



2 EXISTING PHOTO #1
A1.00

NTS







3 EXISTING PHOTO #2
A1.00

NTS

ROOF PLAN GENERAL NOTES:

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

ROOF LEGEND:

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

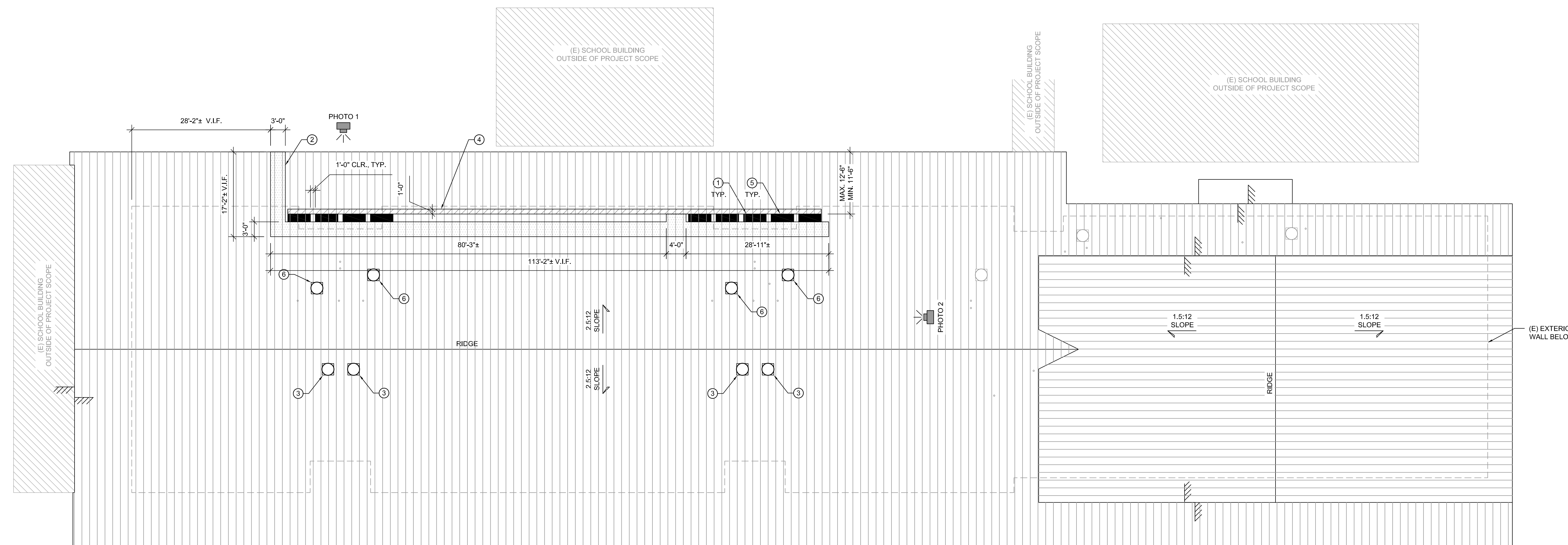
ROOF PLAN KEYNOTES

- MINI-SPLIT SUPPORT STAND TO (E) STANDING SEAM PER STRUCT. FLASH ANY ASSOCIATED PIPE PENETRATIONS PER DETAILS 1, 2 AND 3 ON SHEET A2.10
- ROOF WALK, SEE STRUCT.
- (N) EXHAUST PER MECHANICAL. INSTALL CURB PER DETAILS ON SHEET A2.00 AND MANUFACTURERS DETAILS. (N) EXHAUST SHALL BE LOCATED BETWEEN (E) RAFTERS
- 12" WIDE CONDUIT SUPPORT, SEE STRUCT.
- INSTALLER TO COORDINATE DRAIN PAN REQUIREMENTS PER MECHANICAL DETAIL 2/M1.1
- REPLACE (E) EXHAUST WITH (N) PER MECHANICAL. INSTALL CURB PER DETAILS ON SHEET A2.00 AND MANUFACTURERS DETAILS.



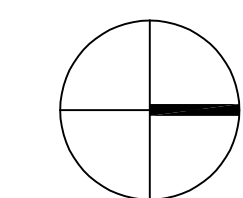
GRANT SCHOOL DISTRICT
329 N. HUMBOLT ST.
CANYON CITY, OR 97820

HUMBOLT ELEMENTARY SCHOOL HVAC



1 PARTIAL ROOF PLAN
A1.00

3/32" = 1'-0"



3 BUILDING KEY
A1.00

NTS



REVISION ID:	DATE:

