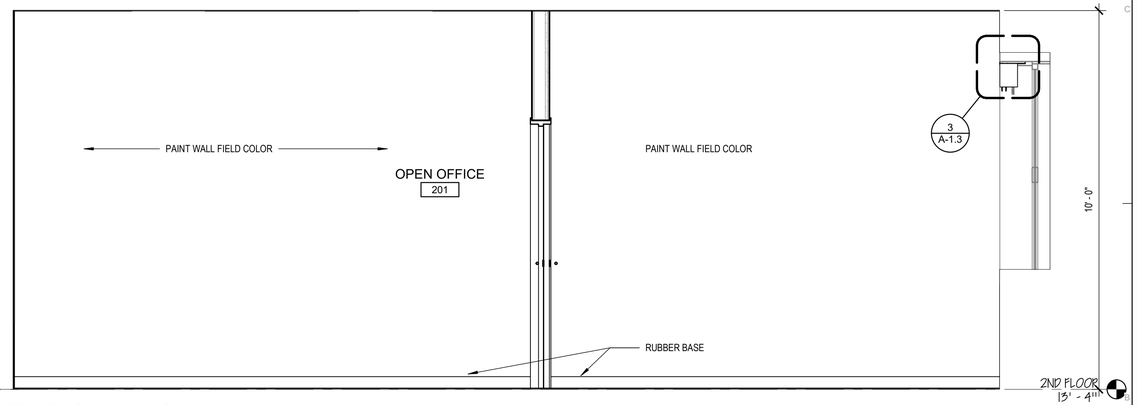
SHEET NO.
A-2.1



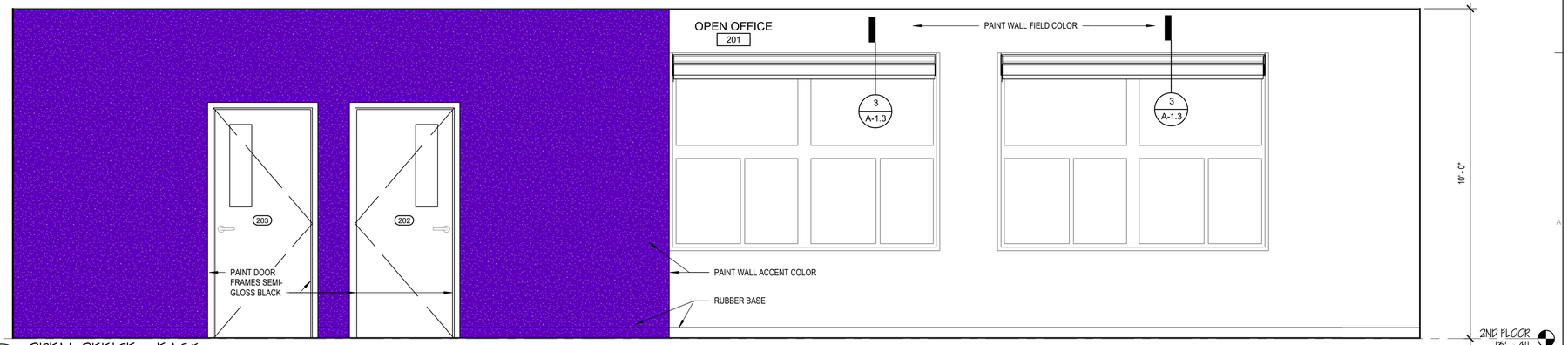
4 OPEN OFFICE - WEST
SCALE: 1/2" = 1'-0"



3 OPEN OFFICE - SOUTH
SCALE: 1/2" = 1'-0"



2 OPEN OFFICE - NORTH
SCALE: 1/2" = 1'-0"



1 OPEN OFFICE - EAST
SCALE: 1/2" = 1'-0"

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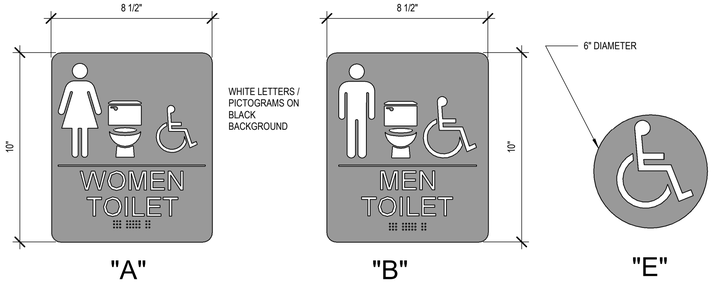
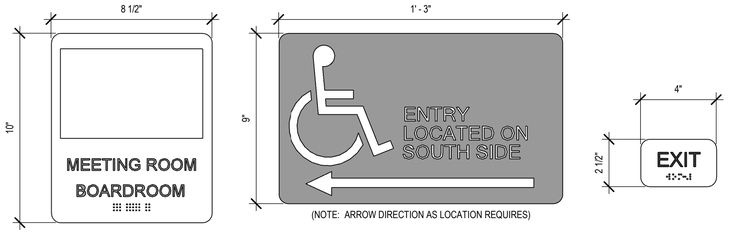
REVIEWED	lms

SHEET NAME
2ND FLOOR OPEN OFFICE INTERIOR ELEVATIONS

SHEET NO.
A-2.2



"A" "B" "E"

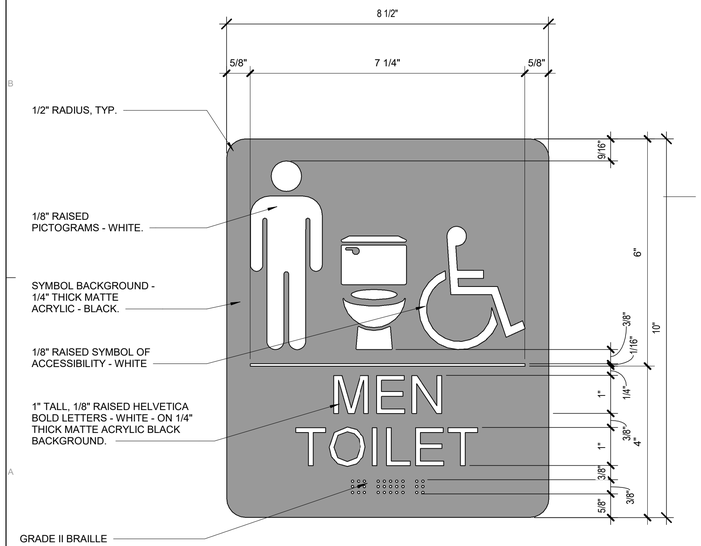


"C" "D"

"F"

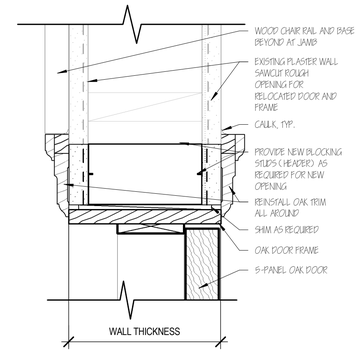
SIGN SCHEDULE

Type Mark	SIGN DESCRIPTION	TEXT ON SIGN	Comments
A	TOILET SIGN	MEN	
B	TOILET SIGN	WOMEN	
C	ROOM SIGN	BOARDROOM	
C	ROOM SIGN	BOARDROOM	
E	HC BUTTON	ACCESSIBILITY SYMBOL	STANDARD AS PROVIDED BY DOOR OPERATOR MANUFACTURER
F	EXIT SIGN	EXIT	RED BACKGROUND WITH WHITE LETTERS



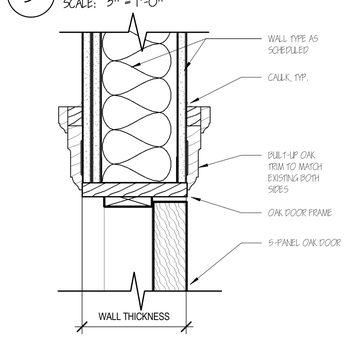
SIGN PLACARD DIMENSIONS & MATERIALS

SIGNAGE TYPES



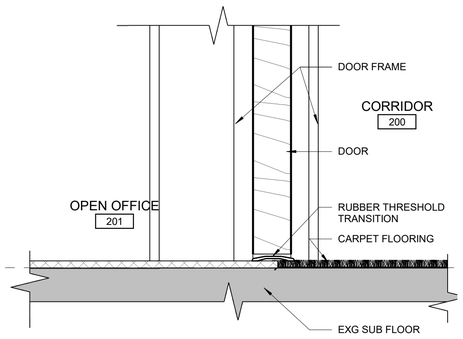
3 WOOD DOOR HEAD - EXG WALL

SCALE: 3" = 1'-0"



2 INT WOOD DOOR HEAD / JAMB

SCALE: 3" = 1'-0"

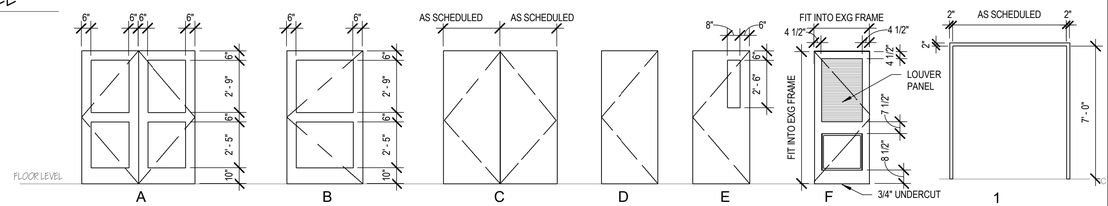


1 DOOR THRESHOLD AT CORRIDOR

SCALE: 3" = 1'-0"

DOOR AND FRAME SCHEDULE

ROOM NUMBER	ROOM NAME	DOORS TYPE	DOORS MATL	DOORS FINISH	DOORS SIZE WIDTH	DOORS SIZE HEIGHT	FRAMES TYPE	FRAMES MATL	FRAMES FINISH	HARDWARE GROUP	REMARKS
103	MEN	D	WOOD	EXG	36"	84"	1	HM	PNT4	EXG	REINSTALL SALVAGED DOOR, FRAMEAND HARDWARE
105	BOARDROOM	C	WOOD	STN	72"	84"	1	HM	PNT3	H2	MAIN ENTRY TO BOARDROOM
105B	BOARDROOM	F	WOOD	STN	36"	84"	1	HM	PNT3	H1	LOUVERED CLOSET DOOR
105C	BOARDROOM	EXG	EXG	PNT3	36"	84"	EXG	EXG	PNT3	EXG	REPAINT DOOR
106	ANTE ROOM	EXG	EXG	EXG	36"	84"	1	HM	PNT3	EXG	FLIP DOOR D106 TO SWING INTO ROOM 106 AS SHOWN ON PLAN - ADD DOOR BOTTOM & WEATHER SEALS
107	SMALL CONF	EXG	EXG	EXG	36"	84"	1	HM	PNT3	EXG	INSTALL DOOR D107 TO SWING INTO ROOM 107 AS SHOWN ON PLAN -ADD DOOR BOTTOM & SOUND SEALS
108	ENTRY	B	HM	PNT2	48"	84"	1	HM	PNT3	H4	SOUTH ENTRY DOOR
109	ANTE ROOM	EXG	EXG	EXG	36"	84"	EXG	EXG	EXG	EXG	EXG DOOR - ADD DOOR BOTTOM & WEATHER SEALS
201	OPEN OFFICE	A	WOOD	STN	72"	84"	1	HM	PNT	H2	
202	OFFICE	E	WOOD	STN	36"	84"	1	HM	PNT	H3	
203	OFFICE	E	WOOD	STN	36"	84"	1	HM	PNT	H3	
204	CLOSET	D	WOOD	STN	36"	84"	1	HM	PNT	H1	
D105B	CORRIDOR	EXG	EXG	EXG	32"	84"	EXG	EXG	EXG	-	THIS DOOR TO BE REMOVED AND TURNED OVER TO THE OWNER - REFERENCE DOOR 105B FOR NEW DOOR IN EXG FRAME
D106	BOARDROOM	EXG	EXG	EXG	36"	84"	EXG	EXG	EXG	-	CAREFULLY REMOVE THIS DOOR AND FRAME - REFERENCE DOOR 106 FOR REINSTALLATION
D107	ANTE ROOM	EXG	EXG	EXG	36"	84"	EXG	EXG	EXG	-	CAREFULLY REMOVE THIS DOOR AND FRAME - REFERENCE DOOR 107 FOR REINSTALLATION
D108	ENTRY	EXG	EXG	EXG	44"	84"	EXG	EXG	EXG	-	DEMO AND REMOVE EXISTING DOOR AND FRAME



DOOR TYPES FRAME TYPES

DOOR HARDWARE SETS

HARDWARE SET H1:
1. BUTT HINGES
2. STORAGE ROOM LATCH (F40) WITH LEVER HANDLE KEYED ON EXTERIOR - ALWAYS UNLOCKED ON INTERIOR
3. CLOSER
4. KICK PLATE (PUSH SIDE)

HARDWARE SET H2:
1. BUTT HINGES
2. LEVER HANDLE WITH CLASSROOM FUNCTION
3. EXIT DEVICE ON INTERIOR - BOTH LEAVES
4. CLOSER - BOTH LEAVES
5. DOOR BOTTOM
6. WEATHER STRIP SEALS FULL PERIMETER

HARDWARE SET H3:
1. BUTT HINGES
2. LEVER HANDLE WITH OFFICE FUNCTION
3. DOOR BOTTOM
4. WEATHER STRIP SEALS FULL PERIMETER

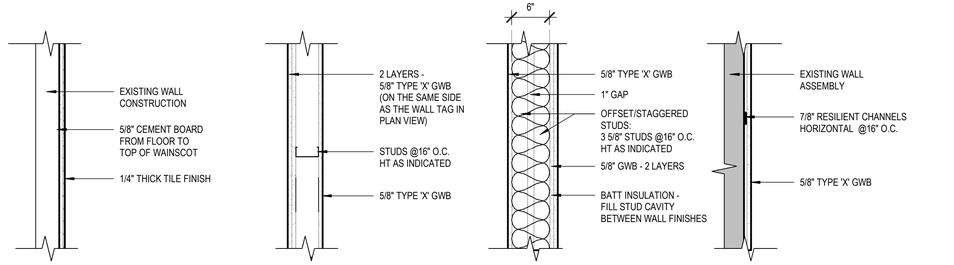
HARDWARE SET H4:
1. CONT. HINGES
2. LEVER HANDLE WITH ENTRY FUNCTION AS SELECTED BY ARCH.
3. EXIT DEVICE ON INTERIOR
4. CLOSER
5. DOOR BOTTOM
6. WEATHER STRIP SEALS FULL PERIMETER
7. AUTOMATIC DOOR OPERATOR
8. ELECTRIC STRIKE
9. POWER SUPPLY

COORDINATE KEYING W/ OWNER TO MATCH EXG BUILDING GRAND MASTER KEYING

ROOM FINISH SCHEDULE

Level	RM NUMBER	ROOM NAME	FLOOR	BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING	COMMENTS / NOTES
FIRST FLOOR	100	MECHANICAL	-	-	-	-	-	-	-	
FIRST FLOOR	101	ELECTRICAL	-	-	-	-	-	-	-	
FIRST FLOOR	102	WOMEN	EXG	EXG/CT	EXG/PNT4	EXG/PNT4	EXG/PNT4	EXG/PNT4/CT	EXG/PNT4	SEE PLANS FOR LOCATION AND EXTENT OF NEW CERAMIC TILE TO MATCH EXISTING
FIRST FLOOR	103	MEN	EXG	EXG/CT	EXG/PNT4	EXG/PNT4	EXG/PNT4	EXG/PNT4/CT	EXG/PNT4	SEE PLANS FOR LOCATION AND EXTENT OF NEW CERAMIC TILE TO MATCH EXISTING
FIRST FLOOR	104	CORRIDOR	-	-	-	-	-	-	-	-
FIRST FLOOR	105	BOARDROOM	CPTT	WD/ST N	GWB/PNT2	GWB/PNT1	GWB/PNT1	GWB/PNT1	ACT	STAINED WD CHAIRRAIL - CORK PANEL WAINSCOT - SEE ELEVATIONS
FIRST FLOOR	105A	CLOSET	EXG	EXG	EXG/PNT1	EXG/PNT1	EXG/PNT1	EXG/PNT1	EXG/PNT1	REPAINT ENTIRE ROOM
FIRST FLOOR	106	ANTE ROOM	CPTT	RB	EXG/PNT1	EXG/PNT1	EXG/PNT1	EXG/PNT1	EXG	REPAINT ENTIRE ROOM
FIRST FLOOR	107	SMALL CONF	EXG	EXG	EXG/PNT1	EXG/PNT1	EXG/PNT1	EXG/PNT1	EXG	
FIRST FLOOR	108	ENTRY	-	-	-	-	-	-	-	
FIRST FLOOR	EX	STAIRS	-	-	-	-	-	-	-	
2ND FLOOR	200	CORRIDOR	-	-	-	-	-	-	ACT	PROVIDE NEW ACT WHERE EXISTING ARE DAMAGED DUE TO CONSTRUCTION ACTIVITIES
2ND FLOOR	201	OPEN OFFICE	CPTT	RB	GWB/PNT1	GWB/PNT1	GWB/PNT1	GWB/PNT1	ACT	SEE ELEVATIONS FOR LOCATION OF ACCENT PNT2 LOCATIONS
2ND FLOOR	202	OFFICE	CPTT	RB	GWB/PNT1	GWB/PNT1	GWB/PNT1	GWB/PNT1	ACT	
2ND FLOOR	203	OFFICE	CPTT	RB	GWB/PNT1	GWB/PNT1	GWB/PNT1	GWB/PNT1	ACT	
2ND FLOOR	204	CLOSET	VCT	RB	EXG/PNT1	GWB/PNT1	EXG/PNT1	EXG/PNT1	EXG/PNT1	

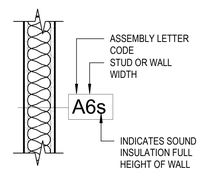
WALL TYPES



A METAL FRAME PARTITION B METAL FRAME PARTITION C DOUBLE INTERIOR WALL D RC FURRED WALL

LEGEND

ASSEMBLY TYPE SYMBOL:



STUD SIZE KEY:

1 =	1 5/8	INCHES
2 =	2 1/2	INCHES
3 =	3 5/8	INCHES
4 =	4	INCHES
6 =	6	INCHES
8 =	8	INCHES
10 =	10	INCHES
12 =	12	INCHES

NOTES

1. FINISH MATERIALS SUCH AS CERAMIC TILE, WALL COVERINGS, ETC. ARE NOT TYPICALLY SHOWN AS AN INTEGRAL PART OF THE ASSEMBLY. REFER TO INTERIOR DRAWINGS AND / OR FINISH SCHEDULES FOR FINISH MATERIALS.
2. STUD SIZES ARE SHOWN WITH EACH ASSEMBLY TYPE.
3. ALL PENETRATIONS THROUGH ACOUSTICAL ASSEMBLIES TO BE ACOUSTICALLY SEALED.
4. ALL NEW WALLS AND PARTITIONS EXTEND TO BOTTOM OF FLOOR OR ROOF DECK ABOVE UNLESS INDICATED OTHERWISE IN SECTIONS AND DETAILS.
5. PARTITIONS WITH R-11 UNFACED BATT INSULATION ARE INDICATED WITH INSULATION HATCH PATTERN

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DATE	06-21-2023
DRAWN	ghm
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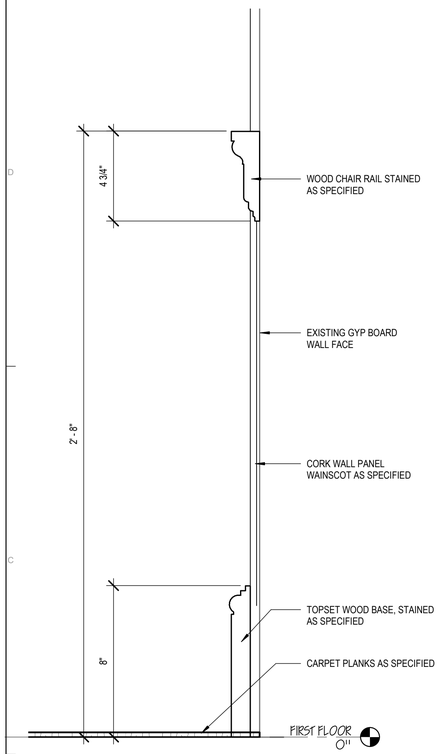
SHEET NAME: SCHEDULES / WALL TYPES

SHEET NO.: A-6.0



8 WOOD CHAIRRAIL / BASE
SCALE: 3" = 1'-0"

7 COLOR SELECTION
SCALE: 11/2" = 1'-0"

FINISH MATERIAL SCHEDULE

MARK	MATERIAL	MANUFACTURER	STYLE / PRODUCT	COLOR	SIZE	FINISH	NOTES
ACT	ACOUSTICAL CEILING TILE	ARMSTRONG	OPTIMA - 9/16" TEGULAR	WHITE	24" x 24" x 3/4"	FACTORY	
CORK	CORK WALL PANEL	AMERICAN CORK PRODUCTS CO	BLIZARD CORK WALL TILE	BLIZARD	11.8" x 23.6" X 1/4" THICK	FACTORY	USE "LIQUID NAILS FUZE IT" FOR WALL ADHESIVE
CPTT	CARPET TILES	MOHAWK GROUP	PROFICIENT GT432	COMMENCEMENT 854	12" X 36"	FACTORY	ECOFLEX BACKING - PLANK HALF LAP INSTALL PATTERN
CT	CERAMIC TILE	MATCH EXG	MATCH EXG	FIELD COLOR + ACCENT + BLACK TOP AND BASE	MATCH EXG	FACTORY	MATCH EXG PATTERN, COLOR, SIZE - PROVIDE COVE BASE
PNT1	PAINT	SHERWIN WILLIAMS	FIELD COLOR	SW 7005 - PURE WHITE	-	EGGSHELL	
PNT2	PAINT	SHERWIN WILLIAMS	ACCENT COLOR	SW 6825 IZMIR PURPLE	-	EGGSHELL	-
PNT3	PAINT	SHERWIN WILLIAMS	DOOR FRAME COLOR	SW 6990 CAVIAR	-	SEMI-GLOSS	-
PNT4	PAINT	SHERWIN WILLIAMS	MATCH EXISTING	MATCH EXISTING	-	MATCH EXG	
RB	RUBBER BASE	ROPPE	STRAIGHT CARPET BASE	100 BLACK	4"	FACTORY	
SHADE	MECHO/5 SYSTEM w ECOVEIL	MECHO		BLACKOUT CLOTH AT WINDOW		FACTORY	BID OPTION
STN	WOOD STAIN	SHERWIN WILLIAMS	TINTABLE WOOD STAIN 250 VOC	COOPER BROWN MW419	-	CLEAR COAT	
VCT	VINYL COMPOSITION TILE	ARMSTRONG	Standard Excelon Imperial Texture	SANDY BEACH 51929	12" x 12"	FACTORY	
WD	WOOD CHAIR RAIL AND BASE	CUSTOM	SEE DRAWINGS FOR PROFILE	MATCH EXISTING	SEE DRAWINGS FOR PROFILE	CLEAR COAT	

LIGHT GAGE STEEL FRAMING

1. ALL COLD-FORMED STRUCTURAL STUD FRAMING MEMBERS AND STEEL JOISTS SHALL BE OF SIZE AND GAGE AS INDICATED IN DRAWINGS.
2. TRACK OF SIZE AND GAGE TO MATCH STUDS SHALL BE PROVIDED AS CONTINUOUS TOP AND BOTTOM SUPPORT AND SHALL HAVE 1-1/2" FLANGES MIN.
3. ALL STUDS SHALL BE CONNECTED AT EACH LEVEL IN ACCORDANCE WITH DETAILS AND WITHIN TOLERANCE LIMITS NOTED.
4. STRUCTURAL STUDS AND JOISTS CALLED OUT ARE SSMA SIZES. THE SSMA SIZES ARE USED TO ESTABLISH STRUCTURAL CAPACITIES AND PERFORMANCE AND ARE NOT INTENDED TO RESTRICT BIDDING. SUBSTITUTIONS ARE ACCEPTABLE PROVIDED THEIR STRUCTURAL CAPACITY AND PERFORMANCE MEET OR EXCEED THOSE LISTED IN THE SSMA CATALOG.
5. FRAMING MEMBERS SHALL BE FABRICATED FROM Fy = 33 ksi STEEL FOR 18 GAGE SECTIONS AND FROM Fy = ksi STEEL FOR 12, 14, AND 16 GAGE SECTIONS.
6. ALL WELDS SHALL BE PERFORMED BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS D1.3.
7. STUDS SHALL BE SEATED SQUARELY IN TRACK AND SHALL BE WELDED TO TOP & BOT OF TRACK W/ 1/8" FILLET WELD PER MFR TYP ASSEMBLY DETAILS UNO.

NON-BEARING / CURTAIN WALL (L.L. LINTEL SCHEDULE

OPENING SIZE	HEADER SIZE	MIN. [x IN^4 PER JOIST	MIN. Sx IN^3 PER JOIST
	(2) 400 S 162 - 33	REF. SSMA	REF. SSMA
4' TO 8'	(2) 600 S 162 - 43	REF. SSMA	REF. SSMA
8' TO 11'	(2) 800 S 162 - 43	REF. SSMA	REF. SSMA
11' TO 13'	(2) 1200 S 162 - 43	REF. SSMA	REF. SSMA

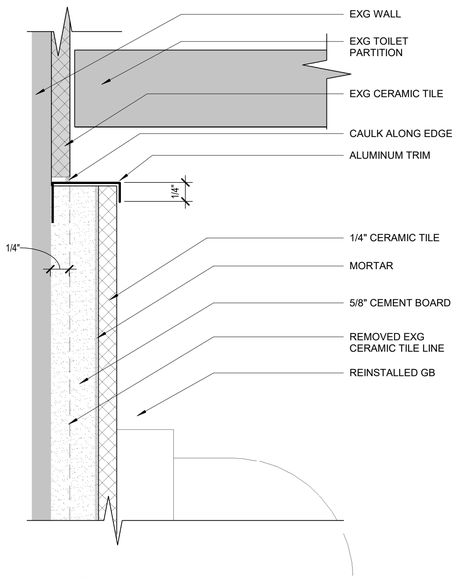
A. SIZES BASED ON SSMA (STEEL STUD MFR ASSOC) UNPUNCHED "CEE" TYPE JOISTS / STUDS.

B. THESE LINTEL SIZES ARE A MINIMUM MEMBER SIZE. LARGER MEMBERS MAY BE USED AT CONTRACTORS OPTION.

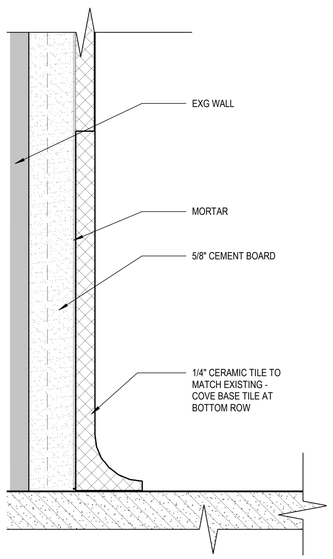
C. ALL LINTELS SHALL HAVE A MINIMUM BEARING OF 1 5/8" AND WEB SHALL BE UNPUNCHED.

D. PROVIDE ALL CONNECTIONS AS RECOMMENDED BY THE STUD MANUFACTURER, UNO.

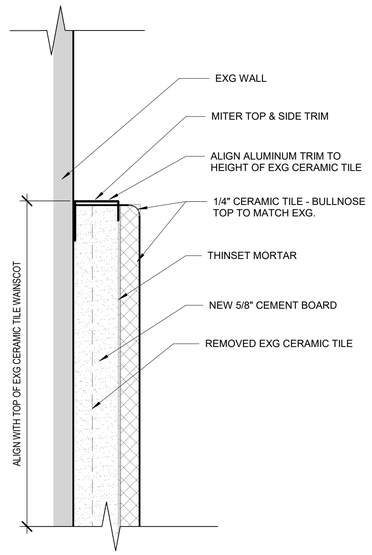
6 LIGHT GAGE NOTES
SCALE: 1" = 1'-0"



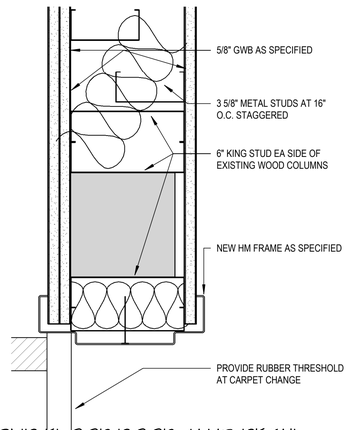
5 SIDE OF TOILET STALL TILE
SCALE: 12" = 1'-0"



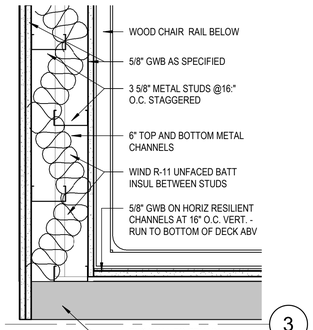
4 BOTTOM OF TOILET STALL TILE
SCALE: 12" = 1'-0"



3 TOP OF TOILET STALL TILE
SCALE: 12" = 1'-0"



2 2ND FLOOR DOOR JAMB DETAIL
SCALE: 3" = 1'-0"



1 2ND FLOOR WALL DETAIL
SCALE: 11/2" = 1'-0"

10241 REGISTERED ARCHITECT LAURA M. STRAUSS STATE OF WASHINGTON
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SEQUIM SD #323
Office Board Room & 2nd Floor Office Remodel
503 N Sequim Ave, Sequim, WA 98382

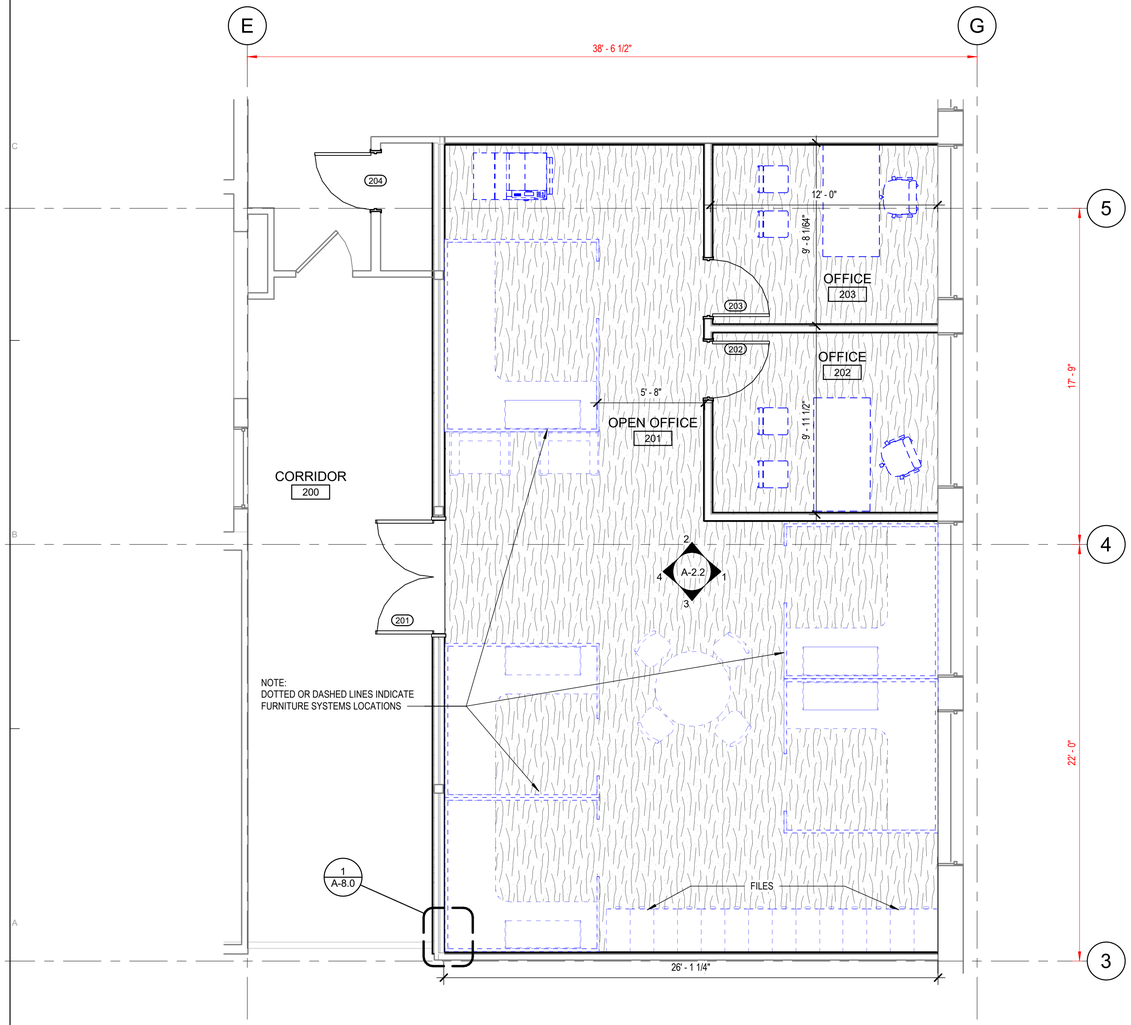
REVISION SCHEDULE

#	DESCRIPTION	DATE

JOB NO.	2023-323
DATE	06-21-2023
DRAWN	ghm
REVIEWED	lms

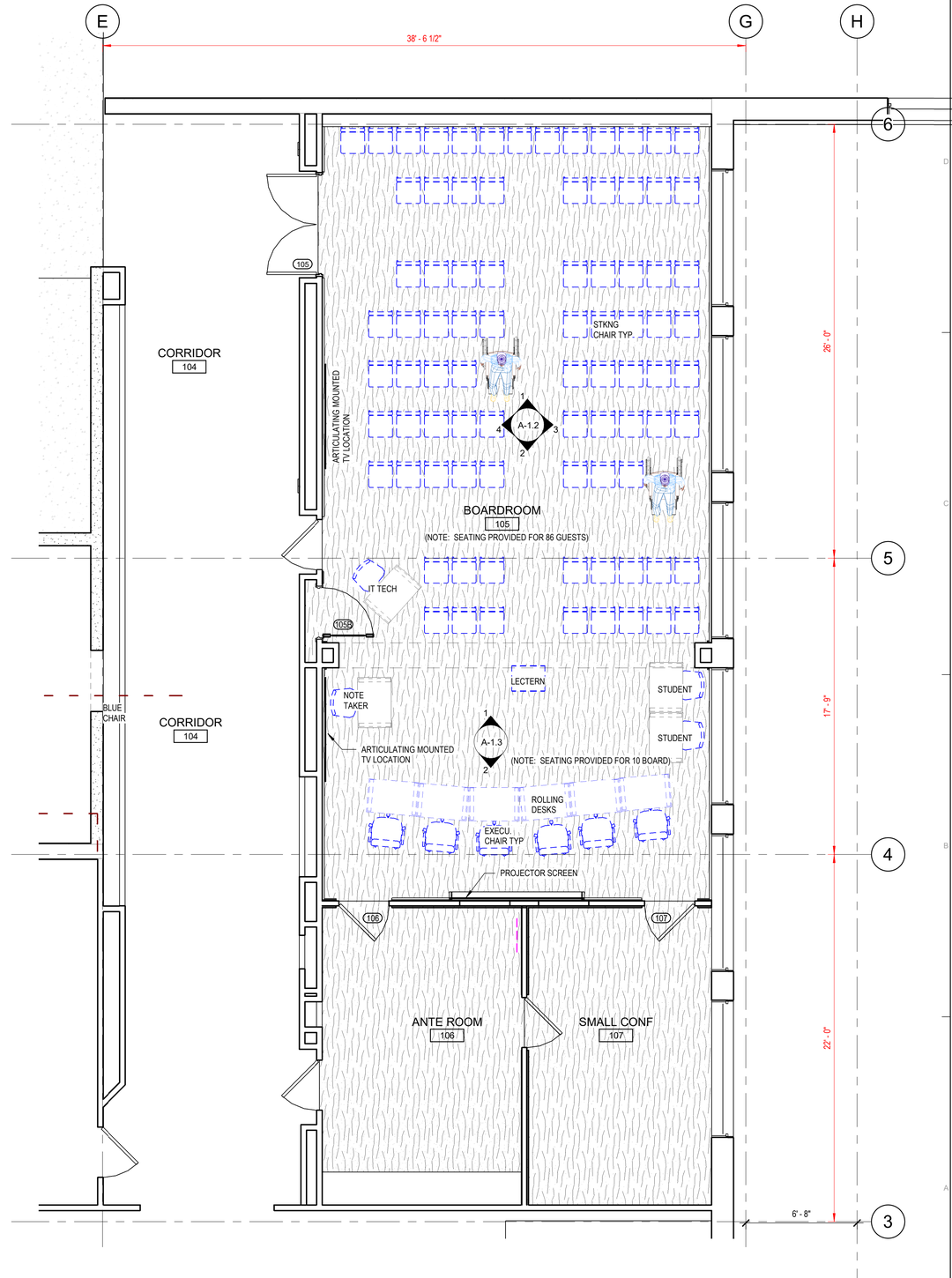
SHEET NAME
MISCELLANEOUS DETAILS

SHEET NO.
A-8.0



2 2ND FLOOR OFFICE FURNITURE PLAN

SCALE: 1/4" = 1'-0" FURNITURE TO BE PROVIDED AND INSTALLED BY OWNER



1 1ST FLOOR BOARD ROOM FURNITURE PLAN

SCALE: 1/4" = 1'-0" FURNITURE TO BE PROVIDED AND INSTALLED BY OWNER

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JOB NO.	2023-323
DATE	06-21-2023
DRAWN	ghm
REVIEWED	lms

SHEET NAME
FURNITURE PLANS

SHEET NO.
I-1.0

MECHANICAL GENERAL NOTES

1. THE TOTAL INSTALLATION SHALL COMPLY WITH ANY REQUIREMENTS OF THE LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION INCLUDING 2018 INTERNATIONAL BUILDING CODE (IBC), 2018 INTERNATIONAL MECHANICAL CODE (IMC), 2018 UNIFORM PLUMBING CODE (UPC) WITH WASHINGTON STATE AMENDMENTS AND THE 2018 WASHINGTON STATE ENERGY CODE.
2. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS UNDER WHICH THEY WILL BE REQUIRED TO WORK. INDICATED DIMENSIONS ARE APPROXIMATE AND ARE GIVEN FOR ESTIMATE PURPOSES ONLY. PRIOR TO PERFORMING ANY NEW WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY DIMENSIONS, SIZES, REQUIRED CLEARANCES AND SHALL ASSUME FULL RESPONSIBILITY FOR THE FITTING OF EQUIPMENT AND MATERIALS HEREIN REQUIRED TO OTHER PARTS OF THE WORK OF OTHER TRADES. DUCT DIMENSIONS SHOWN ON PLANS ARE NET INSIDE CLEAR.
3. THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC TO THE EXTENT THAT OFFSETS, BENDS, SPECIAL FITTINGS AND LOCATIONS ARE NOT EXACTLY LOCATED. DUCTWORK DIMENSIONS SHOWN ON THE DRAWINGS ARE NET INSIDE DIMENSIONS. DO NOT FABRICATE DUCTWORK FROM THESE DRAWINGS. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR SUPPLYING SHOP DRAWINGS WHICH REFLECT THE PROPOSED INSTALLATION. THE SHOP DRAWINGS MUST BE APPROVED BY THE ENGINEER PRIOR TO ANY SHEET METAL FABRICATION. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ACCURATE AS-BUILT DRAWINGS AT THE COMPLETION OF THE PROJECT AND SUBMITTING THEM TO THE ENGINEER AND OWNER.
4. ALL EQUIPMENT, PIPING, DUCTWORK, CONTROLS AND OR WIRING SHOWN IS A REPRESENTATION OF THE ACTUAL SYSTEMS AND IS NOT TO BE CONSIDERED AN AS-BUILT. ALL DIMENSIONS, LOCATIONS AND QUANTITIES SHALL BE FIELD VERIFIED PRIOR TO COMMENCEMENT OF DEMOLITION OR NEW CONSTRUCTION.
5. ITEMS RELATED TO PLUMBING UTILITIES AND/OR OTHER SERVICE(S); MATERIALS, LABOR, PERMITS, FEES, ETC., SHALL BE VERIFIED WITH THE RESPECTIVE SERVING UTILITY COMPANY PRIOR TO SUBMISSION OF A BID. THE ACT OF SUBMITTING A BID SHALL CONSTITUTE FULL RESPONSIBILITY TO INSTALL SERVICE(S) IN COMPLIANCE WITH THE REQUIREMENTS OF THE SERVING UTILITY COMPANY AND THE MECHANICAL ENGINEER.
6. THE CONTRACTOR SHALL COMPLY WITH THE CONTRACT DOCUMENTS IN LAYING OUT THEIR WORK AND EQUIPMENT. THEY SHALL COORDINATE THE WORK OF THIS SECTION WITH THE WORK OF OTHER TRADES AND JOB CONDITIONS.
7. THE INSTALLATION OF ACCESS PANELS OR OTHER INDICATING EQUIPMENT OR SPECIALTIES REQUIRING READING, ADJUSTMENT, INSPECTION, REPAIRS, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY LOCATED WITH REFERENCE TO THE FINISHED BUILDING.
8. EQUIPMENT AND FIXTURES INSTALLED UNDER THIS CONTRACT SHALL BE HUNG OR ANCHORED IN ACCORDANCE WITH 2018 (IBC) AND 2018 UPC. WHERE NOT SPECIFICALLY INDICATED OTHERWISE, DUCTWORK AND EQUIPMENT SHALL BE SUPPORTED PER THE SMACNA GUIDELINES FOR SEISMIC RESTRAINT AND CURRENT APPLICABLE UNIFORM MECHANICAL CODE.
9. PROVIDE MANUAL VOLUME DAMPERS AT UPSTREAM PORTION OF TERMINAL AIR BRANCHES. THESE SHALL BE OF THE LOCKING QUADRANT TYPE. WHERE LOCATED OVER SLOPED OR HARD CEILINGS, PROVIDE DURO-DYNE ANGLE GEAR DRIVE OR BOWDEN CABLE CONTROL SYSTEM OR PROVIDE UNITED ENERTECH POWER/BALANCE SYSTEM. REMOTE PLATE LOCATIONS TO BE LOCATED AS DETERMINED BY ARCHITECT.
10. PROVIDE MINIMUM 1" ACOUSTICAL LINING IN DUCTWORK WITHIN 10 FEET OF AIR MOVING EQUIPMENT. PROVIDE DURO-DYNE FLEXIBLE CONNECTION AT DUCT AT EQUIPMENT LOCATIONS.
11. DUCTS IN AN UNCONDITIONED SPACE OR EXTERIOR DUCT WORK SHALL BE INSULATED IN ACCORDANCE WITH THE WASHINGTON STATE ENERGY CODE (WSEC) AND THE DUCT INSULATION TABLE AS PROVIDED ON THIS SHEET.
12. TESTING, ADJUSTING, AND BALANCING (TAB) OF THE AIR CONDITIONING SYSTEMS AND RELATED ANCILLARY EQUIPMENT WILL BE PERFORMED BY A CERTIFIED, INDEPENDENT THIRD PARTY, AABC OR NEBB AGENCY PROCURED BY THE MECHANICAL CONTRACTOR. A COMPLETE AIR BALANCE REPORT TO BE SUBMITTED TO THE ADMINISTRATIVE AUTHORITY AND TO THE MECHANICAL ENGINEER AND APPROVED PRIOR TO OCCUPANCY.
13. AIR HANDLING DUCT SYSTEMS SHALL BE CONSTRUCTED, INSTALLED AND INSULATED AS DESCRIBED IN CHAPTER 6 OF THE 2018 IMC.
14. MATERIALS EXPOSED WITHIN DUCTS OR PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL HAVE FLAME SPREAD INDEX NOT GREATER THAN 25 AND A SMOKE DEVELOPED INDEX NOT GREATER THAN 50 (2018 IMC SECTION 602.2).
15. UNLESS OTHERWISE STATED, MAXIMUM LENGTH FOR FLEXIBLE DUCTWORK SHALL NOT EXCEED FIVE FEET (5'-0"). ALUMINUM FLEX DUCTWORK WILL NOT BE ALLOWED ON ANY PORTION OF THE DUCTWORK SYSTEM.
16. THERMOSTATS SHALL BE 7-DAY PROGRAMMABLE AND SHALL COMPLY WITH THE 2018 WASHINGTON STATE ENERGY CODE.
17. TEST SYSTEM(S) IN ACCORDANCE WITH REQUIREMENTS OF THE GOVERNING AUTHORITIES.
18. CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE AND LOCATED AS PER CODE REQUIREMENTS. COORDINATE CLEANOUT LOCATIONS WITH EQUIPMENT CABINETS, ETC. AND THE ARCHITECT PRIOR TO ANY INSTALLATION.
19. CONNECTIONS TO EXISTING SERVICES SHALL BE MADE SUCH THAT INTERRUPTION TIME WILL BE AS SHORT AS POSSIBLE. GIVE THE OWNERS REPRESENTATIVE A MINIMUM OF 72 HOURS NOTICE OF SUCH INTERRUPTIONS AND THE ACTUAL SHUT-DOWN TIME SHALL BE AT A TIME DESIGNATED BY THE OWNERS REPRESENTATIVE.
20. POTABLE WATER SYSTEMS SHALL BE DISINFECTED AND FLUSHED PRIOR TO USE BY WATER-CHLORINATION SOLUTION AND HAVE BACTERIOLOGICAL EXAMINATION MADE BY AN APPROVED AGENCY PER 2018 UPC 609.9 AND AS PRESCRIBED IN AWWA C651. METHODS OF CLEANING/ DISINFECTING FOR NEW OR REPAIR PIPING AS DESCRIBED IN C651 OR NFPA 24.
21. PLUMBING PIPE, FITTINGS AND FIXTURES USED TO CONVEY OR DISPENSE WATER FOR HUMAN CONSUMPTION SHALL BE LEAD-FREE PER 2018 UPC 604.2.
22. ANY SUBSTITUTION MADE THAT IS DIFFERENT FROM WHAT IS SPECIFIED ON THE DRAWINGS NEEDS TO BE APPROVED BY ENGINEER OF RECORD AND OWNER PRIOR TO BID AND SHALL BE CLEARLY INDICATED ON THE SUBMITTAL AS TO THAT IS BEING SUBSTITUTED.
23. SHUT-OFF VALVES SHALL BE PROVIDED IN MAIN BRANCHES, RUNS TO RISERS AND WHERE INDICATED ON DRAWINGS.
24. NEW NON-RESIDENTIAL WATER CLOSETS SHALL COMPLY WITH 2018 UPC 411.2 AND SHALL NOT EXCEED 1.6 GALLONS PER FLUSH.
25. NEW NON-RESIDENTIAL LAVATORY FAUCETS SHALL COMPLY WITH 2018 UPC 407.2.1 AND SHALL NOT EXCEED 0.5 GALLONS PER MINUTE FOR PUBLIC LAVATORY AT 60 PSI.
26. FIXTURES, EQUIPMENT, PIPING, FITTINGS, AND MATERIALS SHALL BE LISTED.
27. PLUMBING FIXTURES SHALL MEET THE FLOW REQUIREMENTS SPECIFIED IN THE 2018 UPC.
28. PUBLIC LAVATORIES SHALL HAVE CONTROLS TO LIMIT THE WATER TEMPERATURE TO 120°F.
29. ANY SUBSTITUTION MADE THAT IS DIFFERENT FROM WHAT IS SPECIFIED ON THE DRAWINGS SHALL BE CLEARLY INDICATED ON THE SUBMITTAL AS TO THAT IS BEING SUBSTITUTED.