PROJECT NO: P-2870-23
DRAWN: LJS
CHECKED: DDS
DATE: 10-04-2023

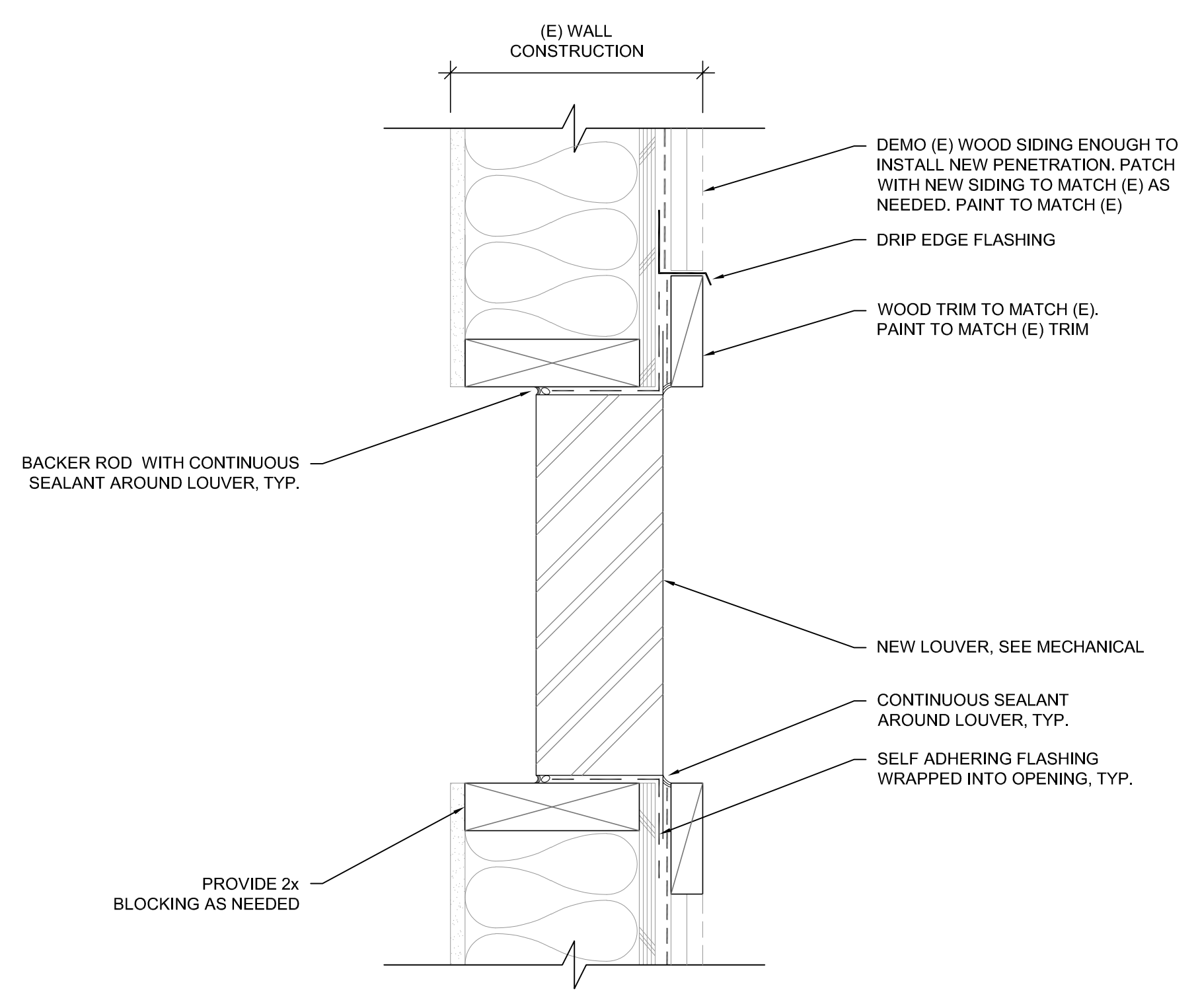
PARTIAL ROOF PLAN
A1.00

ONE INCH EQUALS FULL SCALE