APPLICABLE CODES

MATERIALS, METHODS, AND INSTALLATION SHALL COMPLY WITH THE PROVISIONS OF THE LATEST EDITION OF THE FOLLOWING CODES AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION, CITY OF PORT ORCHARD.

1. BUILDING CODE: 2018 INTERNATIONAL BUILDING CODE WITH WASHINGTON STATE AMENDMENTS
2. PLUMBING CODE: 2018 UNIFORM PLUMBING CODE WITH WASHINGTON STATE AMENDMENTS
3. MECHANICAL CODE: 2018 INTERNATIONAL MECHANICAL CODE WITH WASHINGTON STATE AMENDMENTS
4. ELECTRICAL CODE: 2020 NATIONAL ELECTRICAL CODE (NFPA 70 - 2020) INC. ANNEX A, B, AND C
5. FIRE/LIFE SAFETY: 2018 INTERNATIONAL FIRE CODE WITH WASHINGTON STATE AMENDMENTS
6. ENERGY: 2018 WASHINGTON STATE ENERGY CODE

DUCT INSULATION SCHEDULE

DUCT LOCATION AND USE	MATERIAL	MIN. DUCT R-VALUE	VAPOR RETARDER REQUIRED	NOTES
SUPPLY AIR DUCTS CONCEALED IN CONDITIONED SPACES	MINERAL-FIBER BLANKET	R-3.3	YES	PROVIDE INSULATION TO PREVENT CONDENSATION
SUPPLY AIR DUCTS EXPOSED IN CONDITIONED SPACES	NONE REQUIRED UNLESS NOTED OTHERWISE	N/A	NO	-
RETURN AIR DUCTS, CONCEALED OR EXPOSED WITHIN CONDITIONED SPACES	MINERAL-FIBER BLANKET	R-12	NO	*CLIMATE ZONE 5B*
OSA DUCTS CONCEALED OR EXPOSED WITH IN CONDITIONED SPACES (LESS THAN 2,800 CFM)	MINERAL-FIBER BLANKET	R-7	YES	MIN R-VALUE PER WSEC SECTION C403.2.8.1
ROUND & RECTANGULAR SUPPLY RETURN AND OSA DUCTS LOCATED OUTDOORS	CLOSED-CELL PHENOLIC FOAM	R-8	NO	FIELD APPLIED FOIL & PAPER JACKET. *CLIMATE ZONE 4C
ROUND & RECTANGULAR SUPPLY RETURN AND OSA DUCTS LOCATED OUTDOORS	CLOSED-CELL PHENOLIC FOAM	R-12	NO	FIELD APPLIED FOIL & PAPER JACKET. *CLIMATE ZONE 5C

NOTES:
DUCTWORK SHALL BE INSULATED PER WSEC C403.10.1.1 & C403.10.1.2

PIPE INSULATION SCHEDULE

FLUID TEMPERATURE RANGE (°F)	CONDUCTIVITY RANGE (IN BTU-IN/HR PER SQFT/°F)	INSULATION MEAN RATING TEMPERATURE (°F)		PIPE SIZE (IN. DIA.)				
				< 1	1 to < 1.5	1.5 to < 4	4 to < 8	8 and larger
				REQUIRED INSULATION THICKNESS (IN.)				
SPACE HEATING, HOT WATER SYSTEMS (STEAM, STEAM CONDENSATE AND HOT WATER) AND SERVICE WATER HEATING SYSTEMS								
ABOVE 350°	0.32 - 0.34	250°	INCHES	4.5	5.0	5.0	5.0	5.0
			R-VALUE	R-37	R-41	R-37	R-27	R-23
251° - 350°	0.29 - 0.32	200°	INCHES	3.0	4.0	4.5	4.5	4.5
			R-VALUE	R-24	R-34	R-35	R-26	R-22
201° - 250°	0.27 - 0.30	150°	INCHES	2.5	2.5	2.5	3.0	3.0
			R-VALUE	R-21	R-20	R-17.5	R-17	R-14.5
141° - 200°	0.25 - 0.29	125°	INCHES	1.5	1.5	2.0	2.0	2.0
			R-VALUE	R-11.5	R-11	R-14	R-11	R-10
105° - 140°	0.22 - 0.28	100°	INCHES	1.0	1.5	2.0	2.0	2.0
			R-VALUE	R-7.7	R-12.5	R-11	R-9	R-8
Space cooling systems (chilled water, refrigerant and brine)								
40° - 60°	0.21 - 0.27	75°	INCHES	NONRES 0.5 / RES 0.75	NONRES 0.5 / RES 0.75	1.0	1.0	1.0
			R-VALUE	NONRES R-3 / RES R-6	NONRES R-3 / RES R-5	R-7	R-6	R-5
BELOW 40°	0.20 - 0.26	50°	INCHES	1.0	1.5	1.5	1.5	1.5
			R-VALUE	R-8.5	R-14	R-12	R-10	R-9

NOTE: WHERE INSULATED PIPING IS EXPOSED OUTDOORS, IT SHALL BE COVERED. COVER OUTDOOR EXPOSED INSULATED PIPING WITH 0.016 INCH THICK CORRUGATED ALUMINUM JACKET. PROVIDE VALVE STEM EXTENSIONS SUCH THAT INSULATION IS NOT DAMAGED WHEN VALVE IS CYCLED

PIPE MATERIAL SCHEDULE

SERVICE	PIPE MATERIAL & WEIGHT	TYPE OF JOINTS	PRESSURE FITTINGS MATERIAL	SHUT-OFF RATINGS PSI - SwP	VALVE
COLD WATER ABV. GROUND	COPPER L TUBE	SOLDERED PRESS FIT	CAST BRONZE/ WROUGHT COPPER	125	BALL GATE CHECK
COLD WATER BELOW GROUND TO 5' OUTSIDE BUILDING	COPPER K TUBE	BRAZED	CAST BRONZE/ WROUGHT COPPER	125	BALL GATE
COLD WATER BELOW GROUND BEYOND 5'-0"	SCHEDULE 80 PVC	SOLVENT-WELD	PVC	125	GATE
HOT WATER ABV. GROUND	COPPER L TUBE	SOLDERED PRESS FIT	CAST BRONZE/ WROUGHT COPPER	125	BALL CHECK
VENT	NO-HUB CAST IRON	NO-HUB	N/A	N/A	N/A
WASTE, SOIL & ROOF DRAINS BELOW GRADE	SCH 40 PVC DWV SCHEDULE 40 ABS NO-HUB CAST IRON	SOLVENT-WELD NO-HUB	ABS N/A	N/A N/A	N/A N/A
WASTE, SOIL & ROOF DRAINS ABOVE GRADE	COPPER L TUBE NO-HUB CAST IRON	SOLDERED NO-HUB	BRONZE N/A	125 N/A	N/A N/A
CONDENSATE	COPPER L TUBE	SOLDERED	BRONZE	125	N/A

(MOTORIZED) SHUTOFF DAMPER REQUIREMENTS

OUTSIDE AIR SUPPLY, EXHAUST OPENINGS, RELIEF OUTLETS, STAIRWAY AND SHAFT VENTS AND RETURN OPENINGS USED FOR AIRSIDE ECONOMIZER SHALL BE PROVIDED WITH CLASS I MOTORIZED DAMPERS IN ACCORDANCE WITH THE WASHINGTON STATE ENERGY CODE C403.7.8.1 & C403.7.8.2. CLASS I DAMPERS SHALL HAVE A MAXIMUM LEAKAGE RATE OF 4 CFM/SQ.FT. @ 1.0" W.C. PER C403.7.8.3. AND SHALL BE LABELED BY AN APPROVE AGENCY. DAMPER ACTUATION SHALL BE PROVIDED IN ACCORDANCE WITH C403.7.8.4.

PLUMBING LEGEND AND SYMBOLS

SYMBOL	ABBREV.	DESCRIPTION
DETAIL No. / SHEET No.		DETAIL REFERENCE
EQUIPMENT ID. No.		EQUIPMENT REFERENCE
	CW	COLD WATER
	HW	HOT WATER
	HWR	HOT WATER RETURN
	-	POP-OFF DRAIN LINE OR HIDDEN WATER LINE
	S or W	SOIL or WASTE BELOW GRADE (or FLOOR)
	S or W	SOIL or WASTE ABOVE GRADE (or FLOOR)
	V	PLUMBING VENT
COND	COND	CONDENSATE DRAIN
G	G	GAS LOW PRESSURE
	BV	BALL VALVE
	SOV	SHUT OFF VALVE
	SOV or GC	SHUT OFF VALVE OR GAS COCK ON RISER
	CV	SWING CHECK VALVE
	PRV	PRESSURE REDUCING VALVE
	PTR	PRESSURE-TEMPERATURE RELIEF VALVE
	RPBFP	REDUCED PRESSURE BACKFLOW PREVENTER
	DN	PIPE DOWN
	UP	PIPE UP
	DN	TEE DOWN
	UP	TEE UP
		PIPE RISER & PIPE DROP (UP AND DOWN)
	FCO	FLOOR CLEANOUT
	WCO	WALL CLEANOUT
	CO	CLEANOUT PLUG
		CAP ON END OF PIPE
	HB	HOSE BIBB WITH VACUUM BREAKER
	WHA & TP	WATER HAMMER ARRESTOR & TRAP PRIMER
	GR	GAS REGULATOR
	GC	GAS COCK (or GAS STOP)
	GS	GAS SOLENOID
	P.O.C.	POINT OF CONNECTION
	P.O.D.	POINT OF DEMOLITION
	AP	ACCESS PANEL (WALL Or CEILING)
	ABV	ABOVE
	BEL	BELOW
	AGA	AMERICAN GAS ASSOCIATION
	CONN	CONNECTION
	CONT	CONTINUATION
	(E)	EXISTING
	(N)	NEW
	DN	DOWN
	ADA	AMERICAN DISABILITY ACT
	IE	INVERT ELEVATION
	(TYP)	TYPICAL
	U.O.N.	UNLESS OTHER NOTED
	VTR	VENT THROUGH ROOF
	W/	WITH
	FU	PLUMBING FIXTURE UNIT
	B.F.F.	BELOW FINISH FLOOR
	R.I.C.	ROUGH IN CONNECT

HOT WATER BRANCH LENGTH SCHEDULE

PIPE VOLUME AND MAXIMUM LENGTH IS BASED ON 2018 WASHINGTON STATE ENERGY CODE TABLE C404.3.1

PIPING VOLUME AND MAXIMUM PIPING LENGTH

NOMINAL PIPE SIZE	VOLUME (LIQUID OUNCES PER FT.)	MAXIMUM PIPING LENGTH (FT.)	
		PUBLIC LAVATORY FAUCETS	OTHER FIXTURES AND APPLIANCES
1/2"	1.5	2	43
3/4"	3	0.5	21
1"	5	0.5	13
1-1/4"	8	0.5	8
1-1/2"	11	0.5	6
2" & LARGER	18	0.5	4

AIR DISTRIBUTION SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER & MODEL NO.	FINISH	ACCESSORIES
CD-1	CEILING DIFFUSER	"TITUS" MODEL OMNI-AA	TO MATCH CEILING	-
CE/CR	CEILING REGISTER	"TITUS" MODEL PAR-AA	TO MATCH CEILING	-
SG	SUPPLY SIDEWALL GRILLE	"TITUS" MODEL 271FL	TO MATCH CEILING	PROVIDE LOW LOSS FITTING TO DUCT INLET SIZE AS INDICATED ON PLANS
RG	SUPPLY SIDEWALL GRILLE	"TITUS" MODEL 56FL	TO MATCH CEILING	PROVIDE LOW LOSS FITTING TO DUCT INLET SIZE AS INDICATED ON PLANS

(1) AT ALL HARD LID CEILINGS, CONTRACTOR SHALL PROVIDE FOR "MAT" CABLE DRIVEN DAMPERS. MODEL RT-150. CABLE SHALL BE ROUTED BEHIND GRILLE OPENING AND INSTALLED PER MANUFACTURER'S REQUIREMENTS.

(2) NO OPPOSED BLADE DAMPERS SHALL BE USED.

HVAC LEGEND AND SYMBOLS

SYMBOL	ABBREVIATIONS	DESCRIPTION
		SQ., RECT. OR ROUND DUCT AS NOTED
		DUCT WITH ACOUSTICAL LINER
		EXIST. DUCT OR EQUIP. TO REMAIN
		EXIST. DUCT OR EQUIP. TO BE REMOVED
		FLEXIBLE DUCT
	CD	CEILING DIFFUSER, SUPPLY
	CR / CE	CEILING REGISTER, RETURN & EXHAUST
	SD / SR	SIDE WALL DIFFUSER & SIDE WALL REGISTER
		SECTION THROUGH DUCT
		DUCT DOWN
		SQUARE TO ROUND TRANSITION
		DUCT ACCESS DOOR
		DUCT WITH TURNING VANES
DETAIL No. / SHEET No.		DETAIL REFERENCE
A / M-1		SECTION REFERENCE
EQUIPMENT ID. No.		EQUIPMENT REFERENCE
	SFD	COMBINATION SMOKE / FIRE DAMPER
	MVD	MANUAL VOLUME DAMPER
	OBD	OPPOSED BLADE DAMPER
		PARALLEL DAMPER
T	T'STAT	THERMOSTAT
CO2	CO2 SENSOR	CO2 SENSOR
T°	T'STAT & CO2 SENSOR	THERMOSTAT & CO2 SENSOR
BD		BACK DRAFT DAMPER
S		SWITCH
TC		TIME CLOCK
	A.F.F.	ABOVE FINISHED FLOOR
	CFM	CUBIC FEET OF AIR PER MINUTE
	CFMS	CFM SUPPLY
	CFMR	CFM RETURN
	CFME	CFM EXHAUST
	O.S.A.	OUTSIDE AIR
	(N)	NEW
	(E) OR EXIST.	EXISTING
	30/10	INDICATES OVAL DUCT (INCHES)
	30X10	INDICATES SQUARE DUCT (INCHES)
	10ø	INDICATES ROUND DUCT (INCHES)
	P.O.C	POINT OF CONNECTION
	P.O.D.	POINT OF DEMOLITION
M		MOTORIZED DAMPER
DX	REFR.	REFRIGERANT LINES

MECHANICAL SHEET INDEX

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SEQUIM SD #323
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REVISION SCHEDULE

#	ADDENDUM #1	08/22/23

JOB NO.	2022-080
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SHEET NAME
MECHANICAL LEGENDS & NOTES

SHEET NO.
M-0.1

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MECHANICAL & PLUMBING SCHEDULES

FAN COIL SCHEDULE

TAG	MANUFACTURER & MODEL NO.	AREA SERVED	CFM	E.S.P.	REFRIG. TYPE	ELECTRICAL			MIN OSA	OPER. WT. (LBS)	ANCHORAGE DETAIL REFERENCE	SMOKE DUCT DETECTOR	REMARKS (SEE EQUIPMENT NOTES BELOW)
						MCA	MOCP	V-PH-Hz					
FCU 1	MITSUBISHI PLFY-P05NFMU-E	ANTE ROOM	280	N/A	R-401A	0.24A	15A	208-1-60	2	29	7/M-3.1	N	1 2 3 4
FCU 2	MITSUBISHI PLFY-P12NFMU-E	SMALL CONF. RM	335	N/A	R-410A	0.29A	15A	208-1-60	2	32	7/M-3.1	N	1 2 3 4
FCU 3	MITSUBISHI PEFY-P30NMAU-E	BOARD ROOM	742	0.6	R-410A	2.49A	15A	208-1-60	2	67	7/M-3.1	N	1 2 3 4
FCU 4	MITSUBISHI PLFY-P08NFMU-E	OFFICE 203	315	N/A	R-410A	0.28A	15A	208-1-60	2	29	7/M-3.1	N	1 2 3 4
FCU 5	MITSUBISHI PLFY-P08NFMU-E	OFFICE 204	315	N/A	R-410A	0.28A	15A	208-1-60	2	29	7/M-3.1	N	1 2 3 4
FCU 6	MITSUBSHI PEFY-P24NMAU-E	OPEN OFFICE	671	0.6	R-410A	2.24A	15A	208-1-60	2	67	7/M-3.1	N	1 2 3 4

EQUIPMENT NOTES:

1. (1) NOTE REMOVED
2. (2) OSA TO BE PROVIDED BY ERV. REFER TO ERV SCHEDULE
3. (3) INSTALL UNITS AS SHOWN AND AS RECOMMENDED BY THE MANUFACTURER IN COMPLIANCE WITH LOCAL CODES
4. (4) BUILT IN CONDENSATE PUMP. PROVIDE OVERFLOW SWITCH

VRF OUTDOOR CONDENSER SCHEDULE

TAG	MANUFACTURER & MODEL NO.	DESIGN COOLING CONDITION				HEATING CAPACITY			ELECTRICAL			OPER. WT. (LBS)	ANCHORAGE DETAIL REFERENCE	REMARKS (SEE EQUIPMENT NOTES BELOW)
		AMBIENT DB/WB °F	TOTAL CAPACITY	-	EFF.	AMBIENT TEMP °F	OUTPUT CAPACITY	COP @ 47°F	MCA	MOCP	V-PH-Hz			
CU 1	MITSUBISHI TURY-H0964AN40AN	78.8 / 62.2	96,000 Btu/h	-	23.2 IEER 13.65 EER	25	108,000 Btu/h	2.28	20A	30A	460-3-60	538	1/M-3.1	1 2 3 4

EQUIPMENT NOTES:

1. (1) AHRI LISTED WITH ALL STANDARD FEATURES, INSTALLATION ACCESSORIES AND COMPRESSOR SHORT CYCLING PROTECTION. FILTER DRYER, REFRIGERANT LINE FILTER, LIQUID SOLENOID VALVE, AND SAFETY PRESSURE SWITCHES. INSTALL REFRIGERANT LINE TUBING AND LENGTH IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
2. (2) ROUTING OF REFRIGERANT LINES FROM INDOOR UNIT TO OUTDOOR UNIT NOT SHOWN ON PLANS. CONTRACTOR TO FIELD COORDINATE.
3. (3) REFRIGERANT SHALL BE R-410A
4. (4) PROVIDE ALL REQUIRED ACCESSORIES FOR LONG LENGTH APPLICATION IF REQUIRED

ENERGY RECOVERY VENTILATOR UNIT SCHEDULE

TAG	MANUFACTURER & MODEL NO.	LOCATION	AREA SERVED	SUPPLY FAN		EXHAUST FAN		MOTOR DATA					RECOVERY RATIO SUM/WIN	SUMMER EAT DB/WB (°F)	SUMMER LAT DB/WB (°F)	WINTER EAT DB/WB (°F)	WINTER LAT DB/WB (°F)	FILTERS	ACCESSORIES	OPERATIONAL WEIGHT	SOUND DATA (SONES)	ANCHORAGE DETAIL REFERENCE
				MIN. CFM	TSP	MIN. CFM	TSP	HP	RPM	MCA	MOCP	V-PH-HZ						MIN. MERV				
ERV 1	GREENHECK MINIVENT-750-VG	LEVEL 1	BOARD, ANTE, SMALL CONF. RM	600	0.4"	600	0.4"	SUP: 3/4 EXH: 3/4	SUP: 1,041 EXH: 1,187	12.4 A	15.0 A	208-1Ø-60	78% / 78%	78.8° / 62.2°	75.7° / 56.5°	24.7° / 20.7°	62.1° / 47.1°	8	FIBER MEMBRANE ENERGY RECOVERY CORE W/ LOW LEAKAGE OUTDOOR AIR DAMPER, LOW LEAKAGE RETURN AIR DAMPER, FROST CONTROL, SPEED CONTROL- MOTOR POTENTIOMETER	240 lbs	17.9 SUPPLY 6.6 EXHAUST	7/M-3.1
ERV 2	PANASONIC FV-10VEC2	LEVEL 2	OFFICES	100	0.4"	100	0.4"	SUP: 3/4 EXH: 3/4	SUP: 1,725 EXH: 1,725	12.4 A	15.0 A	120-1Ø-60	60% / 73%	78.8° / 62.2°	-° / -°	24.7° / 20.7°	-° / -°	8	FIBER MEMBRANE ENERGY RECOVERY CORE W/ LOW LEAKAGE OUTDOOR AIR DAMPER, LOW LEAKAGE RETURN AIR DAMPER, FROST CONTROL, SPEED CONTROL- MOTOR POTENTIOMETER	58 lbs	<0.3 SUPPLY <0.3 EXHAUST	7/M-3.1

1. (1) ERV TO OPERATE CONTINUOUSLY.

PLUMBING FIXTURE SCHEDULE

SYMBOL	SPECIFICATION	CONNECTION SIZE:					
		WASTE	TRAP	VENT	CW	HW	ELEC.
UR 1	URINAL: KOHLER "BARDON" K-4991-ETSS, HIGH EFFICIENCY URINAL, ADA 17". 14" EXTENDED RIM, WHITE VITREOUS CHINA. JOSAM 17560-UR. URINAL CARRIER FLOOR MOUNTED BEARING PLATE TYPE. EXISTING CW TO BE CONNECTED TO URINAL.	2	1-1/2"	1-1/2"	3/4"	-	-
DF 1	DRINKING FOUNTAIN: ELKAY ENHANCED EZH2O BOTTLE FILING STATION & SINGLE ADA COOLER. LIGHT GREY GRANITE FINISH, FLEXI-GUARD SAFETY BUBBLER, ELECTRONIC BOTTLE FILLER SENSOR WITH ELECTRONIC FRONT AND SIDE BUBBLER PUSHBAR. 8.0 GPH CHILLING CAPACITY.	2"	1-1/2"	1-1/2"	1/2"	-	115V 60HZ 5A (1)

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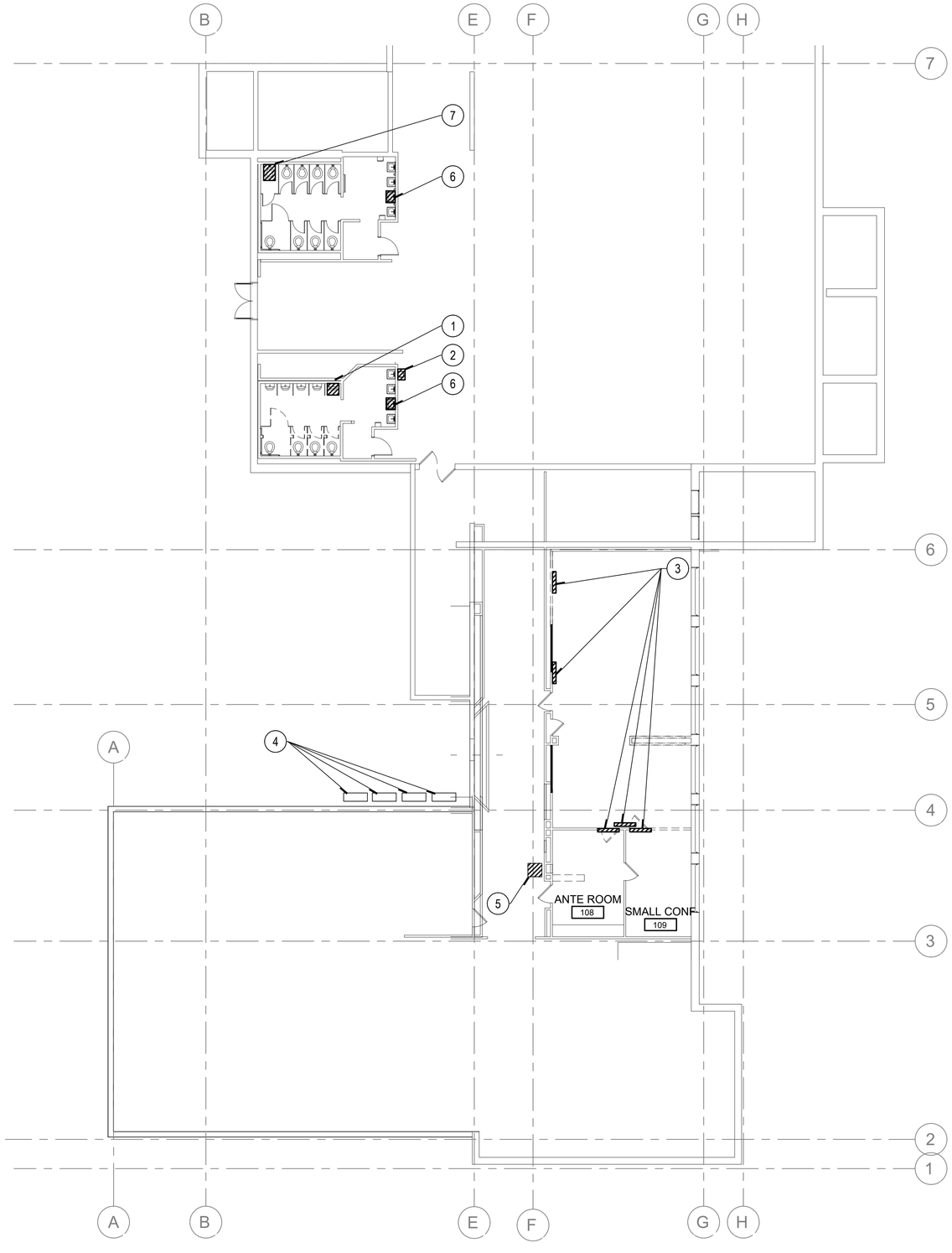
SHEET NAME
MECHANICAL SCHEDULES

SHEET NO.
M-0.2

R:_PROJECT\2022\22-080 SEQUIM SCHOOL DISTRICT BOARD ROOM\22-080 M-FRONT - 2023-08-24 - COLIN GOULET



GENERAL NOTES

1. ALL EQUIPMENT, PIPING, DUCTWORK, CONTROLS AND/OR WIRING SHOWN IS A REPRESENTATION OF THE ACTUAL SYSTEMS AND IS NOT TO BE CONSIDERED AN AS-BUILT. ALL DIMENSIONS, LOCATIONS AND QUANTITIES SHALL BE FIELD VERIFIED PRIOR TO THE COMMENCEMENT OF DEMOLITION OR NEW CONSTRUCTION.
2. UPON REMOVAL OF EXISTING EQUIPMENT, PIPING, DUCTWORK, ETC., THE CONSTRACTOR SHALL PATCH ANY EXISTING ROOF, WALL, FLOOR, AND/OR CEILING ASSEMBLIES. REFER TO ARCHITECTURAL DEMOLITION DRAWINGS FOR ADDITIONAL INFORMATION AND COORDINATION ITEMS.
3. CONTRACTOR SHALL COORDINATE WITH OWNER ANY SHUTDOWN OF SERVICES, SUCH AS GAS AND WATER, PRIOR TO ANY WORK BEING PERFORMED. EXTENT OF SHUTDOWN SHALL BE COORDINATED WITH ARCHITECT, OWNER'S REP, AND OCCUPANTS.
4. ALL MATERIALS REMOVED UNDER DEMOLITION PHASE SHALL BE DISPOSED OF OFF SITE.
5. CONTRACTOR TO VERIFY LOCATION FOR STORAGE OF EXISTING MITSUBISHI HIGH WALL FAN COILS WITH OWNER'S REP.

CONSTRUCTION NOTES

1. (E) URINAL TO BE REPLACED WITH ADA COMPLIANT URINAL
2. (E) DRINKING FOUNTAIN TO BE REMOVED AND REPLACED WITH ADA COMPLIANT DRINKING FOUNTAIN WITH BOTTLE FILLER
3. APPROXIMATE LOCATION OF (E) HIGH WALL MITSUBISHI SPLIT UNITS. CONTRACTOR TO DETERMINE CONDITION OF INTERIOR SPLIT UNITS. OPERABLE UNITS TO BE STORED WITH OWNER FOR RELOCATION FOR FUTURE OFFICES. (TYP.)
4. (E) MITSUBISHI CONDENSERS TO REMAIN
5. (E) CORRIDOR HEATER TO BE REMOVED. STORE WITH OWNER.
6. (E) SINK TO BE REMOVED AND LOWERED. REF ARCHITECTURAL SHEET A1.4.
7. (E) WATER CLOSET TO BE REMOVED AND LOWERED. REF. ARCH SHEET A1.4.

NORTH

MECHANICAL FIRST FLOOR REMODEL PLAN | SCALE: 1/8" = 1'-0" | 1

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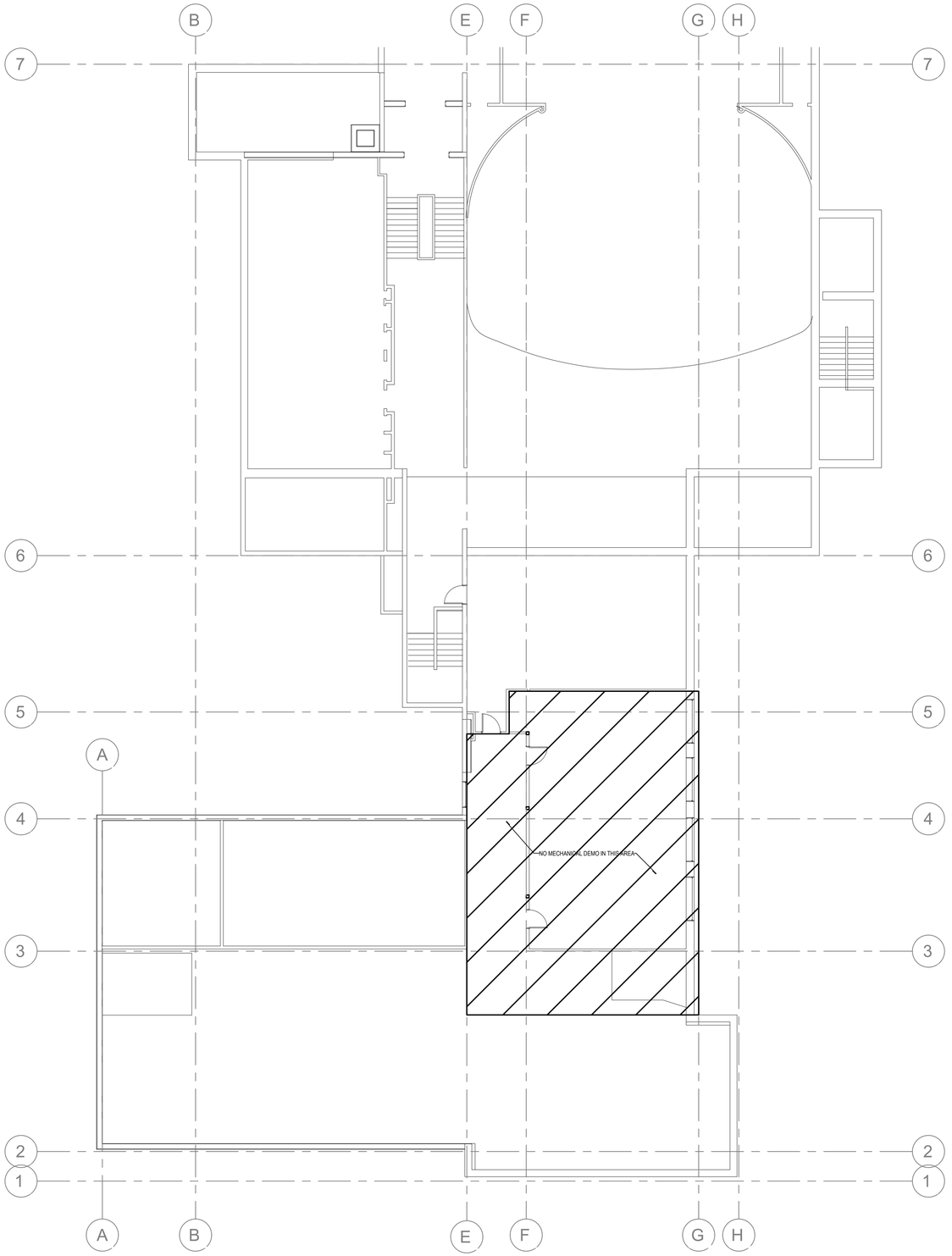

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5. CONTRACTOR TO VERIFY LOCATION FOR STORAGE OF EXISTING MITSUBISHI HIGH WALL FAN COILS WITH OWNER'S REP.

CONSTRUCTION NOTES

NORTH

MECHANICAL SECOND FLOOR REMODEL PLAN | SCALE: 1/8" = 1'-0" | 1

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SHEET NAME
MECHANICAL SECOND FLOOR REMODEL PLAN

SHEET NO.
M-1.2

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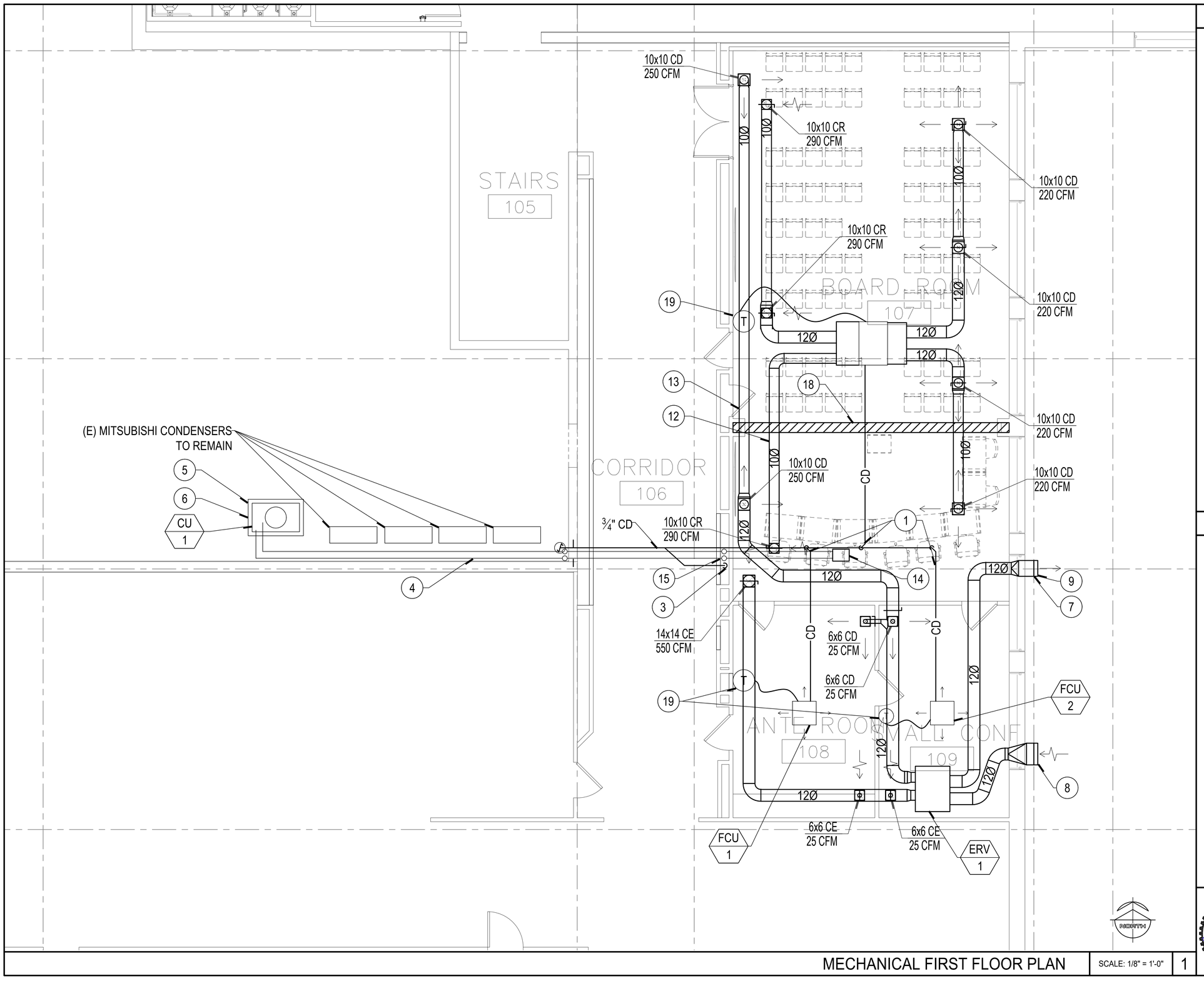

GENERAL NOTES

1. FOR LINE TYPES, SYMBOLS & ABBREVIATIONS SEE LEGEND ON SHEET M0.1.
2. ALL SPIN-IN OR TAP TYPE DUCT CONNECTIONS SHALL BE PROVIDED WITH AN EXTRACTOR.
3. T-STATS SHALL NOT BE MOUNTED IN DIRECT LINE OF ANY SUPPLY DIFFUSER OR NEAR ANY HEAT REJECTION EQUIPMENT.
4. DUCT DIMENSIONS ARE INSIDE CLEAR, ADD AN ADDITIONAL 3" MINIMUM FOR R-8 DUCT INSULATION. SIZES MAY CHANGE PER MANUFACTURER
5. ALL DUCTWORK SHALL BE HARD DUCT. FLEX DUCT MAY BE USED ONLY AT SUPPLY & RETURN OUTLETS AT A MAX. LENGTH OF 5'-0".
6. ALL VENTING SHALL HAVE A MIN. OF 10' CLEARANCE FROM ANY FORCED AIR INLET W/ A MIN. OF 3' CLEARANCE ABOVE & A MIN OF 4' CLEARANCE FROM ANY PROPERTY LINE EXCEPT A PUBLIC WAY.
7. ALL DUCTWORK SHALL BE MOUNTED HIGH AND TIGHT TO ROOF STRUCTURE AS POSSIBLE.
8. PROVIDE 1" ACOUSTICAL LINING IN ALL DUCTWORK WITHIN 10 FEET OF ALL AIR MOVING EQUIPMENT. PROVIDE DURO-DYNE FLEXIBLE CONNECTION AT ALL DUCT AT EQUIPMENT LOCATIONS.
9. ALL THERMOSTATS SHALL BE PROGRAMMED TO RUN IN FAN MODE DURING OCCUPIED HOURS AND SHALL COORDINATE HOURS WITH OWNER. COOLING/ HEATING MODE SHALL RUN AS NEED, PER TEMPERATURE SET POINT AND OCCUPANT LOAD.
10. CONTRACTOR SHALL PROVIDE NEW LOW-VOLTAGE WIRING FOR NEW THERMOSTATS.
11. PROVIDE HARDWIRED CONNECTION TO ERV
12. INSULATE BOTH SUPPLY AND RETURN DUCTING OF ERV PER PER THE REQUIREMENTS OF TABLE C403.10.1.1 AND C403.10.1.2 OF THE WASHINGTON STATE ENERGY CODE
13. FOR DUCT SUPPORT, SEE DETAIL 2&4/M4.01
14. FOR T'STAT, SEE DETAIL 1/M4.01

CONSTRUCTION NOTES

1. 3/4" CONDENSATE TO TRANSITION TO GRAVITY PRIOR TO COMBINATION (TYP.)
2. 3/4" CONDENSATE TO L1
3. 3/4" CONDENSATE FROM L2. TERMINATE TO EXISTING STORMWATER DRYWELL.
4. DX LINESETS TO BE RAN 12" ABOVE GRADE IN CONDUIT. LINESET TO PENETRATE BUILDING AT CEILING OF CORRIDOR.
5. PROVIDE 4" CONCRETE HOUSEKEEPING PAD. REF DETAIL 1/M3.1.
6. PROVIDE LEVEL, COMPACTED BASE FOR HOUSEKEEPING PAD
7. ERV INTAKE/EXHAUST LOCATED ABOVE TOP OF WINDOW
8. 22x22 INTAKE LOUVER. MINIMUM 50% FREE AREA.
9. 16x16 EXHAUST LOUVER. MINIMUM 50% FREE AREA.
10. 10x10 INTAKE LOUVER. MINIMUM 50% FREE AREA.
11. 8x8 EXHAUST LOUVER. MINIMUM 50% FREE AREA.
12. FLATTEN DUCTWORK AS NEEDED TO CROSS BEAM (TYP.)
13. PROVIDE LOUVERED DOOR.
14. BRANCH CONTROLLER LOCATED IN CEILING OF LEVEL 1.
15. DX BRANCH TO LEVEL 2 BRANCH CONTROLLER.
16. DX BRANCH UP FROM LEVEL 1.
17. BRANCH CONTROLLER LOCATED IN CEILING OF LEVEL 2.
18. APPROXIMATE LOCATION OF BEAM. CONTRACTOR TO VERIFY.
19. REF. DETAIL 9 ON SHEET M-3.1

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M-2.1

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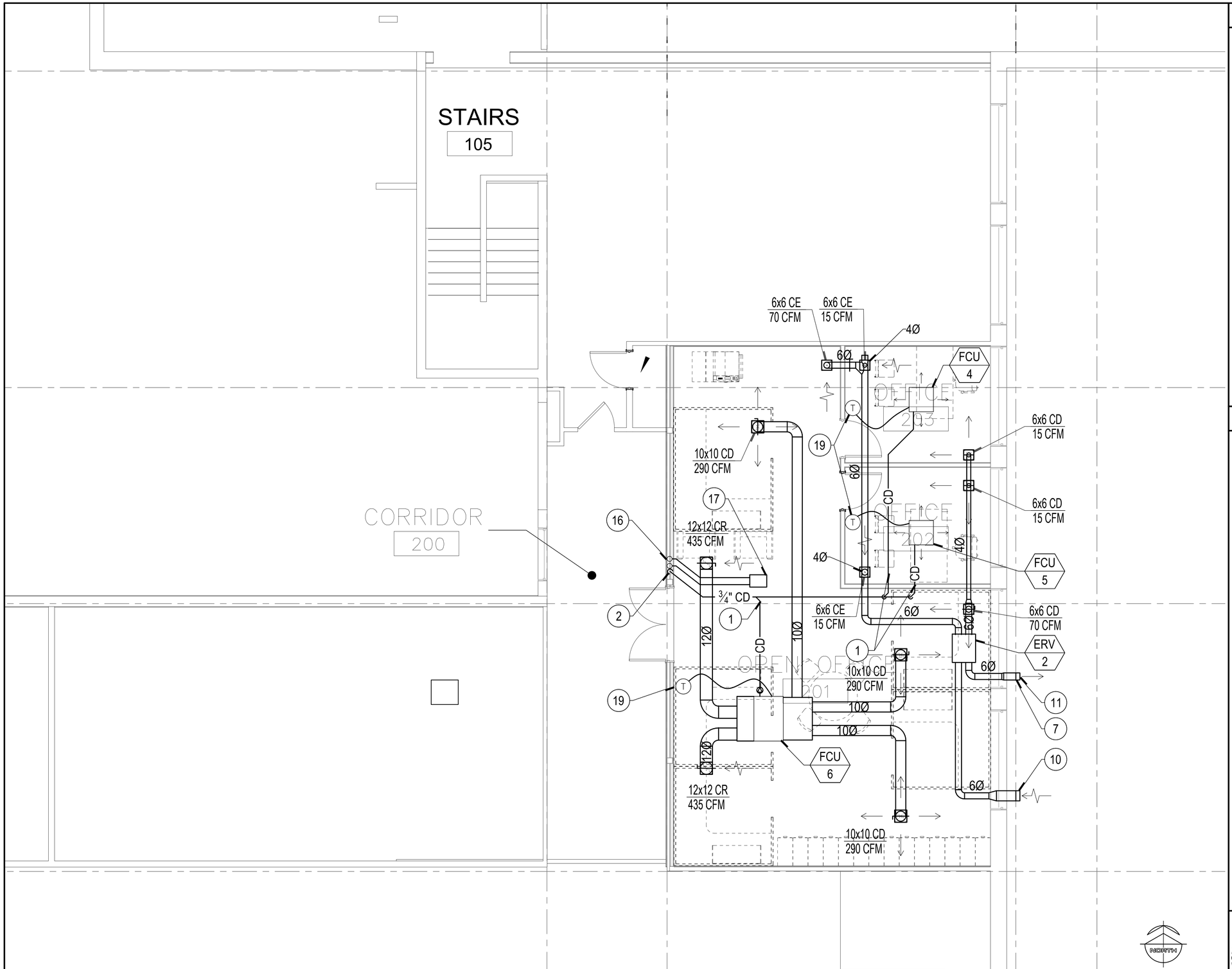

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18. APPROXIMATE LOCATION OF BEAM. CONTRACTOR TO VERIFY.
19. REF. DETAIL 9 ON SHEET M-3.1

MECHANICAL SECOND FLOOR PLAN | SCALE: 1/8" = 1'-0" | 1

design2LAST INC.
543 Main St. Suite 101
Edmonds, WA 98020
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1

SEQUIM SD #323
Office Board Room & 2nd Floor Office Remodel
503 N Sequim Ave, Sequim, WA 98382

REVISION SCHEDULE

#		
1	ADDENDUM #1	08/22/23

JOB NO.	2022-080
DATE	08-23-2023
DRAWN	KN
REVIEWED	RH

SHEET NAME
MECHANICAL SECOND FLOOR PLAN

SHEET NO.
M-2.2

STEVEN M. JOHNSON
STATE OF WASHINGTON
46776
REGISTERED PROFESSIONAL ENGINEER

110 James St., Suite 106
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Phone: 425.458.9700
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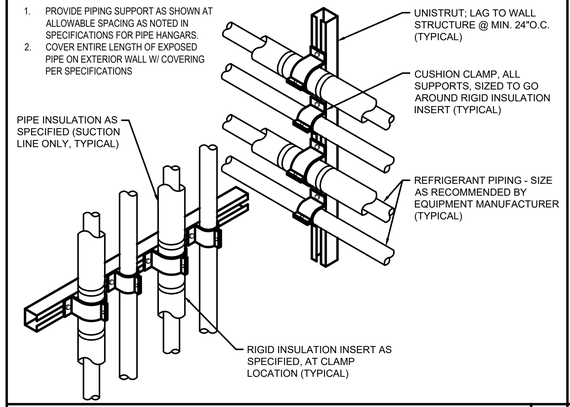
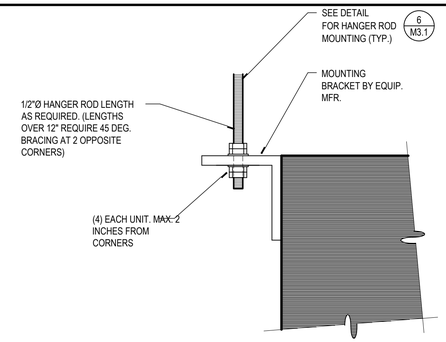
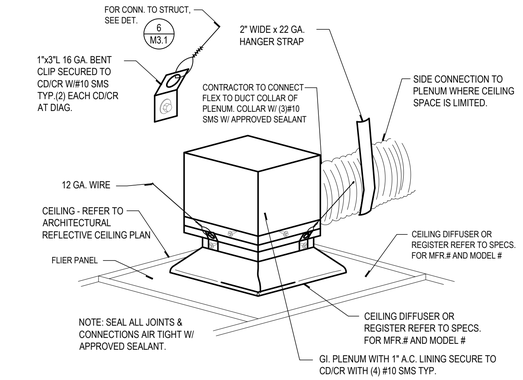
DESIGN WEST ENGINEERING
MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS



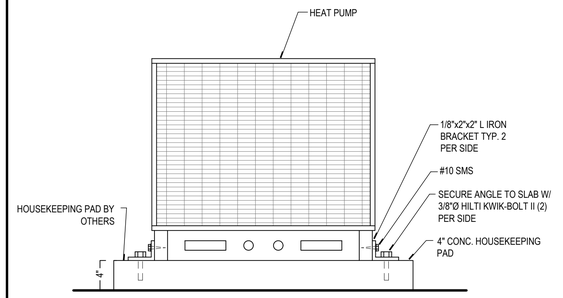
VERTICAL DX PIPING RACK | 10



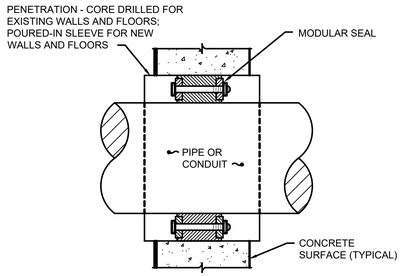
EQUIPMENT MOUNTING DETAIL | 7



AIR DISTRIBUTION - RND SIDE CONNECT | 4



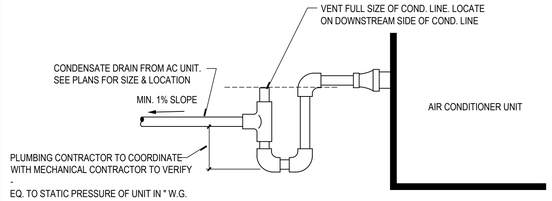
HP MOUNTING DETAIL | 1



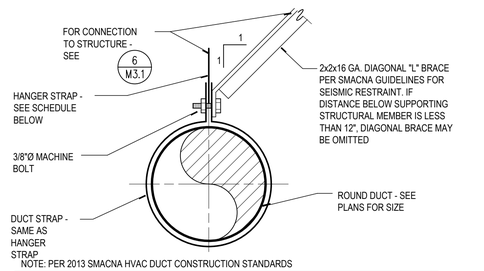
NOTES:

1. CONTRACTOR TO VERIFY OUTSIDE DIAMETER OF PIPE AND ADJUST HOLE SIZE AND THE NUMBER OF LINKS.

PIPING THROUGH WALL OR FLOOR | 11



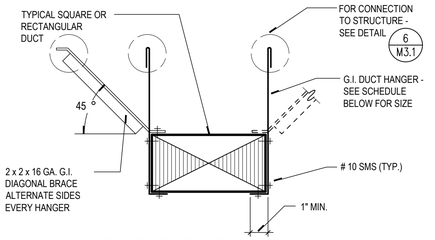
FCU CONDENSATE CONNECTION | 8



NOTE: PER 2013 SMACNA HVAC DUCT CONSTRUCTION STANDARDS

HORIZONTAL	HANGER STRAP SCHEDULE		
DUCT SIZE	HANGER SIZE	MAX. SPACING	MATERIAL
UP THRU 10"	1" x 22 GA.	10'-0" O/C	G.I. STEEL
11" TO 20"	1" x 22 GA.	10'-0" O/C	G.I. STEEL
21" TO 40"	1" x 20 GA.	10'-0" O/C	G.I. STEEL
DUCT SIZE	HANGER SIZE	MAX. SPACING	MATERIAL
UP THRU 10"	2" x 18 GA.	12'-0" O/C	G.I. STEEL
11" TO 20"	2" x 16 GA.	12'-0" O/C	G.I. STEEL
21" TO 40"	1/8" STEEL X 1-1/2"	12'-0" O/C	G.I. STEEL

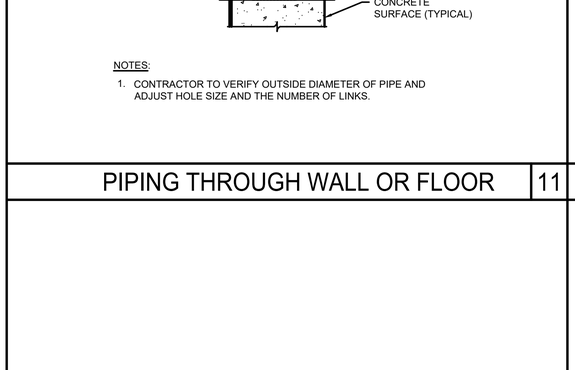
RND - DUCT STRAP DETAIL | 5



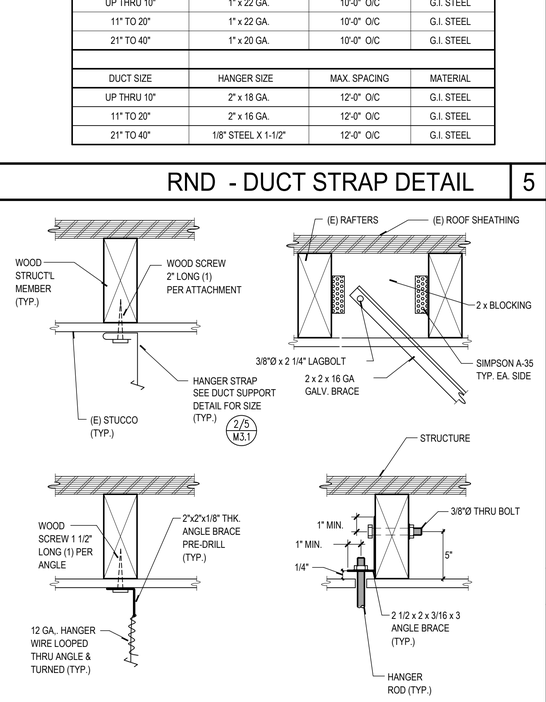
NOTE: PER 2013 SMACNA HVAC DUCT CONSTRUCTION STANDARDS

HORIZONTAL	HANGER STRAP SCHEDULE		
DUCT SIZE	HANGER SIZE	MAX. SPACING	MATERIAL
49" TO 60"	1" x 1/8"	10'-0" O/C	G.I. STEEL
61" TO 79"	1" x 1/8"	10'-0" O/C	G.I. STEEL
VERTICAL			
DUCT SIZE	HANGER SIZE	MAX. SPACING	MATERIAL
49" TO 59"	1-1/8" x 1-1/8" x 1/8" ANGLE	12'-0" O/C	G.I. STEEL
60"	1-1/2" x 1-1/2" x 1/8" ANGLE	12'-0" O/C	G.I. STEEL
OVER 60"	2" x 2" x 1/8" ANGLE	12'-0" O/C	G.I. STEEL

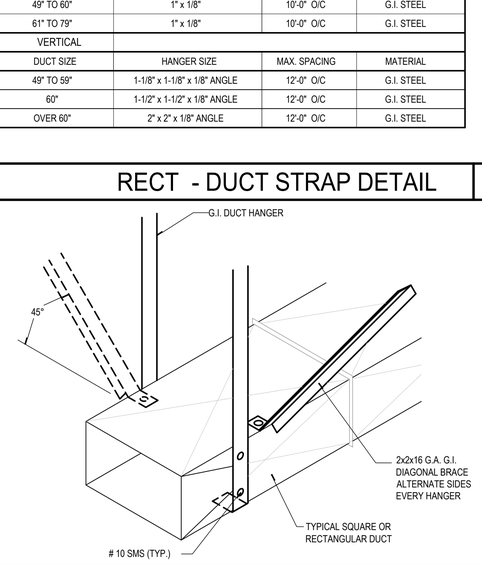
RECT - DUCT STRAP DETAIL | 2



T-STAT MOUNTING | 9



CONNECTION TO WOOD RAFTERS | 6



RECT. DUCT SUPPORT DETAIL | 3

- | 12

STEVEN M. JOHNSON
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SHEET NAME
MECHANICAL DETAILS

SHEET NO.
M-3.1

22-080

SECTION 23 00 10
GENERAL HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC) REQUIREMENTS

PART 1 GENERAL
1.01 GENERAL
A. Conform to General Conditions, Supplementary Conditions, and Division 01.
B. This section of the specification applies to the entire mechanical work, both interior and exterior, as specified herein after and shown on the plans.
1.02 DEFINITIONS
A. The term "approved equal" means final approval by the Owner's representative of a material or piece of equipment substituted for that which is shown in the specifications or plans.
B. The term "provide" means the furnishing and installing of equipment (including connections and appurtenances) complete and ready for use.
C. The term "Mechanical Contractor (MC)" and "Electrical Contractor (EC)" as used in these Specifications or on the Contract Drawings, refers to those subcontractors working under the direction of the "General Contractor (GC)."
1.03 INTENT OF DRAWINGS
A. The drawings are diagrammatic and do not show the exact details and locations, nor all offsets in ductwork. Contractor shall provide additional fittings, offsets and extensions in ductwork and related mechanical insulation as required to meet the intent of the documents. Contractor shall include in his bid provisions to relocate or shift piping and ductwork where conflicts exist with Structural, Architectural, or Electrical.
B. Refer to the complete set of Architectural, Structural, and Electrical Plans and Specifications for additional details of the work. Review Plans and Specifications of other trades to identify other requirements. Discrepancies shall be reported to the Owner's representative immediately before ordering material or beginning work.
1.04 COORDINATION
A. Examine the Architectural, Structural and Electrical drawings before work is started. Consult with each of the other Contractors regarding locations and spaces required for work and lay out work to avoid interference. Maximum clearance shall be maintained for service access and maintenance of all equipment. Failure to coordinate shall be justification to require Contractor, at his own expense, to move his work to provide the necessary space for the other contractors.
B. Mechanical systems have space priority as follows, listed with highest priority first: Graded Drainage Piping, then Ductwork, Drainage Vents, Domestic Water Piping, and Natural Gas Piping. MC to make certain that priority access is maintained. This shall be coordinated by the GC and MC without assistance from Owner's representative, Engineer, or Architect.
C. Contractor shall be responsible for his own coordination between all other trades. Development of Shop Drawings shall be a collaborative effort between the General Contractor, Mechanical Contractor, Electrical Contractor and all other subcontractors working on the project. Shifting of piping, ductwork and other mechanical items shall be the responsibility of the Team to maintain the intent of the documents. Submit shop drawings to the Owner's representative.
D. Detail Drawings By Contractor: Whenever the Contractor's work is of sufficient complexity to warrant additional detailing, or when requested by the Owner's representative, this contractor shall prepare additional detail drawings to scale 1/4" = 1' on paper same size as Contract Drawings and with these layouts, coordinate this work with the work of other trades. Such detail work shall be clearly identified on the drawings as to the area to which it applies. Do not submit these drawings for approval. At completion, include a set of such drawings with each set of As-Built Drawings for Owner's record purposes.
1.05 WORK IN OTHER SECTIONS
A. Drawings and General Provisions of the Contract, including General and Special Conditions and Division 01 Specification Sections, apply to this Section.
1.06CODES AND REFERENCES
A. Codes and Standards listed shall be the most current issue as adopted by the Local Jurisdiction. In the event of a conflict of codes, the most stringent code will apply.
1. International Building Code (IBC)
2. International Mechanical Code (IMC)
3. Washington State Energy Code (WSEC)
4. SMACNA Duct Construction Standards, Metal and Flexible
1.07 PERMITS AND FEES
A. Obtain and pay for all permits, licenses and construction or utility fees. Furnish final certificate to Owner showing compliance with code requirements.
1.08 SCHEDULING
A. Comply with requirements of General Specifications.
1.09 PRIOR APPROVALS
A. Specifications have been written around equipment and material selected for this project based on quality, size, capacity, and performance required to meet building design criteria. Any equipment and/or material used in this project, that is not as specified, must have prior approval from the Owner's representative.
B. Request for Approval must be submitted with substitution request form included in Division 0 to Owner's representative, a minimum of 10 calendar days prior to bid date. This letter shall be accompanied with complete information regarding items to be substituted. If supplier requires a reply to the request for approval, he is to send self-addressed, stamped envelope with request.
C. Those items that receive prior approval, will be listed in the Mechanical Addenda.
D. Supplier, and/or Mechanical Contractor, shall be responsible for ensuring that substituted material or equipment is of the same size, quality, capacity, weight, and electrical characteristics as that specified. Any changes and costs required during construction, due to contractor's/supplier's neglect to properly select substituted equipment, shall be paid by the contractor/supplier.
E. Prior approval to bid does not mean automatic final approval of material or equipment by the Owner's representative. Final approval will be given after final submittal data has been presented to Owner's representative, with complete information regarding weights, capacities, size, electrical requirements and quality.
1.10 MATERIAL AND MATERIAL SUBMITTALS
A. All material used on the project shall be new material and free from defects. This Contractor shall submit catalog data and engineering data on all equipment as specified or having received prior approval.
B. Material and equipment specified is designated by various manufacturer's catalog numbers. Acceptable alternate manufacturers are also listed. Such manufacturers are exempt from the 10-day prior approval clause of these specifications, but must submit standard submittal data for final approval as otherwise noted.
C. Submittal shall be arranged in numerical order, according to specification section number and item number. Submittal shall be bound in hard cover, loose-leaf binder(s).
D. Submittal shall be as follows: Before ordering or installing any of the materials, this Contractor shall submit copies of complete information on the materials to be used on the project. Submittal may be electronic or in hard copy. If contractor chooses to submit printed copies, he shall provide five copies to the Owner's representative. Submittal shall include, but not be limited to, the following.
1. Contractor's Cost Breakdown
2. Complete List of Subcontractors and Suppliers
3. HVAC Insulation
4. All Air-Handling Equipment
5. Air Filters
6. HVAC Ductwork
7. Tests and Adjustments - Air and Hydronic Balancing
E. Owner's representative's review of submittals is for general conformance with the design concept and Contract Documents. Marking or comments shall not be construed as relieving the Contractor from compliance with the project Pans and Specifications, nor departures therefrom. The Contractor remains responsible for details and accuracy for confirming and correlating all quantities and assembly and for safe performance of his work.
F. The Owner's representative will return one set, electronic or printed copy, of this submittal to the contractor showing any corrections, additions, and/or deletions. If the Contractor needs additional printed copies, he shall photocopy his approved copy of the required items. This Contractor shall resubmit those items that need to be corrected or added.
1.11 CONTRACTOR'S COST BREAKDOWN
A. Mechanical Contractor shall submit, with the bound submittals, a cost breakdown of the major portions of his work, pursuant to the following outline.
1. Job organization and submittals.
2. HVAC Equipment, including air handling units, and fans.
3. HVAC ductwork and air terminals.
4. Tests and adjustments - air balance.
1.12 RECORD (AS-BUILT) DRAWINGS
A. This Contractor shall maintain a set of Contract Drawings at the site on which the actual installed location of piping, equipment, etc., shall be shown in a legible, neat manner. This set of plans shall show actual dimensions (including depth of bury) of underground piping from construction lines, so they can be readily found after covering. Upon completion of the project, the as-built information shall be transformed into AutoCad version 2007 or greater. Record drawings shall be the same size as contract drawings. This set of plans shall be submitted for final approval. Drawings shall be one full size set, one half size set and on CD in PDF and .dwg format. The contractor shall be ready for review of the on-site as-builts monthly prior to submitting his billing. Failure to have drawings available for review may delay monthly billings.
1.13 OPERATING INSTRUCTIONS
A. Operate all systems through complete cycles in the presence of designated Owner's representative. Give instructions for operation, care and maintenance. All systems shall be operated through complete operating cycles for a minimum period of 7 days in conjunction with the designated Owner's representative before acceptance.
1.14 TRAINING
A. The Mechanical Contractor shall digitally record all Owner Mechanical training sessions and shall provide copies on DVDs. Training sessions shall be provided for all mechanical systems. Three copies of these DVDs shall be turned over to the Owner at the completion of the project.
1.15 OPERATION AND MAINTENANCE MANUALS (O&Ms)
A. General: Provide one preliminary bound set of Operation and Maintenance Manuals including maintenance information and parts list furnished by the manufacturer with the equipment, together with supplementary drawings where necessary, to itemize serving and maintenance points. Include the Valve Tag list as posted in the Mechanical spaces. Include filter maintenance, methods of operation, seasonal requirements, manufacturer's data and warranty forms. Warranty forms are to be located in the front of the manuals as well as in each applicable specific section. Provide address and 24-hour phone number of the firms responsible under warranty. Items requiring service or correction during the warranty period shall be serviced within 24 hours of notification by Owner. Data in manuals shall be neat, clean copies, posted on 8-1/2" x 11" sheets, with operation and maintenance instructions for each item of equipment installed. Drawings shall be accordion folded. An index shall be provided with all contents listed in an orderly presentation according to specification section.
B. Number of Copies: A preliminary set of the O&M Manuals shall be submitted for approval. After this set has been approved, two additional sets shall be prepared and the three sets shall be transmitted to the Owner's representative.
C. Binding: Organize operating and maintenance data into suitable sets of manageable size. Copies shall be submitted in 3-ring binders. Covers shall include the name of the Job, Owner, Architect, Engineer, Contractor, and the year of completion. The back edge of the binder shall include a label with the name of the Job, the Owner and the year completed. Each copy shall have a typewritten index and tabbed dividers between equipment categories. Binders to be no more than 80% full; binders that are over 80% full will be sent back for dividing into additional binders.
1.16 CERTIFICATIONS
A. Provide written certification that work has been fully completed in strict accordance with Plans and Specifications and request final inspection.
B. Provide written certification that Contractor will replace materials and workmanship that prove defective for one (1) year after date of acceptance or extended warranty as listed in individual sections.
C. Provide written certification of inspection from the Authority Having Jurisdiction, stating that all work has been inspected, accepted, and approved as complying with existing governing ordinances and codes.
D. Provide written certification that Owner's representative has been fully instructed in the operation and function of all mechanical systems.
E. Provide copies of certification in the O & M Manuals.
1.17 DOCUMENTS
A. Present the following documents to the Owner's representative prior to final acceptance of buildings. Final payment of the Contract will be contingent upon receiving these documents:
1. Record (as-built) drawings.
2. Operation and Maintenance Manuals (3 sets).
3. Final material submittal.
4. Warranties and Extended Warranties.
5. Approved Final Balancing logs. (Air and Hydronic Systems) (3 sets).
6. Final certificates of inspection and code compliance.
7. All applicable forms required by these specifications.
B. Provide copies of the above documents in O & M Manuals.
1.18 WARRANTY
A. All mechanical equipment and systems including Heating, Ventilating, and Air Conditioning systems, including controls and all parts thereof, shall be warranted (parts and labor), for a period of one (1) year after the date of substantial completion as determined by the documentation.
B. Contractor shall repair or replace to the satisfaction of the Owner's representatives any defective material, equipment, or poor workmanship, which may show itself during this warranty period.
C. All compressors used in HVAC equipment shall have an additional four-year parts warranty.
D. Controls shall be warranted for two (2) years total parts and labor, from date of final acceptance.
E. Test and Balance shall be warranted for two (2) years total, from date of final acceptance.
1.19 REQUIREMENTS PRIOR TO OCCUPANCY - OFF-GASSING AND BAKE-OUT
A. Mechanical Contractor shall provide in his bid provisions for Off-Gassing and Bake-out of new materials installed in this contract. HVAC systems shall be run continuously for a minimum of two (2) week period prior to occupancy, at the completion of each area of the project. HVAC systems shall maintain a constant temperature of 70 to 78 degrees F, in all zones at 60% minimum outside air. Coordinate this requirement with the General Contractor.
1.20 MECHANICAL ACOUSTICAL REQUIREMENTS
A. The noise criteria (NC) end resultant for each space shall be per Code as adopted by Local Jurisdiction.

SECTION 23 00 20
BASIC MATERIALS AND METHODS FOR HEATING, VENTILATING, AND AIR-CONDITIONING

PART 1 GENERAL
1.01 WORK INCLUDES
A. General requirements for basic materials and methods.
1.02 REFERENCES
A. American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE).
B. "Seismic Restraint Manual Guidelines for Mechanical Systems" by Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA).
PART 2 PRODUCTS
2.01 GENERAL
A. See specific sections for this requirement.
2.02 PRODUCT TESTING
A. Any piece of equipment used in this project and hereinafter specified which, by its nature, requires electrical connection, such as fans, pumps, air handling equipment, etc., must be provided with an approval label from one of the agencies hereinafter listed.
B. Approval of agency must be for the total package; approval of individual components not acceptable. All labels must be located outside of equipment and shall be visible to inspector. Comply with all requirements of RCW 19.28.010 and NEC Sections 90-7 and 110-3 (1993).
C. It shall be the responsibility of the Mechanical Contractor or the equipment supplier to meet the requirements of this section. Any agency costs to provide an appropriate label for a piece of equipment must be included in this bid. Failure by Mechanical Contractor or supplier to obtain approval labels prior to bid shall be sufficient cause for the Mechanical Contractor/supplier to obtain all such labels at no additional cost to Owner. The following is a list of approval testing laboratories:
1. Underwriters Laboratories, Inc., www.ul.com
2.03 DAMAGED OR REJECTED MATERIALS
A. Remove from the site immediately.
2.04 ACCESS DOORS AND PANELS
A. Manufacturers:
1. Jay R. Smith
2. Milcor
3. Approved equal.
B. 16 gauge steel door and frame with concealed hinge and cylinder lock. Provide matching latches/locks keyed the same for multiple panels in a project. When "B" dimension is 24" or more, provide additional latches at the top and bottom of door. Provide finish and material as noted in Part 3 - Execution.
PART 3 EXECUTION
3.01 LAYING OUT WORK
A. Locate all general reference points as established by the General Contractor and take such action as is necessary to prevent their destruction; lay out work and be responsible for all lines, elevations, grading for utilities and other work executed under the Contract. Exercise proper precautions to verify figures shown on drawings, before laying out work and be responsible for any errors resulting from failure to exercise such precaution.
3.02 WORKMANSHIP
A. Furnish and install all equipment for a neat and finished appearance. If, in the judgment of the Owner's representative, any portion of the work has not been installed in a workmanlike manner, or has been left in a rough, unfinished manner, Contractor will be required to remove and reinstall the equipment, and patch and paint surrounding surfaces in a manner satisfactory to the Owner's representative, without any increase in cost to the Owner.
3.03 OPENINGS IN DUCTWORK
A. Keep all openings covered tightly with plastic during the work.
3.04 CUTTING AND PATCHING (NEW WORK)
A. Furnish dimensions and locations of openings to other Contractors doing the work. Provide ample time to avoid delays and unnecessary labor. Cutting and patching made necessary to admit work, repair defective material or workmanship, or by neglect to anticipate proper requirements, shall be done by the General Contractor at the expense of the Mechanical Contractor.
3.05 CUTTING AND PATCHING (EXISTING STRUCTURE)
A. All necessary cutting and patching of existing structures necessary for installation of mechanical work shall be done by the Mechanical Contractor as directed by the Owner's representative.
B. All surfaces must be patched upon completion of the work to the satisfaction of the Owner's representative. Final finish of all patched surfaces shall be done per Architectural finish schedule, by the General Contractor. All excavation necessary for the Mechanical Contractor shall be performed by the MC. Surfaces shall be patched as hereinbefore specified and all backfilling shall be done in accordance with requirements of this section and other related notes in the Contract Documents. If none specified, restore to original condition.
3.06 ACCESSIBILITY
A. Locate valves, damper operators, etc., so as to be easily accessible in mechanical spaces or through access panels, specified hereinafter. Otherwise, obtain Owner's representative's approval of location.
B. Any equipment requiring maintenance clearances for servicing of filters, motors, compressors, etc., shall be carefully installed to avoid servicing problems. Failure of contractor to comply with this requirement shall be sufficient cause for contractor to make all necessary changes at no cost to the Owner. To avoid problems with interpretation of the NEC, allow 42" for all electrical clearances.
3.07 ACCESS DOORS AND PANELS
A. Locations of panels shall be carefully selected during construction, so as not to be located behind cabinets, etc. Coordinate closely with the Architectural and Electrical Plans before installing panels.
B. In areas such as janitor's room or on painted walls, etc., access panels shall be prime-coated and painted by the General Contractor; install before surrounding surfaces have been painted. In areas such as toilet rooms, the access panels shall be stainless steel or chrome-plated. In other finished areas such as on ceilings, all access panels shall have the same type of finished surface as that of the surrounding area.
C. Doors shall have cylinder lock latches, all keyed alike.
D. Provide fire-rated access doors for one-hour or two-hour rated walls and ceilings; units shall be UL labeled.
3.09 PAINTING, TAGS, ETC.
A. Identification Tags: Provide identification tags for each main shutoff and control valve throughout the building indicating the system served. Tags shall be black phenolic plastic with white engraved inscription attached with chrome chain.
B. Each major item of Mechanical Equipment shall be provided with the name of the item, i.e., Exhaust Fan No. 2, etc., in labels of black phenolic plastic with white engraved inscription. Minimum size of lettering is 1" with a maximum of 2". Select appropriate sizes for the size of the equipment being labeled. Align labels with edges of equipment and locate labels so as to be visible. For ceiling exhaust fans, provide additional tag on grille.
1. Ceiling Tile Access Labels: Where it is necessary to remove ceiling tile(s) to access mechanical equipment, backdraft dampers, motorized dampers, remote control sensors, valves/controllers, combination fire/smoke dampers, filters, valves, volume dampers, etc., provide and install round 1/2" diameter, yellow, self-adhesive labels on the metal ceiling grid, visible near all four corners of each tile requiring removal.
3.10 EQUIPMENT LUBRICATION
A. All exhaust fans, air handling units, heat pumps, and other HVAC equipment shall have all lubrication fittings extended to the equipment exterior. The Mechanical Contractor shall grease all equipment prior to startup.
Installed ductwork and equipment openings shall be sealed to prevent contamination of construction dust, debris and moisture. Uninstalled ductwork and equipment shall be securely covered to prevent contamination or the insulation getting wet. Uninstalled ductwork and equipment shall be stored on pallets or dunnage that prevents water reaching the ductwork. If ductwork or equipment is found to be dirty or wet, this contractor shall be responsible for replacing such items. Contaminated or wet duct shall be spray painted with high visibility paint and removed from the site immediately. After equipment has been used for any purpose, such as adjusting, testing, or temporary ventilation, filters shall be replaced and exhaust/return ducts shall be cleaned. Use temporary filters with 80% to 85% filter efficiency during construction. Cover all openings with temporary filters if startup, test and balance, or commissioning starts prior to all work being completed in the building.
C. Remove tags, shipping labels, etc., from all ductwork in exposed areas, whether ductwork is painted or not.
3.12 CAULKING
A. Caulk all openings and flash around all piping, equipment, and ductwork passing through roof, floor, and walls. All caulking shall be water resistant. See also paragraph "Fire Integrity" for rated walls, ceilings, roofs, or floor penetrations.
B. All piping and ductwork penetrations of walls, ceilings, and floors shall be caulked. A chrome-plated escutcheon plate shall be installed at each visible piping penetration of walls, ceilings, or floors. All duct penetrations of walls, ceilings or floors shall be flashed with 3" x 3" 18 gauge galvanized sheet metal angle for concealed ducts, and stainless steel angle for exposed ducts.
3.13 OPERATION OF EQUIPMENT AND SYSTEMS
A. Contractor is responsible during all periods of balancing and testing. Provide temporary utilities as required.
3.14 TESTS, ADJUSTMENTS AND INSPECTION
A. Test all work thoroughly and systematically, both during construction and after completion. Notify Owner's representative 48 hours in advance of all tests. Tests shall be maintained until approved. Tests shall be as hereinafter specified.
B. The Contractor shall test the completed installation as in regular service. Any defects or imperfections that may show up are to be promptly corrected. The Contractor shall guarantee the entire system and all parts thereof for a period of one year from date of final acceptance. The Contractor shall repair or replace any part which may show signs of failure during that time, if such failure, in the opinion of the Owner's representative, is due to imperfections in material or to improper workmanship.
C. No system, whether prescribed for testing or not, shall be covered or concealed below ground, in walls, in ceiling spaces, or generally from ease of viewing, without first notifying the Owner's representative. Failure to notify the Owner's representative for inspection of concealed systems shall be cause to require this contractor to uncover and recover such systems at no additional cost to Owner.
D. A log of all tests shall be kept. The log shall note, dates, time of day test started, system or portion of system tested, length of test, test results, and who witnessed the test (AHJ, Owner's representative, or GC). Contractor shall insert legible name of witnesses. Contractor to submit a copy of the contractor's test log monthly to the Owner's representative.
E. Review the project to determine when final inspection is appropriate and advise Owner's representative. Mechanical Contractor is required to complete his work before requesting final inspection.
3.15 FINAL INSPECTION
A. This contractor shall thoroughly review and inspect the project to determine when final inspection is required, and shall so advise the Owner's representative. It shall be understood that the work is to be essentially complete. If such is not the case and more than one final inspection and one backcheck are necessary, this Contractor may be billed for the additional backchecks at the then governing rate for the personnel involved. The final inspection punchlist shall be legibly signed on a copy of the punch list by a person responsible for the trade involved, and transmitted to the Owner's representative, before a backcheck will be scheduled.
3.16 PROTECTION AND CLEANING
A. All equipment and material installed by this contractor shall be properly protected from damage during the course of construction.
3.17 SPECIAL PROTECTION
A. Exercise maximum precaution to protect the building and equipment from damage of any kind, and in particular, prevent water and dust seepage into new equipment.
3.18 BALANCING WORK
A. Provide Testing, Adjusting and Balancing as required in this section of the specification.
3.19 INSTRUCTION PERIODS FOR OWNER'S PERSONNEL
A. Scope: Following installation of mechanical work, have representatives of installation tradesmen conduct demonstrations and instruction periods to point out locations of servicing points and required points of maintenance to Owner's representatives.
B. General Description of Instruction Periods: Each period shall include preliminary discussion and presentation of information from maintenance manuals with appropriate references to drawings, followed by tours of building areas explaining maintenance requirements, access methods, servicing and maintenance procedures, equipment cleaning procedures, temperature control settings, and available adjustments.
C. Scheduling of Instruction Periods: Notice of Contractor's readiness to conduct such instruction and demonstration shall be given to the Owner's representative at least two weeks prior to the instruction periods, and agreement reached as to the date at which the instruction periods are to be performed. Advise Owner's representative two weeks prior to date when ready to conduct instruction and demonstrations; receive approvals of proposed date prior to making final arrangements.
3.20 ON-SITE OBSERVATIONS AND SAFETY MEASURES
A. During its progress, all work shall be subject to observation by the Owner's representative, and of the National Board of Fire Underwriters, State and Local Inspectors. The Engineer has not been retained or compensated to provide design and construction review services relating to the Contractor's safety precautions or to means, methods, techniques, sequences or procedures required for the Contractor to perform his work. The Contractor will be totally responsible for conditions of the jobsite, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours. The duty of the Owner's representative to conduct construction observations of the Contractor's performance is not intended to include review of the adequacy of the Contractor's safety measures in, on, or near the construction site. It shall be the Contractor's responsibility to comply with "Safety and Health Regulations for Construction" in the Federal Register by the U.S. Department of Labor. Contractor shall be responsible for providing all such safety measures and shall consult with the State and/or Federal Safety Inspector for interpretation whenever in doubt as to whether he is or is not in compliance with State and/or Federal regulations. Furthermore, the Contractor distinctly assumes all risk or damage or injury to any persons or property wherever located resulting from any action or operation under this contract or in connection with the work.
3.21 SYSTEM STARTUP
A. Provide the services of manufacturer's field representative for starting and testing equipment.
B. Prepare a manufacturer's startup report, and turn over to the Owner's representative and Commissioning Agent.

SECTION 232300
REFRIGERANT PIPING

PART 1 - GENERAL
1.1 SUMMARY
A. Section Includes:
B. Refrigerant pipes and fittings.
C. Refrigerant piping valves and specialties.
D. Refrigerants.
1.2 ACTION SUBMITTALS
A. Product Data: For each type of valve, refrigerant piping, and piping specialty.
1. Include pressure drop, based on manufacturer's test data, for the following:
a. Thermostatic expansion valves.
b. Solenoid valves.
c. Hot-gas bypass valves.
d. Filter dryers.
e. Strainers.
f. Pressure-regulating valves.
B. Shop Drawings:
1. Show layout of refrigerant piping and specialties, including pipe, tube, and fitting sizes; flow capacities; valve arrangements and locations; slopes of horizontal runs; oil traps; double risers; wall and floor penetrations; and equipment connection details.
2. Show piping size and piping layout, including oil traps, double risers, specialties, and pipe and tube sizes to accommodate, as a minimum, equipment provided, elevation difference between compressor and evaporator, and length of piping to ensure proper operation and compliance with warranties of connected equipment.
3. Show interface and spatial relationships between piping and equipment.
4. Shop Drawing Scale: 1/4 inch equals 1 foot.
1.3 INFORMATIONAL SUBMITTALS
A. Welding certificates.
B. Field quality-control reports.
1.4 CLOSEOUT SUBMITTALS
A. Operation and Maintenance Data: For refrigerant valves and piping specialties to include in maintenance manuals.
1.5 QUALITY ASSURANCE
A. Welding Qualifications: Qualify procedures and personnel according to 2010 ASME Boiler and Pressure Vessel Code: Section IX, "Welding and Brazing Qualifications."
B. Comply with ASHRAE 15, "Safety Code for Refrigeration Systems."
C. Comply with ASME B31.5, "Refrigeration Piping and Heat Transfer Components."
1.6 PRODUCT STORAGE AND HANDLING
A. Store piping with end caps in place to ensure that piping interior and exterior are clean when installed.
PART 2 - PRODUCTS
2.1 PERFORMANCE REQUIREMENTS
A. Line Test Pressure for Refrigerant R-410A:
1. Suction Lines for Air-Conditioning Applications: 300 psig.
2. Hot-Gas and Liquid Lines: 535 psig.
2.2 COPPER TUBE AND FITTINGS
A. Copper Tube: ASTM B 280, Type ACR.
B. Wrought-Copper Fittings: ASME B16.22.
C. Wrought-Copper Unions: ASME B16.22.
D. Solder Filler Metals: ASTM B 32. Use 95-5 tin antimony or alloy HB solder to join copper socket fittings on copper pipe.
E. Brazing Filler Metals: AWS A5.8/A5.8M.
F. Flexible Connectors:
1. Body: Tin-bronze bellows with woven, flexible, tinned-bronze-wire-reinforced protective jacket.
2. End Connections: Socket ends.
3. Offset Performance: Capable of minimum 3/4-inch misalignment in minimum 7-inch-long assembly.
4. Working Pressure Rating: Factory test at minimum 500 psig.
5. Maximum Operating Temperature: 250 deg F.
2.3 VALVES AND SPECIALTIES
A. Diaphragm Packless Valves:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved equal:
a. Danfoss Inc.
b. Heldon Products; Henry Technologies.
2. Body and Bonnet: Forged brass or cast bronze; globe design with straight-through or angle pattern.
3. Diaphragm: Phosphor bronze and stainless steel with stainless-steel spring.
4. Operator: Rising stem and hand wheel.
5. Seat: Nylon.
6. End Connections: Socket, union, or flanged.
7. Working Pressure Rating: 500 psig.
8. Maximum Operating Temperature: 275 deg F.
B. Packed-Angle Valves:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved equal:
a. Danfoss Inc.
b. Heldon Products; Henry Technologies.
2. Body and Bonnet: Forged brass or cast bronze.
3. Packing: Molded stem, back seating, and replaceable under pressure.
4. Operator: Rising stem.
5. Seat: Nonrotating, self-aligning polytetrafluoroethylene.
6. Seal Cap: Forged-brass or valox hex cap.
7. End Connections: Socket, union, threaded, or flanged.
8. Working Pressure Rating: 500 psig.
9. Maximum Operating Temperature: 275 deg F.
C. Check Valves:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved equal:
a. Apollo Flow Controls; Conbraco Industries, Inc.
b. Danfoss Inc.
2. Body: Ductile iron, forged brass, or cast bronze; globe pattern.
3. Bonnet: Bolted ductile iron, forged brass, or cast bronze; or brass hex plug.
4. Piston: Removable polytetrafluoroethylene seat.
5. Closing Spring: Stainless steel.
6. Manual Opening Stem: Seal cap, plated-steel stem, and graphite seal.
7. End Connections: Socket, union, threaded, or flanged.
8. Maximum Opening Pressure: 0.50 psig.
9. Working Pressure Rating: 500 psig.
10. Maximum Operating Temperature: 275 deg F.
D. Service Valves:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved equal:
a. Danfoss Inc.
b. Emerson Climate Technologies.
2. Body: Forged brass with brass cap including key end to remove core.
3. Core: Removable ball-type check valve with stainless-steel spring.
4. Seat: Polytetrafluoroethylene.
5. End Connections: Copper spring.
6. Working Pressure Rating: 500 psig.
E. Solenoid Valves: Comply with AHRI 760 and UL 429; listed and labeled by a National Recognized Testing Laboratory (NRTL).
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved equal:
a. Danfoss Inc.
b. Emerson Climate Technologies.
2. Body and Bonnet: Plated steel.
3. Solenoid Tube, Plunger, Closing Spring, and Seat Orifice: Stainless steel.
4. Seat: Polytetrafluoroethylene.
5. End Connections: Threaded.
6. Electrical: Molded, watertight coil in NEMA 250 enclosure of type required by location with 1/2-inch conduit adapter, and 24 or 115-V ac coil.
7. Working Pressure Rating: 400 psig.
8. Maximum Operating Temperature: 240 deg F.
F. Safety Relief Valves: Comply with 2010 ASME Boiler and Pressure Vessel Code; listed and labeled by an NRTL.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved equal:
a. Danfoss Inc.
b. Heldon Products; Henry Technologies.
2. Body and Bonnet: Ductile iron and steel, with neoprene O-ring seal.
3. Piston, Closing Spring, and Seat Insert: Stainless steel.
4. Seat: Polytetrafluoroethylene.
5. End Connections: Threaded.
6. Working Pressure Rating: 400 psig.
7. Maximum Operating Temperature: 240 deg F.
G. Thermostatic Expansion Valves: Comply with AHRI 750.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved equal:
a. Danfoss Inc.
b. Emerson Climate Technologies.
2. Body, Bonnet, and Seal Cap: Forged brass or steel.
3. Diaphragm, Piston, Closing Spring, and Seat Insert: Stainless steel.
4. Packing and Gaskets: Non-asbestos.
5. Capillary and Bulb: Copper tubing filled with refrigerant charge.
6. Suction Temperature: 40 deg F.
7. Superheat: Nonadjustable.
8. Reverse-flow option (for heat-pump applications).
9. End Connections: Socket, flare, or threaded union.
10. Working Pressure Rating: 450 psig.
H. Straight-Type Strainers:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved equal:
a. Danfoss Inc.
b. Heldon Products; Henry Technologies.
2. Body: Welded steel with corrosion-resistant coating.
3. Screen: 100-mesh stainless steel.
4. End Connections: Socket or flare.
5. Working Pressure Rating: 500 psig.
6. Maximum Operating Temperature: 275 deg F.