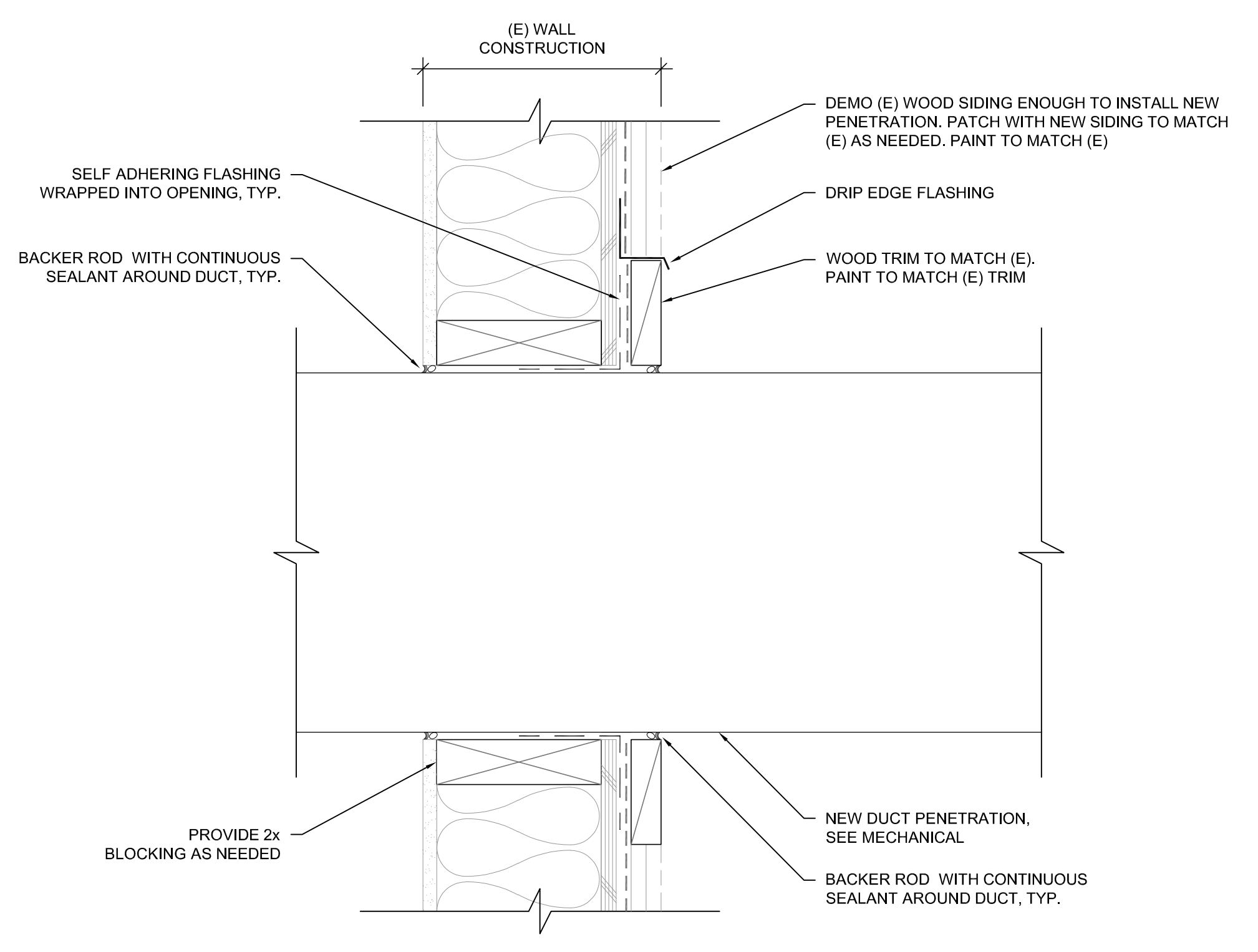
BID & PERMIT SET

REVISION ID:	DATE:

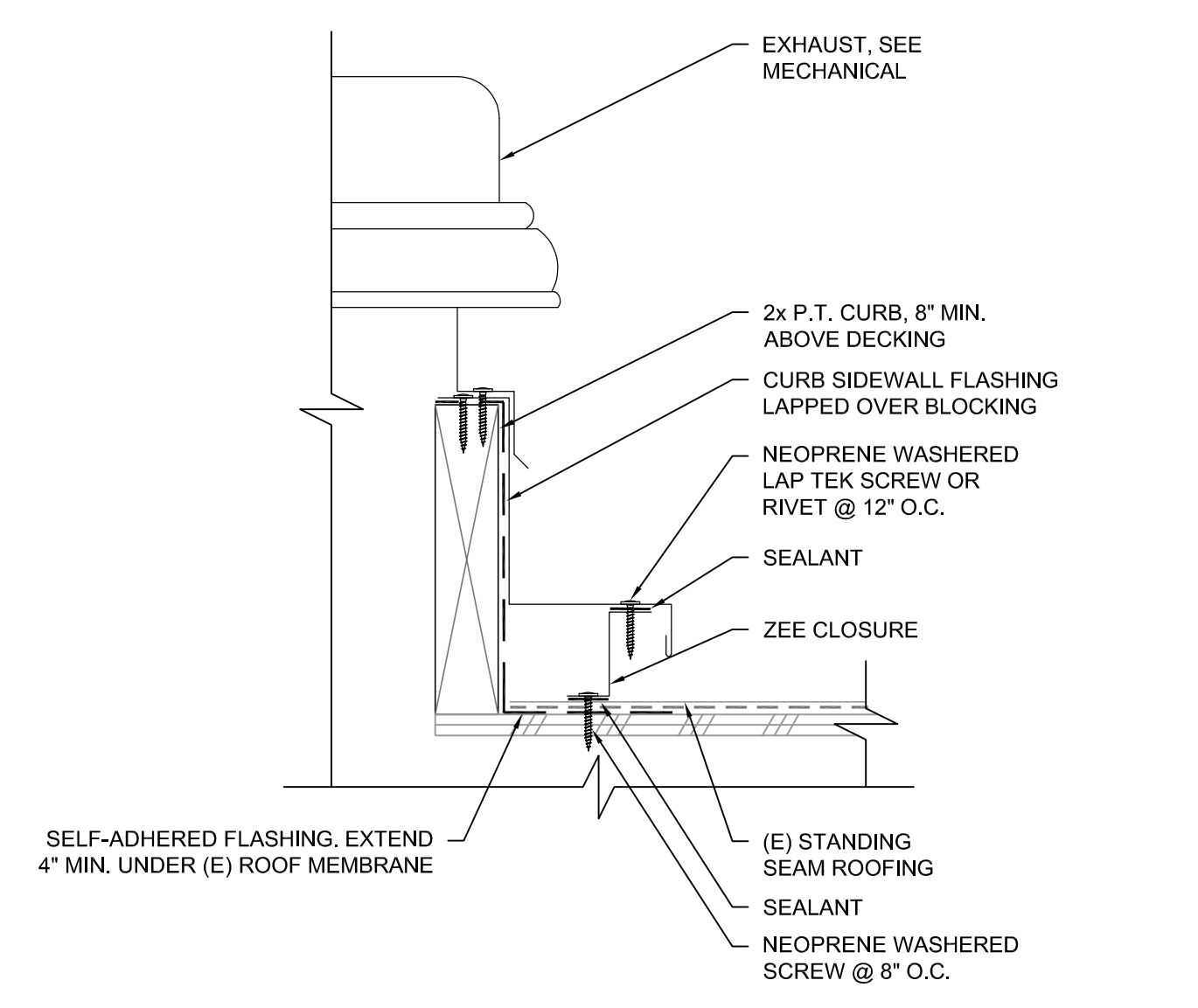
PROJECT NO: P-2870-23
DRAWN: LJS
CHECKED: DDS
DATE: 10-04-2023