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SEQUIM SD #323
Office Board Room & 2nd Floor Office Remodel
503 N Sequim Ave, Sequim, WA 98382

REVISION SCHEDULE

#	ADDENDUM #1	08/22/23

JOB NO.	2022-080
DATE	08-23-2023
DRAWN	KN
REVIEWED	RH

SHEET NAME
MECHANICAL SPECIFICATIONS

SHEET NO.
M-4.1

STEVEN M. JOHNSON
STATE OF WASHINGTON
46776
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MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

I. Not Used.
J. Moisture/Liquid Indicators:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved equal:
a. Danfoss Inc.
b. Emerson Climate Technologies.
2. Body: Forged brass.
3. Window: Replaceable, clear, fused glass window with indicating element protected by filter screen.
4. Indicator: Color coded to show moisture content in parts per million (ppm).
5. Minimum Moisture Indicator Sensitivity: Indicate moisture above 60 ppm.
6. End Connections: Socket or flare.
7. Working Pressure Rating: 500 psig
8. Maximum Operating Temperature: 240 deg F.
K. Permanent Filter Dryers: Comply with AHRI 730.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved equal:
a. Danfoss Inc.
b. Emerson Climate Technologies.
2. Body and Cover: Painted-steel shell.
3. Filter Media: 10 micron, pleated with integral end rings; stainless-steel support.
4. Desiccant Media: Activated alumina.
5. Designed for reverse flow (for heat-pump applications).
6. End Connections: Socket.
7. Access Ports: NPS 1/4 connections at entering and leaving sides for pressure differential measurement.
8. Maximum Pressure Loss: 2 psig.
9. Working Pressure Rating: 500 psig
10. Maximum Operating Temperature: 240 deg F.

2.4 REFRIGERANTS

A. ASHRAE 34, R-410A: Pentafluoroethane/Difluoromethane.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following, or approved equal:
a. Arkema Inc.
b. DuPont Fluorochemicals Div.

PART 3 - EXECUTION

3.1 PIPING APPLICATIONS FOR REFRIGERANT R-410A
A. Suction Lines NPS 1-1/2 and Smaller for Conventional Air-Conditioning Applications: Copper, Type ACR, annealed-temper tubing and wrought-copper fittings with brazed joints.
B. Hot-Gas and Liquid Lines: Copper, Type ACR, annealed-temper tubing and wrought-copper fittings with brazed joints.
C. Safety-Relief-Valve Discharge Piping: Copper, Type ACR, drawn-temper tubing and wrought-copper fittings with brazed or soldered joints.

3.2 VALVE AND SPECIALTY APPLICATIONS
A. Install packed-angle valves in suction and discharge lines of compressor.
B. Install service valves for gage taps at inlet and outlet of hot-gas bypass valves and strainers if they are not an integral part of valves and strainers.
C. Install a check valve at the compressor discharge and a liquid accumulator at the compressor suction connection.
D. Except as otherwise indicated, install packed-angle valves on inlet and outlet side of filter dryers.
E. Install a full-size, three-valve bypass around filter dryers.
F. Install solenoid valves upstream from each expansion valve and hot-gas bypass valve. Install solenoid valves in horizontal lines with coil at top.
G. Install thermostatic expansion valves as close as possible to distributors on evaporators.
1. Install valve so diaphragm case is warmer than bulb.
2. Secure bulb to clean, straight, horizontal section of suction line using two bulb straps. Do not mount bulb in a trap or at bottom of the line.
3. If external equalizer lines are required, make connection where it will reflect suction-line pressure at bulb location.
H. Install safety relief valves where required by 2010 ASME Boiler and Pressure Vessel Code. Pipe safety-relief-valve discharge line to outside according to ASHRAE 15.
I. Install moisture/liquid indicators in liquid line at the inlet of the thermostatic expansion valve or at the inlet of the evaporator coil capillary tube.
J. Install strainers upstream from and adjacent to the following unless they are furnished as an integral assembly for the device being protected:
1. Solenoid valves.
2. Thermostatic expansion valves.
3. Hot-gas bypass valves.
4. Compressor.
K. Install filter dryers in liquid line between compressor and thermostatic expansion valve.

3.3 PIPING INSTALLATION
A. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems; indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated unless deviations to layout are approved on Shop Drawings.
B. Install refrigerant piping according to ASHRAE 15.
C. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
D. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.
E. Install piping adjacent to machines to allow service and maintenance.
F. Install piping free of sags and bends.
G. Install fittings for changes in direction and branch connections.
H. Select system components with pressure rating equal to or greater than system operating pressure.
I. Install piping as short and direct as possible, with a minimum number of joints, elbows, and fittings.
J. Arrange piping to allow inspection and service of refrigeration equipment. Install valves and specialties in accessible locations to allow for service and inspection. Install refrigerant piping in protective conduit where installed belowground.
K. Install refrigerant piping in rigid or flexible conduit in locations where exposed to mechanical injury.
L. Slope refrigerant piping as follows:
1. Install horizontal hot-gas discharge piping with a uniform slope downward away from compressor.
2. Install horizontal suction lines with a uniform slope downward to compressor.
3. Install traps and double risers to entrain oil in vertical runs.
4. Liquid lines may be installed level.
N. When brazing or soldering, remove solenoid-valve coils and sight glasses; also remove valve stems, seats, and packing, and accessible internal parts of refrigerant specialties. Do not apply heat near expansion-valve bulb.
O. Install piping with adequate clearance between pipe and adjacent walls and hangers or between pipes for insulation installation.
P. Install sleeves for piping penetrations of walls, ceilings, and floors. Comply with requirements for sleeves specified in Section 230517 "Sleeves and Sleeve Seals for HVAC Piping."
Q. Install sleeve seals for piping penetrations of concrete walls and slabs. Comply with requirements for sleeve seals specified in Section 230517 "Sleeves and Sleeve Seals for HVAC Piping."
R. Install escutcheons for piping penetrations of walls, ceilings, and floors.

3.4 PIPE JOINT CONSTRUCTION
A. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
B. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
C. Fill pipe and fittings with an inert gas (nitrogen or carbon dioxide), during brazing or welding, to prevent scale formation.
D. Soldered Joints: Construct joints according to ASTM B 828 or CDA's "Copper Tube Handbook."
E. Brazed Joints: Construct joints according to AWS's "Brazing Handbook," Chapter "Pipe and Tube."
1. Use Type BCuP (copper-phosphorus) alloy for joining copper socket fittings with copper pipe.
2. Use Type BAg (cadmium-free silver) alloy for joining copper with bronze or steel.
F. Threaded Joints: Thread steel pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and to restore full ID. Join pipe fittings and valves as follows:
1. Apply appropriate tape or thread compound to external pipe threads unless dry-seal threading is specified.
2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.
G. Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.

3.5 FIELD QUALITY CONTROL
A. Perform the following tests and inspections:
3. Comply with ASME B31.5, Chapter VI.
4. Test refrigerant piping, specialities, and receivers. Isolate compressor, condenser, evaporator, and safety devices from test pressure if they are not rated above the test pressure.
5. Test high- and low-pressure side piping of each system separately at not less than the pressures indicated in "Performance Requirements" Article.
a. Fill system with nitrogen to the required test pressure.
b. System shall maintain test pressure at the manifold gage throughout duration of test.
c. Test joints and fittings with electronic leak detector or by brushing a small amount of soap and glycerin solution over joints.
d. Remake leaking joints using new materials, and retest until satisfactory results are achieved.
B. Prepare test and inspection reports.

3.6 SYSTEM CHARGING
A. Charge system using the following procedures:
1. Install core in filter dryers after leak test but before evacuation.
2. Evacuate entire refrigerant system with a vacuum pump to 500 micrometers. If vacuum holds for 12 hours, system is ready for charging.
3. Break vacuum with refrigerant gas, allowing pressure to build up to 2 psig.
4. Charge system with a new filter-dryer core in charging line.

3.7 ADJUSTING
A. Adjust thermostatic expansion valve to obtain proper evaporator superheat.
B. Adjust high- and low-pressure switch settings to avoid short cycling in response to fluctuating suction pressure.
C. Adjust set-point temperature of air-conditioning to the system design temperature.
D. Perform the following adjustments before operating the refrigeration system, according to manufacturer's written instructions:
1. Open shutoff valves in condenser water circuit.
2. Verify that compressor oil level is correct.
3. Open compressor suction and discharge valves.
4. Open refrigerant valves except bypass valves that are used for other purposes.
5. Check open compressor-motor alignment and verify lubrication for motors and bearings.
E. Replace core of replaceable filter dryer after system has been adjusted and after design flow rates and pressures are established.

SECTION 238129
VARIABLE REFRIGERANT VOLUME (VRV) HVAC SYSTEM

PART 1 - GENERAL

1.1 SECTION INCLUDES
A. Variable refrigerant volume HVAC system includes:
1. Outdoor/Condensing unit(s)
2. Indoor/Evaporator units
3. Branch selector units
4. Refrigerant piping
5. Control panels
6. Control wiring
B. Basis of Design for this specification is Daikin.

1.2 RELATED REQUIREMENTS
A. Section 23 23 00 - Refrigerant Piping and Specialties: Additional requirements for refrigerant piping system.

1.3 PROCEDURE FOR ALTERNATE MANUFACTURERS
A. Alternates: Owner requests a bid Alternate for a system designed and manufactured by a manufacturer other than that listed as the Basis of Design.
B. Alternate systems will be considered only under the terms described for Substitutions in the article MANUFACTURERS in PART 2 of this section.

1.4 REFERENCE STANDARDS
A. AHRI 210/240 - Standard for Performance Rating of Unitary Air-Conditioning and Air-Source Heat Pump Equipment; Air-Conditioning, Heating, and Refrigeration Institute.
B. ASHRAE (FUND) - ASHRAE Handbook - Fundamentals.
C. NFPA 70 - National Electrical Code; National Fire Protection Association; Including All Applicable Amendments and Supplements.
D. UL 1995 - Heating and Cooling Equipment; Including All Revisions.
E. Reference standards shall be the latest revision as accepted by the local Authority Having Jurisdiction.

1.5 ADMINISTRATIVE REQUIREMENTS
A. Pre-Installation Meeting: Conduct a pre-installation meeting one week prior to the start of the work of this section; require attendance by all affected installers.

1.6 SUBMITTALS
A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
B. Pre-Bid Submittals: For proposed substitute systems/products, as defined in PART 2, and alternate systems/products, as defined above, proposer shall submit all data described in this article, under the terms given for substitutions stated in PART 2.
C. Shop Drawings: Installation drawings custom-made for this project; include as-designed HVAC layouts, locations of equipment items, refrigerant piping sizes and locations, condensate piping sizes and locations, remote sensing devices, control components, electrical connections, control wiring connections. Include:
1. Detailed piping diagrams, with branch balancing devices.
2. Condensate piping routing, size, and pump connections.
3. Detailed power wiring diagrams.
4. Detailed control wiring diagrams.
5. Drawings required by manufacturer.
D. Operating and Maintenance Data:
1. Manufacturer's complete standard instructions for each unit of equipment and control panel.
2. Custom-prepared system operation, troubleshooting, and maintenance instructions and recommendations.
3. Identification of replaceable parts and local source of supply.
E. Project Record Documents: Record the following:
1. As-installed routing of refrigerant piping and condensate piping.
2. Locations of control panels.

1.7 QUALITY ASSURANCE
A. The units shall be tested by a Nationally Recognized Testing Laboratory (NRTL), in accordance with ANSI/UL 1995- Heating and Cooling Equipment and bear the Listed Mark.
B. All wiring shall be in accordance with the National Electric Code (NEC).
C. The system shall be certified in accordance with Air Conditioning, Heating, and Refrigeration Institute's (AHRI) Standard 1060 and bear the AHRI Certified Label.
D. The system will be produced in an ISO 9001 and ISO 14001 facility, which are standards set by the International Standard Organization (ISO). The system shall be factory tested for safety and function.

1.8 DELIVERY, STORAGE AND HANDLING
A. Deliver, store, and handle equipment and refrigerant piping according to manufacturer's recommendations.

1.9 WARRANTY
A. Daikin North America LLC warrants original owner of the non-residential building, multifamily residence or residence in which the Daikin products are installed that under normal use and maintenance for comfort cooling and conditioning applications such products (the "Products") will be free from defects in material and workmanship. This warranty applies to compressor and all parts and is limited in duration to ten (10) years starting from the "installation date" which is one of the two dates below:
1. The installation date is the date that the unit is originally commissioned, but no later than 18 months after the manufacture date noted on the unit's rating plate.
2. If the date the unit is originally commissioned cannot be verified, the installation date is three months after the manufacture date.

PART 2 - PRODUCTS

2.1 MANUFACTURERS
A. Basis of Design: The system design shown in the contract documents is based on equipment and system designed by Daikin AC.
B. Systems designed and manufactured by other manufacturers will be considered by Owner under the terms described for substitutions with the following exceptions:
1. Substitution requests will be considered only if required submittal data is complete; see article SUBMITTALS above.
2. Contractor (not equipment supplier) shall certify that the use of the substitute system and equipment will not require changes to other work or re-design by Architect.
3. Contractor or HVAC subcontractor shall certify that the substitute system will achieve the performance specified.
4. Do not assume substitution has been accepted until formal written notice has been issued by Owner/Engineer of Record.
C. Approved manufacturers:
1. Daikin
2. Mitsubishi

2.2 HVAC SYSTEM DESIGN
A. System Operation: Heating and cooling, simultaneously.
1. Zoning: Provide capability for temperature control for each individual indoor/evaporator unit independently of all other units.
2. Provide a complete functional system that achieves the specified performance based on the specified design conditions and that is designed and constructed according to the equipment manufacturer's requirements.
3. Conditioned spaces are shown on the drawings.
4. Outdoor/Condenser unit locations are shown on the drawings.
5. Indoor/Evaporator unit locations are shown on the drawings.
6. Branch selector unit locations are shown on the drawings.
7. Required equipment unit capacities are shown on the drawings.
8. Refrigerant piping sizes are not shown on the drawings.
9. Connect equipment to condensate piping provided by others; condensate piping is shown on the drawings.
B. Cooling / Heating Mode Interior Performance: Refer to VRF Fan Coil and VRF Condensing Unit Schedules
C. Outside Air Design Conditions: Refer to VRF Fan Coil and VRF Condensing Unit Schedules
D. Energy Design Wind Speed: 25 mph.
E. Operating Temperature Ranges: Refer to VRF Fan Coil and VRF Condensing Unit Schedules
F. Refrigerant Piping Lengths: Provide equipment capable of serving system with following piping lengths without any oil traps:
1. Minimum Piping Length from Outdoor/Central Unit(s) to Furthest Terminal Unit: 540 feet, actual; 620 feet, equivalent.
2. Total Combined Liquid Line Length: 3280 feet, minimum.
3. Maximum Vertical Distance Between Outdoor/Central Unit(s) and Terminal Units: 295 feet.
4. Minimum Piping Length Between Indoor Units: 49 feet.
H. Control Wiring Lengths:
1. Between Outdoor/Condenser Unit and Indoor/Evaporator Unit: 6,665 feet, minimum.
2. Between Outdoor/Condenser Unit and Central Controller: 3,330 feet, minimum.
3. Between Indoor/Evaporator Unit and Remote Controller: 1,665 feet.
I. Controls: Provide the following control interfaces:
1. For Each Indoor/Evaporator Unit: One wall-mounted wired "local" controller, with temperature sensor; locate where indicated.
2. Remote, multizone on/off control panels sufficient to control all units; locate where indicated.
3. One central remote control panel for entire system; locate where indicated.
4. One time clock control panel for entire system; locate where indicated.
5. LonWorks gateways sufficient to connect all units to building automation system by others; include wiring to gateways.
6. The building automation system by the VRV manufacturer is not specified in this section. Consult the manufacturer for details.
7. Building automation system by HVAC system manufacturer ; provide one user stations located where indicated.
J. Local Controllers: Wall-mounted, wired, containing temperature sensor.
K. Remote Temperature Sensors: In addition to temperature sensors integral with indoor/evaporator units, provide wall-mounted, wired remote temperature sensors located in the same room for the following:
1. Wall mounted units mounted up high.
2. Exception: Where a local controller with temperature sensor is provided for the particular unit and is located in the same space.

2.3 EQUIPMENT
A. All Units: Factory assembled, wired, and piped and factory tested for function and safety.
1. Refrigerant: R-410A.
2. Performance Certification: AHRI Certified; www.ahrinet.org.
3. Safety Certification: Tested to UL 1995 by UL or Intertek-ETL and bearing the certification label.
4. Provide outdoor/condensing units capable of serving indoor unit capacity up to 200% of the capacity of the outdoor/condensing unit.
5. Provide units capable of serving the zones indicated.
6. Thermal Performance: Provide heating and cooling capacity as indicated, based on the following nominal operating conditions:
7. Energy Efficiency: Report EER and COP based on tests conducted at "full load" in accordance with AHRI 210/240 or alternate test method approved by U.S. Department of Energy.
B. Electrical Characteristics:
1. Power - Branch Selector Units: 208 to 230 Volts, single phase, 60 Hz.
2. Power - Indoor Units: 208 to 230 Volts, single phase, 60 Hz.
C. System Controls:
1. Include self-diagnostic, auto-check functions to detect malfunctions and display the type and location.
D. Remote Centralized Control Panel:
E. Remote On/Off Control Panel:
F. Time Clock Panel:
G. Unit Controls: As required to perform input functions necessary to operate system; provided by manufacturer of units.
1. Provide interfaces to remote control and building automation systems as specified.
H. Wiring:
1. Control Wiring: 18 AWG, 2-conductor, non-shielded, non-polarized, stranded cable.
2. Control Wiring Configuration: Daisy chain.
I. Refrigerant Piping:
1. Provide refrigerant piping as designed by manufacturer's design program.
2. Insulate each refrigerant line individually between the condensing and indoor units.

2.4 OUTDOOR/CONDENSING UNITS
A. Outdoor/Condensing Units: Air-cooled DX refrigeration units, designed specifically for use with indoor/evaporator units; factory assembled and wired with all necessary electronic and refrigerant controls; modular design for ganging multiple units.
1. Refrigeration Circuit: Scroll compressors, motors, fans, condenser coil, electronic expansion valves, solenoid valves, 4-way valve, distribution headers, capillaries, filters, shut off valves, oil separators, service ports and refrigerant regulator.
2. Refrigerant: Factory charged.
3. Variable Volume Control: Modulate compressor capacity automatically to maintain constant suction and condensing pressures while varying refrigerant volume to suit heating/cooling loads.
4. Capable of being installed with wiring and piping to the left, right, rear or bottom.
5. Capable of heating operation at low end of operating range as specified, without additional low ambient controls or auxiliary heat source; during heating operation, reverse cycle (cooling mode) oil return or defrost is not permitted, due to potential reduction in space temperature.
6. Sound Pressure Level: As specified, measured at 3 feet from front of unit; provide night setback sound control as a standard feature; three selectable sound level steps of 55 dB, 50 dB, and 45 dB, maximum.
7. Power Failure Mode: Automatically restart operation after power failure without loss of programmed settings.
8. Safety Devices: High pressure sensor and switch, low pressure sensor/switch, control circuit fuses, crankcase heaters, fusible plug, overload relay, inverter overload protector, thermal protectors for compressor and fan motors, over current protection for the inverter and anti-recycling timers.
9. Provide refrigerant sub-cooling to ensure the liquid refrigerant does not flash when supplying to us indoor units.
10. Oil Recovery Cycle: Automatic, occurring 2 hours after start of operation and then every 8 hours of operation; maintain continuous heating during oil return operation.
11. Controls: Provide contacts for electrical demand shedding.
B. Unit Cabinet: Weatherproof and corrosion resistant; rust-proofed mild steel panels coated with baked enamel finish.
1. Designed to allow side-by-side installation with minimum spacing.
C. Fans: One or more direct-drive propeller type, vertical discharge, with multiple speed operation via DC (digitally commutating) inverter.
1. Provide minimum of 2 fans for each condensing unit.
2. External Static Pressure: Factory set at 0.12 in WG, minimum.
3. Fan Airflow: As indicated for specific equipment.
4. Fan Motors: Factory installed; permanently lubricated bearings; inherent protection; fan guard; output as indicated for specific equipment.
D. Condenser Coils: Copper tubes expanded into aluminum fins to form mechanical bond; waffle louver fin and rifled bore tube design to ensure high efficiency performance.
1. Coil Design: N-shape internal grooves mechanically bonded on to aluminum fins to an e-Pass Design.
E. Compressors: Scroll type, hermetically sealed, variable speed inverter-driven and fixed speed in combination to suit total capacity; minimum of one variable speed, inverter driven compressor per condenser unit; minimum of two compressors per condenser unit; capable of controlling capacity within range of 6% to 100% of total capacity.
1. Variable Speed Control: Capable of changing the speed to follow the variations in total cooling and heating load as determined by the suction gas pressure; high/low pressures calculated by samplings of evaporator and condenser temperatures every 20 seconds, with compressor capacity adjusted to eliminate deviation from target value by changing inverter frequency or on/off setting of fixed speed compressors.
2. Multiple Condenser Modules: Balance total operation hours of compressors by means of duty cycling function, providing for sequential starting of each module at each start/stop cycle, completion of oil return, and completion of defrost, or every 8 hours.
3. Failure Mode: In the event of compressor failure, operate remaining compressor(s) at proportionally reduced capacity; provide microprocessor and associated controls specifically designed to address this condition.
4. Inverter Driven Compressors: PVM inverter driven, highly efficient reluctance DC (digitally commutating), hermetically sealed scroll "G2-type" with maximum speed of 7,980 rpm.
5. Rotors: Incorporating neodymium magnets for higher torque and efficiency; at complete stop of compressor, position rotor into optimum position for low torque start.
6. Provide each compressor with crankcase heater, high pressure safety switch, and internal thermal overload protector.
7. Provide oil separators and intelligent oil management system.
8. Provide spring mounted vibration isolators.

2.5 BRANCH SELECTOR UNITS
A. Branch Selector Units: Concealed boxes designed specifically for this type of system to control heating/cooling mode selection of downstream units; consisting of electronic expansion valves, sub-cooling heat exchanger, refrigerant control piping and electronics to facilitate communications between unit and main processor and between branch unit and indoor/evaporator units.
1. Control direction of refrigerant flow using electronic expansion valves; use of solenoid valves for changeover and pressure equalization is not permitted due to refrigerant noise; use of multi-port branch selector boxes is not permitted unless spare ports are provided for redundancy.
2. Provide one electronic expansion valve for each downstream unit served, except multiple indoor/evaporator units may be connected, provided balancing joints are used in downstream piping and total capacity is within capacity range of the branch selector.
3. When branch unit is simultaneously heating and cooling, energize sub-cooling heat exchanger.
4. Casing: Galvanized steel sheet; with flame and heat resistant foamed polyethylene sound and thermal insulation.
5. Refrigerant Connections: Braze type.
6. Condensate Drainage: Provide unit that does not require condensate drainage.

2.6 INDOOR/EVAPORATOR UNITS
A. All Indoor/Evaporator Units: Factory assembled and tested DX fan-coil units, with electronic proportional expansion valve, control circuit board, factory wiring and piping, self-diagnostics, auto-restart function, 3-minute fused time delay, and test run switch.
1. Refrigerant: Refrigerant circuits factory-charged with dehydrated air, for field charging.
2. Temperature Control Mechanism: Return air thermistor and computerized Proportional-Integral-Derivative (PID) control of superheat.
3. Coils: Direct expansion type constructed from copper tubes expanded into aluminum fins to form a mechanical bond; waffle louver fin and high heat exchange, rifled bore tube design; factory tested.
a. Provide thermistor on liquid and gas lines.
4. Fans: Direct-drive, with statically and dynamically balanced impellers; high and low speeds unless otherwise indicated; motor thermally protected.
5. Return Air Filter: Washable long-life net filter with mildew proof resin, unless otherwise indicated.
6. Condensate Drainage: Built-in condensate drain pan with PVC drain connection.
a. Units With Built-In Condensate Pumps: Provide condensate safety shutoff and alarm.
7. Cabinet Insulation: Sound absorbing foamed polystyrene and polyethylene insulation.
B. Wall Surface-Mounted Units: Finished white casing, with removable front grille; foamed polystyrene and polyethylene sound insulation; wall mounting plate; polystyrene condensate drain pan.
1. Airflow Control: Auto-swing louver that closes automatically when unit stops; five (5) steps of discharge angle, set using remote controller; upon restart, discharge angle defaulting to same angle as previous operation.
2. Condensate Pump: Built-in, concealed.
3. Condensate Drain Connection: Back, with piping concealed in wall.
4. Fan: Direct-drive cross-flow type.

PART 3 - EXECUTION

3.1 EXAMINATION
J. Verify that required electrical services have been installed and are in the proper locations prior to starting installation.
K. Verify that condensate piping has been installed and is in the proper location prior to starting installation.

3.2 INSTALLATION
A. Install in accordance with manufacturer's instructions.
B. Install refrigerant piping in accordance with equipment manufacturer's instructions.
C. Perform wiring in accordance with NFPA 70, National Electric Code (NEC).
D. Coordinate with installers of systems and equipment connecting to this system.

3.3 FIELD QUALITY CONTROL
A. Provide manufacturer's field representative to inspect installation prior to startup.

3.4 SYSTEM STARTUP
A. Provide manufacturer's field representative to perform system startup.
B. Prepare and start equipment and system in accordance with manufacturer's instructions and recommendations.
C. Adjust equipment for proper operation within manufacturer's published tolerances.

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SEQUIM SD #323
Office Board Room & 2nd Floor Office Remodel
503 N Sequim Ave, Sequim, WA 98382

REVISION SCHEDULE

#	ADDENDUM #1	08/22/23

JOB NO. 2022-080
DATE 08-23-2023
DRAWN KN
REVIEWED RH

SHEET NAME
MECHANICAL
SPECIFICATIONS CONT.

SHEET NO.
M-4.2

STEVEN M. JOHNSON
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MECHANICAL • ELECTRICAL • ENERGY CONSULTANTS

SECTION 22 00 10
GENERAL PLUMBING REQUIREMENTS

PART 1 - GENERAL

1.01 GENERAL
- A. Conform to General Conditions, Supplementary Conditions, and Division 01.
- B. This section of the specification applies to the entire mechanical work, both interior and exterior, as specified herein after and shown on the plans.
- C. This Contractor is responsible for coordination with all other trades.

1.02 SCOPE
- A. All services to within five (5) feet of the building shall be provided as shown on plans, and final connections to these services shall be made by the Mechanical Contractor.

1.03 DEFINITIONS
- A. The term "approved equal" means final approval by the Owner's representative of a material or piece of equipment substituted for that which is shown in the specifications or plans.
- B. The term "provide" means the furnishing and installing of equipment (including connections and appurtenances) complete and ready for use.
- C. The terms "Mechanical Contractor (MC)" and "Electrical Contractor (EC)" as used in these Specifications or on the Contract Drawings, refer to those subcontractors working under the direction of the "General Contractor (GC)."

1.04 INTENT OF DRAWINGS
- A. The drawings are diagrammatic and do not show the exact details and locations, nor all offsets in piping. Contractor shall provide additional fittings, offsets and extensions in piping and related mechanical insulation as required to meet the intent of the documents and shall include these items in his bid. Contractor shall also include in his bid provisions to relocate or shift piping where conflicts exist with Structural, Architectural or Electrical.
- B. Refer to the complete set of Architectural, Structural, and Electrical Plans and Specifications for additional details of the work. Review Plans and Specifications of other trades to identify other requirements. Discrepancies shall be reported to the Owner's representative immediately before ordering material or beginning work.

1.05 COORDINATION
- A. Examine the Architectural, Structural and Electrical drawings before work is started. Consult with each of the other Contractors regarding locations and spaces required for work and lay out work to avoid interference. Maximum clearance shall be maintained for service access and maintenance of all equipment. Failure to coordinate shall be justification to require Contractor, at his own expense, to move his work to provide the necessary space for the other contractors.
- B. Mechanical systems have space priority as follows, listed with highest priority first: Graded Drainage Piping, then Ductwork, Drainage Vents, and Domestic Water Piping. MC to make certain that priority access is maintained. This shall be coordinated by the GC and MC without assistance from Owner's representative, Engineer, or Architect.
- C. Contractor shall be responsible for his own coordination between all other trades. Development of Shop Drawings shall be a collaborative effort between the General Contractor, Mechanical Contractor, Electrical Contractor and all other subcontractors working on the project. Shifting of piping, ductwork and other mechanical items shall be the responsibility of the Team to maintain the intent of the documents. Submit drawings to the Owner's representative.
- D. Detail Drawings By Contractor: Whenever the Contractor's work is of sufficient complexity to warrant additional detailing, or when requested by the Owner's representative, this contractor shall prepare additional detail drawings to scale 1/4" = 1' on paper same size as Contract Drawings. With these layouts, coordinate this work with the work of other trades. Such detail work shall be clearly identified on the drawings as to the area to which it applies. Do not submit these drawings for approval. At completion, include a set of such drawings with each set of As-Built Drawings for Owner's record purposes.

1.06 WORK IN OTHER SECTIONS
- A. Drawings and General Provisions of the Contract, including General and Special Conditions and Division 01 Specification Sections, apply to this Section.

1.07 CODES AND REFERENCES
- A. Codes and Standards listed shall be the most current issue as adopted by the Local Jurisdiction. In the event of a conflict of codes, the most stringent code will apply.
  1. International Building Code (IBC)
  2. Uniform Plumbing Code (UPC)
  3. International Mechanical Code (IMC)

1.08 PERMITS AND FEES
- A. Obtain and pay for all permits, licenses and construction or utility fees. Furnish final certificate to Owner showing compliance with code requirements.

1.09 SCHEDULING
- A. Comply with requirements of General Specifications.

1.10 PRIOR APPROVALS
- A. Specifications have been written around equipment and material selected for this project based on quality, size, capacity, and performance required to meet building design criteria. Any equipment and/or material used in this project, that is not as specified, must have prior approval from the Owner's representative.
- B. Request for Approval must be submitted with substitution request form included in Division 0 to Owner's representative a minimum of 10 calendar days prior to bid date. This letter shall be accompanied with complete information regarding items to be substituted. If supplier requires a reply to the request for approval, he is to send a self-addressed, stamped envelope with request.
- C. Those items that receive prior approval will be listed in the Mechanical Addenda.
- D. Supplier, and/or Mechanical Contractor, shall be responsible for ensuring that substituted material or equipment is of the same size, quality, capacity, weight, and electrical characteristics as that specified. Any changes and costs required during construction, due to contractor's/supplier's neglect to properly select substituted equipment, shall be paid by the contractor/supplier.
- E. Prior approval to bid does not mean automatic final approval of material or equipment by the Owner's representative. Final approval will be given after final submittal data has been presented to Owner's representative, with complete information regarding weights, capacities, size, electrical requirements and quality.

1.11 MATERIAL AND MATERIAL SUBMITTALS
- A. All material used on the project shall be new material and free from defects. This Contractor shall submit catalog data and engineering data, on all equipment as specified or having received prior approval.
- A. All Plumbing Fixtures, Trim, Piping and Valves in contact with potable water shall be certified lead free (less than 1/4 of 1%). Any product designed for dispensing potable water must meet both the NSF 61 and NSF 372 test standards, or be NSF-61-G certified to all requirements of NSF/ANSI 61 (health effects) and all requirements of Annex G and NSF/ANSI 372 (lead content) via third-party testing and certification.
- B. Material and equipment specified is designated by various manufacturer's catalog numbers. Acceptable alternate manufacturers are also listed. Such manufacturers are exempt from the 10-day prior approval clause of these specifications, but must submit standard submittal data for final approval as otherwise noted.
- C. Submittal shall be arranged in numerical order, according to specification section number and item number. Submittal shall be bound in hard cover, loose-leaf binder(s).
- D. Submittal shall be as follows: Before ordering or installing any of the materials, this Contractor shall submit copies of complete information on the materials to be used on the project. Submittal may be electronic or in hard copy. If contractor chooses to submit printed copies, he shall provide five copies to the Owner's representative. Submittal shall include, but not be limited to, the following.
  1. Contractor's Cost Breakdown.
  2. Complete List of Subcontractors and Suppliers.
  3. Pipe, Valves and Specialties for each system including storm and sanitary drainage systems, domestic water systems, plumbing systems, and all outside systems including fire protection systems.
  4. All Plumbing Fixtures.
  5. Insulation.
- E. The Owner's representative will return one set, electronic or printed copy, of this submittal to the contractor showing any corrections, additions, and/or deletions. If the Contractor needs additional printed copies, he shall photocopy his approved copy of the required items. This Contractor shall resubmit those items that need to be corrected or added.

1.12 CONTRACTOR'S COST BREAKDOWN
- A. Mechanical Contractor shall submit, with the bound submittals, a cost breakdown of the major portions of his work, pursuant to the following outline.
  1. Job organization and submittals.
  2. Plumbing rough-in.
  3. Plumbing fixtures.
  4. Plumbing piping and insulation.

1.13 RECORD (AS-BUILT) DRAWINGS
- A. This Contractor shall maintain a set of Contract Drawings at the site on which the actual installed location of piping, equipment, etc., shall be shown in a legible, neat manner. This set of plans shall show actual dimensions (including depth of bury) of underground piping from construction lines, so they can be readily found after covering. Upon completion of the project, the as-built information shall be transformed into AutoCad version 2007 or greater. Record drawings shall be the same size as contract drawings. This set of plans shall be submitted for final approval. Drawings shall be one full size set, one half size set and on CD in PDF and .dwg format. The contractor shall be ready for review of the on-site as-builts monthly prior to submitting his billing. Failure to have drawings available for review may delay monthly billings.

1.14 OPERATING INSTRUCTIONS
- A. Operate all systems through complete cycles in the presence of designated Owner's representative. Give instructions for operation, care and maintenance.

1.15 TRAINING
- A. The Mechanical Contractor shall digitally record all Owner Mechanical training sessions and shall provide copies on DVDs. Training sessions shall be provided for all mechanical systems. Three copies of these DVDs shall be turned over to the Owner at the completion of the project.

1.16 OPERATION AND MAINTENANCE MANUALS (O&MS)
- A. General: Provide one preliminary bound set of Operation and Maintenance Manuals including maintenance information and parts list furnished by the manufacturer with the equipment, together with supplementary drawings where necessary, to itemize serving and maintenance points. Include the Valve Tag list(s) as posted in the Mechanical spaces. Include filter maintenance, methods of operation, seasonal requirements, manufacturer's data and warranty forms. Warranty forms are to be located in the front of the manuals as well as in each applicable section. Provide address and 24-hour phone number of the firms responsible under warranty. Items requiring service or correction during the warranty period shall be serviced within 24-hours of notification by Owner. Data in manuals shall be neat, clean copies, posted on 8 1/2" x 11" sheets, with operation and maintenance instructions for each item of equipment installed. Drawings shall be accordion folded. An index shall be provided with all contents listed in an orderly presentation according to specification section.
- B. Number of Copies: A preliminary set of the O&M Manuals shall be submitted for approval. After this set has been approved, two additional sets shall be prepared and the three sets shall be transmitted to the Owner's representative.
- C. Binding: Organize operating and maintenance data into suitable sets of manageable size. Copies shall be submitted in 3-ring binders. Covers shall include the name of the Job, Owner, Architect, Engineer, Contractor, and the year of completion. The back edge of the binder shall include a label with the name of the Job, the Owner and the year completed. Each copy shall have a typewritten index and tabbed dividers between equipment categories. Binders are to be no more than 80% full; binders that are over 80% full will be sent back for dividing into additional binders.

1.17 CERTIFICATIONS
- A. Provide written certification that work has been fully completed in strict accordance with Plans and Specifications and request final inspection.
- B. Provide written certification that Contractor will replace materials and workmanship that prove defective for one (1) year after date of acceptance or extended warranty as listed in individual sections.
- C. Provide written certification of inspection from the Authority Having Jurisdiction, stating that all work has been inspected, accepted, and approved as complying with existing governing ordinances and codes.
- D. Provide written certification that Owner's representative has been fully instructed in the operation and function of all mechanical systems.
- E. Provide copies of certifications in the O & M Manuals.

1.18 DOCUMENTS
- A. Present the following documents to the Owner's representative prior to final acceptance of buildings. Final payment of the Contract will be contingent upon receiving these documents:
  1. Record (as-built) drawings.
  2. Operation and Maintenance Manuals (3 sets).
  3. Final material submittal.
  4. Warranties and Extended Warranties.
  5. Approved Final Balancing logs. (Air Systems) (3 sets).
  6. Final certificates of inspection and code compliance.
  7. All applicable forms required by these specifications.
  8. Provide copies of the above documents in O & M Manuals.

1.19 WARRANTY
- A. All Plumbing systems, and all parts thereof, shall be warranted (parts and labor), for a period of one (1) year after the date of substantial completion as determined by the documentation.
- B. Contractor shall repair or replace, to the satisfaction of the Owner's representative, any defective material, equipment, or poor workmanship which may show itself during this warranty period.
- C. Test and Balance shall be warranted for two (2) years total, from date of final acceptance.

PART 2 - EXECUTION

2.01 SUBMITTAL
- A. Owner's representative's review of submittals is for general conformance with the design concept and Contract Documents. Marking or comments shall not be construed as relieving the Contractor from compliance with the project Plans and Specifications, nor departures therefrom. The Contractor remains responsible for details and accuracy for confirming and correlating all quantities and assembly and for safe performance of his work.

SECTION 22 00 20
BASIC MATERIALS AND METHODS FOR PLUMBING

PART 1 - GENERAL

1.01 WORK INCLUDES
- A. General requirements for basic materials and methods.

1.02 REFERENCES
- A. See General Plumbing Requirements.

PART 2 - PRODUCTS

2.01 GENERAL
- A. See specific sections for this requirement.

2.02 DAMAGED OR REJECTED MATERIALS
- A. Remove from the site immediately.

2.03 HANGERS
- A. Manufacturers:
  1. Grinnell
  2. Michigan Hanger
  3. Tolco
- B. Provide all anchors, hangers and all supports for piping and equipment included in contract.
- C. It is the responsibility of the Contractor to provide an adequate pipe suspension system in accordance with recognized engineering practices, using standard, commercially-accepted pipe hangers and accessories.
- D. All pipe hangers and supports shall conform to the latest requirements of ANSI Code for Pressure Piping, B31.1, and Manufacturers Standardization Society Documents MSS SP-58 and MSS SP-69.

2.04 ACCESS DOORS AND PANELS
- A. Manufacturers:
  1. Jay R. Smith
  2. Milcor
  3. Approved equal.
- B. 16 gauge steel door and frame with concealed hinge and cylinder lock. Provide matching latches/locks keyed the same for multiple panels in a project. When "B" dimension is 24" or more, provide additional latches at the top and bottom of door. Provide finish and material as noted in Part 3 - Execution.

PART 3 - EXECUTION

3.01 LAYING OUT WORK
- A. Locate all general reference points as established by the General Contractor and take such action as is necessary to prevent their destruction; lay out work and be responsible for all lines, elevations, grading for utilities and other work executed under the Contract. Exercise proper precautions to verify figures shown on drawings before laying out work, and be responsible for any errors resulting from failure to exercise such precaution.

3.02 WORKMANSHIP
- A. Furnish and install all equipment for a neat and finished appearance. If, in the judgment of the Owner's representative, any portion of the work has not been installed in a workmanlike manner, or has been left in a rough, unfinished manner, Contractor will be required to remove and reinstall the equipment, and patch and paint surrounding surfaces in a manner satisfactory to the Owner's representative, without any increase in cost to the Owner.

3.03 EXCAVATION - GENERAL
- A. Perform all necessary excavation, shoring and backfilling required for the proper installation of work inside the buildings and premises, or outside as may be necessary. Slope sides of excavation to comply with local codes and ordinances having jurisdiction. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated. Sewer trenches shall be excavated to the grade with the bottom rounded to the outside of the sewer piping. Bell holes shall be hand excavated to ensure that piping rests for its entire length upon the bottom of the trench.
- B. Excess excavation shall be backfilled with gravel or sand and mechanically compacted to give full support to the piping. In case of sewer lines in rock excavation, the excavation shall be made at least 6" deeper than required and backfilled with sand to outside invert grades to provide cushion. No underground lines shall be covered until the installation has been approved by the Authority Having Jurisdiction. Maintain sides and slopes of excavations in safe condition until completion of backfilling. All backfill shall be thoroughly compacted.
- C. No cinders shall be used for backfilling where steel, iron or copper piping is used.
- D. All items of grading which will in any manner affect the bearing capacity of the soil foundations upon which will be placed floor slabs, walls, column footings or pipe beds shall be performed to the satisfaction of the Owner's representative. All soil foundation areas which will in any manner support any of the above-stated construction will be compacted by the use of mechanical tampers to at least 95% of the maximum density of the soil foundations as determined by the compaction control test, in accordance with the "Method of test for Moisture Density Relations of Soils, ASTM Designation D1557." The moisture control at the time of compaction shall be uniform throughout the area and shall not vary more than 5% above or below the optimum moisture content as determined by the above described " Compaction Control Test." Place fill in 8" loose layers, each layer compacted.

3.04 PIPING INSTALLATION
- A. Lay piping in straight lines with uniform slope, leave no pockets. Care shall be taken to keep all foreign materials out of the piping during installation. Where ground water is present, provide suction pumps to keep trenches free of water, and cap ends of piping exposed to ground water when work is interrupted.
- B. Piping run above the floor SHALL NOT BE LOCATED OVER ELECTRICAL PANELS OR SWITCHBOARDS, except where located above a structural ceiling, or with drain pans approved by the AHJ. This piping includes, but is not limited to, waste and vent and domestic water lines.
- C. Isolation Valves:
  1. Provide isolation valves on inlets and outlets of all major pieces of equipment, to facilitate serving and removal of such equipment without the necessity of draining the associated system. Provide whether or not shown on Plans.
  2. Provide isolation ball or butterfly valves with positive shutoff for all hot water, cold water and hot water recirculation piping serving restrooms.
  3. Provide isolation ball or butterfly valves at all branches off the mains.
  4. Isolation valves shall be located above T-Bar ceiling where possible.
  5. Provide access panels to isolation valves located above hard ceilings.
- D. Do not solder within 12” of valves, flanges, etc., manufactured from any bismuth alloy.

3.05 OPENINGS IN PIPING
- A. Keep all openings covered tightly with plastic during the work.

3.06 PIPE SLEEVES
- A. General: Provide pipe sleeves for piping passing through foundations, walls, floors, partitions, and roof to allow piping to pass freely through.
- B. Building Walls (Below Grade) and Floor Slabs: Where piping passes through building walls below grade, and floor slabs on grade or below grade, the sleeves shall extend a minimum of 1" inside the building wall or above the finished floor level, and shall be made watertight and gas tight by the appropriate modular seal. Sleeves shall be Schedule 40 galvanized steel pipe. If the sleeve and modular seal are subject to trapping water on the top side, pack with water resistant foam and caulk with flexible caulking or grout.
- C. Building Walls and Floor Slabs (Above Grade) - New Construction: Where domestic hot and cold water and hot water circulation piping passes through concrete walls or floors within the building, the sleeves shall be of sufficient strength to withstand the pressure and concrete pouring operation without deforming or rupturing. Sheet metal ductwork with end slit and formed into flanges is not acceptable. Sleeves shall extend 1" above the finished floor. Sleeves in walls shall be flush on both sides.
- D. Building Walls (Above Grade) - Existing Construction: Where domestic hot water and hot water circulation piping passes through concrete or masonry walls, provide galvanized sheet metal sleeves. When piping passing through is insulated, the sleeve shall be large enough to permit the covering to pass through. Where the wall is a fire separation, the opening between the sleeve and insulation shall be sealed with intumescent material; see Paragraph "Fire Integrity" in this section. The wall around sleeves shall be patched to original finish.
- E. Piping Subject to Expansion: Where piping is subject to motion due to expansion, such as domestic hot water piping, the sleeve shall be made large enough to allow free motion. When piping passing through is insulated, the sleeve shall be large enough to permit the covering to pass through.

3.07 WALL/FLOOR PLATES AND ESCUTCHEONS
- A. Where piping passes through any wall, floor or ceiling, it shall be fitted with chromium-plated escutcheons, with suitable set screws or other approved holding device. Where extended sleeves are necessary, the plates shall be of sufficient depth to cover the sleeves.

3.08 PIPE HANGERS AND SUPPORTS
- A. Where thermal movement in the pipe line will occur, the pipe hanger assembly must be capable of supporting the line in all operating conditions. Accurate weight balance calculations shall be made to determine the supporting force at each hanger location, in order to prevent excessive stress in either pipe or equipment connections.
- B. Where piping is to be supported from building steel, beam clamps shall be used. Beam clamp selection shall be for the required load and the configuration of the steel at the point of attachment. Drilling holes in the steel for hanger rod will not be permitted unless approved by the Structural Engineer. Use only adjustable side beam clamps (Type 25); standard beam clamps are not acceptable.
- C. Riser Clamps (Vertical Piping): Piping shall be supported at each floor with a riser clamp or at sufficient intervals to carry the weight of the piping and its contents. Stacks shall be supported at their base by a concrete pier or by a suitable hanger located on the horizontal run, close to the riser. Riser clamp extensions shall rest on the building structure where possible; auxiliary steel supports shall be provided where it is impractical to rest directly on the building structure.
- D. Angle Clips: Where piping is to be supported from building wood structure, angle clips shall be used with lag bolts sized to support the load in shear. Any attachment to wooden structural members shall be subject to the approval of the Structural Engineer.
- E. Hanger Rods: Hanger rod size shall be selected on the basis of loading from the following table:

3/8"	610#
1/2"	1,130#
5/8"	1,810#
3/4"	2,710#
7/8"	3,770#
1"	4,960#

- F. Hangers shall be subject to tensile loading only. Where lateral or axial movement is anticipated, use suitable linkage in hanger rod to permit swing. DO NOT BEND RODS.
- G. All rods shall be electro-plated to prevent corrosion.
- H. All rods shall be double-nutted, on both ends if applicable, and excess rod on the bottom shall be cut flush and ground for safety.

3.09 CUTTING AND PATCHING (NEW WORK)
- A. Furnish dimensions and locations of openings to other Contractors doing the work. Provide ample time to avoid delays and unnecessary labor. Cutting and patching made necessary to admit work, repair defective material or workmanship, or by neglect to anticipate proper requirements, shall be done by the General Contractor. at the expense of the Mechanical Contractor.

3.10 CUTTING AND PATCHING (EXISTING STRUCTURE)
- A. All necessary cutting and patching of existing structures necessary for installation of mechanical work shall be done by the Mechanical Contractor, as directed by the Owner's representative.
- B. All surfaces must be patched upon completion of the work to the satisfaction of the Owner's representative. Final finish of all patched surfaces shall be done per Architectural finish schedule, by the General Contractor. All excavation necessary for the Mechanical Contractor shall be performed by the MC. Surfaces shall be patched as herein before specified and all backfilling shall be done in accordance with requirements of this section and other related notes in the Contract Documents. If none specified, restore to original condition.

3.11 ACCESSIBILITY
- A. Locate valves, traps, etc., so as to be easily accessible in mechanical spaces or through access panels, specified hereinafter. Otherwise, obtain Owner's representative's approval of location.
- B. Any equipment requiring maintenance clearances for servicing of filters, motors, compressors, etc., shall be carefully installed to avoid servicing problems. Failure of Contractor to comply with this requirement shall be sufficient cause for Contractor to make all necessary changes at no cost to the Owner. To avoid problems with interpretation of the NEC, allow 42" for all electrical clearances.

3.12 ACCESS DOORS AND PANELS
- A. Locations of panels shall be carefully selected during construction, so as not to be located behind cabinets, etc. Coordinate closely with the Architectural and Electrical Plans before installing panels.
- B. In areas such as janitor's room or on painted walls, etc., access panels shall be prime-coated and painted by the General Contractor; install before surrounding surfaces have been painted. In areas such as toilet rooms, the access panels shall be stainless steel or chrome-plated. In other finished areas such as on ceilings, all access panels shall have the same type of finished surface as that of the surrounding area.
- C. Provide access panels for all wall cleanouts on drainage piping and concealed valves for all piping.
- D. Doors shall have cylinder lock latches, all keyed alike.
- E. Provide fire-rated access doors for one-hour or two-hour rated walls and ceilings; units shall be UL labeled.

3.13 MECHANICAL ACCESSES
- A. Provide suitable access to all mechanical equipment requiring servicing, maintenance, replacement, or repair.

3.14 PAINTING, TAGS, ETC.
- A. Field painting of all equipment, piping etc., located in and exposed in occupied spaces, shall be by the General Contractor. See Architectural painting specification.
- B. Pipe Markers:
  1. Piping throughout the building shall be equal to Brady Corporation No. B-946, M.S.I. No. MS-900, meeting or exceeding ANSI A13.10-1981. Pipe markers shall consist of two wraps of arrows in the direction of flow, color, and wording as indicated in the following schedule. Stencils shall be visibly located and spaced on maximum 20'-0" centers for long straight pipe runs. Stencils shall be located on both sides of a wall, within the first 3'.
  2. Color Code Schedule: (Service, Color, Stencil)

Domestic Cold Water	Green	C.W.
Domestic Hot Water	Yellow	H.W.
Domestic Hot Water Recirc.	Yellow	H.W.C.
Waste and Vent Lines	Yellow	D.W.V.

  3. Ceiling Tile Access Labels: Where it is necessary to remove ceiling tile(s) to access valves, etc., provide and install round 1/2" diameter, yellow, self-adhesive labels on the metal ceiling grid, visible near all four corners of each tile requiring removal.

3.15 FIRE INTEGRITY
- A. All penetrations of fire-rated walls, ceilings, roofs or floors by piping must be protected by appropriately-rated assemblies and caulking to maintain integrity of structure.

3.16 CLEANING UP
- A. Comply with requirements of the General Specifications.
- B. Remove tags, labels, etc., from all plumbing fixtures. Clean all fixtures and trim.

3.17 CAULKING
- A. Caulk all openings and flash around all piping and equipment passing through roof, floor, and walls. All caulking shall be water resistant. See also Paragraph "Fire Integrity" for rated wall, ceiling, roof, or floor penetrations.
- B. All piping penetrations of walls, ceilings, and floors shall be caulked. A chrome-plated escutcheon plate shall be installed at each visible pipe penetration of walls, ceilings, or floors.

3.18 TESTS, ADJUSTMENTS AND INSPECTION
- A. Test all work thoroughly and systematically, both during construction and after completion. Notify Owner's representative 48 hours in advance of all tests. Tests shall be maintained until approved. Tests shall be as hereinafter specified.
- B. The Contractor shall test the completed installation as in regular service. Any defects or imperfections that may show up are to be promptly corrected. The Contractor shall guarantee the entire system and all parts thereof for a period of one year from date of final acceptance. The Contractor shall repair or replace any part which may show signs of failure during that time, if such failure, in the opinion of the Owner's representative, is due to imperfections in material or to improper workmanship.
- C. No system, whether prescribed for testing or not, shall be covered or concealed below ground, in walls, in ceiling spaces, or generally from ease of viewing, without first notifying the Owner's representative. Failure to notify the Owner's representative for inspection of concealed systems shall be cause to require this Contractor to uncover and recover such systems at no additional cost.
- D. A log of all tests shall be kept. The log shall note dates, time of day test started, system or portion of system tested, length of test, test results, and who witnessed the test (AHJ, Owner's representative, or GC). Contractor shall include legible names of witnesses. Contractor to submit a copy of the contractor's test log monthly to the Owner's representative.
- E. Review the project to determine when final inspection is appropriate and advise Owner's representative. Mechanical Contractor is required to complete his work before requesting final inspection.

3.19 FINAL INSPECTION
- A. This Contractor shall thoroughly review and inspect the project to determine when final inspection is required, and shall so advise the Owner's representative. It shall be understood that the work is to be essentially complete. If such is not the case and more than one final inspection and one backcheck are necessary, this Contractor may be billed for the additional back checks at the then governing rate for the personnel involved. The final inspection punchlist shall be legibly signed on a copy of the punch list by a person responsible for the trade involved, and transmitted to the Owner's representative, before the backcheck will be scheduled.

3.20 PROTECTION AND CLEANING
- A. All equipment and material installed by this Contractor shall be properly protected from damage during the course of construction. Enamelware or china fixtures which are plastered around and/or over shall be protected with heavy, thoroughly-secured, wrapping paper. All fixtures and equipment shall be thoroughly cleaned before final inspection. Remove all pasted paper labels from plumbing fixtures.

3.21 SPECIAL PROTECTION
- A. Exercise maximum precaution to protect the building and equipment from damage of any kind, and in particular, prevent water and dust seepage into new equipment.

3.22 INSTRUCTION PERIODS FOR OWNER'S PERSONNEL
- A. Scope: Following installation of mechanical work, have representatives of installation tradesmen conduct demonstrations and instruction periods to point out locations of servicing points and required points of maintenance to Owner's representatives.
- B. General Description of Instruction Periods: Each period shall include preliminary discussion and presentation of information from maintenance manuals with appropriate references to drawings, followed by tours of building areas explaining maintenance requirements, access methods, servicing and maintenance procedures, equipment cleaning procedures, settings, and available adjustments.
- C. Scheduling of Instruction Periods: Notice of Contractor's readiness to conduct such instruction and demonstration shall be given to the Owner's representative at least two weeks prior to the instruction periods, and agreement reached as to the date at which the instruction periods are to be performed. Advise Owner's representative two weeks prior to date when ready to conduct instruction and demonstrations; receive approvals of proposed date prior to making final arrangements.

3.23 ON-SITE OBSERVATIONS AND SAFETY MEASURES
- A. During its progress, all work shall be subject to observation by the Owner's representative. The Engineer has not been retained or compensated to provide design and construction review services relating to the Contractor's safety precautions or to means, methods, techniques, sequences or procedures required for the Contractor to perform his work. The Contractor will be totally responsible for conditions of the jobsite, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours. It shall be the Contractor's responsibility to comply with "Safety and Health Regulations for Construction" in the Federal Register by the U.S. Department of Labor. Contractor shall be responsible for providing all such safety measures and shall consult with the State and/or Federal Safety Inspector for interpretation whenever in doubt as to whether he is or is not in compliance with State and/or Federal regulations. Furthermore, the Contractor distinctly assumes all risk or damage or injury to any persons or property wherever located resulting from any action or operation under this contract or in connection with the work.

3.24 DRAFT STOPS
- A. It shall be the responsibility of each Contractor performing his trade to verify with Architectural Plans and to maintain the integrity of draft stops, whenever his work requires penetration of these areas. Patch as required to maintain integrity of draft stops.

SECTION 22 05 53
IDENTIFICATION FOR PLUMBING, PIPING AND EQUIPMENT

PART 1 GENERAL

1.01 SECTION INCLUDES
- A. Valve Tags.
- B. Pipe Markers and Arrows.
- C. Equipment Identification Nameplates.
- D. Ceiling Tile Access Markers.
- E. Valve Chart Frame.

1.02 REFERENCE STANDARDS
- A. ASME A13.1 - Scheme for the Identification of Piping Systems; The American Society of Mechanical Engineers.
- B. Reference standards shall be the latest revision as accepted by the local Authority Having Jurisdiction.

1.03 SUBMITTALS
- A. List: Submit list of wording, symbols, letter size, and color coding for mechanical identification, include matching size and colored arrows.
- B. Chart and Schedule: Submit valve chart and schedule, including valve tag number, location, function, and valve manufacturer's name and model number.
- C. Product Data: Provide manufacturer's catalog literature for each product required.
- D. Project Record Documents: Record actual locations of tagged valves, on As-Built's.

1.04 QUALITY ASSURANCE
- A. Perform work in accordance with applicable codes.

PART 2 PRODUCTS

2.01 MANUFACTURERS
- A. Brady Corporation
- B. Seton Identification Products
- C. Marking Services, Inc.

2.02 VALVE TAGS
- A. Metal Tags: Brass with stamped blackened letters; tag size minimum 1-1/2" diameter with smooth edges, 40 mils thick.
- B. Tag Lettering: First Line = System Abbreviation; Second Line = Consecutive Valve Numbers, staring at 01.
- C. Beaded Chain: #6 x 4-1/2" - Nickel Plated.

2.03 PIPE MARKERS AND ARROWS
- A. Comply with ASME A13.1.
- B. Plastic Tape Pipe Markers: Flexible vinyl film tape with pressure sensitive adhesive backing and printed markings.
- C. Plastic Tape Pipe Arrows: Nominal sizes and colors to match pipe markers. 1", 2" and 4".
- D. Size of pipe markers:
  1. 3/4" to 1-1/4" OSD of covering = 1/2" letters.
  2. 1-1/2" to 2" OSD of covering = 3/4" letters.

2.04 EQUIPMENT IDENTIFICATION NAMEPLATES
- A. Description:
  1. Plastic Laminate 1-1/4" letters and arrow.
  2. Vinyl Markers 1-1/4" letter and arrow.
  3. Color per ASME standards.

2.05 CEILING TILE ACCESS MARKERS
- A. Description: Vinyl or Plastic markers, 1/2" diameter minimum with color coded head.
- B. Color code as follows:
  1. HVAC Equipment: Yellow.
  2. Plumbing Valves: Green.

2.06 VALVE CHART FRAME
- A. Description: Anodized aluminum frame, letter size, to hold typewritten chart under clear plastic window.

PART 3 EXECUTION

3.01 PREPARATION
- A. Degrease and clean surfaces to receive adhesive for identification materials.

3.02 INSTALLATION
- A. Install plastic nameplates and markers with corrosion-resistant mechanical fasteners, or adhesive. Apply with sufficient adhesive to ensure permanent adhesion.
- B. Install tags with nickel-plated chain.
- C. Install plastic pipe markers in accordance with manufacturer's instructions. Install a circular wrap of arrows at each end of the pipe marker.
- D. Install plastic tape pipe arrows completely around pipe in accordance with manufacturer's instructions.
- E. Identify all mechanical equipment, air handling units, pumps, heat transfer equipment, tanks, water treatment devices, etc., with plastic nameplates.
- F. Identify ALL valves with tags.
- G. Identify piping, concealed or exposed, with plastic pipe markers. Identify service, flow direction. Install in clear view and align with axis of piping. Locate identification not to exceed 20' on center for straight runs including risers and drops, adjacent each valve and tee, at each side of penetration of structure or enclosure, and at each obstruction.
- H. Provide ceiling tile access markers to locate Mechanical Equipment, Filters, Valves, Dampers, etc., above T-bar type panel ceilings. Locate on the metal ceiling grid near all four corners of the tile requiring removal.
- I. Install Valve Chart Frames and Valve Lists on walls in an accessible location in the Mechanical Space.

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SEQUIM SD #323
Office Board Room & 2nd Floor Office Remodel
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REVISION SCHEDULE

#		
	ADDENDUM #1	08/22/23

JOB NO.	2022-080
DATE	08-23-2023
DRAWN	KN
REVIEWED	RH

SHEET NAME
MECHANICAL SPECIFICATIONS CONT.

SHEET NO.
M-4.3

NOTE TO CONTRACTOR

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR THE SAME.

SHEET INDEX

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST CODE OF FEDERAL REGULATIONS (CFR), NATIONAL ELECTRICAL CODE EDITION AND ALL APPLICABLE LOCAL CODES AND REGULATIONS.
2. ALL PANELS, SWITCHES, ETC. SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS IN COMPLIANCE TO UL REQUIREMENTS TO ACCOMMODATE CONDUCTORS SHOWN.
3. WHERE WIRE SIZES ARE INDICATED ON PLANS, FOR INDIVIDUAL CIRCUITS, THE WIRE SIZE INDICATED SHALL APPLY TO THE COMPLETE CIRCUIT, UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF MECHANICAL, PLUMBING AND OTHER EQUIPMENT REQUIRING ELECTRICAL CONNECTION PRIOR TO ANY WORK.
5. CONTRACTOR SHALL EXTEND WIRING FROM ALL JUNCTION BOXES, SWITCHES, ETC. AND MAKE FINAL CONNECTION AS REQUIRED TO ALL BUILDING EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS.
6. LOCATION OF LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS. AT OR NEAR DOORS, INSTALL SWITCHES ON SIDE OPPOSITE TO DOOR HINGE. VERIFY FINAL HINGE LOCATION IN FIELD PRIOR TO ANY WORK.
7. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED. FOLLOW DRAWINGS IN LAYING OUT WORK AND CHECK DRAWINGS OR OTHER TRADES RELATING TO WORK TO VERIFY SPACE IN WHICH WORK WILL BE INSTALLED. MAINTAIN HEADROOM AND MINIMUM CODE REQUIRED WORKING CLEARANCES AT ALL TIMES.
8. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL WALL OUTLET BOXES FOR SWITCHES, BELL/STROBES, FIRE ALARM PULL STATIONS. RECEPTACLES ETC. WITH CABINETS, FURNITURE, EQUIPMENT ETC., TO AVOID CONFLICT.
9. WHERE ELECTRIC MOTORS OR HEATERS ARE INSTALLED IN HUNG CEILINGS, PROVIDE DISCONNECT SWITCH IN HUNG CEILING WITHIN REACH FROM ACCESS POINT.
10. FURNISH APPROVED EXPANSION FITTINGS WHERE RACEWAY CROSSES BUILDING EXPANSION JOINTS.
11. FURNISH PULL STRING IN EACH RACEWAY RUN OVER 10' IN LENGTH, IN WHICH PERMANENT WIRING IS NOT INSTALLED.
12. NOT MORE THAN THREE LIGHTING OR CONVENIENCE OUTLET CIRCUITS ARE PERMITTED IN ONE CONDUIT, PROVIDE SEPARATE CONDUIT FOR EACH HOMERUN INDICATED ON THE DRAWING, UNLESS INDICATED OTHERWISE.
13. PROVIDE PULL BOXES WHEREVER NECESSARY TO FACILITATE PULLING OF CONDUCTORS. COORDINATE LOCATIONS OF BOXES WITH OTHER TRADES TO AVOID CONFLICT. PULL BOXES SHALL BE ACCESSIBLE. THE SIZE OF PULL BOX SHALL COMPLY WITH N.E.C. REQUIREMENTS.
14. OUTLET BOXES FOR FIXTURES RECESSED IN HUNG CEILING SHALL BE ACCESSIBLE THROUGH OPENING CREATED BY REMOVAL OF FIXTURES.
15. SEE MECHANICAL AND PLUMBING DRAWINGS AND SPECIFICATION FOR ADDITIONAL CONNECTION REQUIREMENTS TO CONTROL PANELS, CONTROL TRANSFORMERS, POWER FOR CONTROL SYSTEM EP AND PE SWITCHES, TIME CLOCKS, VALVES, STATS, RELAYS, DUCT SMOKE DETECTOR LOCATIONS, ETC. INDICATED ON CONTROL WIRING DIAGRAMS. ELECTRICAL CONTRACTOR SHALL VERIFY FINAL CONTROL WIRING REQUIREMENTS WITH MECHANICAL AND PLUMBING CONTRACTORS PRIOR TO ANY WORK AND PROVIDE ALL NECESSARY DEVICES AND CONNECTIONS AS REQUIRED.
16. ALL EXTERIOR ELECTRICAL DEVICES AND EQUIPMENT INCLUDING THOSE THAT ARE EXPOSED TO OUTSIDE ENVIRONMENT (UP TO 16') SHALL BE WEATHERPROOF TYPE, NEMA 3R.
17. NO CONDUIT RUNS SHALL BE ALLOWED IN CONCRETE SLABS. ALL CONDUITS WILL BE PLACED ABOVE ACCESSIBLE CEILING SPACES UNLESS SPECIFICALLY INDICATED TO BE UNDERGROUND.
18. LIGHTING, POWER, TELEPHONE AND COMMUNICATIONS OUTLETS SHALL NOT BE PLACED BACK-TO-BACK.
19. WHERE MORE THAN ONE LIGHT SWITCH OCCURS AT SAME LOCATION, SWITCHES SHALL BE MOUNTED IN A MULTIPLE GANG BOX UNDER A SINGLE COVER PLATE. PLATES WITH MORE THAN (3) LIGHT SWITCHES SHALL BE LABELED TO INDICATE THE LIGHT FIXTURES CONTROLLED.
20. DISCONNECT SWITCHES SHALL BE MOUNTED ON INDIVIDUAL SUPPORTS, OR OTHERWISE DIRECTLY ON EQUIPMENT, PROVIDED NO MODIFICATION TO EQUIPMENT IS NECESSARY.
21. ALL ELECTRICAL POWER, LIGHTING, TELEPHONE OR SIGNAL WIRING IN FIRE RATED WALL IS TO BE INSTALLED IN A METALLIC CONDUIT SYSTEM.
22. ALL ELECTRIC MATERIAL SHALL BE LISTED BY "UL" FOR THE TYPE OF APPLICATION AND "UL" LABEL SHALL APPEAR ON ALL ELECTRICAL EQUIPMENT.
23. CONTACT UTILITY COMPANIES FOR SCOPE OF WORK PRIOR TO SUBMITTING BID; INCLUDE UTILITY CHARGES IF ANY.
24. ALL DISTRIBUTION AND CONTROL EQUIPMENT (SUCH AS CB's, SWITCHES, CONTACTORS, ETC.), TERMINATIONS SHALL BE FULLY RATED PER UL AS FOLLOWS:

    a. 125A OR LESS : 60°C OR MORE;
    b. MORE THAN 125A : 75°C OR MORE.
25. ANY ERRORS, OMISSIONS, OR DESIGN DISCREPANCIES ON PLANS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ELECTRICAL ENGINEER FOR CLARIFICATION OR CORRECTION PRIOR TO CONSTRUCTION AND PREPARATION OF SUBMITTAL PACKAGES.
26. CONDUCTORS SHALL HAVE UNDERWRITER'S LABORATORIES, INC.(UL) LISTED, 600 VOLT INSULATION OF TYPE SPECIFIED BELOW OR ELSEWHERE IN THE SPECIFICATIONS. CONDUCTORS SHALL BE COPPER.

    1. BRANCH CIRCUITS - LIGHTING AND POWER.

    a. #10 AWG AND SMALLER, SOLID WIRE TYPE THW OR THHN/THWN, THHW(THHN FOR DRY LOCATION ONLY).
    b. #8 AWG TO #2 AWG, STRANDED TYPE THW OR THHN/THHW.
    c. #1 AWG AND LARGER, STRANDED TYPE XHHW.

    2. FEEDERS : TYPE THW OR THHN/THWN, OR XHHW.
27. PROVIDE GREEN INSULATED GROUNDING CONDUCTOR IN EACH RACEWAY INCLUDING CONDUITS, PLUG STRIPS, WIREMOLD. SIZE OF GROUNDING SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE ARTICLE 250.
28. WIRING METHOD SHALL BE EMT ABOVE GROUND AND MOUNTED IN CONCEALED SPACES AND SCHEDULE-40 PVC FOR UNDERGROUND INSTALLATION. USE RIGID WHEN ENCASED IN CONCRETE OR SUSCEPTIBLE TO DAMAGE.
29. PROVIDE 110V OUTLET, CFL LIGHT & SWITCH FOR LIGHT @ FAU IN ATTIC, WHERE APPLICABLE.
30. ALL SWITCH LOCATIONS ARE REQUIRED TO HAVE A NEUTRAL CONDUCTOR PROVIDED AT THE SWITCH LOCATION PER NEC 404.2(C).
31. UNLESS OTHERWISE INDICATED, SHARING OF NEUTRAL/GROUNDED CONDUCTORS AMONG SINGLE PHASE BRANCH CIRCUITS OF DIFFERENT PHASES INSTALLED IN THE SAME RACEWAY IS NOT PERMITTED. PROVIDE DEDICATED NEUTRAL/GROUNDED CONDUCTOR FOR EACH INDIVIDUAL BRANCH CIRCUIT.
32. UNLESS OTHERWISE INDICATED, PROVIDE A SEPARATE SWITCHED AND UNSWITCHED PHASE CONDUCTOR TO ALL CONTROLLED RECEPTACLES REGARDLESS OF RECEPTACLE CONFIGURATION.
33. BASIS OF ELECTRICAL DESIGN LIMITS VOLTAGE DROP TO 2% FOR FEEDERS AND 3% FOR BRANCH CIRCUITS. ANY CHANGES MADE IN THE FIELD SHALL LIMIT VOLTAGE DROP TO THESE PERCENTAGES.
34. BRANCH CIRCUIT CONDUITS SHALL BE CONCEALED IN WALL OR CEILING SPACES. EXPOSED CONDUITS ARE NOT ALLOWED WHERE CONCEALED METHODS ARE AVAILABLE.
35. CONTRACTOR SHALL PROVIDE CONDUCTORS AND CONDUITS REQUIRED FOR ALL BRANCH CIRCUITS AND FEEDERS. FOR CIRCUIT SIZES NOT SHOWN, REFER TO PANEL SCHEDULES FOR CONDUCTOR AND CONDUIT SIZES.
36. ALL EMERGENCY CIRCUITS SHALL BE ENTIRELY INDEPENDENT OF ALL OTHER WIRING AND EQUIPMENT AND SHALL NOT ENTER SAME RACEWAY, BOXES OR CABINETS WITH OTHER WIRING EXCEPT WHERE PROVIDED IN NEC 700.9B.
37. REFER TO LIGHTING CONTROL DETAILS FOR WIRING AND CONDUIT REQUIREMENTS. CONTRACTOR SHALL PROVIDE ALL WIRING AND CONDUITS REQUIRED BY MANUFACTURER TO FIXTURES AND CONTROLS.

GENERAL NOTES CONTINUED

38. THE CONTRACTOR SHALL COORDINATE THE WORK WITH OTHER TRADES. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION, WHICH DIFFERS FROM THE WORK AS SHOWN ON THE CONTRACT DOCUMENTS, SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERRUPTION OF THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER.
39. EXACT ROUTING METHOD AND LOCATION OF CONDUIT PENETRATION AND OPENINGS IN WOOD ROOF DECKS, WALL, FLOORS OR STRUCTURAL STEEL MEMBERS SHALL BE DETERMINED BY THE CONTRACTOR IN FIELD. PERFORM CORING, SAWCUTTING, PATCHING AND REFINISHING OF EXISTING WALLS AND SURFACES WHEREVER IT IS NECESSARY TO PENETRATE. OPENINGS SHALL BE SEALED IN AN APPROVED METHOD TO MEET THE FIRE RATING AND WATER PROOFING REQUIREMENTS OF THE PARTICULAR WALL, FLOOR OR CEILING. ALL FIRE SEALS SHALL BE UL APPROVED. CONTRACTOR SHALL SCAN ALL CONCRETE WALLS AND SLABS FOR THE PRESENCE OF REBAR AND/OR UTILITIES PRIOR TO DRILLING OR CUTTING IF CONCRETE WORK IS INVOLVED. CONTRACTOR SHALL PROVIDE CERTIFICATION OF CALIBRATION OF CONCRETE SCANNING EQUIPMENT PRIOR TO PERFORMING WORK.
40. STUB OUT (2)1" CONDUITS FROM ALL FLUSHED MOUNTED PANELBOARDS INTO ACCESSIBLE CEILING SPACE AND CAP FOR FUTURE USE.

ABBREVIATIONS

A	AMPERE
AF	AMPERE FRAME RATING (CIRCUIT BREAKER)
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFU	AMPERE FUSE RATING (FUSE)
AIC	AMPERE INTERRUPTING CAPACITY
AS	AMPERE SWITCH RATING (FUSE)
AT	AMPERE TRIP RATING (CIRCUIT BREAKER)
AWG	AMERICAN WIRE GAUGE
BKBD	BACKBOARD
BLDG	BUILDING
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CFSD	COMBINATION FIRE SMOKE DAMPER
CO	CONDUIT ONLY
CT	CURRENT TRANSFORMER
CU	COPPER
CL	CENTERLINE
DISC	DISCONNECT
DSBN	DISTRIBUTION SECTION
DN	DOWN
DWG	DRAWING
EA	EACH
EC	ELECTRICAL CONTRACTOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EXIST, (E)	EXISTING
EXO	EXTERNAL OPERABLE DISCONNECT
F	FUSE
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FF	FINISHED FLOOR
FG	FINISHED GRADE
FLA	FULL LOAD CURRENT
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HV	HIGH VOLTAGE
IDF	INTERMEDIATE DISTRIBUTION FRAME
IG	ISOLATED/INSULATED GROUND
ISC	SHORT CIRCUIT CURRENT AVAILABLE IN RMS SYMMETRICAL AMPERES
J-BOX	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KW	KILOWATT
KV	KILO VOLT
KVA	KILO VOLT-AMPERE
LDC	LOCAL DISTRIBUTION CABINET
LDF	LOCAL DISTRIBUTION FRAME
LCL	LONG CONTINUOUS LOAD
LTG	LIGHTING
LV	LOW VOLTAGE
MFR	MANUFACTURER
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MIN	MINIMUM
MH	MANHOLE / METAL HALIDE
M/M	METER AND MAIN SECTION
MULTI	MULTI-METER SECTION
MV	MEDIUM VOLTAGE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NEW (N)	NEW, TO BE FURNISHED AND INSTALLED BY CONTRACTOR
NF	NON-FUSED
NIC	NOT IN CONTRACT
N/L	NIGHT LIGHT
NO	NUMBER, NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
P	POLE
PB	PULL BOX
PF	POWER FACTOR
PNL	PANEL
POC	POINT OF CONNECTION
PP	POWER POLE
PWR	POWER
PVC	POLYVINYL CHLORIDE
QUAD	QUADRUPLEX
QTY	QUANTITY
RGS	RIGID GALVANIZED STEEL
RMC	RIGID METALLIC CONDUIT
RM	ROOM
RNC	RIGID NONMETALLIC CONDUIT
SHT	SHEET
SN	SOLID NEUTRAL
SPEC	SPECIFICATIONS
SW	SWITCH
SWBD	SWITCHBOARD
TC	TIME CLOCK
TEL	TELEPHONE
TERM	TERMINAL
TP	TEMPORARY POLE
TYP	TYPICAL
UGPS	UNDERGROUND PULL SECTION
UL	UNDERWRITERS LABORATORY
UPS	UNINTERRUPTIBLE POWER SUPPLY
UON	UNLESS OTHERWISE NOTED
V	VOLT, VOLTAGE
VA	VOLT-AMPERE
VFC	VARIABLE FREQUENCY CONTROLLER
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
WH	WATT-HOUR
WP	WEATHERPROOF
WW	WIREWAY
XP	EXPLOSION PROOF
Z	IMPEDANCE
4W	FOUR-WIRE
3W	THREE-WIRE
5S	JUNCTION BOX (4 11/16" SQUARED X2 1/8" DEEP)
Ø	DIAMETER, PHASE
#	NUMBER
°C	DEGREE CELSIUS
(E)	EXISTING DEVICE TO REMAIN
(R)	REMOVE EXISTING DEVICE AND ASSOCIATED CONDUIT AND WIRE
(RL)	REMOVE EXISTING DEVICE AND RELOCATE AS SHOWN ON PLAN
(NL)	NEW LOCATION OF RELOCATED DEVICE

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REVISION SCHEDULE

#		
1	ADDENDUM #1	08/22/23

JOB NO.	2022-080
DATE	08-23-2023
DRAWN	AE
REVIEWED	LM

SHEET NAME
ELECTRICAL LEGENDS AND NOTES

SHEET NO.
E-0.1

POWER LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
	SWITCH AND FUSE ASSEMBLY
	UTILITY COMPANY PULL SECTION LUGS
	GROUNDING CONNECTION TO MAIN BUILDING GROUND SYSTEM U.O.N.
N G	GROUNDING CONNECTION AT SWITCHGEAR/DISTRIBUTION BOARD WITH NEUTRAL BONDING.
M	IN-LINE UTILITY COMPANY METER
M	UTILITY METER WITH CIRCUIT TRANSFORMERS (CT'S) METER
SS	SOLID STATE DEVICE CONNECTED TO THE POWER DISTRIBUTION SYSTEM
GFP	GROUND FAULT PROTECTION DEVICE CONNECTED TO THE POWER DISTRIBUTION SYSTEM
SPD	SURGE PROTECTION DEVICE
T OR TRANS. "T-X" 300 KVA PRI.480V Δ SEC.208Y/120 GND.	TRANSFORMER WITH SECONDARY GROUND. REFER TO SINGLE LINE DIAGRAM FOR KVA RATING AND GROUNDING REQUIREMENTS.
G	ON-SITE GENERATOR SET
36" O.C.	STAINLESS STEEL SURFACE MOUNTED WIREMOLD MOUNTED AT 48" A.F.F. U.O.N. IF POWER AND DATA ARE SHOWN, PROVIDE WITH DUAL CHANNEL RACEWAY. WIREMOLD 4000 SERIES.
200-Y	CONDUIT WIRING DESCRIPTION PER FEEDER SCHEDULE ON OTHER PLAN
PB	CONCRETE ELECTRICAL PULL BOX WITH LID APPROPRIATE FOR INSTALLATION LOCATION. LID SHALL BE LABELED "ELECTRICAL" OR "COMM" ACCORDING TO USE.
	SMOKE FIRE DAMPER
DD	DUCT MOUNTED SMOKE DETECTOR.
T	THERMOSTAT SUPPLIED BY MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR SHALL STUB 3/4" C.O. 6" ABOVE CEILING SPACE, PROVIDE BUSHING AND PULL WIRE. IF INSTALLED IN AREA WITH EXPOSED STRUCTURE ABOVE OR HARDLID CEILING, PROVIDE 3/4" C.O. BACK TO ASSOCIATED HVAC UNIT. REFER TO MECHANICAL DETAILS FOR T-STAT MOUNTING HEIGHT REQUIREMENTS. VERIFY LOCATIONS WITH HVAC CONTRACTOR PRIOR TO ROUGH IN.
CO	CARBON MONOXIDE SENSOR SUPPLIED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL PROVIDE 3/4" GALVANIZED RIGID CONDUIT WITH PULL STRING BACK TO HEAD END CARBON MONOXIDE PANEL. REFER TO MECHANICAL DRAWINGS FOR EXACT EQUIPMENT LOCATIONS AND WIRING DETAILS.
P	CEILING MOUNTED PLUG LOAD CONTROLLER.
HCS	CONTACT SENSOR FOR HVAC SHUTDOWN. 4S BOX, MOUNTED ABOVE DOOR OR WINDOW, U.O.N. STUB 3/4" C.O. 6" ABOVE CEILING SPACE. PROVIDE BUSHING AND PULL WIRE. IF INSTALLED IN AREA WITH EXPOSED STRUCTURE ABOVE OR HARD LID CEILING, PROVIDE 3/4" C.O. BACK TO LOCATION OF ASSOCIATED HVAC THERMOSTAT.

POWER LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
A-1	SUBSCRIPT "A-1" REFERS TO PANEL DESIGNATION WITH CIRCUIT NUMBER. TYPICAL OF ALL RECEPTACLE OUTLETS.
	DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	DOUBLE DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS, GFCI TYPE) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS) WITH MOUNTING HEIGHT HORIZONTALLY ABOVE COUNTER TOP PER ARCHITECTURAL PLANS OR APPROVAL.
	DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS, GFCI TYPE) WITH MOUNTING HEIGHT HORIZONTALLY ABOVE COUNTER TOP PER ARCHITECTURAL PLANS OR APPROVAL.
	CA TITLE 24 COMPLIANT DUPLEX RECEPTACLE OUTLET, HALF-CONTROLLED, CONVENIENCE, WITH PERMANENT MARKING. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	CA TITLE 24 COMPLIANT DOUBLE DUPLEX RECEPTACLE OUTLET, HALF-CONTROLLED, CONVENIENCE, WITH PERMANENT MARKING. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	SIMPLEX RECEPTACLE OUTLET, CONVENIENCE WITH (2)USB PORTS. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N. LEVITON MODEL #T5832.
WP	WEATHERPROOF DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	DUPLEX RECEPTACLE OUTLET, SINGLE SPLIT-CIRCUIT SWITCHED. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	SURFACE MOUNTED DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS) MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N.
	RECESSED CEILING MOUNTED DUPLEX RECEPTACLE OUTLET, CONVENIENCE. (20 AMPS, 125 VOLTS) U.O.N.
J	ABOVE CEILING, CONCEALED, JUNCTION BOX, WITH COVER, PER NATIONAL ELECTRICAL CODE (NEC) TABLE 314.16(A)(B), 4" SQUARE DEEP, WITH PLASTER RING.
HJ	RECESSED WALL MOUNTED JUNCTION BOX, WITH COVER, PER NATIONAL ELECTRICAL CODE (NEC) TABLE 314.16(A)(B), 4" SQUARE DEEP, WITH PLASTER RING.
SEE NOTE BELOW	DUPLEX RECEPTACLE, FLUSH IN FLOOR, WATERTIGHT JUNCTION BOX (HINGED BRASS COVER: 20 AMP, 120 VOLT, 2-POLE, 3-WIRE) U.O.N.
	DOUBLE DUPLEX RECEPTACLE, FLUSH IN FLOOR, WATERTIGHT JUNCTION BOX (20 AMP, 120 VOLT, 2-POLE, 3-WIRE) U.O.N.
	JUNCTION BOX, FLUSH IN FLOOR, WATERTIGHT (HINGED BRASS COVER: 20 AMP, 120 VOLT, 2-POLE, 3-WIRE) U.O.N.
	FLOOR BOX NOTE WHERE INDICATED IN AN EXISTING SLAB, PROVIDE SAWCUTTING OF SLAB AS REQUIRED AND EXTEND CONDUIT AND WIRING TO JUNCTION BOX IN NEAREST ACCESSIBLE WALL. DO NOT SAWCUT THROUGH POST TENSION SLABS.
L5-30R	SPECIALTY OUTLET. VERIFY NEMA CONFIGURATION AS NOTED ON PLANS.
OR	BRANCH PANELBOARD, WALL MOUNTED, SEE PLANS AND SCHEDULE. (SURFACE MOUNTED)
	BRANCH PANELBOARD, WALL MOUNTED, SEE PLANS AND SCHEDULE. (RECESSED MOUNTED)
	MAIN SWITCHBOARD, POWER OR LIGHT, FLOOR STANDING ENCLOSURE, (SEE SINGLE LINE DIAGRAM AND LOAD SUMMARY)
F	DISCONNECT SWITCH H.P. RATED 600 VOLTS RATED. "F" INDICATES FUSE TYPE. FUSES PER APPROVED MANUFACTURERS SHOP DRAWINGS.
#2	MAGNETIC MOTOR STARTER H.P. RATED (NUMBER INDICATES NEMA SIZE)
+96" OR 7'-6" AFF	MOUNTING HEIGHT FROM FINISHED FLOOR TO BOTTOM LINE OF OUTLET OR EQUIPMENT. FOR LIGHT FIXTURES, IT IS TO BOTTOM OF FIXTURE.
	CONDUIT STUBBED AND CAPPED, SIZE AND QUANTITIES PER PLANS.
	CONDUIT CONCEALED IN OR UNDER FLOOR, 3/4" UON, COORDINATE WITH G.C. : OR, BURIAL CONDUIT UNDERGROUND IN SCHEDULE - 40 PVC UNLESS NOTED OTHERWISE. VERIFY DEPTH AND TRENCHING WITH G.C.
DETAIL No. SHEET No.	DETAIL REFERENCE
EQUIPMENT ID. No.	EQUIPMENT REFERENCE
PR	ELECTRICAL UTILITY PRIMARY
SC	ELECTRICAL UTILITY SECONDARY
T	UTILITY TELEPHONE
OH	TEMPORARY OVERHEAD CABLING
A-1,3	1" U.O.N HOMERUN TO CIRCUITS #1 AND #3 IN PANEL "A". (CROSSMARKS INDICATE NUMBER OF PHASES AND NEUTRAL. PROVIDE GROUND WIRE.)
	GROUND WELL
	EXISTING (DASH INDICATES) ELECTRICAL EQUIPMENT
	TELEPHONE BACKBOARD 2'X4'X3/4" PLYWOOD. PROVIDE 2" CONDUIT TO TELEPHONE POC.
	MOLDED CASE CIRCUIT BREAKER
	MOLDED CASE SHUNT TRIP CIRCUIT BREAKER
	MOLDED CASE DRAW OUT TYPE CIRCUIT BREAKER
E	REMOTE CONTROLLED, ELECTRONICALLY OPERATED CIRCUIT BREAKER

LIGHTING LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
FN 2ab/2AB N/L	2'X4' RECESSED LUMINAIRE. FN INDICATES LUMINAIRE TYPE - REFER TO LUMINAIRE SCHEDULE, TYPICAL. SUBSCRIPT 2ab REFERS TO CIRCUIT AND SWITCH LEG 'a' AND 'b', SUBSCRIPT 2AB REFERS TO CIRCUIT AND ZONE DESIGNATION 'A' AND 'B'. SUBSCRIPT N/L REFERS TO UNSWITCHED LEG. TYPICAL OF ALL LIGHTING.
FNE	2'X4' RECESSED LUMINAIRE WITH 90MIN. EMERGENCY BATTERY BACKUP
	SURFACE MOUNTED DOUBLE FACE EXIT SIGN (UNIVERSAL ARROWS INDICATED AS NEEDED)
	SURFACE MOUNTED SINGLE FACE EXIT SIGN (UNIVERSAL ARROWS INDICATED AS NEEDED)
S3ab	SWITCH, SINGLE POLE 20A. MOUNTED 48" A.F.F. TO TOP OF DEVICE. SUBSCRIPTS INDICATE THE FOLLOWING: M - MOTOR RATED 3 - THREE WAY 4 - FOUR WAY K - KEY OPERATED D - DIMMER SWITCH T - TIMED SWITCH a, b, c, ETC. - DESIGNATES SWITCH-LEGS CONTROLLED AND QUANTITY OF SWITCHES AT EACH LOCATION.
	OCCUPANCY SENSOR, DUAL-TECHNOLOGY, SURFACE CEILING MOUNTED. WATT STOPPER MODEL #DT-300 OR LEVITON MODEL #OSC20-M0W. PROVIDE WITH POWER PACK(S) AS REQUIRED.
	DUAL TECHNOLOGY OCCUPANCY SENSOR, SURFACE WALL MOUNTED 180° U.O.N. LEVITON MODEL #0SSMT-GD (FOR SINGLE POLE SWITCHING) & LEVITON MODEL #0SSMD-GD FOR (DUAL SWITCHING)
1AB	LOW-VOLTAGE OVERRIDE SWITCH. NUMBER INDICATES OVERRIDE SWITCH. A,B,C, ETC. DESIGNATES AREA AS SHOWN ON LIGHTING SCHEDULE.
SAB	LOW-VOLTAGE DIMMER SWITCH. MOUNTED 48" A.F.F. TO TOP OF DEVICE. 'A,B,C' ETC. - DESIGNATES ZONE CONTROLLED AND QUANTITY OF ZONES AT EACH LOCATION.
M	LOW-VOLTAGE OCCUPANCY SENSOR, DUAL-TECHNOLOGY, SURFACE CEILING MOUNTED INTERCONNECTED TO NETWORK LIGHTING CONTROLS.
DC	CEILING MOUNTED DIGITAL ROOM CONTROLLER INTERCONNECTED TO NETWORK LIGHTING CONTROLS.

SIGNAL LEGEND AND SYMBOLS

SYMBOL	DESCRIPTION
	DATA OUTLET BOX 4S, MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N. STUB 3/4" C.O. 6" ABOVE CEILING SPACE, PROVIDE BUSHING AND PULL WIRE. IF INSTALLED IN AREA WITH EXPOSED STRUCTURE ABOVE OR HARD LID CEILING, PROVIDE 3/4" C.O. BACK TO LOCATION OF NEAREST IDF/MDF.
W	TELEPHONE OUTLET BOX 4S, MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N. STUB 3/4" C.O. 6" ABOVE CEILING SPACE, PROVIDE BUSHING AND PULL WIRE. IF INSTALLED IN AREA WITH EXPOSED STRUCTURE ABOVE OR HARD LID CEILING, PROVIDE 3/4" C.O. BACK TO LOCATION OF NEAREST COMMUNICATIONS CABINET OR TELEPHONE BACKBOARD. "W" INDICATES +42" A.F.F. UNLESS OTHERWISE NOTED.
	COMBINATION TELEPHONE & DATA OUTLET BOX 4S, MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N. STUB 3/4" C.O. 6" ABOVE CEILING SPACE, PROVIDE BUSHING AND PULL WIRE. IF INSTALLED IN AREA WITH EXPOSED STRUCTURE ABOVE OR HARD LID CEILING, PROVIDE 3/4" C.O. BACK TO LOCATION OF NEAREST IDF/MDF, COMMUNICATIONS CABINET, OR TELEPHONE BACKBOARD.
	COMBINATION TELEPHONE & DATA OUTLET BOX 4S, MOUNTED HEIGHT HORIZONTALLY ABOVE COUNTER TOP PER ARCHITECTURAL PLANS OR APPROVAL STUB 3/4" C.O. 6" ABOVE CEILING SPACE, PROVIDE BUSHING AND PULL WIRE. IF INSTALLED IN AREA WITH EXPOSED STRUCTURE ABOVE OR HARD LID CEILING, PROVIDE 3/4" C.O. BACK TO LOCATION OF NEAREST IDF/MDF, COMMUNICATIONS CABINET, OR TELEPHONE BACKBOARD.
	FLUSH FLOOR MOUNTED COMBINATION TELEPHONE & DATA OUTLET BOX, U.O.N.
HTV	TELEVISION OUTLET BOX 4S, MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE U.O.N. STUB 3/4" C.O. 6" ABOVE CEILING SPACE, PROVIDE BUSHING AND PULL WIRE. IF INSTALLED IN AREA WITH EXPOSED STRUCTURE ABOVE OR HARD LID CEILING, PROVIDE 3/4" C.O. BACK TO LOCATION OF CABLE TELEVISION TERMINAL OR COMMUNICATIONS CABINET.
	CEILING MOUNTED PROJECTOR.