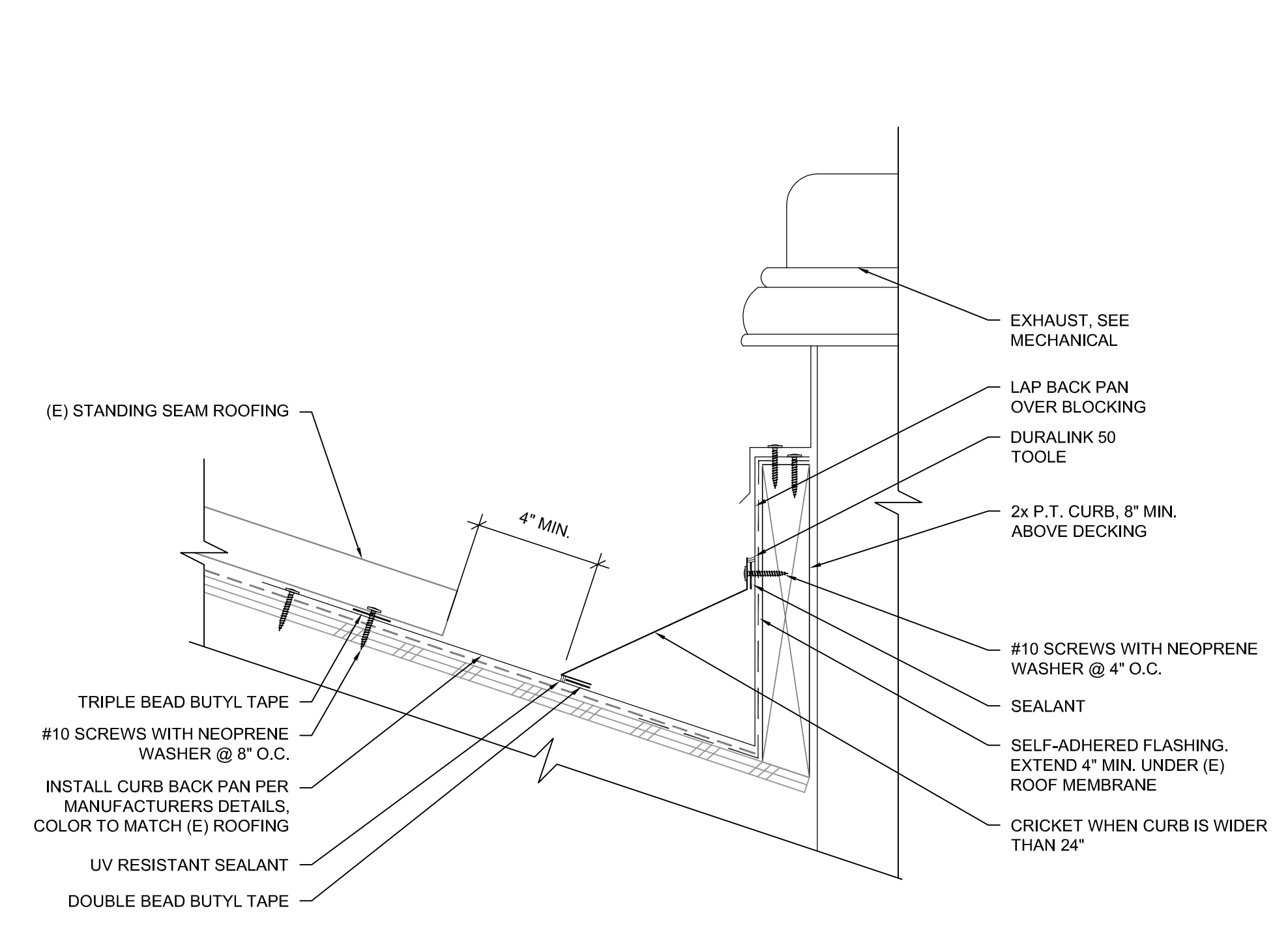
1 WALL LOUVER DETAIL
3" = 1'-0"