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REVISION SCHEDULE

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1	ADDENDUM #1	08/22/23

JOB NO.	2022-080
DATE	08-23-2023
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REVIEWED	LM

SHEET NAME
ELECTRICAL LEGENDS AND NOTES

SHEET NO.
E-0.2

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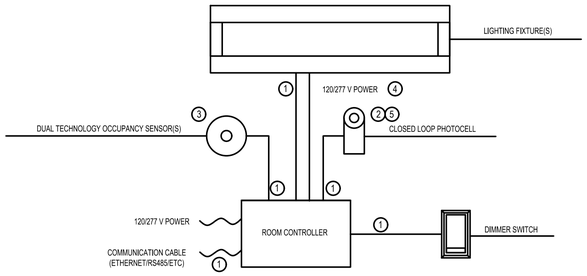


GENERAL NOTES:
1. INSTALL ALL LIGHTING PER MANUFACTURER'S REQUIREMENTS
2. TUNE OCCUPANCY SENSORS FOR NOISE, DO NOT LOCATE NEAR AIR VENTS

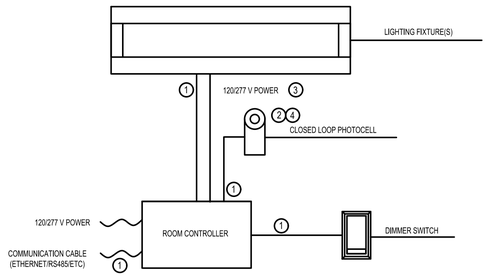
CONSTRUCTION NOTES:

(1) LOW VOLTAGE CABLING SHALL BE PER MANUFACTURER'S REQUIREMENTS
(2) OPEN LOOP SENSOR(S) ACCEPTABLE, CONTRACTOR TO PLACE SENSOR PER MANUFACTURER'S REQUIREMENTS
(3) OCCUPANCY SENSOR TO BE DUAL TECHNOLOGY
(4) POWER ROUTED TO FIXTURE(S) THROUGH ROOM CONTROLLER WHERE REQUIRED BY MANUFACTURER
(5) PROVIDE PHOTOCELLS IN ALL DAYLIT ZONES WHERE TOTAL LIGHT FIXTURES EXCEEDS TWO FIXTURES.

SEQUENCE OF OPERATION :
OCCUPANCY - AUTO ON 0% TO 50%, MANUAL ON FROM 50% TO 100%, AUTO OFF W/ 10 MINUTE DELAY
PHOTOCELL - DIM FIXTURES TO MAINTAIN 30 FC ON WORK SURFACE

VERIFY ALL PROGRAMMING REQUIREMENTS WITH OWNER.

PRIVATE AND OPEN OFFICE LIGHTING CONTROL DIAGRAM | 1



GENERAL NOTES:
1. INSTALL ALL LIGHTING PER MANUFACTURER'S REQUIREMENTS
2. TUNE OCCUPANCY SENSORS FOR NOISE, DO NOT LOCATE NEAR AIR VENTS

CONSTRUCTION NOTES:

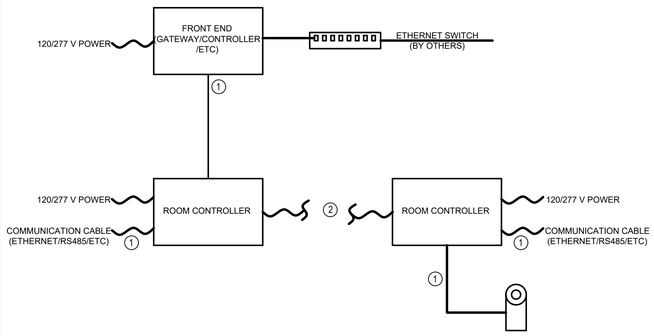
(1) LOW VOLTAGE CABLING SHALL BE PER MANUFACTURER'S REQUIREMENTS
(2) OPEN LOOP SENSOR(S) ACCEPTABLE, CONTRACTOR TO PLACE SENSOR PER MANUFACTURER'S REQUIREMENTS
(3) POWER ROUTED TO FIXTURE(S) THROUGH ROOM CONTROLLER WHERE REQUIRED BY MANUFACTURER
(4) PROVIDE PHOTOCELLS IN ALL DAYLIT ZONES WITH TOTAL WATTAGE OF FIXTURES IN ZONE EXCEEDS 120 WATTS.

SEQUENCE OF OPERATION - PRIVATE OFFICE

OCCUPANCY - AUTO ON 0% TO 50%, MANUAL ON FROM 50% TO 100%, AUTO OFF W/ 10 MINUTE DELAY
PHOTOCELL - DIM FIXTURES TO MAINTAIN 30 FC ON WORK SURFACE

CONTRACTOR SHALL VERIFY AND CONFIRM BOARDROOM LIGHTING ZONE PROGRAMMING NEED WITH THE OWNER.

BOARDROOM LIGHTING CONTROL DIAGRAM | 2



GENERAL NOTES:
1. INSTALL ALL LIGHTING PER MANUFACTURER'S REQUIREMENTS
2. BUILDINGS OVER 10,000 SQUARE FEET SHALL BE CAPABLE OF RECEIVING A DEMAND RESPONSE SIGNAL. LIGHTING CONTROLS SHALL BE PROGRAMMED TO AUTOMATICALLY DIM 15% OF THE BUILDINGS TOTAL INSTALLED LIGHTING POWER.
3. OWNER SHALL BE PROVIDED ALL NECESSARY SOFTWARE AND/OR LICENSES TO MODIFY SCHEDULES, ALL SETPOINTS INCLUDING OCC SENSOR DELAYS AND PHOTOCELL DIMMING LEVELS. SCHEDULE AND SETPOINT ADJUSTMENTS SHALL BE BROWSER BASED. ALL CONTROLLERS SHALL BE NAMED ACCORDING TO THE ROOM NAME THEY SERVE AS SHOWN ON CONSTRUCTION DOCUMENTS.

CONSTRUCTION NOTES:

(1) LOW VOLTAGE CABLING SHALL BE PER MANUFACTURER'S REQUIREMENTS
(2) CONTRACTOR TO PROVIDE COMPLETE NETWORKED LIGHTING CONTROL SYSTEM.

SEQUENCE OF OPERATION - OVERALL
SCHEDULE - PROGRAM LIGHTING OCCUPIED/UNOCCUPIED PERIOD PER OWNER'S DEFINED SCHEDULE.

LIGHTING CONTROLS NETWORK ARCHITECTURE | 3

LUMINAIRE SCHEDULE

TYPE	VOLTS	WATTAGE	LUMENS	LAMPS	MOUNTING	FIXTURE DESCRIPTION	MFR.	CATALOG #	NOTES	SYMBOL
F1	120	---	---	LED N/A	UNIVERSAL	LED EXIT SIGN WITH 90 MINUTE EMERGENCY BATTERY BACK UP.	---	---		
F2	120	26.92	3,561	LED 3500K	RECESSED	2'X2' RECESSED LED FIXTURE WITH 0-10V DIMMING.	LITHONIA	STAKS 2X2 AL03 SWW7		
F2E	120	26.92	3,561	LED 3500K	RECESSED	2'X2' RECESSED LED FIXTURE WITH 0-10V DIMMING AND 90-MINUTE BATTERY BACKUP WITH INTEGRAL TEST SWITCH.	LITHONIA	STAKS 2X2 AL03 SWW7*	*EMERGENCY BATTERY PACK CATALOG NUMBER: ILBLP CP10 HE SD A	

LUMINAIRE SCHEDULE NOTES

1. EQUALS SHALL BE CONSIDERED UPON SUBMITTAL REVIEW AND APPROVAL. PLEASE NOTE THAT IF AN ALTERNATE IS CONSIDERED:
   a. THE CONTRACTOR IS COMPLETELY AND SOLELY RESPONSIBLE FOR ALL ASPECTS OF THE SUBSTITUTION INCLUDING UPDATING CONSTRUCTION DOCUMENTS, OBTAINING APPROVALS AND PERMITS FROM LOCAL AUTHORITY, AND COORDINATING WITH ALL TRADES TO ENSURE CHANGES TO AFFECTED BUILDING SYSTEM ARE ACCOUNTED FOR AND ACCEPTABLE TO THE ENGINEERING TEAM. CONTRACTOR SHALL ENSURE SUBSTITUTED EQUIPMENT MEETS OR EXCEEDS DESIGN INTENT REGARDING RATINGS, PERFORMANCE, DIMENSIONAL CLEARANCES, PHYSICAL DIMENSIONS (MAX/MIN), WEIGHT LIMITATIONS, AND OTHER ASPECTS, PROVING SUBSTITUTION IS SUITABLE TO THE APPLICATION. ENGINEERS WILL REVIEW THE RATING AND PERFORMANCE OF SUBSTITUTED EQUIPMENT ONLY AND WILL NOT ASSUME RESPONSIBILITY FOR SUBSTITUTION AT ANY LEVEL.
   b. IF CONTRACTOR CANNOT MAKE SUBSTITUTED EQUIPMENT WORK IN THIS PROJECT, CONTRACTOR SHALL REVERT TO REQUIREMENTS OF PERMITTED CONSTRUCTION DOCUMENTS AT THEIR EXPENSE.
   c. IT IS UNDERSTOOD BY ALL PARTIES THAT ANY SUBSTITUTIONS OF SPECIFIED PRODUCTS ARE DONE FOR THE PURPOSE OF COST SAVINGS TO THE OWNER. THEREFORE, ANY MATERIAL SUBSTITUTION OR DEVIATIONS PROPOSED BY THE CONTRACTOR SHALL BE INCLUDED WITH THE INITIAL BID AND SHALL SHOW A LINE ITEMS CREDIT TO THE OWNER FOR EACH SUBSTITUTION IN LIEU OF SPECIFIED PRODUCTS.
   d. CONTRACTOR SHALL PROVIDE A POINT BY POINT PHOTOMETRIC STUDY FOR ALL AREAS WHERE ALTERNATE FIXTURES ARE SUBMITTED. LIGHT LEVELS WILL BE REVIEWED FOR COMPLIANCE WITH PROJECT REQUIREMENTS AND BASIS OF DESIGN VALUES.
2. THE FIXTURE SCHEDULE INDICATES GENERAL DESCRIPTION OF LIGHTING FIXTURES AND MANUFACTURERS CATALOG NUMBERS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE CORRECT CEILING CONFIGURATION AND PROVIDE THE FIXTURES WITH ALL NECESSARY TRIMS AND MOUNTING HARDWARE SO THAT BOTH THE CEILING SYSTEM AND THE FIXTURE CONSTRUCTION MATCHES. PROVIDE SEISMIC HANGERS AS REQUIRED.
3. IT SHALL BE CONTRACTORS RESPONSIBILITY TO VERIFY THE EXACT LOCATION OF ALL LIGHTING FIXTURES AND TYPE OF CEILING WITH ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO ANY WORK. SEE ARCHITECTURAL REFLECTED CEILING PLAN PRIOR TO ANY WORK. SEE ARCHITECTURAL ELEVATION DRAWING FOR MOUNTING HEIGHTS OF WALL MOUNTED FIXTURES.
4. A JUNCTION BOX MUST BE PROVIDED WITH ALL EXIT LIGHTS CONNECTED TO MORE THAN ONE SET OF CONDUCTORS UNLESS THE EXIT LIGHT FIXTURE IS FURNISHED WITH AN APPROVED OUTLET BOX FOR THROUGH WIRING.
5. A COMPLETE WSEC COMPLIANT LIGHTING CONTROL SYSTEM SHALL BE PROVIDED TO CONTROL ALL INTERIOR AND EXTERIOR LIGHTING SYSTEMS. REFER TO LIGHTING CONTROL DIAGRAMS, SCHEDULES AND DETAILS.
6. BATTERY PACK EMERGENCY TEST SWITCHES SHALL BE INTEGRAL TO LIGHT FIXTURE. COORDINATION OF SWITCH LOCATION IS REQUIRED WITH DESIGN TEAM IF INTEGRAL INSTALLATION IS NOT POSSIBLE.
7. FIXTURES DESIGNATED AS EMERGENCY SHALL BE SUPPLIED WITH INTEGRAL BATTERY PACK CAPABLE OF POWERING TWO T8 LAMPS FOR 90 MINUTES WITH A TOTAL LIGHT OUTPUT OF 1100 LUMENS OR ONE F13 BIAX FOR 90 MINUTES WITH A TOTAL LIGHT OUTPUT OF 520 LUMENS.
8. PROVIDE ALL REQUIRED MOUNTING HARDWARE ANCHORAGE AND SUPPORTS TO INSTALL LIGHTING FIXTURES.
9. THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERABLE LIGHTING SYSTEM AS PART OF THIS BUILDING CONTRACT.
10. SUSPENSION SYSTEM FOR LIGHT FIXTURES WHICH HAVE PASSED SHAKING TABLE TESTS APPROVED BY THE OFFICE OF THE STATE OF ARCHITECT, OR WHICH, AS INSTALLED, ARE FREE TO SWING A MINIMUM OF 45' FROM THE VERTICAL IN ALL DIRECTIONS WITHOUT CONTACTING OBSTRUCTIONS. SHALL BE ASSUMED TO COMPLY WITH THE LATERAL FORCE REQUIREMENTS FOR SECTION 2305, PART 2, TITLE 24, CCR. UNLESS OF THE CABLE TYPE FREE SWING SUSPENSION SYSTEM SHALL HAVE A SAFETY WIRE OR CABLE ATTACHED TO THE FIXTURE AND STRUCTURE AT EACH SUPPORT CAPABLE OF SUPPORTING FOUR TIMES THE SUPPORTED LOAD.
11. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE FIXTURE BALLAST OR DRIVER VOLTAGE MATCHES THE CIRCUIT VOLTAGE SUPPLYING FIXTURE PRIOR TO ORDERING.
12. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY BALLAST/DRIVER DIMMING CONFIGURATION IS COMPATIBLE WITH CONTROLS BEING PROVIDED PRIOR TO ORDERING FIXTURES. EX. 2 WIRE, 3 WIRE, 4 WIRE, 0-10V, CAT 5, ETC.
13. LED LIGHT FIXTURES SHALL BE IN ACCORDANCE WITH IES, NFPA, UL, AS SHOWN ON THE DRAWINGS, AND AS SPECIFIED.
14. LED LIGHT FIXTURES SHALL BE REDUCTION OF HAZARDOUS SUBSTANCES (ROHS)-COMPLIANT.
15. LED DRIVERS SHALL INCLUDE THE FOLLOWING FEATURES UNLESS OTHERWISE INDICATED:
    - MINIMUM EFFICIENCY: 85% AT FULL LOAD.
    - MINIMUM OPERATING AMBIENT TEMPERATURE: -20 DEG C. (-4 DEG F.)
    - INPUT VOLTAGE: 120 - 277V (±10%) AT 60 HZ., UNLESS OTHERWISE INDICATED.
    - INTEGRAL SHORT CIRCUIT, OPEN CIRCUIT, AND OVERLOAD PROTECTION.
    - POWER FACTOR: >=0.95.
    - TOTAL HARMONIC DISTORTION: <=20%.
    - COMPLY WITH FCC 47 CFR PART 15.
22. LED MODULES SHALL INCLUDE THE FOLLOWING FEATURES UNLESS OTHERWISE INDICATED:
    - COMPLY WITH IES LM-79 AND LM-80 REQUIREMENTS.
    - MINIMUM CRI 80 AND COLOR TEMPERATURE 4000K UNLESS OTHERWISE SPECIFIED IN LUMINAIRE SCHEDULE.
    - MINIMUM RATED LIFE: 50,000 HOURS PER IES L70.
    - LIGHT OUTPUT LUMENS AS INDICATED IN THE LUMINAIRE SCHEDULE.
23. LED DOWNLIGHTS:
    - HOUSING, LED DRIVER, AND LED MODULE SHALL BE PRODUCTS OF THE SAME MANUFACTURER.
24. LED TROFFERS:
    - LED DRIVERS, MODULES, AND REFLECTOR SHALL BE ACCESSIBLE, SERVICEABLE, AND REPLACEABLE FROM BELOW THE CEILING.
    - HOUSING, LED DRIVER, AND LED MODULE SHALL BE PRODUCTS OF THE SAME MANUFACTURER.
25. ALL FIXTURES MOUNTED OUTDOORS SHALL BE UL LISTED FOR WET LOCATION.
26. ALL REMOTE DRIVERS SHALL BE CONCEALED ABOVE CEILING OR PLACED IN A REMOTE LOCATION WHEN ATTIC SPACE IS NOT AVAILABLE.

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REVISION SCHEDULE		
#	ADDENDUM #1	08/22/23

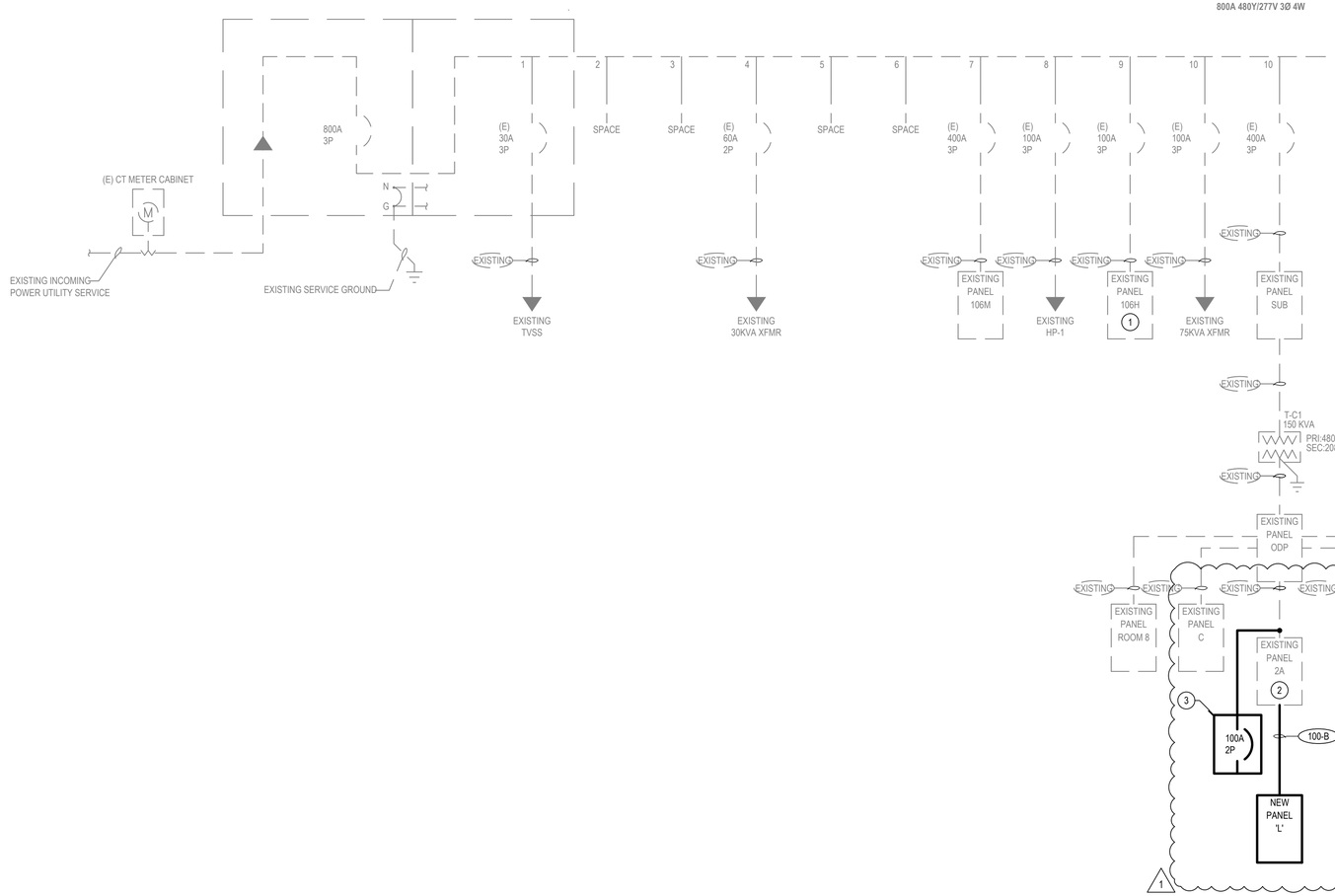
JOB NO.	2022-080
DATE	08-23-2023
DRAWN	AE
REVIEWED	LM

SHEET NAME
LUMINAIRE SCHEDULE

SHEET NO.
E-0.3

(E) MAIN SWITCHBOARD 'MDP'

800A 480Y/277V 3Ø 4W



SINGLE LINE DIAGRAM | 1

600V FEEDER SCHEDULE 1Ø 3W

LABEL	TYPE	SETS	PHASE	NEUTRAL	GROUND	CONDUIT
20-B	20A-3W	1	2 # 12	1 # 12	1 # 12	3/4"
30-B	30A-3W	1	2 # 10	1 # 10	1 # 10	3/4"
40-B	40A-3W	1	2 # 8	1 # 10	1 # 10	1"
50-B	50A-3W	1	2 # 6	1 # 6	1 # 10	1"
60-B	60A-3W	1	2 # 6	1 # 6	1 # 10	1"
70-B	70A-3W	1	2 # 4	1 # 4	1 # 8	1-1/4"
80-B	80A-3W	1	2 # 4	1 # 4	1 # 8	1-1/4"
90-B	90A-3W	1	2 # 2	1 # 2	1 # 8	1-1/4"
100-B	100A-3W	1	2 # 1	1 # 1	1 # 8	1-1/2"
125-B	125A-3W	1	2 # 1	1 # 1	1 # 6	1-1/2"
150-B	150A-3W	1	2 # 1/0	1 # 1/0	1 # 6	1-1/2"
175-B	175A-3W	1	2 # 2/0	1 # 2/0	1 # 6	2"
200-B	200A-3W	1	2 # 3/0	1 # 3/0	1 # 6	2"

NOTE:
ALL CONDUCTOR SIZES ARE BASED ON TYPE THHN COPPER CONDUCTOR UNLESS OTHERWISE NOTED. THE AMPACITY OF CONDUCTORS SHALL BE BASED ON THE TERMINALS NOT TO EXCEED 60°C FOR CONDUCTOR SIZE #14 THROUGH #1 AWG OR 75°C FOR CONDUCTOR SIZE OVER #1 AWG AS PER NEC 110.14(C).

FEEDER SCHEDULE | 3

LOAD SUMMARY
EXISTING PANEL '2A'

		LOAD VA	LOAD AMPS
1	EXISTING LOAD*	2288	11
2	PANEL 'L'	16769	81
	TOTAL LOAD INCLUDING NEC DEMAND FACTORS: 120/208V 1PH 3W	19057	92
	EXISTING PANEL RATED:		225

*EXISTING LOAD BASED ON PRELIMINARY 7 DAY LOAD RECORDINGS

1

LOAD SUMMARY
EXISTING MAIN SWITCHBOARD ' MDP '

		LOAD VA	LOAD AMPS
1	EXISTING LOAD*	143600	173
2	KW TO KVA (0.8PF)	35900	43
3	+25% EXIST LOAD PER NEC 220.87	44875	54
5	NEW LOAD ON PANEL '2A'	16769	20
6	NEW LOAD ON PANEL 'A'	3100	4
7	NEW LOAD ON PANEL '106H'	16620	20
	TOTAL LOAD INCLUDING NEC DEMAND FACTORS: 480Y/277V 3PH 4W	244244	294
	EXISTING SWITCHBOARD RATED:		800

LOAD SUMMARY | 2

GENERAL NOTES

1. REFER TO 'GENERAL NOTES' ON ELECTRICAL LEGENDS AND NOTES SHEET FOR WIRING METHODS, MATERIALS, AND REQUIREMENTS.
2. ALL CIRCUIT BREAKERS, PANELBOARDS AND TRANSFORMERS SHALL BE OF THE SAME MANUFACTURER.
3. ALL GROUND CONNECTIONS SHALL BE CADWELD.
4. ALL PANELBOARDS SHALL BE FULLY RATED FOR THE AVAILABLE FAULT UNLESS OTHERWISE NOTED.
5. THE FEEDER LENGTHS SHOWN ON THESE DRAWINGS ARE FOR CALCULATION PURPOSES ONLY AND ARE NOT VALID FOR BIDDING.
6. CONTRACTOR SHALL UPDATE ALL MODIFIED PANEL DIRECTORIES OR CREATE A NEW TYPED DIRECTORY, IF ONE DOES NOT EXIST, IDENTIFYING EACH CIRCUIT AND INSTALLED CIRCUIT LOADS, MOUNTED IN GLASS OR PLASTIC INSIDE DOOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING DIRECTORIES TO INDICATE ALL NEW CIRCUITS AND ACTUAL AREA SERVED WHICH IS NOT NECESSARILY THE DESCRIPTION INDICATED ON THE BID DOCUMENTS. USE A COMPUTER OR TYPEWRITER TO CREATE DIRECTORY; HANDWRITTEN DIRECTORIES ARE NOT ACCEPTABLE.
7. EQUIPMENT DATA AND CONFIGURATIONS SHOWN ON THE SINGLE LINE DIAGRAM PROVIDE GENERAL EQUIPMENT INFORMATION. CONTRACTOR SHALL REVIEW ELECTRICAL PLANS AND SPECIFICATIONS TO VERIFY ALL EQUIPMENT ASSOCIATED DESIGN INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY COMPONENTS REQUIRED FOR A COMPLETE AND OPERATIONAL INSTALLATION. ANY DISCREPANCIES BETWEEN DESCRIPTIONS, SPECIFICATIONS, AND EXISTING CONDITIONS ARE TO BE PRESENTED TO THE ENGINEER OF RECORD PRIOR TO COMPLETION OF THE BID PROCESS FOR CLARIFICATION. NO EQUIPMENT SHALL BE ORDERED UNTIL DISCREPANCIES ARE RESOLVED THROUGH A FORMAL RFI PROCESS.
8. GROUND ALL ELECTRICAL EQUIPMENT, BRANCH CIRCUITS, FEEDERS, PANEL AND DISTRIBUTION BOARDS, ELECTRICAL SERVICES, ETC. PER ADOPTED NEC ARTICLES 250.
9. ALL ELECTRICAL EQUIPMENT (I.E. SWITCHGEAR, TRANSFORMERS, DISTRIBUTION BOARDS, PANELBOARDS, DISCONNECT SWITCHES, ETC.) SHALL BE PROVIDED WITH A PHENOLIC NAMEPLATE WITH ENGRAVED LETTERS PER SPECIFICATIONS. ALL NAMEPLATES SHALL BE FASTENED WITH A MINIMUM OF TWO (2) MACHINE SCREWS. NO SELF ADHESIVE NAMEPLATES ARE ALLOWED.
10. ELECTRICAL CONTRACTOR TO INCLUDE IN BID ALL ASSOCIATED COSTS FOR THIRD PARTY TESTING OF ELECTRICAL EQUIPMENT, GROUND FAULT, CONDUCTORS, ETC.

CONSTRUCTION NOTES

1. PROVIDE NEW CIRCUIT BREAKER IN EXISTING DISTRIBUTION PANEL BOARD. TYPE TO MATCH EXISTING. AIC RATING TO BE GREATER THAN AVAILABLE FAULT CURRENT. UPDATE PANELBOARD DIRECTORY PER GENERAL NOTE REQUIREMENTS.
2. PROVIDE NEW 100A 2P CIRCUIT BREAKER IN EXISTING DISTRIBUTION PANEL BOARD. TYPE TO MATCH EXISTING. AIC RATING TO BE GREATER THAN AVAILABLE FAULT CURRENT. CONTRACTOR SHALL ALSO CIRCUIT TRACE EXISTING BRANCH CIRCUITS AND UPDATE PANELBOARD DIRECTORY.
3. AS AN ALTERNATE, PROVIDE COST TO TAP EXISTING PANEL 2A FEEDERS AND PROVIDE AN ENCLOSED 100 2P BREAKER ADJACENT TO PANEL 2A FOR NEW PANEL L FEEDER.

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1

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REVISION SCHEDULE

#	ADDENDUM #1	08/22/23

JOB NO.	2022-080
DATE	08-23-2023
DRAWN	AE
REVIEWED	LM

SHEET NAME
SINGLE LINE DIAGRAM AND PANEL SCHEDULES

SHEET NO.
E-0.4

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PANEL 106H (EXISTING)

MOUNTING: SURFACE
FED FROM: MAIN SWITCHBOARD 'MDP'
NEMA: 1
AIC RATING: 10,000
LOCATION: ELECTRICAL RM
VOLTAGE: 480Y/277V 3PH 4W
BUS: 250 A
MAIN: 250 A
FEEDER: EXISTING

NOTE	DESCRIPTION	A	B	C	TYPE	POLE	AMP	AWG/PH	LENGTH	V.D. %		PHASE		V.D. %	LENGTH	AWG/PH	AMP	POLE	TYPE	A	B	C	DESCRIPTION	NOTE
1	LIGHTS 110-117	500			L	1	20				1	A - -	2				20	1	L	500			EXTERIOR LIGHTS	1
1	LIGHTS 100-197		500		L	1	20				3	- B -	4				20	1	L		500		LIGHTS 201-202	1
1	LIGHTS 113, 113A, 109			500	L	1	20				5	- - C	6				20	1	L			500	LIGHTS 200, 204	1
1	WALL HEATER 113	1200			N	1	20				7	A - -	8	1.02	118	#10	30	3	N	5540			CU-1	2
	SPARE					1	20				9	- B -	10				- -	- -	N		5540		- - - - - -	
	SPARE					1	20				11	- - C	12				- -	- -	N			5540	- - - - - -	
	SPARE					1	20				13	A - -	14										SPACE	
	SPARE					1	20				15	- B -	16										SPACE	
	SPARE					1	20				17	- - C	18										SPACE	
	SPARE					1	20				19	A - -	20										SPACE	
	SPARE					1	20				21	- B -	22										SPACE	
	SPARE					1	20				23	- - C	24										SPACE	
	SPARE					1	20				25	A - -	26										SPACE	
	SPARE					1	20				27	- B -	28										SPACE	
	SPARE					1	20				29	- - C	30										SPACE	
	SPARE					1	20				31	A - -	32										SPACE	
	SPARE					1	20				33	- B -	34										SPACE	
	SPARE					1	20				35	- - C	36										SPACE	
	SPARE					1	20				37	A - -	38				40	3	C	8310			XFMR 'X-1'	1
	SPARE					1	20				39	- B -	40				- -	- -	C		8310		- - - - - -	
	SPARE					1	20				41	- - C	42				- -	- -	C			8310	- - - - - -	
	SUBTOTALS	1700	500	500																14350	14350	14350		

CEC LOAD CALC:	CONNECTED	DEMAND	DEMAND	DEMAND
LOAD TYPE	VA	FACTOR	VA	AMPS
(L) LIGHTING	3000	1.25	3750	5
(R) RECEPTACLE	0	NEC 220.44	0	0
(M) MOTOR	0	1.25	0	0
LARGEST MOTOR		0.25	0	0
(C) CONTINUOUS	24930	1.25	31163	38
(N) NON-CONTINUOUS	17820	1.00	17820	21
(K) KITCHEN (NEC 220.56)	0	0.65	0	0
(S) SPECIAL DEMAND	0	1.00	0	0
TOTALS	45750		52733	

TOTAL AMPS CONNECTED AT 480Y/277V 3PH 4W WITH LCL 63 A

SUBTOTALS:	PHASE
16050 VA	A
14850 VA	B
14850 VA	C
45750 VA	TOTAL
58	AMPS

NOTES:
1. EXISTING BREAKER, EXISTING LOAD
2. NEW BREAKER, NEW LOAD

PANEL A (EXISTING)

MOUNTING: RECESSED
FED FROM: PANEL 'ODP'
NEMA: 1
AIC RATING: 10,000
LOCATION: CORRIDOR 101
VOLTAGE: 120/240V 1PH 3W
BUS: 125 A
MAIN: MLO
FEEDER: EXISTING

NOTE	DESCRIPTION	A	B	TYPE	POLE	AMP	AWG/PH	LENGTH	V.D. %		PHASE		V.D. %	LENGTH	AWG/PH	AMP	POLE	TYPE	A	B	DESCRIPTION	NOTE
1	EAST LTNG	300		L	1	15				1	A -	2				15	1	N	180		OFFICE RECEPT	1
1	STORE RM		500	N	1	15				3	- B	4	1.03	37	#12	20	1	N		1000	BOARD RM TV OUTLETS	2
1	MASTER CLOCK	50		N	1	15				5	A -	6				15	1	N	200		UPSTAIRS STORE RM	1
1	ATTIC		200	N	1	15				7	- B	8				15	1	N		500	ROOM 8	1
1	ROOM 4 FLOOR OUTLET	180		N	1	15				9	A -	10				15	1	N	500		CORRIDORS	1
1	ROOM 8		500	N	1	15				11	- B	12				30	1	N		500	EXISTING LOAD	1
2	PROJECTOR	300		N	1	20	#12	24	0.20	13	A -	14				20	1	N	500		CORRIDOR & ROOM 4 RECEPTS	1
1	EXISTING LOAD		500	N	1	20				15	- B	16				20	1	N		500	ROOM 6	1
1	WEST LTNG / ROOM 4	300		N	1	20				17	A -	18				15	1	N	500		EXISTING LOAD	1
1	ROOM 6		500	N	1	20				19	- B	20				50	2	N		3000	EXISTING LOAD	1
1	EXISTING LOAD	500		N	1	20				21	A -	22				- -	- -	N	3000		- - - - - -	1
2	BOARD RM RECEPTS		720	N	1	20	#12	75	1.50	23	- B	24	0.72	24	#12	20	1	N		1080	AV RECEPTS	2
	SUBTOTALS	1630	2920																4880	6580		

CEC LOAD CALC:	CONNECTED	DEM.	DEM.	DEMAND
LOAD TYPE	VA	FACT.	VA	AMPS
(L) LIGHTING	300	1.25	375	2
(R) RECEPTACLE	0	220.44	0	0
(M) MOTOR	0	1.25	0	0
LARGEST MOTOR		0.25	0	0
(C) CONTINUOUS	0	1.25	0	0
(N) NON-CONTINUOUS	15710	1.00	15710	65
(K) KITCHEN (NEC 220.56)	0	0.65	0	0
(S) SPECIAL DEMAND	0	1.00	0	0
TOTALS	16010		16085	

TOTAL AMPS CONNECTED AT 120/240V 1PH 3W WITH LCL 67 A

SUBTOTALS:	PHASE
6510 VA	A
9500 VA	B
16010 VA	TOTAL
79	AMPS

NOTES:
1. EXISTING BREAKER, EXISTING LOAD
2. NEW BREAKER, NEW LOAD

PANEL ODP (EXISTING)

MOUNTING: SURFACE
FED FROM: XFMR 'T-C1'
NEMA: 1
AIC RATING: 10,000
LOCATION:
VOLTAGE: 208Y/120V 3PH 4W
BUS: 400 A
MAIN: 400 A
FEEDER: EXISTING

NOTE	DESCRIPTION	A	B	C	TYPE	POLE	AMP	AWG/PH	LENGTH	V.D. %		PHASE		V.D. %	LENGTH	AWG/PH	AMP	POLE	TYPE	A	B	C	DESCRIPTION	NOTE
	PANEL 'C'	5400			C	2	60				1	A - -	2				125	2	C	11250			PANEL 'D'	
	- - - - - -		5400		C	- -	- -				3	- B -	4				- -	- -	C		11250		- - - - - -	
2	PANEL 'A'			8005	- -	2	125				5	- - C	6				225	2	C			9528	HALLWAY PANEL '2A'	
	- - - - - -	8005			- -	- -	- -				7	A - -	8				- -	- -	C	9528			- - - - - -	
	PANEL 'ROOM 8'		11250		C	2	125				9	- B -	10				20	1	N				EXISTING LOAD	
	- - - - - -			11250	C	- -	- -				11	- - C	12				20	1	N				EXISTING LOAD	
	SPACE										13	A - -	14				20	1	N				EXISTING LOAD	
	SPACE										15	- B -	16				20	1	N				EXISTING LOAD	
	SPACE										17	- - C	18				20	1	N				EXISTING LOAD	
	SPACE										19	A - -	20				125	2	C				PANEL 'E'	
	SPACE										21	- B -	22				- -	- -	C				- - - - - -	
	SPACE										23	- - C	24										SPACE	
	SPACE										25	A - -	26										SPACE	
	SPACE										27	- B -	28										SPACE	
	SPACE										29	- - C	30										SPACE	
	SPACE										31	A - -	32										SPACE	
	SPACE										33	- B -	34										SPACE	
	SPACE										35	- - C	36										SPACE	
	SPACE										37	A - -	38										SPACE	
	SPACE										39	- B -	40										SPACE	
	SPACE										41	- - C	42										SPACE	
	SUBTOTALS	13405	16650	19255																20778	11250	9528		

CEC LOAD CALC:	CONNECTED	DEMAND	DEMAND	DEMAND
LOAD TYPE	VA	FACTOR	VA	AMPS
(L) LIGHTING	300	1.25	375	1
(R) RECEPTACLE	0	NEC 220.44	0	0
(M) MOTOR	0	1.25	0	0
LARGEST MOTOR		0.25	0	0
(C) CONTINUOUS	74857	1.25	93571	260
(N) NON-CONTINUOUS	15710	1.00	15710	44
(K) KITCHEN (NEC 220.56)	0	0.65	0	0
(S) SPECIAL DEMAND	0	1.00	0	0
TOTALS	90867		109656	

TOTAL AMPS CONNECTED AT 208Y/120V 3PH 4W WITH LCL 305 A

SUBTOTALS:	PHASE
34183 VA	A
27900 VA	B
28783 VA	C
90867 VA	TOTAL
285	AMPS

NOTES:
1. EXISTING BREAKER, EXISTING LOAD
2. EXISTING BREAKER, MODIFIED LOAD

PANEL L (NEW)

MOUNTING: RECESSED
FED FROM: 2A
NEMA: 1
AIC RATING: 10,000
LOCATION: OPEN OFFICE
VOLTAGE: 120/208V 1PH 3W
BUS: 100 A
MAIN: 100 A
FEEDER: 100 -B

NOTE	DESCRIPTION	A	B	TYPE	POLE	AMP	AWG/PH	LENGTH	V.D. %		PHASE		V.D. %	LENGTH	AWG/PH	AMP	POLE	TYPE	A	B	DESCRIPTION	NOTE
	RECEPTS- OFFICE 203	720		N	1	20	#12	55	1.10	1	A -	2	1.90	88	#12	20	1	N	776		LIGHTING - OFFICES	
	RECEPTS- OFFICE 204		720	N	1	20	#12	55	1.10	3	- B	4	0.27	50	#12	15	2	N		291	FCU-4, FCU-5, FCU-6	
	OPEN OFFICE PRINTER PWR	1000		N	1	20	#12	32	0.89	5	A -	6				- -	- -	N	291		- - - - - -	
	RECEPTS - OPEN OFFICE		1080	N	1	20	#12	35	1.05	7	- B	8	0.72	30	#12	15	2	N		1290	ERV-1	
	RECEPTS - OPEN OFFICE	1080		N	1	20	#12	25	0.75	9	A -	10				- -	- -	N	1290		- - - - - -	
	RECEPTS - OPEN OFFICE		900	N	1	20	#12	15	0.38	11	- B	12	1.03	43	#12	15	2	N		1290	ERV-2	
	ADA DOOR	500		N	1	20	#12	147	2.04	13	A -	14				- -	- -	N	1290		- - - - - -	
	DF-1		1000	N	1	20	#12	107	2.97	15	- B	16	1.25	90	#12	20	1	N		500	ADA DOOR	
	ADA DOOR	500		N	1	20	#12	70	0.97	17	A -	18	0.31	54	#12	15	2	N	314		FCU-1, FCU-2, FCU-3	
	BOARD RM. DOOR CONTACTS		1000	N	1	20	#12	43	1.19	19	- B	20				- -	- -	N		314	- - - - - -	
	BOARD RM. SPEAKERS	250		N	1	20	#12	64	0.44	21	A -	22	0.33	66	#12	20	1	N	180		SERVICE OUTLET	2
	SPARE				1	20				23	- B	24				20	1				SPARE	
	SPARE				1	20			1	25	A -	26				20	1				SPARE	
	SUBTOTALS	4050	4700																4140	3684		

CEC LOAD CALC:	CONNECTED	DEM.	DEM.	DEMAND
LOAD TYPE	VA	FACT.	VA	AMPS
(L) LIGHTING	776	1.25	970	5
(R) RECEPTACLE	0	220.44	0	0
(M) MOTOR	0	1.25	0	0
LARGEST MOTOR		0.25	0	0
(C) CONTINUOUS	0	1.25	0	0
(N) NON-CONTINUOUS	15799	1.00	15799	76
(K) KITCHEN (NEC 220.56)	0	0.65	0	0
(S) SPECIAL DEMAND	0	1.00	0	0
TOTALS	16575		16769	

TOTAL AMPS CONNECTED AT 120/208V 1PH 3W WITH LCL 81 A

SUBTOTALS:	PHASE
8190 VA	A
8384 VA	B
16575 VA	TOTAL
70	AMPS

NOTES:

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REVISION SCHEDULE

#	ADDENDUM #1	08/22/23

JOB NO.	2022-080
DATE	08-23-2023
DRAWN	AE
REVIEWED	LM

SHEET NAME: PANEL SCHEDULES

SHEET NO. E-0.5

LEONARD P. MAIA
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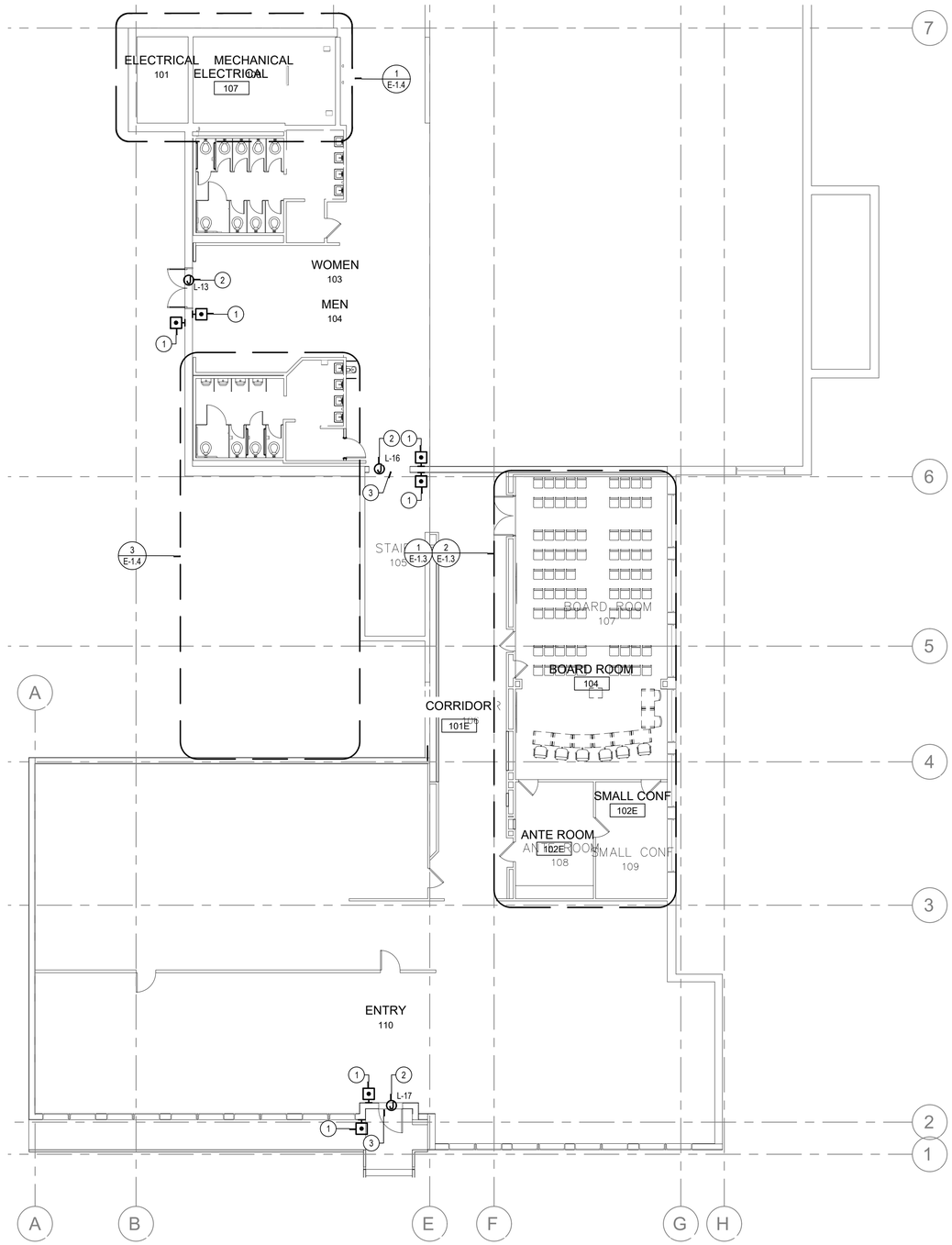

GENERAL NOTES

1. COORDINATE POWER AND DATA DEVICE LOCATIONS, AND DEVICE PLATE COLOR WITH ARCHITECT.
2. NO PIPING, DUCTS OR EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE LOCATED WITHIN A SPACE EXTENDING FROM FLOOR TO A HEIGHT OF 6' ABOVE THE EQUIPMENT. NEC 110.26(E)1.