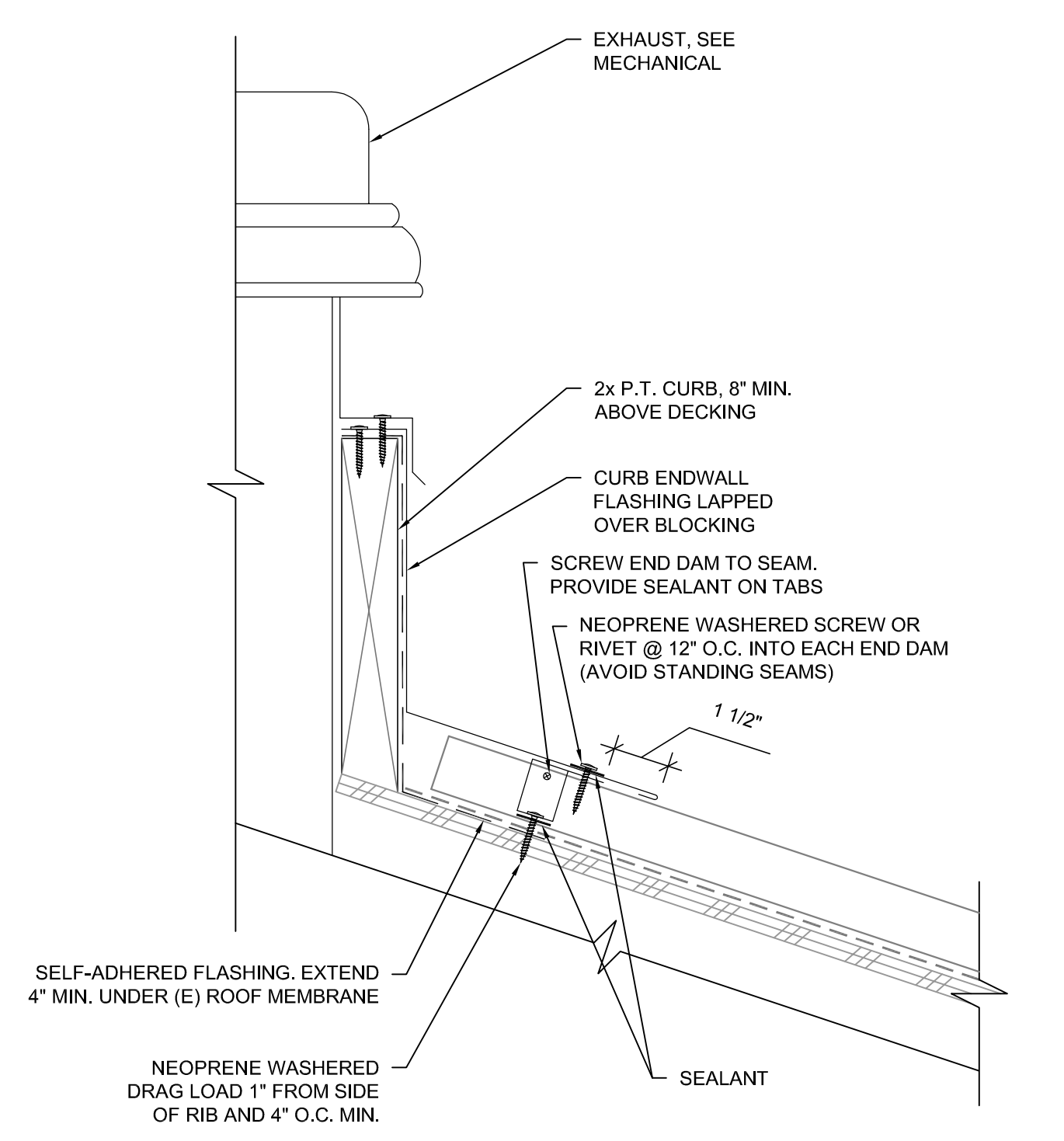
2 PENETRATION DETAIL
3" = 1'-0"



3 EXHAUST VENT CURB SIDEWALL DETAIL
3" = 1'-0"



4 EXHAUST VENT CURB BACK PAN / CRICKET DETAIL
3" = 1'-0"



5 EXHAUST VENT CURB ENDWALL DETAIL
3" = 1'-0"

01 33 00 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

- 1.1 SUMMARY
A. SHOP DRAWING, PRODUCT DATA, AND SAMPLE REQUIREMENTS FOR ALL PRODUCTS OR MODELS...
1.2 REQUIREMENTS
A. SHOP DRAWINGS: PROVIDE SHOP DRAWINGS IN A CLEAR AND THOROUGH MANNER...
1.3 SUBMITTALS REQUIRED:
A. SHOP DRAWINGS: PROVIDE SHOP DRAWINGS FOR THE FOLLOWING SPECIFIED ITEMS...

02 41 19 SELECTIVE DEMOLITION

- 1.1 SUMMARY
A. DEMOLITION AND REMOVAL OF SELECTED PORTIONS OF BUILDING
B. SALVAGE OF EXISTING ITEMS TO BE REUSED OR RECYCLED
1.2 DEFINITIONS
A. REMOVE: DETACH ITEMS FROM EXISTING CONSTRUCTION AND LEGALLY DISPOSE OF THEM OFF-SITE...
2.1 SELECTIVE DEMOLITION, GENERAL
A. VERIFY THE UTILITY MATERIALS HAVE BEEN DISCONNECTED AND CAPPED BEFORE STARTING SELECTIVE DEMOLITION OPERATIONS...

07 72 00 ROOF ACCESSORIES

- 1.1 SUMMARY
A. SECTION INCLUDES:
1. FORMED EQUIPMENT SUPPORT FLASHING
1.2 ACTION SUBMITTALS
A. GENERAL PERFORMANCE: ROOF SPECIALTIES SHALL WITHSTAND EXPOSURE TO WEATHER AND RESIST THERMALLY INDUCED MOVEMENT WITHOUT FAILURE...
2.1 PRODUCTS
A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:
1. MASTER FLASH
2. DEKTIIE
3.1 EXECUTION
A. GENERAL: INSTALL COMPONENTS TO PRODUCE A WATER-TIGHT SYSTEM ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS...