CONSTRUCTION NOTES

1. ADA PUSH-BUTTON OUTLET BOX 4S, MOUNTED +15" A.F.F. TO BOTTOM OF DEVICE PROVIDE ALL NECESSARY MOUNTING HARDWARE. ROUTE 3/4"C. TO ACCESSIBLE CEILING SPACE. VERIFY EXACT ELECTRICAL CONNECTION REQUIREMENTS WITH MANUFACTURER AND OWNER PRIOR TO INSTALLATION.
2. PROVIDE POWER FOR DOOR OPENER. VERIFY EXACT LOCATION WITH ARCHITECT AND EXACT POWER REQUIREMENTS WITH MANUFACTURER SPECIFICATIONS.
3. CONTRACTOR SHALL CONNECT EXISTING MAG HOLD DOORS TO EXISTING FIRE ALARM SYSTEM AND CONFIGURE DOORS SUCH THAT DOORS REMAIN OPEN DURING OPERATING HOURS. WHEN DOORS ARE RELEASED (CLOSED), ADA PUSHBUTTON SHALL REOPEN DOORS WHEN OPERATED.

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REVISION SCHEDULE		
#	ADDENDUM #1	08/22/23

JOB NO.	2022-080
DATE	08-23-2023
DRAWN	AE
REVIEWED	LM

SHEET NAME
OVERALL ELECTRICAL FLOOR PLANS

SHEET NO.
E-1.1

OVERALL FIRST FLOOR PLAN | SCALE: 3/32" = 1'-0" | 1

NORTH

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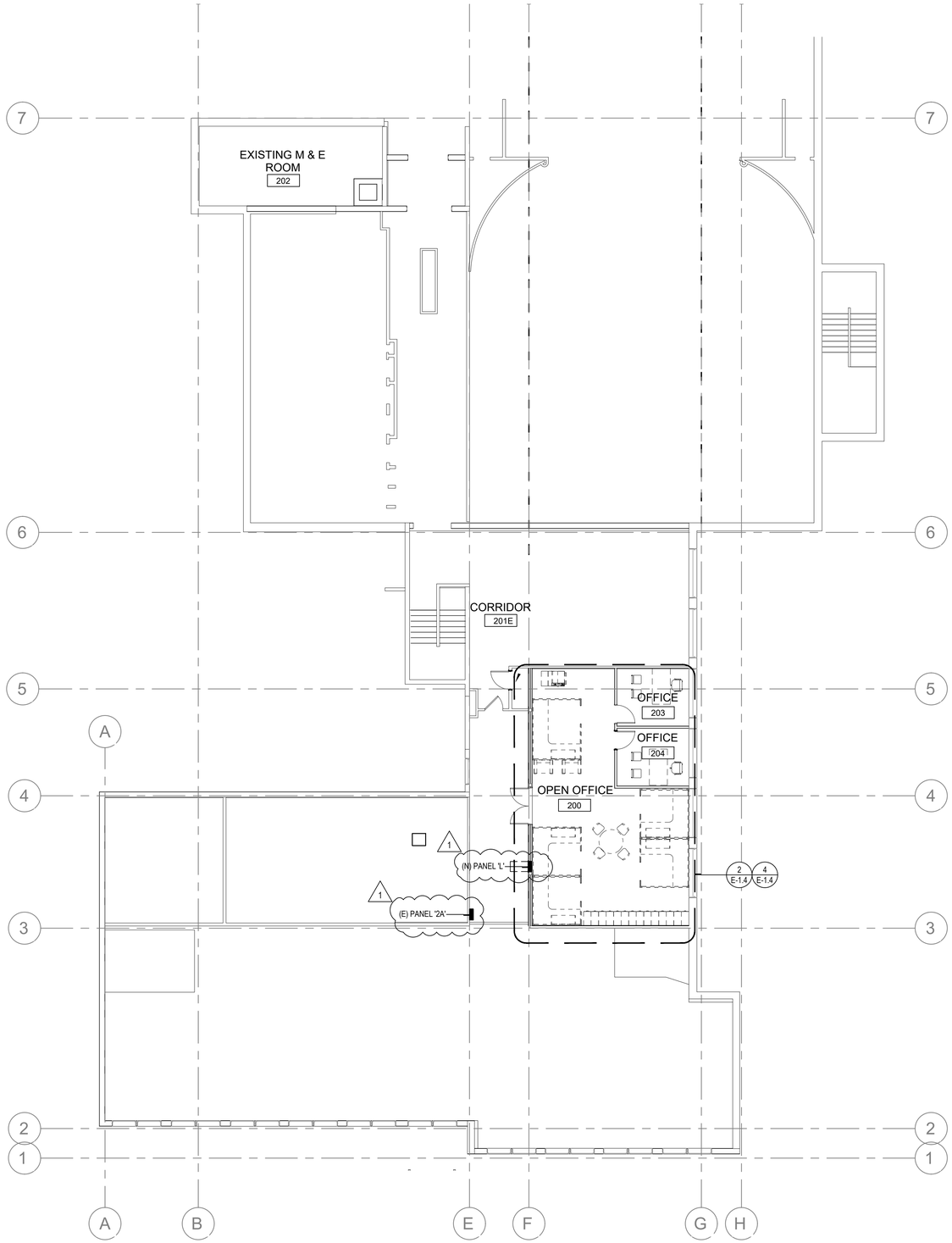

GENERAL NOTES

1. COORDINATE POWER AND DATA DEVICE LOCATIONS, AND DEVICE PLATE COLOR WITH ARCHITECT.
2. NO PIPING, DUCTS OR EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE LOCATED WITHIN A SPACE EXTENDING FROM FLOOR TO A HEIGHT OF 6' ABOVE THE EQUIPMENT. NEC 110.26(E)1.

CONSTRUCTION NOTES

NORTH

OVERALL SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"

1

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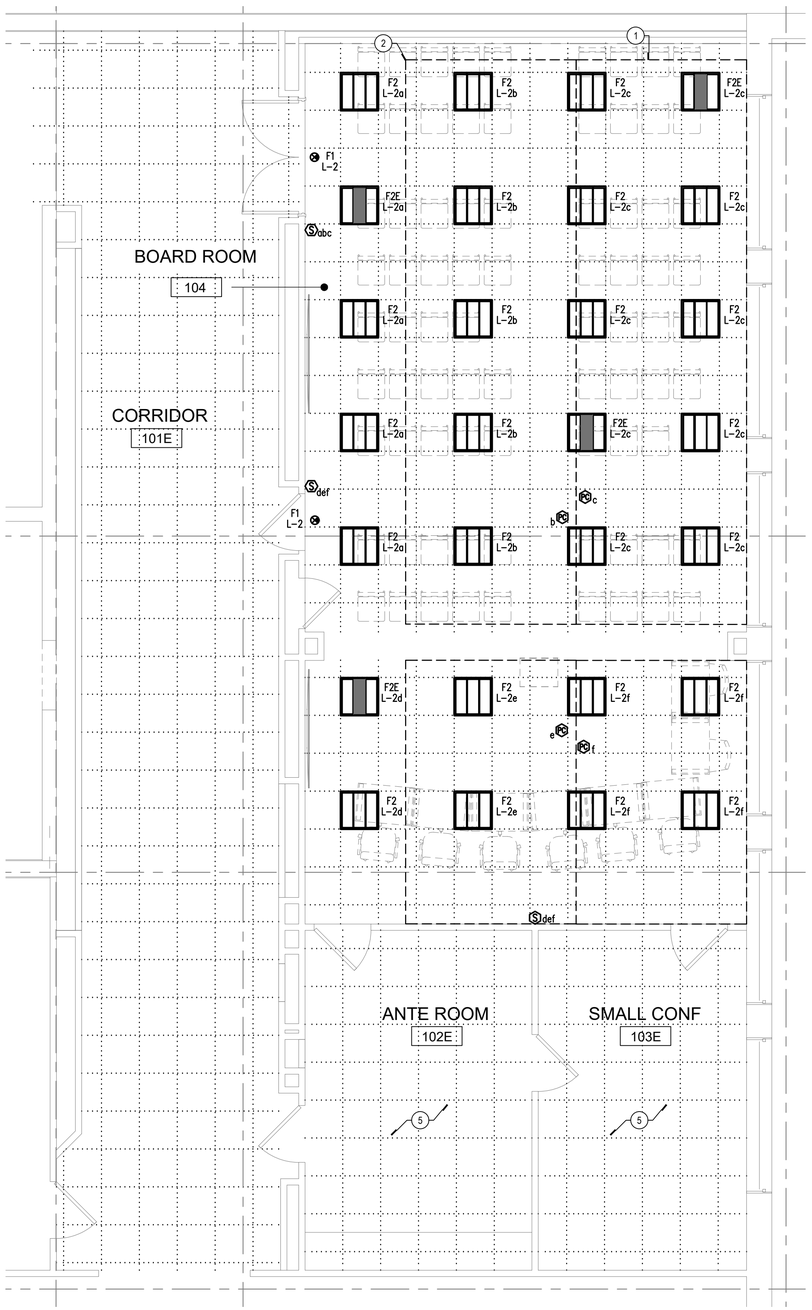
SHEET NAME
OVERALL SECOND FLOOR PLAN

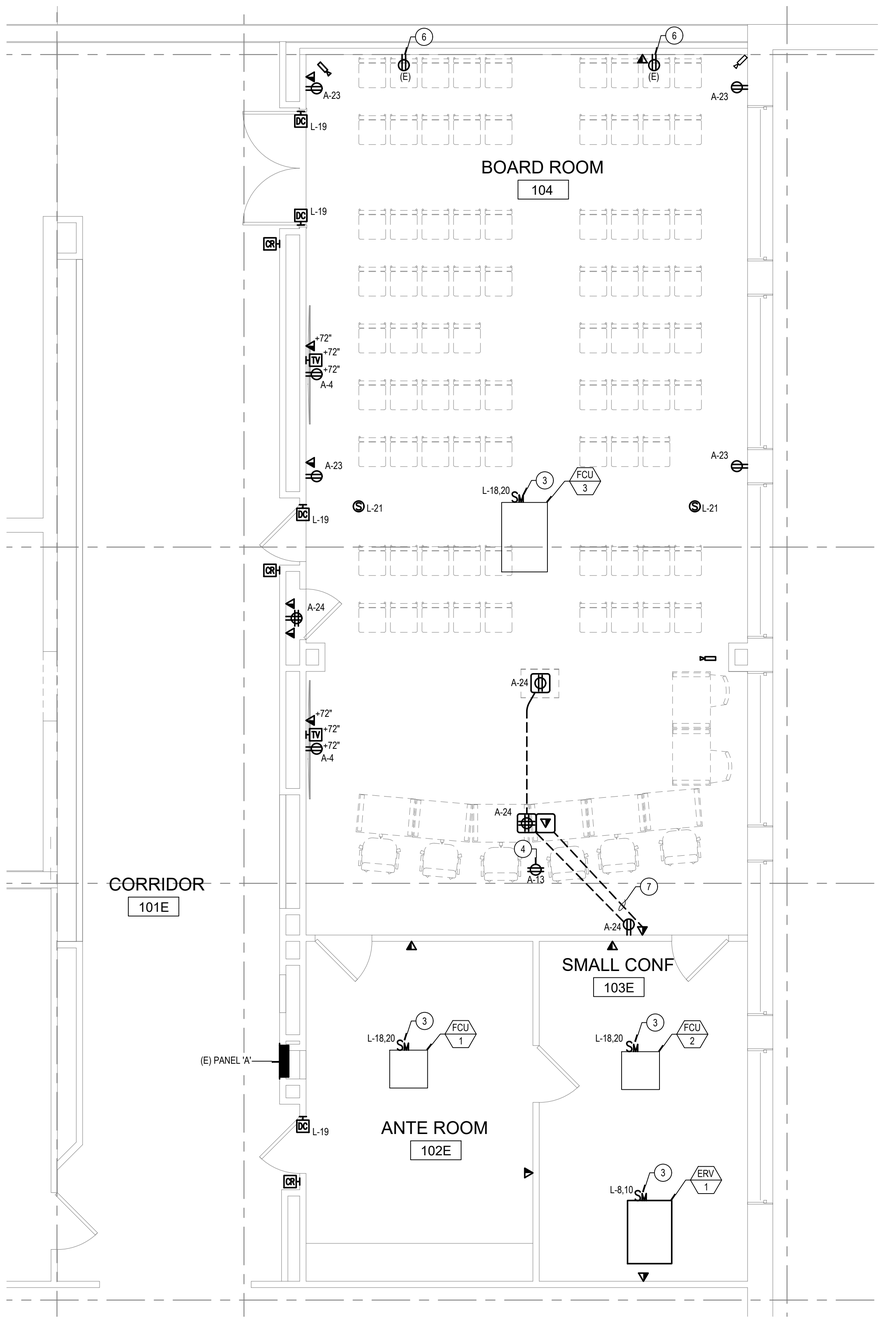
SHEET NO.
E-1.2

22-080

R:_PROJECT\2022\22-080 SEQUIM SCHOOL DISTRICT BOARD ROOM\22-080 E-PMPLN - 2023-08-24 - BETHLEHEM ZEKARIAS



FIRST FLOOR LIGHTING PLAN | SCALE: 1/4" = 1'-0" | 2



FIRST FLOOR POWER & SIGNAL PLAN | SCALE: 1/4" = 1'-0" | 1

GENERAL NOTES

1. COORDINATE POWER AND DATA DEVICE LOCATIONS, AND DEVICE PLATE COLOR WITH ARCHITECT.
2. NO PIPING, DUCTS OR EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE LOCATED WITHIN A SPACE EXTENDING FROM FLOOR TO A HEIGHT OF 6' ABOVE THE EQUIPMENT. NEC 110.26(E)1.
3. COORDINATE LIGHT FIXTURE LOCATIONS AND LIGHT SWITCH LOCATIONS, COLOR, AND STYLE WITH ARCHITECT.
4. WHERE OCCUPANCY SENSORS ARE SHOWN ON PLANS, VERIFY WATTAGE AND COVERAGE OF PRODUCT PROVIDED IS ADEQUATE FOR SPACE TO BE CONTROLLED. COVERAGE IS TO BE ADJUSTED TO AVOID ACCIDENTAL ACTIVATION OUTSIDE OF AREA. VERIFY WIRING REQUIREMENTS TO ADDITIONAL SENSORS, ROOM CONTROLLERS, RELAY PACKS, ETC WITH PRODUCT BEING PROVIDED. OCCUPANCY SENSORS SHALL NOT BE LOCATED WITHIN FOUR FEET OF ANY HVAC DIFFUSER.
5. WHERE DAYLIGHT SENSORS ARE SHOWN ON PLANS, LOCATION SHOWN IS DIAGRAMMATICAL. VERIFY LOCATION IS PER MANUFACTURER RECOMMENDATIONS BASED ON TYPE OF SENSOR (OPEN/CLOSED LOOP). VERIFY WIRING REQUIREMENTS TO ADDITIONAL SENSORS, ROOM CONTROLLERS, RELAY PACKS, ETC WITH PRODUCT BEING PROVIDED.
6. PROVIDE NON-SWITCHED 'HOT' POWER WIRE TO BATTERY PACK CHARGING/SENSOR IN FIXTURE.
7. REFER TO LIGHTING CONTROL DETAILS FOR WIRING AND CONDUIT REQUIREMENTS. CONTRACTOR SHALL PROVIDE ALL WIRING AND CONDUITS REQUIRE BY MANUFACTURER TO FIXTURES AND CONTROLS.
8. FINAL MOUNTING LOCATIONS OF ALL OCCUPANCY AND PHOTOCELL DEVICES SHALL COORDINATED WITH MANUFACTURERS RECOMMENDATIONS AND FIELD ADJUSTED WITH REPRESENTATIVE AS NECESSARY.
9. COORDINATE POWER AND DATA DEVICE LOCATIONS, AND DEVICE PLATE COLOR WITH ARCHITECT.
10. REFER TO MECHANICAL AND PLUMBING PLANS FOR THE EXACT LOCATION OF HVAC EQUIPMENT AND ADDITIONAL WIRING REQUIREMENTS.
11. PROVIDE DUCT DETECTOR POWER AND CONNECTIONS AS INDICATED ON MECHANICAL DRAWINGS.
12. PROVED FLEXIBLE SEAL TYPE CONDUIT FOR CONNECTION TO ALL HVAC EQUIPMENT.
13. ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL BE NEMA 3R.
14. ALL EXTERIOR RECEPTACLE OUTLETS SHALL BE GFCI TYPE.
15. PROVIDE HEAVY DUTY DISCONNECT SWITCHES WITH DUAL ELEMENT FUSES TO MATCH MOTOR H.P. RATING.
16. WHERE EQUIPMENT RATED 800 AMPS OR MORE, DOOR IN ELECTRICAL ROOM SHALL OPEN IN THE DIRECTION OF EGRESS AND SHALL BE EQUIPPED WITH LISTED PANIC HARDWARE PER CEC 110.26(C)(3).
8. PROVIDE 3/4" CONDUIT FOR ELECTRICAL CIRCUITS U.O.N..
9. CONTRACTOR SHALL PROVIDE CONDUCTORS AND CONDUITS REQUIRED FOR ALL BRANCH CIRCUIT AND FEEDERS FOR CIRCUIT SIZES NOT SHOWN, REFER TO PANEL SCHEDULES FOR CONDUCTOR AND CONDUIT SIZES.
10. EXCEPT FOR THE HOMERUN INDICATION, CONDUIT AND WIRING SHOWN FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO PROVIDE THE NUMBER OF CONDUCTORS REQUIRED FOR HOT LEGS, NEUTRAL AND GROUNDING AT EACH DEVICE FOR PROPER BRANCH CIRCUITING.

CONSTRUCTION NOTES

1. PRIMARY SIDELIT DAYLIT ZONE, PER WASHINGTON STATE ENERGY CODE.
2. SECONDARY SIDELIT DAYLIT ZONE, PER WASHINGTON STATE ENERGY CODE.
3. PROVIDE NEMA 1 MOTOR RATED SNAPSWITCH.
4. PROVIDE POWER FOR PROJECTOR. VERIFY EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
5. EXISTING LIGHT FIXTURES TO REMAIN.
6. EXISTING RECEPTACLE AND FACEPLATE TO BE REPLACED TO MATCH NEW AND MOUNTED AT +15" MIN.
7. PROVIDE (1)1-1/4" C.O. FOR TELECOMMUNICATION NEEDS.

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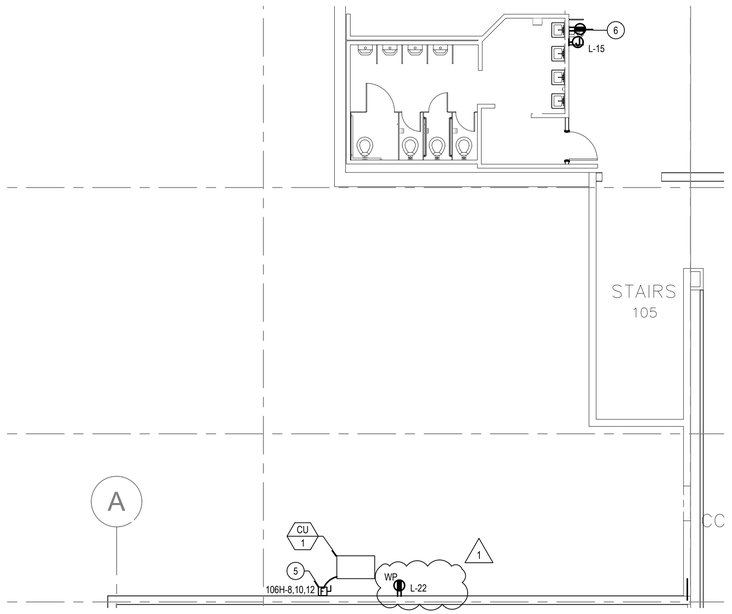
REVIEWED	LM

SHEET NAME
ENLARGED ELECTRICAL FLOOR PLANS

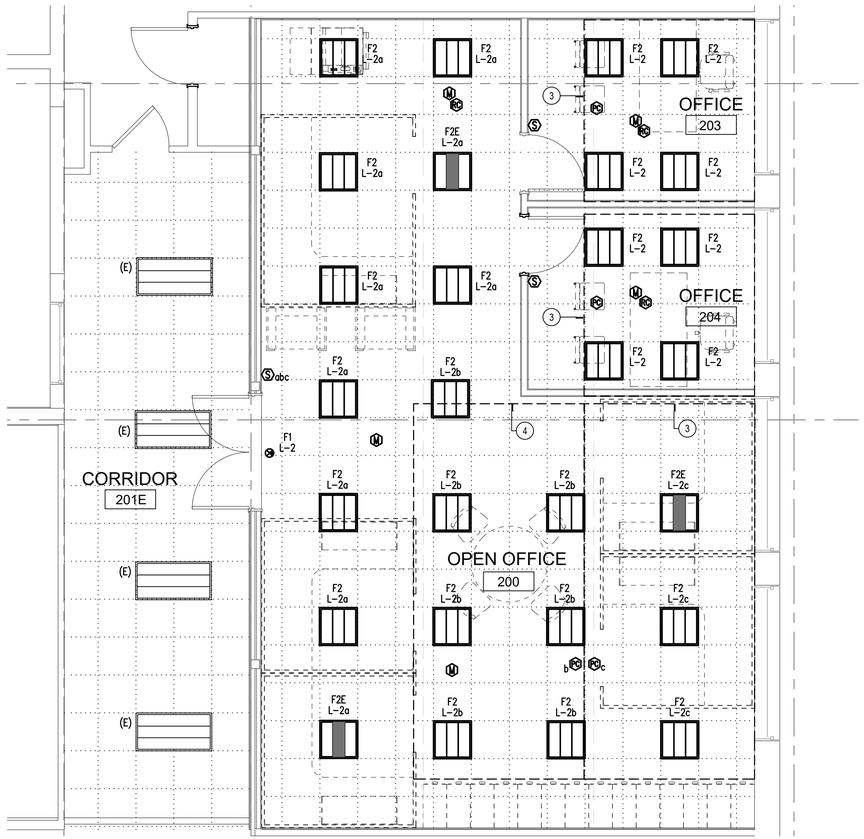
SHEET NO.
E-1.3

22-080

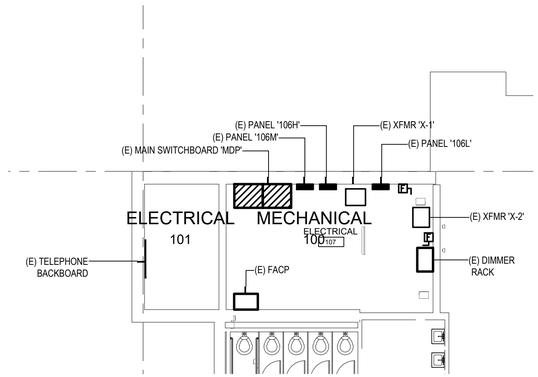
R:_PROJECT\2022\22-080 SEQUIM SCHOOL DISTRICT BOARD ROOM\22-080 E-ISTEN.ARCEDPLUS - 2023-08-24 - BETHLEHEM ZEKARIAS



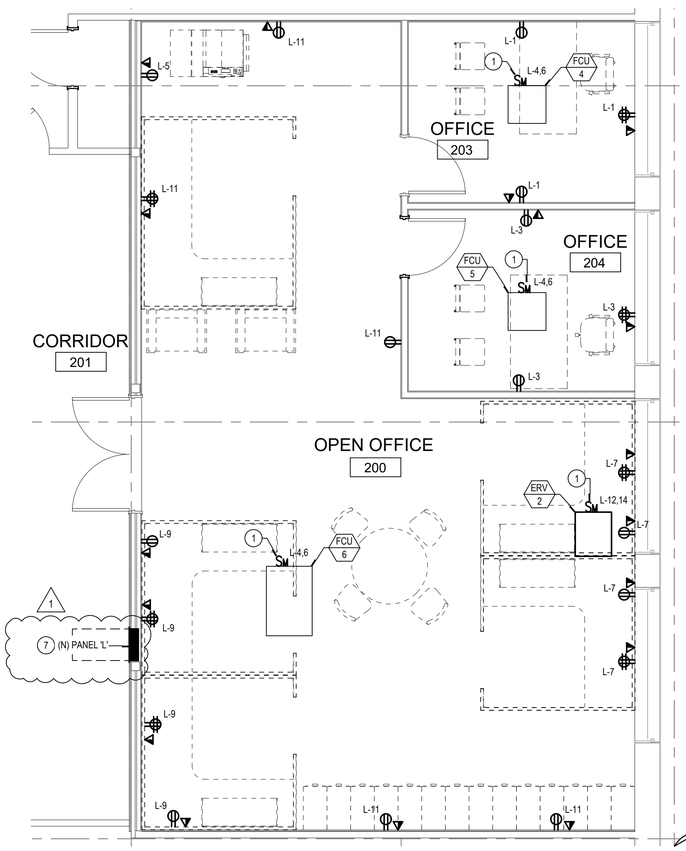
CONDENSING UNIT AND DRINKING FOUNTAIN POWER PLAN | SCALE: 1/8" = 1'-0" | 3



SECOND FLOOR LIGHTING PLAN | SCALE: 1/4" = 1'-0" | 4



FIRST FLOOR ELECTRICAL ROOM | SCALE: 1/8" = 1'-0" | 1



SECOND FLOOR POWER & SIGNAL PLAN | SCALE: 1/4" = 1'-0" | 2

GENERAL NOTES

1. COORDINATE POWER AND DATA DEVICE LOCATIONS, AND DEVICE PLATE COLOR WITH ARCHITECT.
2. NO PIPING, DUCTS OR EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE LOCATED WITHIN A SPACE EXTENDING FROM FLOOR TO A HEIGHT OF 6' ABOVE THE EQUIPMENT. NEC 110.26(E)1.
3. COORDINATE LIGHT FIXTURE LOCATIONS AND LIGHT SWITCH LOCATIONS, COLOR, AND STYLE WITH ARCHITECT.
4. WHERE OCCUPANCY SENSORS ARE SHOWN ON PLANS, VERIFY WATTAGE AND COVERAGE OF PRODUCT PROVIDED IS ADEQUATE FOR SPACE TO BE CONTROLLED. COVERAGE IS TO BE ADJUSTED TO AVOID ACCIDENTAL ACTIVATION OUTSIDE OF AREA. VERIFY WIRING REQUIREMENTS TO ADDITIONAL SENSORS, ROOM CONTROLLERS, RELAY PACKS, ETC WITH PRODUCT BEING PROVIDED. OCCUPANCY SENSORS SHALL NOT BE LOCATED WITHIN FOUR FEET OF ANY HVAC DIFFUSER.
5. WHERE DAYLIGHT SENSORS ARE SHOWN ON PLANS, LOCATION SHOWN IS DIAGRAMMATICAL. VERIFY LOCATION IS PER MANUFACTURER RECOMMENDATIONS BASED ON TYPE OF SENSOR (OPEN/CLOSED LOOP). VERIFY WIRING REQUIREMENTS TO ADDITIONAL SENSORS, ROOM CONTROLLERS, RELAY PACKS, ETC WITH PRODUCT BEING PROVIDED.
6. PROVIDE NON-SWITCHED 'HOT' POWER WIRE TO BATTERY PACK CHARGING/SENSOR IN FIXTURE.
7. REFER TO LIGHTING CONTROL DETAILS FOR WIRING AND CONDUIT REQUIREMENTS. CONTRACTOR SHALL PROVIDE ALL WIRING AND CONDUITS REQUIRE BY MANUFACTURER TO FIXTURES AND CONTROLS.
8. FINAL MOUNTING LOCATIONS OF ALL OCCUPANCY AND PHOTOCELL DEVICES SHALL COORDINATED WITH MANUFACTURERS RECOMMENDATIONS AND FIELD ADJUSTED WITH REPRESENTATIVE AS NECESSARY.
9. COORDINATE POWER AND DATA DEVICE LOCATIONS, AND DEVICE PLATE COLOR WITH ARCHITECT.
10. REFER TO MECHANICAL AND PLUMBING PLANS FOR THE EXACT LOCATION OF HVAC EQUIPMENT AND ADDITIONAL WIRING REQUIREMENTS.
11. PROVIDE DUCT DETECTOR POWER AND CONNECTIONS AS INDICATED ON MECHANICAL DRAWINGS.
12. PROVED FLEXIBLE SEAL TYPE CONDUIT FOR CONNECTION TO ALL HVAC EQUIPMENT.
13. ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL BE NEMA 3R.
14. ALL EXTERIOR RECEPTACLE OUTLETS SHALL BE GFCI TYPE.
15. PROVIDE HEAVY DUTY DISCONNECT SWITCHES WITH DUAL ELEMENT FUSES TO MATCH MOTOR H.P. RATING.
16. WHERE EQUIPMENT RATED 800 AMPS OR MORE, DOOR IN ELECTRICAL ROOM SHALL OPEN IN THE DIRECTION OF EGRESS AND SHALL BE EQUIPPED WITH LISTED PANIC HARDWARE PER CEC 110.26(C)(3).
8. PROVIDE 3/4" CONDUIT FOR ELECTRICAL CIRCUITS U.O.N..
9. CONTRACTOR SHALL PROVIDE CONDUCTORS AND CONDUITS REQUIRED FOR ALL BRANCH CIRCUIT AND FEEDERS FOR CIRCUIT SIZES NOT SHOWN. REFER TO PANEL SCHEDULES FOR CONDUCTOR AND CONDUIT SIZES.
10. EXCEPT FOR THE HOMERUN INDICATION, CONDUIT AND WIRING SHOWN FOR REFERENCE ONLY. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO PROVIDE THE NUMBER OF CONDUCTORS REQUIRED FOR HOT LEGS, NEUTRAL AND GROUNDING AT EACH DEVICE FOR PROPER BRANCH CIRCUITING.

CONSTRUCTION NOTES

1. PROVIDE AND INSTALL NEMA 1 MOTOR RATED SNAP SWITCH.
2. CONNECT NEW LIGHT FIXTURE TO EXISTING LIGHTING CIRCUIT WITHIN CORRIDOR.
3. PRIMARY SIDELIT DAYLIT ZONE, PER WASHINGTON STATE ENERGY CODE.
4. SECONDARY SIDELIT DAYLIT ZONE, PER WASHINGTON STATE ENERGY CODE.
5. PROVIDE AND INSTALL 30A,3P H.D. WEATHERPROOF NEMA 3R RATED FUSED DISCONNECT. FUSING PER MECHANICAL EQUIPMENT MANUFACTURERS REQUIREMENTS. VERIFY EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL CONTRACTOR.
6. REUSE EXISTING CIRCUIT FOR NEW DRINKING FOUNTAIN. VERIFY EXACT LOCATION AND REQUIREMENTS WITH MECHANICAL CONTRACTOR.
7. PROVIDE MINIMUM 3'-0" LEVEL CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT, PER NEC 110.26.

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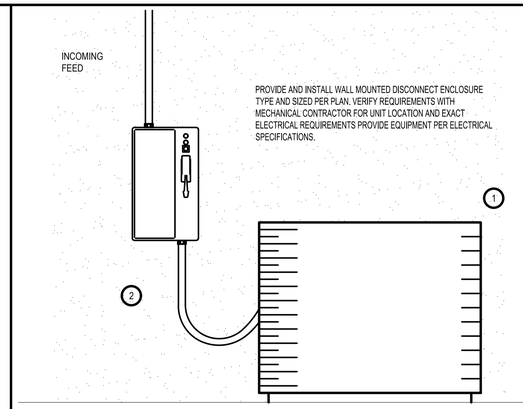
SHEET NAME
ENLARGED ELECTRICAL FLOOR PLANS

SHEET NO.
E-1.4

22-080

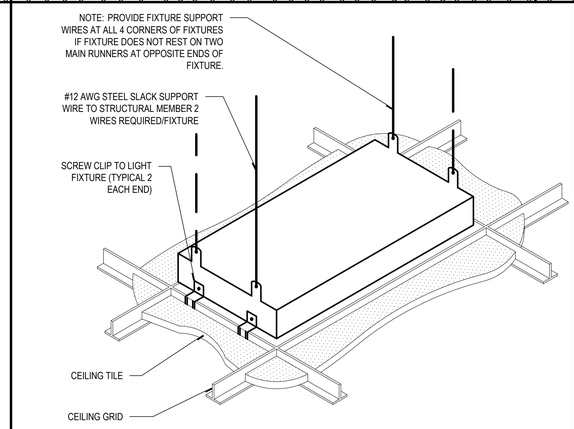
R:_PROJECT\2022\22-080 SEQUIM SCHOOL DISTRICT BOARD ROOM\22-080 E-ENLARGEDPLNS - 2023-08-24 - BETHLEHEM ZEKARIAS



CONSTRUCTION NOTES:

1. MECHANICAL UNIT
2. SEALTITE WEATHERPROOF FLEXIBLE CONDUIT CONNECTION.

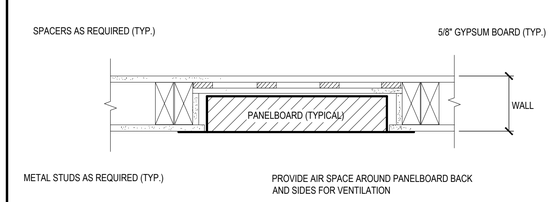
MECHANICAL UNIT DISCONNECT 1



GENERAL NOTES:

1. REFER TO ARCHITECTURAL DRAWINGS FOR TYPE OF CEILING GRID AND TILE SYSTEM.

LIGHTING FIXTURE SUSPENSION 2



RECESSED PANELBOARD 3

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SHEET NAME
ELECTRICAL DETAILS

SHEET NO.
E-2.1

ELECTRICAL SPECIFICATIONS

PART 1 GENERAL

1.01 SCOPE OF WORK

A. WORK COVERED BY THIS SECTION CONSISTS OF FURNISHING ALL LABOR, EQUIPMENT, SUPPLIES, AND MATERIALS, UNLESS OTHERWISE SPECIFIED, AND IN PERFORMING ALL OPERATIONS NECESSARY FOR THE INSTALLATION OF A COMPLETE AND OPERABLE ELECTRICAL SYSTEM AS REQUIRED BY THESE SPECIFICATIONS AND AS INDICATED ON THE DRAWINGS.

B. THE CONTRACTOR SHALL EXAMINE ALL DRAWINGS AND SPECIFICATIONS IN A MANNER TO BE FULLY COGNIZANT OF ALL WORK REQUIRED UNDER THIS SECTION.

C. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS UNLESS OTHERWISE ARRANGED AND SCHEDULE ALL REQUIRED INSPECTIONS FOR THE EXECUTION OF THE WORK UNDER THIS CONTRACT.

1.02 GENERAL REQUIREMENTS

A. WORK DONE UNDER THIS SECTION SHALL COMPLY WITH THE LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE, NEC (NATIONAL ELECTRICAL CODE), THE STATE OF CALIFORNIA TITLE 24, THE STATE BUILDING STANDARDS, (OSHA) OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, AND TO ANY APPLICABLE LOCAL JURISDICTIONAL REQUIREMENTS. IN CASE OF CONFLICT BETWEEN REQUIREMENT, THE MOST RESTRICTIVE SHALL APPLY.

1.03 ELECTRICAL CONTRACTOR'S RESPONSIBILITY

A. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COMPLETE SET OF DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL CHECK THE DRAWINGS OF THE OTHER TRADES AND SHALL CAREFULLY READ THE ENTIRE SPECIFICATIONS AND DETERMINE HIS RESPONSIBILITIES.

B. BEFORE SUBMITTING THE BID, THE ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FULLY ACQUAINT HIMSELF WITH EXISTING CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL THE EQUIPMENT AND ASSOCIATED WIRING IN SUCH A MANNER AS TO CONFORM WITH THE EXISTING STRUCTURE OF THE BUILDING, AVOID OBSTRUCTIONS, AND MEET APPLICABLE CODE REQUIREMENTS.

C. THE INTENT OF THESE DRAWINGS IS TO DESCRIBE A COMPLETE AND OPERABLE SYSTEM. WHERE EXISTING CONDITIONS DIFFER FROM DRAWINGS, ADJUSTMENT SHALL BE MADE AND ALLOWANCES INCLUDED FOR ALL NECESSARY EQUIPMENT TO COMPLETE ALL PARTS OF THE DRAWINGS AND SPECIFICATIONS. BRING ANY QUESTIONS TO THE ARCHITECT OR ENGINEER'S ATTENTION PRIOR TO BIDDING.

D. WHEREVER A DISCREPANCY IN QUANTITY OR SIZE OF CONDUIT, WIRE, EQUIPMENT, DEVICES, CIRCUIT BREAKERS, ETC., ARISES ON THE DRAWING AND/OR SPECIFICATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITION NOTED ON DRAWINGS AND/OR IN SPECIFICATIONS TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ENGINEER.

1.04 WORK NOT INCLUDED

A. CERTAIN LABOR, MATERIALS, OR EQUIPMENT MAY BE FURNISHED UNDER OTHER CONTRACTS BY THE OWNER. WHEN SUCH IS THE CASE, THE EXTENT, SOURCE, AND DESCRIPTION OF THESE ITEMS WILL BE INDICATED ON THE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS. UNLESS OTHERWISE NOTED, ALL LABOR, MATERIALS AND EQUIPMENT FOR THE COMPLETE INSTALLATION OF THE ELECTRICAL WORK SHALL BE PROVIDED UNDER THIS SECTION OF THESE SPECIFICATIONS.

1.05 SPECIAL REQUIREMENTS

A. THE DRAWINGS INDICATE GENERAL ARRANGEMENT OF CIRCUITS, OUTLETS, LOCATIONS OF MOTOR CONTROLLERS WITH DISCONNECTS, PANELBOARDS, CONDUIT ROUTING, AND OTHER WORK. INFORMATION SHOWN ON THE DRAWINGS IS ESSENTIALLY DIAGRAMMATIC; HOWEVER, RECIRCUITING OR RELOCATING ELECTRICAL EQUIPMENT WILL NOT BE PERMITTED WITHOUT SPECIFIC WRITTEN APPROVAL OF THE ENGINEER.

1.06 SUBMITTALS

A. AFTER AWARD OF THE CONTRACT AND BEFORE ANY MATERIALS ARE DELIVERED TO THE JOB SITE, A COMPLETE LIST OF ALL MATERIALS PROPOSED TO BE FURNISHED AND INSTALLED UNDER THIS SECTION MUST BE PROVIDED.

B. SUBMIT TO THE ENGINEER FOR APPROVAL ONE PRINT AND ONE REPRODUCIBLE OF ALL LIGHTING FIXTURES, SWITCHGEAR, PANELBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, AND MOTOR STARTERS. SHOP DRAWINGS SHALL INCLUDE MANUFACTURER'S PRINTED INFORMATION FOR EACH OF THESE ITEMS IDENTIFIED ON THE DRAWINGS. THE INFORMATION SHALL INCLUDE, AS MINIMUM, OVERALL DIMENSIONS, WEIGHT, PHASE, VOLTAGE RATINGS, WIRING DIAGRAMS, AND NAMEPLATE DATA.

1.07 STANDARDS AND MATERIALS

A. ALL MATERIALS SHALL CONFORM WITH THE CURRENT APPLICABLE INDUSTRY STANDARDS, NEMA (NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION), ANSI (AMERICAN NATIONAL STANDARDS INSTITUTE), IPCEA (INSULATED POWER CABLE ENGINEERS ASSOCIATION), IEEE (INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS), NATIONAL ELECTRICAL SAFETY CODE.

B. UNLESS OTHERWISE INDICATED, ALL MATERIALS SHALL BE UNDERWRITERS LABORATORIES LISTED AND LABELED, OR CERTIFIED BY A NATIONALLY RECOGNIZED TESTING LABORATORY.

C. WORKMANSHIP AND NEAT APPEARANCE SHALL BE AS IMPORTANT AS THE ELECTRICAL MECHANICAL EFFICIENCY. DEFECTIVE AND DAMAGED MATERIALS SHALL BE REPLACED OR REPAIRED PRIOR TO FINAL APPROVAL AND ACCEPTANCE. THE DRAWINGS AND SPECIFICATIONS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT THAN CODES, STATUTES, OR ORDINANCES IN EFFECT. APPLICABLE CODES, STANDARDS, ORDINANCES, AND STATUTES TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT OR CONFLICT WITH THE DRAWINGS OR SPECIFICATIONS.

1.08 DELIVERY AND STORAGE OF MATERIALS

A. THE CONTRACTOR SHALL INVESTIGATE EACH SPACE IN THE BUILDING THROUGH WHICH EQUIPMENT MUST PASS TO REACH ITS FINAL LOCATIONS. IF NECESSARY, THE MANUFACTURER SHALL BE REQUIRED TO SHIP HIS MATERIAL IN SECTIONS, SIZED TO PERMIT PASSING THROUGH SUCH RESTRICTED AREAS IN THE BUILDING.

B. THE CONTRACTOR SHALL RETAIN IN HIS POSSESSION AND SHALL BE RESPONSIBLE FOR ALL PORTABLE AND DETACHABLE PARTS OF PORTIONS OF INSTALLATIONS SUCH AS FUSES, KEY LOCKS, ADAPTERS, BLOCKING CLIPS, AND INSERTS UNTIL FINAL COMPLETION OF WORK. THESE PARTS SHALL BE DELIVERED TO THE OWNER UPON COMPLETION OF THE WORK.

PART 2 PRODUCTS

2.01 EQUIPMENT AND MATERIALS

A. ALL MATERIALS FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL BE NEW, FREE FROM DEFECTS, AND SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE OF THE WORK. SHOULD ANY TROUBLE DEVELOP DURING THEIR PERIOD DUE TO DEFECTIVE MATERIALS OR FAULTY WORKMANSHIP, THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS AND LABOR TO CORRECT THE TROUBLE WITHOUT ANY COST TO THE OWNER. ANY DEFECTIVE MATERIAL OR INFERIOR WORKMANSHIP NOTED AT THE TIME OF INSTALLATION SHALL BE CORRECTED IMMEDIATELY TO THE SATISFACTION OF THE OWNER.

B. ALL MAJOR EQUIPMENT COMPONENTS SHALL HAVE THE MANUFACTURER'S NAME, ADDRESS, MODEL NUMBER, AND SERIAL NUMBER PERMANENTLY ATTACHED IN A CONSPICUOUS MANNER.

2.02 CONDUIT

A. PROVIDE RACEWAYS AS INDICATED ON THE DRAWINGS AND AS HEREIN SPECIFIED. CONDUITS SHALL BE RIGID STEEL "GRC" (THICK WALL) GALVANIZED; ELECTRICAL METALLIC TUBING "EMT" (THIN WALL); FLEXIBLE STEEL, GALVANIZED; LIQUID-TIGHT, FLEXIBLE STEEL CONDUIT WITH GROUND BOND; ALUMINUM CONDUIT; OR SCHEDULE 40 PVC.

B. ALL EMPTY UNDERGROUND CONDUITS (CO) SHALL BE SCHEDULE 40 PVC UNLESS OTHERWISE INDICATED ON THE DRAWING. ABOVE GROUND EMPTY CONDUITS SHALL BE EMT OR GRC AS REQUIRED BY CODE.

C. WHERE CONDUIT CROSSES AN EXPANSION JOINT, PROVIDE APPROVED FITTINGS WHICH ALLOW DEFLECTIONS EQUIVALENT TO TWICE THE MOVEMENT ALLOWED BY THE DESIGN.

2.03 CONDUCTORS

A. PROVIDE A COMPLETE SYSTEM OF CONDUCTORS IN RACEWAY SYSTEMS AS SHOWN ON THE DRAWINGS AND THEN HEREIN SPECIFIED.

B. LIGHTING AND POWER CONDUCTORS SHALL BE COPPER, 600 VOLT, TYPE THWN/THHN, NO. 12 MINIMUM UNLESS OTHERWISE NOTED.

C. CONTROL CONDUCTORS SHALL BE 600V, TYPE THWN/THHN, NO.14 MINIMUM SIZE UNLESS OTHERWISE NOTED.

2.04 FITTINGS

A. CONNECTOR, COUPLING, LOCKNUT, BUSHINGS AND CAPS USED WITH RIGID CONDUIT SHALL BE STEEL, THREADED AND GALVANIZED. BUSHINGS SHALL BE INSULATED.