07 92 00 JOINT SEALANTS

- 1.1 SUMMARY
A. ACRYLIC LATEX JOINT SEALANTS
B. URETHANE JOINT SEALANTS
C. SILICONE JOINT SEALANTS
D. RELATED SECTION
1. GLAZING SEALANTS IN ROOFING
2. GLAZING SEALANTS IN GLAZING
3. FIRE-RESISTANCE-RATED CONSTRUCTION SEALANTS IN FIRESTOPPING
1.2 QUALITY ASSURANCE
A. PRECONSTRUCTION FIELD-ADHESION TESTING: BEFORE INSTALLING SEALANTS, FIELD TEST ADHESION TO PROJECT JOINT SUBSTRATES AS FOLLOWS:
1. FOR JOINTS WITH DISSIMILAR SUBSTRATES, VERIFY ADHESION TO EACH SUBSTRATE SEPARATELY...
2.1 PRODUCTS
A. ACRYLIC LATEX JOINT SEALANTS: ASTM C 834, TYPE O, GRADE NF...
B. ACRYLIC LATEX SEALANTS: ASTM C 834, TYPE O, GRADE NF...

- 1.2 QUALITY ASSURANCE
A. PRECONSTRUCTION FIELD-ADHESION TESTING: BEFORE INSTALLING SEALANTS, FIELD TEST ADHESION TO PROJECT JOINT SUBSTRATES AS FOLLOWS:
1. FOR JOINTS WITH DISSIMILAR SUBSTRATES, VERIFY ADHESION TO EACH SUBSTRATE SEPARATELY...
2.1 PRODUCTS
A. ACRYLIC LATEX JOINT SEALANTS: ASTM C 834, TYPE O, GRADE NF...
B. ACRYLIC LATEX SEALANTS: ASTM C 834, TYPE O, GRADE NF...
C. URETHANE JOINT SEALANTS: TYPE M, GRADE NS, CLASS 25...
D. URETHANE JOINT SEALANTS: TYPE S OR M, GRADE P, CLASS 50...
E. SILICONE JOINT SEALANTS: TYPE S, GRADE NS, CLASS 50...

09 91 00 PAINTING

- 1.1 SUMMARY
A. INTERIOR PAINTING
B. EXTERIOR PAINTING
1.2 REGULATORY AGENCY REQUIREMENTS
A. REMOVAL OF ANY LEAD-BASED PAINT PRODUCTS (EXCEEDING 20 FT OF EXTERIOR SURFACE OR 8 SQ FT OF INTERIOR SURFACE) MUST BE PERFORMED BY WORKERS WHO HAVE BEEN PRE-CERTIFIED BY EPA...
1.3 SITE CONDITIONS
A. PERFORM WORK ONLY UNDER THE FOLLOWING CONDITIONS, UNLESS OTHERWISE INSTRUCTED BY MANUFACTURER:
1. MAXIMUM RELATIVE HUMIDITY: 85%
2. AMBIENT AIR TEMPERATURES ARE BETWEEN 50 DEGREES AND 95 DEGREES F...
2.1 EXTERIOR PAINTING SCHEDULE
A. BASIS OF DESIGN IS SHERWIN WILLIAMS.
B. CONCRETE:
1. PREVIOUSLY COATED SURFACES: LIXON CONDITIONER
2. PRIMER: LIXON CONCRETE & MASONRY PRIMER SEALER
3. (2) TOP COATS: A5-400 COMFLEX XL SMOOTH ELASTOMERIC HIGH BUILD COATING
C. CMU
1. PREVIOUSLY COATED SURFACES: LIXON CONDITIONER
2. PRIMER: LIXON BLOCK SURFACE
3. (2) TOP COATS: A5-400 COMFLEX XL SMOOTH ELASTOMERIC HIGH BUILD COATING
D. METAL
1. PRIMER: PRO-INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER
2. (2) TOP COATS: PRO INDUSTRIAL WATER BASED ACRYLON 100 URETHANE
E. WOOD
1. PRIMER: EXTERIOR LATEX WOOD PRIMER
2. (2) TOP COATS: A5-100 EXTERIOR LATEX SATIN
F. EXTERIOR PLASTER, STUCCO, EIFS
1. PREVIOUSLY COATED SURFACES: LIXON CONDITIONER
2. PRIMER: LIXON CONCRETE & MASONRY PRIMER SEALER
3. (2) TOP COATS: A5-400 COMFLEX XL SMOOTH ELASTOMERIC HIGH BUILD COATING
2.2 INTERIOR PAINTING SCHEDULE
A. BASIS OF DESIGN IS SHERWIN WILLIAMS. PROVIDE APPROPRIATE PRIMER FOR EACH SUBSTRATE PER MANUFACTURER.
B. CORRIDORS AND STAIRWELLS:
1. WALLS: (2) TOP COATS - PRO INDUSTRIAL PRE-CATALYZED WATERBASED EPOXY SEMI-GLOSS
2. CEILING: (2) TOP COATS - PROMAR 200 ZERO VOC LATEX SATIN
C. CLASSROOMS AND OFFICES:
1. WALLS: (2) TOP COATS - PROMAR 200 ZERO VOC INTERIOR LATEX SATIN
2. CEILING: (2) TOP COATS - PROMAR 200 ZERO VOC LATEX EGGSHELL
D. RESTROOMS, KITCHEN, CAFETERIA, LOCKER ROOMS:
1. WALLS & CEILING: (2) TOP COATS - PRO INDUSTRIAL WATERBASED CATALYZED EPOXY SEMI-GLOSS
E. DOOR FRAMES, WINDOW FRAMES, TRIM:
1. (2) TOP COATS - PRO INDUSTRIAL ACRYLIC SEMI-GLOSS
2. EXPOSED METAL, DECKING OR BAR JOISTS:
1. (2) TOP COATS - PRO INDUSTRIAL WATERBOURNE ACRYLIC DRYFLAX EGG SHELL
3.1 SURFACE PREPARATION
A. ALUMINUM: REMOVE ALL OIL, GREASE, DIRT, OXIDE AND OTHER FOREIGN MATERIAL BY CLEANING PER SSP-SP1 SOLVENT CLEANING...
B. CMU & CONCRETE: REMOVE ALL LOOSE MORTAR AND FOREIGN MATERIAL, FILL BUG HOLES, AIR POCKETS, AND OTHER VOIDS WITH A CEMENT PATCHING COMPOUND...
C. CEMENT SIDING/PANELS: WASH SURFACE WITH APPROPRIATE CLEANER, RINSE THOROUGHLY AND ALLOW TO DRY...
D. INTERIOR DRYWALL: ALL SCREW/NAIL HEADS MUST BE SET AND SPACKLED, JOINTS TAPED AND MUDDERED, SANDED SMOOTH, AND ALL DUST REMOVED FROM SURFACE...
E. GALVANIZED METAL: CLEAN PER SSP-SP1 USING DETERGENT OR A DEGREASING CLEANER TO REMOVE GREASES AND OILS...
F. PLASTER: DAMAGED AREAS MUST BE REPAIRED WITH AN APPROPRIATE PATCHING MATERIAL...
G. STEEL: REMOVE ALL LOOSE MILL SCALE, LOOSE RUST, AND OTHER FOREIGN MATERIAL...
H. WOOD: KNOTS, PITCH STREAKS MUST BE SCRAPPED, SANDED, AND SPOT PRIMED BEFORE FULL PRIMING COAT IS APPLIED...
I. MILDEW: REMOVE ANY MILDEW BY SCRUBBING WITH TRISODIUM PHOSPHATE SOLUTION...

22 00 00 PLUMBING DESIGN-BUILD PERFORMANCE SPECIFICATION

- 1.1 DESCRIPTION OF WORK
A. THIS PROJECT CONSISTS OF REPLACING EXISTING HVAC EQUIPMENT AT THE HUMBOLT ELEMENTARY SCHOOL LOCATED IN CANYON CITY, OREGON. THIS SPECIFICATION SECTION COVERS DESIGN/BUILD PERFORMANCE REQUIREMENTS FOR THE PLUMBING SYSTEMS. REFER TO CONSTRUCTION DRAWINGS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK...
1.2 SECTION INCLUDES
A. DESIGN AND CONSTRUCTION OF COMPLETE PLUMBING SYSTEMS.
1.3 RELATED SECTIONS
A. SEE OTHER SPECIFICATION SECTIONS.
1.4 REFERENCES
A. PLUMBING SYSTEM DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE OREGON PLUMBING SPECIALTY CODE (OPSC) AND LOCAL LAWS AND ORDINANCES.
B. OMSC - 2022 OREGON MECHANICAL SPECIALTY CODE
C. OESC - 2022 OREGON ELECTRICAL SPECIALTY CODE
D. OSSC - 2022 OREGON STRUCTURAL SPECIALTY CODE
E. OEESC - 2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE
1.5 REQUIREMENTS
A. THE PLUMBING DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.
B. SUBMIT TO THE OWNER FOR REVIEW:
1. REVIEWING AGENCY SUBMITTAL: 10 DAYS AFTER RECEIVING REVIEWING AGENCY COMMENTS...
2. CONSTRUCTION SHALL NOT COMMENCE UNTIL THE DETAILED DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS HAVE BEEN ACCEPTED AND APPROVED BY THE OWNER AND THE REVIEWING AGENCY...
C. CONSTRUCTION DOCUMENTS AND REVIEWING AGENCY SUBMITTALS:
1. DRAWINGS SHALL BE SCALABLE, DATED, STAMPED AND SIGNED BY THE CONTRACTOR'S REGISTERED MECHANICAL ENGINEER FOR THE STATE OF OREGON...
2. SPECIFICATIONS SHALL BE PROVIDED IN HARD COPY FORMAT, 8.5" X 11" SIZE. DRAWINGS AND SPECIFICATIONS SHALL BE SUITABLE FOR SUBMISSION TO THE REVIEWING AGENCY FOR REVIEW...
D. IF APPLICABLE, COORDINATE WITH THE MECHANICAL AND ELECTRICAL DESIGN CONTRACTORS AND THEIR ENGINEERS FOR THE PLUMBING EQUIPMENT BEING INSTALLED AS PART OF THIS PROJECT.
1.6 SUBMITTALS FOR REVIEW
A. CONSTRUCTION DOCUMENTS COMPONENTS (IN ADDITION TO DESIGN DEVELOPMENT COMPONENTS):
1. DRAWINGS INCLUDING:
a. COMPLETE PLUMBING SYSTEMS FLOOR PLAN DRAWINGS.
b. COMPLETED PLUMBING ENERGY CODE FORMS.
c. OREGON ENGINEERING STAMP WITH SIGNATURES.
B. REVIEWING AGENCY SUBMITTAL:
1. REVIEWING AGENCY COMMENTS AND CONTRACTOR RESPONSES.
2. DRAWINGS WITH REVIEWING AGENCY COMMENTS INCORPORATED.
3. PLUMBING SPECIFICATIONS.
4. FINAL STAMPED, SIGNED AND APPROVED DRAWINGS SUITABLE FOR CONSTRUCTION.
3.1 GENERAL
A. DRAWINGS:
1. COORDINATE DRAWINGS WITH OTHER DISCIPLINES, INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL.
B. EXISTING DOCUMENTATION:
1. COORDINATE WITH ZCS ENGINEERING & ARCHITECTURE TO OBTAIN RECORD DOCUMENTS (DRAWINGS AND/OR SPECIFICATIONS) OF THE EXISTING BUILDINGS...
C. PLUMBING DESIGN:
1. PLUMBING CALCULATIONS AND DESIGN SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE OREGON PLUMBING SPECIALTY CODE (OPSC)...
2. SLOPE DRAINAGE LINES AS DETERMINED BY THE EXISTING CONNECTION POINT, BUT NOT LESS THAN 1/8 INCH PER FOOT...
3. INSULATE ALL POTABLE HOT WATER LINES AS SPECIFIED IN THE OREGON ENERGY EFFICIENCY CODE...
4. INSULATE ALL COLD WATER LINES TO PREVENT CONDENSATION...
5. SOIL PIPE SHALL BE CAST IRON...
6. POTABLE WATER LINES SHALL BE COPPER, TYPE L FOR ABOVE GRADE AND TYPE K FOR BELOW GRADE.
3.2 FIELD INVESTIGATION
A. PERFORM AN EXTENSIVE FIELD INVESTIGATION AND RECORD INFORMATION REQUIRED TO PERFORM THE PLUMBING SYSTEMS DESIGN DESCRIBED HEREIN.
B. THE FIELD INVESTIGATION SHALL COVER:
1. ALL AREAS REQUIRED TO COMPLETE THIS PROJECT'S SCOPE OF WORK.
3.5 PLUMBING DESIGN
A. COORDINATE WITH THE OWNER, ARCHITECT, AND OTHER DISCIPLINES TO DETERMINE LOCATIONS AND SPACE REQUIREMENTS OF ALL NEW FIXTURES.