B. EMT FITTINGS, CONNECTORS AND COUPLINGS SHALL BE STEEL, ZINC, OR CADMIUM PLATED, COMPRESSION TYPE, WITH INSULATED THROAT.

C. FLEXIBLE STEEL CONDUIT CONNECTORS SHALL BE TWIST-IN-TYPE WITH INSULATED THROAT. THE FINISH SHALL BE ZINC OR CADMIUM PLATING.

D. EMT CONDUIT FITTINGS SHALL BE THE COMPRESSION TYPE; SET SCREW FITTINGS SHALL NOT BE USED.

2.05 JUNCTION AND PULL BOXES

A. FOR INTERIOR DRY LOCATIONS, BOXES SHALL BE GALVANIZED ONE-PIECE DRAWN STEEL, KNOCKOUT TYPE WITH REMOVABLE, MACHINE SCREW SECURED COVERS.

B. ALL BOXES SHALL BE SIZED FOR THE NUMBER AND SIZES OF CONDUCTORS AND CONDUITS ENTERING THE BOX AND EQUIPPED WITH PLASTER RINGS WHERE REQUIRED.

2.06 OUTLET BOXES

A. FOR FIXTURES, BOXES SHALL BE GALVANIZED, ONE-PIECE DRAWN STEEL, KNOCKOUT TYPE EQUIPPED WITH 3/8" FIXTURE STUDS AND PLASTER RINGS WHERE REQUIRED.

B. FOR CONVENIENCE OUTLETS, WALL SWITCHES, OR OTHER DEVICES, OUTLET BOXES SHALL BE GALVANIZED ONE-PIECE DRAWN STEEL, KNOCKOUT TYPE 4"X4"X1-1/2" MINIMUM.

C. FOR LOCATIONS WHERE STANDARD BOXES ARE NOT SUITABLE, SPECIAL BOXES SHALL BE DESIGNED TO FIT SPACE OR MEET OTHER REQUIREMENTS AND SUBMITTED FOR APPROVAL.

2.07 SWITCHES

A. ALL DEVICES SHALL CONFORM TO NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA) STANDARDS AND SHALL BE UNDERWRITERS' LABORATORIES, INC., (UL) LISTED AND LABELED AND SHALL BE "SPECIFICATION GRADE," MEETING THE REQUIREMENTS OF FEDERAL SPECIFICATION WS-896-E, FOR SWITCHES.

1. WALL SWITCHES SHALL BE SPECIFICATION COMMERCIAL GRADE (MINIMUM), FULLY ENCLOSED, QUIET-TYPE TUMBLER SWITCHES RATED 20 AMPERES, 120/277-VOLT, BAKELITE OR COMPOSITION, BACK AND SIDE WIRED, BUMPER PAD, FULL RATING FOR INDUCTIVE OR NON-INDUCTIVE LOADS AND INCANDESCENT OR FLUORESCENT LIGHTING LOADS.
2. SINGLE POLE SWITCHES: G.E. 59511, HUBBELL #1221, ARROW #1991 OR PASS & SEYMOUR 20AC1.
3. THREE-WAY QUIET SWITCHES: G.E. 59531, HUBBELL #1223, ARROW #1993 OR PASS& SEYMOUR 20AC3.
4. WALL SWITCH AND PILOT LIGHTS SHALL BE FLUSH MOUNTED COMBINATION WALL TYPE WITH SWITCH AND PILOT LIGHT EQUIPPED WITH A 6-WATT, 125-VOLT CANDELABRA BASE LAMP. THE PILOT LIGHT SHALL HAVE A GREEN JEWEL WITH BRASS RIM FLUSH MOUNTED IN THE WALL PLATE.
5. ALL SWITCHES SHALL BE OF THE SAME MANUFACTURE.
6. NORMAL SWITCH COLOR IS WHITE APPROVED BY ARCHITECT/OWNER. SWITCHES CONTROLLING CIRCUITS CONNECTED TO EMERGENCY POWER SOURCE SHALL BE RED.
7. 30 AMP MOTOR RATED SNAP SWITCHES SHALL BE LEVITON MS302-DS. PROVIDED IN NEMA 1 OR 3R ENCLOSURE AS SHOWN ON DRAWING.

B. SENSOR SWITCH (MOTION SENSOR)

1. WALL SENSOR SWITCH SHALL BE WATT STOPPER DUAL TECHNOLOGY OCCUPANCY SENSOR LEVITON MODEL #OSSMT-GD (FOR SINGLE POLE SWITCHING) & LEVITON MODEL #OSSMD-GD FOR (DUAL SWITCHING).
2. CEILING SENSOR SWITCH SHALL BE WATT STOPPER DUAL-TECHNOLOGY MODE.
3. PROVIDE 120/277V CEILING SENSOR POWER PACK INSTALLED IN J-BOX NEXT TO LIGHTING CIRCUIT.

2.08 RECEPTACLES

A. DUPLEX RECEPTACLES SHALL BE SPECIFICATION GRADE, 20 AMPS, 125 VOLTS, 3-WIRE, SIDE-WIRED WITH BINDING SCREWS, PARALLEL SLOTS, U-GROUND, PLASTER EARS AND CAPTIVE MOUNTING SCREWS. BODY SHALL BE PHENOLIC, PLASTIC, OR BAKELITE. RECEPTACLES SHALL BE HEAVY-DUTY, 3-BLADE CURRENT CARRYING CONTACT AND DOUBLEWIDE FLAT BLADE GROUND CONTACTS. PROVIDE ARROW HART 5242-I HUBBELL 5242-I OR LEVITON 5242-I.

B. SINGLE RECEPTACLES SHALL BE SPECIFICATION GRADE, GROUNDING TYPE, SIDE-WIRED, WITH BINDING SCREWS, AND SHALL HAVE STANDARD SIZE IVORY BAKELITE BASE. FOR CIRCUITS CONSISTING OF ONE SINGLE RECEPTACLE ONLY, AMPERE RATING OF RECEPTACLE SHALL BE THE SAME AS CIRCUIT BREAKER OF FUSE. FOR RECEPTACLES RATED 15 AMPS/125 VOLTS, PROVIDE NEMA 5-15R, ARROW-HART 5251-I. FOR RECEPTACLES RATED 20 AMPS / 125 VOLTS, PROVIDE NEMA 5-20R, ARROW-HART 5721-I, OR EQUAL.

2.09 DEVICE PLATES

1. PROVIDE PLATES FOR ALL SWITCHES, RECEPTACLES, JUNCTION BOXES, TELEPHONE AND OTHER OUTLETS.
2. PROVIDE ENGRAVED OR ETCHED PLATES FOR ALL LOCK SWITCHES, PILOT SWITCHES, SWITCHES FROM WHICH EQUIPMENT OR CIRCUIT CONTROLLED CANNOT BE READILY SEEN, THREE OR MORE SWITCHES UNDER A COMMON PLATE AND FOR SWITCHES AS INDICATED.
3. STAINLESS STEEL PLATES SHALL BE AMERICAN IRON AND STEEL INSTITUTE (AISI) TYPE 302, WITH BEVELED EDGES, 0.040" THICK WITH SATIN SMOOTH FINISH. "SMOOTHIE," HUBBELL #97071 SERIES.
4. PLASTIC COVER PLATE SHALL BE HIGH IMPACT THERMOPLASTIC, HIGH STRENGTH, SCRATCH-RESISTANT, SMOOTH AND SELF-EXTINGUISHING, HUBBELL "PI" SERIES OR PASS & SEYMOUR RP SERIES.
5. WHERE OUTLETS ARE INDICATED TO BE WEATHERPROOF, PROVIDE AN AISI TYPE 302 STAINLESS WITH DOUBLE HINGED COVERS, PASS & SEYMOUR #WPD-8.
6. GALVANIZED STEEL PLATES SHALL BE SQUARE OR RECTANGULAR AND HOT DIPPED GALVANIZED OR SHERARDIZED, BEVELED EDGES AND 0.040" THICK. GALVANIZED STEEL PLATES SHALL BE USED IN UTILITY AREA.
7. PROVIDE PLATES EQUIPPED WITH CLOSE FITTING OPENINGS FOR THE EXACT DEVICE TO BE USED. PROVIDE PLATES FOR TELEPHONE OUTLETS EQUIPPED WITH BUSHED OPENINGS.
8. REFER TO SECTION 3.08 FOR LABELING OF PLATES.
9. COVER PLATES ON PRESSED STEEL OUTLET BOXES IN FURRED AREAS, ATTICS, ETC., OR EXPOSED IN MECHANICAL EQUIPMENT ROOMS SHALL BE OF THE SAME MATERIAL AS THE OUTLET BOX.
10. COVER PLATES IN LOCATIONS CONCEALED FROM PUBLIC VIEW SHALL HAVE THE CIRCUIT NUMBERS AND SOURCE FEED POINT HAND LABELED WITH MARKING BLACK PEN (PERMANENT MARKER). SEE SECTION 3.08 FOR LABELING.
11. PROVIDE PLASTIC COVER PLATES UNLESS NOTED OTHERWISE

2.10 PANELBOARDS

A. FURNISH AND INSTALL ALL BRANCH CIRCUIT PANELBOARDS AS HEREINAFTER SPECIFIED AND AS SHOWN ON THE DRAWINGS. PANELBOARDS SHALL BE OF THE DEAD FRONT SAFETY TYPE EQUIPPED WITH THE THERMAL MAGNETIC 40°C CIRCUIT BREAKERS.

B. CIRCUIT BREAKERS SHALL BE RATED MINIMUM 10,000 AMPS RMS SYMMETRICAL INTERRUPTING CAPACITY AND SHALL BE THE NUMBER OF POLES AND CURRENT CAPACITY AS INDICATED ON THE PANEL SCHEDULE. BRANCH CIRCUIT PANELBOARDS SHALL BE SQUARE-D OR EATON/CUTLER HAMMER WITH LUGS UL LISTED FOR USE WITH 75°C WIRE.

C. DOOR SHALL HAVE A PLASTIC COVERED DIRECTORY FRAME WITH A TYPED IDENTIFICATION CARD OR ALL CIRCUIT AND PANEL NUMBERS FOR BRANCH CIRCUIT PANELBOARDS.

D. PROVIDE NAMEPLATE FOR ALL PANELBOARDS, ENGRAVED WHITE LETTERS ON BLACK BACKGROUND INSTALL NAME PLATES ON THE TRIM ABOVE DOOR.

E. ALL WIRING SHALL BE NEATLY ARRANGED AND LACED TOGETHER.

F. ALL CIRCUIT BREAKERS USED FOR HVAC LOADS SHALL BE RATED "HACR".

G. BUS BARS SHALL BE RECTANGULAR IN CROSS SECTION CONSTRUCTED OF COPPER. NEUTRAL AND GROUND BUSES SHALL BE FULL SIZE.

2.11 INTERIOR LIGHTING FIXTURES

A. FURNISH, INSTALL AND WIRE LIGHTING FIXTURES SCHEDULED OR INDICATED BY TYPE DESIGNATION ON THE DRAWINGS. IF TYPE DESIGNATION IS OMITTED, FIXTURES SHALL BE OF THE SAME TYPE AS SHOWN FOR ROOMS OF SIMILAR USAGE. VERIFY BEFORE PURCHASE AND INSTALLATION. NO ALTERNATIVE FIXTURES WILL BE ACCEPTED.

B. LOCATIONS OF FIXTURES ON ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. VERIFY LOCATION AND SPACING WITH ARCHITECTURAL REFLECTED CEILING PLANS AND OTHER REFERENCE DATA BEFORE PURCHASING. COORDINATE SPACE CONDITIONS, INCLUDING HEADROOM CLEARANCES AND INTERFERENCES WITH CEILING COMPONENTS SUCH AS DUCTS, OPENINGS, BEAMS AND PIPING PRIOR TO INSTALLATION.

C. CHECK THE ARCHITECTURAL FINISHES AND, REGARDLESS OF THE CATALOG PREFIXES AND SUFFIXES SHOWN, FURNISH FIXTURES WITH THE PROPER TRIM, FRAMES, SUPPORTS, HANGERS AND OTHER MISCELLANEOUS APPURTENANCES OR PROPERLY COORDINATE WITH SAID FINISHES. WHERE REQUIRED, FURNISH REINFORCING FOR CEILING CONSTRUCTION TO SUPPORT THE WEIGHT OF THE FIXTURES.

D. FIXTURES SHALL BE FREE OF LIGHT LEAKS AND DESIGNED TO PROVIDE SUFFICIENT VENTILATION OF LAMPS AND BALLASTS, INCLUDING VENT HOLES WHERE REQUIRED. OUTDOOR FIXTURES WITH VENT HOLES SHALL HAVE WIRE MESH SCREENS IN THE VENT HOLES.

E. REPLACE BLEMISHED, DAMAGED OR UNSATISFACTORY FIXTURES AT NO ADDITIONAL COST TO THE OWNER AND IN A MANNER SATISFACTORY TO THE ARCHITECT.

F. LAMPS

1. LAMPS SHALL BE NEW AND OF WATTAGE AND TYPE INDICATED OR AS REQUIRED FOR THE PARTICULAR FIXTURE INSTALLED.
2. UNLESS OTHERWISE NOTED, LAMPS DESCRIBED IN FIXTURE SCHEDULE, ANSI NOMENCLATURE, MANUFACTURED BY GENERAL ELECTRIC, SYLVANIA, PHILLIPS, OR EQUAL.
3. PROVIDE INCANDESCENT LAMPS AND TUNGSTEN-HALOGEN LAMPS AS 130 VOLT RATED WHENEVER SUCH DESIGNS ARE AVAILABLE.
4. PROVIDE FLUORESCENT LAMPS AS INDICATED ON THE DRAWINGS. ALL LINEAR FLUORESCENT LAMPS ARE TO BE INSTALLED WITH THE LABEL FACING THE SAME DIRECTION.
5. PROVIDE HIGH INTENSITY DISCHARGE (H.I.D.) LAMPS OF TYPE AND WATTAGE AS SHOWN ON THE DRAWINGS. LAMPS SHALL BE COMPATIBLE WITH FIXTURE BALLAST. MANUFACTURERS: G.E. CO., PHILLIPS, SYLVANIA, OR EQUAL.

G. HIGH INTENSITY DISCHARGE LAMP BALLASTS

1. PROVIDE HIGH INTENSITY DISCHARGE LAMP BALLASTS AS HIGH POWER FACTOR REGULATING TYPE, CONFORMING TO APPLICABLE NEMA STANDARDS. INPUT VOLTAGE AND WATTAGES ARE LISTED IN THE FIXTURE SCHEDULE.
2. MINIMUM STARTING TEMPERATURE: MINUS 20 DEGREES F.
3. PROVIDE HIGH INTENSITY DISCHARGE BALLASTS OF THE ENCAPSULATED TYPE WITH LOWEST SOUND RATING AVAILABLE.

H. EXIT SIGNS LIGHTS SHALL BE LED TYPE AND PROVIDED WITH AN INTEGRAL EMERGENCY BATTERY PACK.

I. LED LIGHT FIXTURES

A. GENERAL:

1. LED LIGHT FIXTURES SHALL BE IN ACCORDANCE WITH IES, NFPA, UL, AS SHOWN ON THE DRAWINGS, AND AS SPECIFIED.
2. LED LIGHT FIXTURES SHALL BE REDUCTION OF HAZARDOUS SUBSTANCES (ROHS)-COMPLIANT.
3. LED DRIVERS SHALL INCLUDE THE FOLLOWING FEATURES UNLESS OTHERWISE INDICATED:
   a. MINIMUM EFFICIENCY: 85% AT FULL LOAD.
   b. MINIMUM OPERATING AMBIENT TEMPERATURE: -20 DEG C. (-4 DEG F.)
   c. INPUT VOLTAGE: 120 - 277V (±10%) AT 60 HZ.
   d. INTEGRAL SHORT CIRCUIT, OPEN CIRCUIT, AND OVERLOAD PROTECTION.
   e. POWER FACTOR: >=0.95.
   f. TOTAL HARMONIC DISTORTION: <=20%.
   g. COMPLY WITH FCC 47 CFR PART 15.
4. LED MODULES SHALL INCLUDE THE FOLLOWING FEATURES UNLESS OTHERWISE INDICATED:
   a. COMPLY WITH IES LM-79 AND LM-80 REQUIREMENTS.
   b. MINIMUM CRI 80 AND COLOR TEMPERATURE 4000K UNLESS OTHERWISE SPECIFIED IN LUMINAIRE SCHEDULE.
   c. MINIMUM RATED LIFE: 50,000 HOURS PER IES L70.
   d. LIGHT OUTPUT LUMENS AS INDICATED IN THE LUMINAIRE SCHEDULE.

B. LED DOWNLIGHTS:

1. HOUSING, LED DRIVER, AND LED MODULE SHALL BE PRODUCTS OF THE SAME MANUFACTURER.

C. LED TROFFERS:

1. LED DRIVERS, MODULES, AND REFLECTOR SHALL BE ACCESSIBLE, SERVICEABLE, AND REPLACEABLE FROM BELOW THE CEILING.
2. HOUSING, LED DRIVER, AND LED MODULE SHALL BE PRODUCTS OF THE SAME MANUFACTURER.

2.12 LOW VOLTAGE SWITCHGEAR

A. FURNISH AND INSTALL ALL SWITCHBOARDS AS HEREINAFTER SPECIFIED AND AS SHOWN ON THE DRAWINGS. SWITCHBOARDS SHALL BE OF THE DEAD FRONT SAFETY TYPE EQUIPPED WITH THE THERMAL MAGNETIC 40°C CIRCUIT BREAKERS.

B. CIRCUIT BREAKERS SHALL BE RATED MINIMUM 10,000 AMPS RMS SYMMETRICAL INTERRUPTING CAPACITY AND SHALL BE THE NUMBER OF POLES AND CURRENT CAPACITY AS INDICATED ON THE SINGLE LINE DIAGRAM. SWITCHBOARDS SHALL BE SQUARE-D , GE, OR EATON/CUTLER HAMMER.

C. LABEL EACH SWITCHBOARD COMPARTMENT WITH ENGRAVED METAL OR LAMINATED-PLASTIC NAMEPLATE WITH WHITE LETTERS ON BLACK BACKGROUND, MOUNTED WITH CORROSION-RESISTANT SCREWS.

D. ENCLOSURE FINISH FOR OUTDOOR UNITS: NEMA 3R WEATHERPROOF ENCLOSURE WITH FACTORY-APPLIED FINISH IN MANUFACTURER'S STANDARD COLOR, UNDERSURFACES TREATED WITH CORROSION-RESISTANT UNDERCOATING.

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REVISION SCHEDULE

#		
1	ADDENDUM #1	08/22/23

JOB NO.	2022-080
DATE	08-23-2023
DRAWN	AE
REVIEWED	LM

SHEET NAME
ELECTRICAL SPECIFICATIONS

SHEET NO.
E-3.1

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ELECTRICAL SPECIFICATIONS

E. ENCLOSURE FINISH FOR INDOOR UNITS: FACTORY-APPLIED FINISH IN MANUFACTURER'S STANDARD GRAY FINISH OVER A RUST-INHIBITING PRIMER ON TREATED METAL SURFACE.

F. BARRIERS: BETWEEN ADJACENT SWITCHBOARD SECTIONS.

G. UTILITY METERING COMPARTMENT: FABRICATED COMPARTMENT AND SECTION COMPLYING WITH UTILITY COMPANY'S REQUIREMENTS. IF SEPARATE VERTICAL SECTION IS REQUIRED FOR UTILITY METERING, MATCH AND ALIGN WITH BASIC SWITCHBOARD.

H. BUS TRANSITION AND INCOMING PULL SECTIONS: MATCHED AND ALIGNED WITH BASIC SWITCHBOARD.

I. BUSES AND CONNECTIONS: THREE PHASE, FOUR WIRE, UNLESS OTHERWISE INDICATED.

1. PHASE- AND NEUTRAL-BUS MATERIAL: HARD-DRAWN COPPER OF 98 PERCENT CONDUCTIVITY WITH FEEDER CIRCUIT-BREAKER LINE CONNECTIONS. IF BUS IS COPPER, USE COPPER FOR FEEDER CIRCUIT-BREAKER LINE CONNECTIONS.

2. LOAD TERMINALS: INSULATED, RIGIDLY BRACED, SILVER-PLATED, COPPER RUNBACK BUS EXTENSIONS EQUIPPED WITH PRESSURE CONNECTORS FOR OUTGOING CIRCUIT CONDUCTORS. PROVIDE LOAD TERMINALS FOR FUTURE CIRCUIT-BREAKER POSITIONS AT FULL AMPERE RATING OF CIRCUIT-BREAKER POSITION.

3. GROUND BUS: 1/4-BY-2-INCH- (6-BY-50-MM-) MINIMUM-SIZE, HARD-DRAWN COPPER OF 98 PERCENT CONDUCTIVITY, EQUIPPED WITH PRESSURE CONNECTORS FOR FEEDER AND BRANCH-CIRCUIT GROUND CONDUCTORS. FOR BUSWAY FEEDERS, EXTEND INSULATED EQUIPMENT GROUNDING CABLE TO BUSWAY GROUND CONNECTION AND SUPPORT CABLE AT INTERVALS IN VERTICAL RUN.

4. CONTACT SURFACES OF BUSES: SILVER PLATED.

5. MAIN PHASE BUSES, NEUTRAL BUSES, AND EQUIPMENT GROUND BUSES: UNIFORM CAPACITY FOR ENTIRE LENGTH OF SWITCHBOARD'S MAIN AND DISTRIBUTION SECTIONS. PROVIDE FOR FUTURE EXTENSIONS FROM BOTH ENDS.

6. ISOLATION BARRIER ACCESS PROVISIONS: PERMIT CHECKING OF BUS-BOLT TIGHTNESS.

7. NEUTRAL BUSES: 100 PERCENT OF THE AMPACITY OF PHASE BUSES, UNLESS OTHERWISE INDICATED, EQUIPPED WITH PRESSURE CONNECTORS FOR OUTGOING CIRCUIT NEUTRAL CABLES. BUS EXTENSIONS FOR BUSWAY FEEDER NEUTRAL BUS ARE BRACED.

J. FUTURE DEVICES: EQUIP COMPARTMENTS WITH MOUNTING BRACKETS, SUPPORTS, BUS CONNECTIONS, AND APPURTENANCES AT FULL RATING OF CIRCUIT-BREAKER COMPARTMENT.

K. EQUIP DISTRIBUTION SECTIONS WITH FULL HEIGHT VERTICAL BUSSING TO ACCOMMODATE MAXIMUM UTILIZATION OF SPACE FOR DEVICES.

2.13 CIRCUIT AND MOTOR DISCONNECTS

A. DISCONNECT (SAFETY) SWITCHES SHALL BE FUSED, HEAVY DUTY TYPE SWITCHES MEETING NEMA SPECIFICATIONS. SWITCHES SHALL BE PROVIDED WITH REJECTION TYPE FUSE BLOCKS. PROVIDE SWITCHES WITH THE NUMBER OF POLES, THE VOLTAGE, CURRENT AND HORSEPOWER RATINGS AS REQUIRED. PROVIDE EXTERNALLY OPERABLE QUICK-MAKE, QUICK-BREAK TYPE MECHANISM WITH COVER INTERLOCK AND PADLOCKABLE IN EITHER THE OPEN OR CLOSED POSITION.

B. SWITCHES SHALL BE NEMA 3R (RAIN TIGHT ENCLOSURE) WHERE INDICATED TO BE OUTDOORS WEATHERPROOF.

C. PROVIDE NAMEPLATE INDICATING EQUIPMENT SERVED. ALL GENERAL SNAP SWITCHES OPERATING MOTOR LOADS SHALL BE HORSEPOWER RATED OR BE RATED AT LEAST 125% OF THE FULL LOAD CURRENT.

2.15 ELECTRICAL CONNECTIONS

A. UNLESS OTHERWISE NOTED, ALL WIRING FOR MOTORS, STARTERS, CONTROLS, AND EQUIPMENT SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. WHERE MOTORS FOR MECHANICAL EQUIPMENT ARE FURNISHED BY OTHER DIVISIONS, WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR, EXCEPT WHERE WIRED INTEGRALLY WITH THE EQUIPMENT.

B. CONNECTION AND CONTROL DIAGRAMS FOR ALL MECHANICAL AND CONTROL EQUIPMENT SHALL BE FURNISHED UNDER OTHER DIVISIONS, AND BE APPROVED BY THE OWNER FOR CONNECTION BY THE ELECTRICAL CONTRACTOR.

2.16 SUPPORTING DEVICES

A. ALL EQUIPMENT CONDUITS SHALL BE SUPPORTED, ANCHORED AND BRACED IN ACCORDANCE WITH THE MOST STRINGENT CODES AND REQUIREMENTS. COMPLY WITH CHAPTER 23 OF THE LATEST CBC (CALIFORNIA BUILDING CODE).

PART 3 EXECUTION

3.01 WORKMANSHIP AND COMPLETION OF INSTALLATION

A. WORKMANSHIP AND NEAT APPEARANCE SHALL BE AS IMPORTANT AS THE ELECTRICAL AND MECHANICAL EFFICIENCY. DEFECTIVE AND DAMAGED MATERIALS SHALL BE REPLACED OR REPAIRED PRIOR TO FINAL INTERPRETATIONS INCLUDED. ANY DEFICIENCY PERTAINING TO EITHER WORKMANSHIP OR MATERIALS FOUND BY THE INSPECTOR SHALL BE CORRECTED WITHOUT ADDITIONAL COST TO THE OWNER.

B. THE CONTRACTOR SHALL MAINTAIN ON JOB SITE A SET OF THE WORKING DRAWINGS WHICH SHALL BE UPDATED DAILY IN DETAIL FOR WORK ACCOMPLISHED. UPON COMPLETION OF THE WORK, A SET OF REPRODUCIBLE CONTRACT DRAWINGS SHALL BE OBTAINED FROM THE GENERAL CONTRACTOR AND ALL CHANGES AS NOTED ON THE RECORD SET OF PRINTS SHALL BE INCORPORATED THEREON WITH RED INK IN A NEAT, LEGIBLE, UNDERSTANDABLE AND PROFESSIONAL MANNER.

C. ALL EQUIPMENT AND MATERIAL CONNECTED WITH THIS PROJECT SHALL BE INSTALLED COMPLETE, THOROUGHLY CLEANED, AND ALL RESIDUE REMOVED FROM INSIDE SURFACES. EXTERIOR SURFACES OF ALL MATERIAL AND EQUIPMENT SHALL BE CLEANED AND DELIVERED IN A PERFECT, UNBLEMISHED CONDITION.

D. UPON COMPLETION OF THE INSTALLATION AND AS A CONDITION OF ITS ACCEPTANCE FURNISH ONE COPY OF THE FINAL INSPECTION CERTIFICATE TO THE OWNER.

3.02 PREPARATION COORDINATION.

A. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH ALL OTHER CONTRACTORS FURNISHING LABOR, MATERIALS AND WORK, SO THAT THE WORK AS WHOLE SHALL BE EXECUTED AND COMPLETED WITHOUT CONFLICT OR DELAY.

B. EXAMINE THE DRAWINGS AND SPECIFICATIONS AND DETERMINE THE WORK TO BE PERFORMED BY THE ELECTRICAL, MECHANICAL AND OTHER TRADES. PROVIDE THE TYPE AND AMOUNT OF ELECTRICAL MATERIALS AND EQUIPMENT NECESSARY TO PLACE THIS WORK IN PROPER OPERATION, COMPLETELY WIRED TESTED AND READY FOR USE. THIS SHALL INCLUDE ALL CONDUIT, WIRE, DISCONNECTS, RELAYS, AND OTHER DEVICES FOR THE REQUIRED OPERATION SEQUENCE OF ALL ELECTRICAL, MECHANICAL, AND OTHER SYSTEMS OR EQUIPMENT.

C. PERFORM ALL WORK IN A MANNER WHICH WILL NOT CAUSE UNNECESSARY INCONVENIENCE OR DANGER TO THE OCCUPANTS, NOR INTERFERE WITH THE ACTIVITIES IN THE BUILDING.

D. THE CONTRACTOR SHALL COORDINATE AND SCHEDULE EACH POWER INTERRUPTION WITH OWNER, AND SHALL PROVIDE AT LEAST TWO WEEKS NOTICE OF PROPOSED INTERRUPTION AND WORK TO BE ACCOMPLISHED.

3.03 TRENCHING AND BACKFILLING

A. PERFORM ALL SUCH TRENCHING AND BACKFILLING IN ACCORDANCE WITH DRAWING DETAILS.

3.04 CORE CUTTING, DRILLING, AND PATCHING

A. NO HOLES WILL BE ALLOWED IN ANY STRUCTURAL MEMBERS WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT OR STRUCTURAL ENGINEER AND GENERAL CONTRACTOR.

3.05 INSTALLATION

A. WORKMANSHIP IS TO BE NEAT, BY EXPERIENCED WORKMEN WITH ADEQUATE SUPERVISION, AND IN LINE WITH NORMAL INDUSTRY WORK PRACTICES.

B. MAINTAIN WORKING CLEARANCE AROUND ELECTRICAL EQUIPMENT, IN ACCORDANCE WITH CODE REQUIREMENTS AS A MINIMUM.

C. WHERE LIGHTING FIXTURES AND OTHER ELECTRICAL ITEMS ARE SHOWN IN CONFLICT WITH LOCATIONS OF STRUCTURAL MEMBERS AND MECHANICAL OR OTHER EQUIPMENT, FURNISH AND INSTALL ALL REQUIRED SUPPORTS AND WIRING TO CLEAR THE ENCROACHMENT.

D. VERIFY LOCATION OF EACH OUTLET FOR POWER, SIGNAL, TELEPHONE/DATA, AND EACH LIGHTING FIXTURE WITH ARCHITECT PRIOR TO ROUGH-IN. INCLUDE IN BID COST OF RELOCATING EACH ITEM WITHIN TEN-FEET RADIUS OF ITS INDICATED LOCATION.

E. ALL CONDUIT TO BE RUN CONCEALED UNLESS OTHERWISE NOTED. ALL CONDUITS SHALL BE ROUTED OVERHEAD IN CEILING SPACES. NO CONDUITS SHALL BE PERMITTED IN CONCRETE SLAB, MASONRY WALLS UNLESS SPECIFICALLY SO INDICATED. CONDUIT SHALL BE RUN SO AS NOT TO INTERFERE WITH OTHER PIPING FIXTURES OR EQUIPMENT.

F. WHERE ALLOWED, EXPOSED CONDUIT RUNS SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO WALLS, STRUCTURAL MEMBERS, OR INTERSECTION OF VERTICAL PLANES AND CEILINGS.

G. ALL ELECTRICAL CONDUITS AND OTHER ELECTRICAL RACEWAYS PASSING THROUGH FIRE RATED CEILINGS, SLABS, CABLE TRAYS, WALLS AND PARTITIONS SHALL BE SEALED TO PREVENT THE SPREAD OF FIRE, SMOKE, AND GASSES. USE A UL LISTED AND APPROVED FIRE-STOP MATERIAL EQUAL TO RATING OF A WALL OR A FLOOR SLAB PENETRATED; INSTALLATION OF FIRE-STOP MATERIAL SHALL BE IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

H. UNLESS WRITTEN PERMISSION IS GRANTED BY THE ARCHITECT, NO MATERIAL SHALL BE MOUNTED ON THE EXTERIOR WALLS OR PARAPET TOP OF THE BUILDING.

I. ALL ROTATING ELECTRICAL EQUIPMENT SHALL BE SUPPLIED WITH A FLEXIBLE, LIQUID-TIGHT CONDUIT WITH APPROPRIATE SLACK AND SHALL NOT EXCEED THIRTY-SIX (36) INCHES.

J. ALL POWER WIRING SHALL BE INSTALLED IN CONDUIT.

K. TELEPHONE WIRES SHALL BE PLENUM RATED CABLE FOR MOUNTING IN CEILING SPACES WITHOUT CONDUIT UNLESS OTHERWISE NOTED.

L. ALL WIRES FOR ALL SYSTEMS SHALL BE CONTINUOUS FROM SWITCH TO TERMINAL OR FURTHEST OUTLET. NO JOINTS SHALL BE MADE EXCEPT IN PULL, JUNCTION OR OUTLET BOXES, OR IN PANEL OR SWITCHBOARD GUTTERS.

M. ALL RECEPTACLE, CONTROL DEVICE, AND SWITCH MOUNTING HEIGHTS SHALL BE COORDINATED WITH ARCHITECTURAL ELEVATIONS PRIOR TO ROUGH-IN.

3.06 GROUNDING

A. ALL EQUIPMENT SHALL BE PROPERLY GROUNDED AS INDICATED ON DRAWINGS AND AS REQUIRED BY THE LATEST EDITION OF APPLICABLE CODES.

B. FURNISH AND INSTALL ALL GROUNDING CONDUCTORS, CONDUIT AND CLAMPS. THE SIZE OF THE GROUNDING CONDUCTORS SHALL BE NOT LESS THAN THAT SPECIFIED IN THE NEC.

C. BUILDING GROUNDING SYSTEM RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS.

D. EACH BRANCH CIRCUIT SHALL BE EQUIPPED WITH CODE SIZE GREEN GROUND, EQUIPMENT WIRE (PER NEC 250-95) (NOT INDICATED ON DRAWINGS) WITHIN THE SAME CONDUIT FOR ALL CIRCUITS OF PANELBOARDS.

3.07 BRANCH CIRCUITS

A. NO MORE THAN THREE BRANCH CIRCUITS PERMITTED IN ONE CONDUIT UNLESS INDICATED OTHERWISE

3.08 IDENTIFICATION

A. THE FOLLOWING ITEMS SHALL BE EQUIPPED WITH NAMEPLATES:

1. ALL MOTORS, MOTOR STARTERS, CONTROL PANELS, MOTORS CONTROL REMOTE STATIONS.

2. ALL DISCONNECT AND SAFETY SWITCHES, MAIN DISTRIBUTION PANEL FEEDER OVERCURRENT DEVICES AND SPARES, CIRCUIT EQUIPMENT IN SEPARATE ENCLOSURES.

3. SPECIAL ELECTRICAL SYSTEMS SHALL BE PROPERLY IDENTIFIED AT JUNCTION AND PULL BOXES

4. ALL BRANCH CIRCUIT PANEL BOARDS SHALL HAVE IDENTIFYING ENGRAVED PLASTIC NAMEPLATES. ALSO, PROVIDE A TYPED DIRECTORY CARD FOR EACH BRANCH CIRCUIT PANELBOARD. THE CARD IS TO BE PLACED ON THE INTERIOR SIDE OF THE PANELBOARD DOOR BEHIND A CLEAR PLASTIC SHIELD. THE CARD SHALL IDENTIFY EACH CIRCUIT BY NUMBER, LOAD, AND LOCATION.

5. IN GENERAL, EQUIPMENT SHALL BE IDENTIFIED AS DESIGNATED ON THE ELECTRICAL DRAWINGS. NAMEPLATES FOR PANELBOARDS AND SWITCHBOARDS SHALL INCLUDE THE PANEL DESIGNATION, VOLTAGE AND PHASE OF THE SUPPLY. THE NAME OF THE MACHINE SHALL BE THE SAME AS THE NAME USED ON ALL MOTOR STARTERS, DISCONNECTS, AND P.B STATION NAMEPLATES FOR THAT MACHINE.

B. NAMEPLATES SHALL BE FABRICATED AS FOLLOWS:

1. NAMEPLATE MATERIALS SHALL CONSIST OF 3-PLY, 1/16" LAMINATED PLASTIC WITH WHITE CORE FOR LETTERING AND BLACK BACKGROUND.

2. CAPITAL LETTERS SHALL BE USED.

3. NAMEPLATES SHALL BE FASTENED WITH CADMIUM-PLATED SELF-TAPPING NO. 6 SCREWS 1/4" LONG

4. THE MINIMUM SIZE OF ALL NAME PLATES AND LETTERING SHALL BE 3/4" HIGH BY 2" LONG WITH 1/4" LETTERS.

3.09 PROTECTION

A. USE ALL MEANS NECESSARY TO PROTECT THE WORK AND MATERIALS FROM LOSS DURING AND AFTER INSTALLATION, AND PROVIDE ADEQUATE AND PROPER STORAGE FACILITIES DURING THE PROGRESS OF THE WORK. PROVIDE FOR THE SAFETY AND GOOD CONDITION OF ALL WORK UNTIL FINAL ACCEPTANCE OF THE WORK BY THE OWNER. REPLACE ALL DAMAGE OR DEFECTIVE WORK, MATERIAL, AND EQUIPMENT AT NO EXPENSE TO THE OWNER BEFORE REQUESTING FINAL ACCEPTANCE.

3.10 CLEANING OF EQUIPMENT, MATERIAL, AND PREMISES

A. SITE SHALL BE LEFT BROOM CLEAN AFTER COMPLETION OF WORK EACH DAY. UPON COMPLETION OF THE WORK, LEAVE THE PREMISES CLEAN OF ALL DIRT AND DEBRIS.

B. ALL EQUIPMENT AND MATERIAL CONNECTED WITH THIS PROJECT SHALL BE INSTALLED COMPLETE, THOROUGHLY CLEANED, AND ALL RESIDUE REMOVED FROM INSIDE SURFACES. EXTERIOR SURFACES OF ALL MATERIAL AND EQUIPMENT SHALL BE CLEANED AND DELIVERED IN A PERFECT, UNBLEMISHED CONDITION.

3.11 HANDLING OF WIRE AND CABLE

A. HANDLE WIRE AND CABLE SO AS TO AVOID DAMAGE TO CONDUCTORS AND TAKE EVERY PRECAUTION TO AVOID SHARP BENDING OR SCORING OF THE CABLE. CABLE SHALL NOT BE LAID NOR DRAGGED UPON THE GROUND.

B. THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND REPLACE AT HIS OWN EXPENSE ALL WIRE AND CABLE DAMAGED DUE TO IMPROPER HANDLING, AND SHALL PAY FOR THE NEW WIRE OR CABLE.

3.12 TESTING AND INSPECTIONS

A. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND ARRANGE ALL REQUIRED INSPECTIONS FOR THE EXECUTION OF THE WORK UNDER THIS CONTRACT.

B. THE CONTRACTOR SHALL REPLACE ALL DAMAGED OR DEFECTIVE EQUIPMENT OR WORK.

C. ALL CIRCUITS SHALL BE TESTED FOR CONTINUITY AND CIRCUIT INTEGRITY BY THE CONTRACTOR. ADJUSTMENTS SHALL BE MADE FOR CIRCUITS NOT COMPLYING WITH TESTING CRITERIA.

D. THE CONTRACTOR SHALL FURNISH ALL INSTRUMENTS AND PERFORM ANY ADDITIONAL TESTS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. CONTRACTOR SHALL ALSO CORRECT ALL FAILURES AND REPLACE ANY DAMAGED PORTIONS OF THE WORK RESULTING FROM THOSE TESTS. THE COST OF THE FOREGOING ITEMS SHALL BE PAID BY THE CONTRACTOR.

E. THE CONTRACTOR SHALL FURNISH THE OWNER CERTIFICATES OF INSPECTION AND APPROVAL BY THE ELECTRICAL INSPECTION AUTHORITY ON ALL WORK COMPETED AS REQUIRED.

F. CONTRACT DRAWINGS AND SPECIFICATIONS, GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS, ELECTRICAL PROVISIONS AND DIVISION-1 SPECIFICATION SECTIONS APPLY TO WORK OF THIS SECTION.

G. RESPONSIBILITIES OF INSTALLING CONTRACTORS

A.A. GENERAL CONTRACTOR (GC)

a. ENSURE THAT ALL CONTRACTORS IDENTIFIED AS THE CONTRACTOR RESPONSIBLE FOR ACCEPTANCE TESTING AND COMPLETION OF THE WSEC CERTIFICATE(S) OF ACCEPTANCE ARE CERTIFIED BY THE STATE OF WASHINGTON OR ITS DESIGNATED BODY TO CONDUCT EACH RESPECTIVE TEST.

A.A. ELECTRICAL CONTRACTOR (EC)

a. VERIFY PROPER INSTALLATION AND PERFORMANCE OF ALL ELECTRICAL SERVICES PROVIDED.
b. COMPLETE WSEC CERTIFICATE(S) OF INSTALLATION AND MANUFACTURER'S PRE-START CHECKLISTS PRIOR TO SCHEDULING STARTUP/PROGRAMMING OF LIGHTING CONTROL EQUIPMENT.
i. RETAIN CERTIFICATE(S) OF INSTALLATION IN A 3-RING BINDER IN AN ORGANIZED FASHION. BINDER IS TO REMAIN ON THE JOB SITE
ii. MAKE CERTIFICATE(S) OF INSTALLATION AVAILABLE FOR BUILDING INSPECTOR'S REVIEW.
iii. RETAIN CALIBRATION RECORDS FOR EQUIPMENT PROVIDED WITH MANUFACTURER CALIBRATED SENSORS IN THE CERTIFICATE(S) OF INSTALLATION BINDER.
iv. CORRECT LABELING OF ALL CIRCUITS WITH CONNECTED EQUIPMENT.
c. COMPLETE THE CERTIFICATE(S) OF ACCEPTANCE PER THE CONTRACT DOCUMENTS.
i. THE COMPANY INSTALLING THE LIGHTING SYSTEMS MUST BE AN AUTHORIZED LIGHTING CONTROLS ACCEPTANCE TEST EMPLOYER CERTIFIED BY A LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN CERTIFICATION PROVIDER OR INCLUDE IN THEIR BID THE COST OF RETAINING AND OVERSEEING A CONTRACTOR WHO IS AN AUTHORIZED LIGHTING CONTROLS ACCEPTANCE TEST EMPLOYER TO COMPLETE THE ACCEPTANCE TESTING.
ii. ALL REQUIRED ACCEPTANCE TESTING MUST BE COMPLETED BY A LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN EMPLOYED BY THE LIGHTING CONTROLS ACCEPTANCE TEST EMPLOYER.
iii. RETAIN CERTIFICATE(S) OF ACCEPTANCE IN A 3-RING BINDER IN AN ORGANIZED FASHION. BINDER IS TO REMAIN ON THE JOB SITE
iv. SUCCESSFUL COMPLETION OF THE REQUIRED ACCEPTANCE TESTS IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR. ANY COSTS ASSOCIATED WITH MODIFICATIONS NECESSARY TO OBTAIN COMPLIANCE AND RE-TESTING OF SYSTEMS SHALL BE INCLUDED IN THE BASE BID OF THIS PROJECT.

3.13 TELEPHONE AND DATA

A. PROVIDE AND INSTALL COMPLETE SYSTEM OF CONDUIT WITH PULL LINES, BACKBOARDS, EQUIPMENT RACK, PULL BOXES, JUNCTION BOXES, OUTLET BOXES, AND PLASTER RINGS, FOR TELEPHONE/ DATA SYSTEMS, TO BE INSTALLED AS PART OF THIS BUILDING CONTRACT.

B. PROVIDE OVERHEAD CONDUIT CONNECTIONS BETWEEN THE MAIN TELECOM ROOM AND THE NETWORK RACK.

C. A FIRE RATED PLYWOOD BACK-BOARD SHALL BE PROVIDED OVER THE BACK OF THE TELEPHONE ROOM AS SHOWN ON THE DRAWINGS. PROVIDE NATIONAL ELECTRICAL CODE (NEC) SIZED GROUND CONDUCTOR FROM THE TELEPHONE BACKBOARD TO MAIN BUILDING GROUNDING SYSTEM.

D. THE TELEPHONE AND DATA CONDUITS SHALL BE FROM OUTLET BOX TO 6" ABOVE THE ACCESSIBLE CEILING SPACE. CONDUIT RUNS OVER 200 FEET IN LENGTH, OR WITH MORE THAN TWO 90 DEGREE BENDS, SHALL BE PROVIDED WITH ACCESSIBLE PULL BOXES OF SIZES AS APPROVED BY THE OWNER.

E. PULLWIRES SHALL BE INSTALLED IN ALL TELEPHONE/ DATA CONDUITS CONTINUOUS AND WITHOUT SPLICES, PROJECTING 36 INCHES OUT OF EACH END OF CONDUIT/OUTLET BOX. EQUIP ALL JUNCTION BOXES WITH PLASTER RINGS.

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SEQUIM SD #323
Office Board Room & 2nd Floor Office Remodel
503 N Sequim Ave, Sequim, WA 98382

REVISION SCHEDULE

#		
	ADDENDUM #1	08/22/23

JOB NO.	2022-080
DATE	08-23-2023
DRAWN	AE
REVIEWED	LM

SHEET NAME
ELECTRICAL
SPECIFICATIONS

SHEET NO.
E-3.2

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