23 00 00 MECHANICAL DESIGN-BUILD PERFORMANCE SPECIFICATION

- 1.1 DESCRIPTION OF WORK
A. THIS PROJECT CONSISTS OF REPLACING EXISTING HVAC EQUIPMENT AT THE HUMBOLT ELEMENTARY SCHOOL LOCATED IN CANYON CITY, OREGON. THIS SPECIFICATION SECTION COVERS DESIGN/BUILD PERFORMANCE REQUIREMENTS FOR THE MECHANICAL SYSTEMS. REFER TO CONSTRUCTION DRAWINGS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK...
B. PERFORM A DETAILED FIELD INVESTIGATION AND PREPARE DESIGN DOCUMENTS WITH OREGON MECHANICAL ENGINEER'S STAMP AND SIGNATURE, SUITABLE FOR PLAN CHECK SUBMISSION AND CONSTRUCTION.
1.2 SECTION INCLUDES
A. DESIGN AND CONSTRUCTION OF MECHANICAL HEATING, VENTILATION, AND COOLING SYSTEMS UNDER THE BASE BID.
1.3 RELATED SECTIONS
A. SEE OTHER SPECIFICATION SECTIONS.
1.4 REFERENCES
A. HEATING, VENTILATING, AND COOLING SYSTEM DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE OREGON MECHANICAL SPECIALTY CODE (OMSC), LOCAL LAWS AND ORDINANCES AND WITH LOAD CALCULATIONS IN ACCORDANCE WITH ASHRAE PROCEDURES;
B. OMSC - 2022 OREGON MECHANICAL SPECIALTY CODE;
C. OESC - 2021 OREGON ELECTRICAL SPECIALTY CODE;
D. OSSC - 2022 OREGON STRUCTURAL SPECIALTY CODE; AND
E. OEESC - 2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE.
1.5 REQUIREMENTS
A. THE MECHANICAL (HVAC) DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.
B. SUBMITTALS SHALL BE SUBMITTED TO THE OWNER FOR REVIEW.
1. CONSTRUCTION SHALL NOT COMMENCE UNTIL THE DETAILED DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS HAVE BEEN ACCEPTED AND APPROVED BY THE OWNER AND THE REVIEWING AGENCY...
C. CONSTRUCTION DOCUMENTS AND REVIEWING AGENCY SUBMITTALS:
1. DRAWINGS SHALL BE SCALABLE, DATED, STAMPED AND SIGNED BY THE CONTRACTOR'S REGISTERED MECHANICAL ENGINEER FOR THE STATE OF OREGON...
2. SPECIFICATIONS SHALL BE PROVIDED IN HARD COPY FORMAT, 8.5" X 11" SIZE. DRAWINGS AND SPECIFICATIONS SHALL BE SUITABLE FOR SUBMISSION TO THE REVIEWING AGENCY FOR REVIEW...
D. COORDINATE WITH THE ELECTRICAL DESIGN-BUILD CONTRACTOR AND HIS ELECTRICAL ENGINEER FOR THE MECHANICAL EQUIPMENT BEING INSTALLED AS PART OF THIS PROJECT.
E. PROVIDE STRUCTURAL ENGINEERING ANALYSIS AND DESIGN OF STRUCTURE TO ACCOMMODATE ALL HVAC EQUIPMENT ADDED BY THIS SCOPE OF WORK.
1.6 SUBMITTALS FOR REVIEW
A. CONSTRUCTION DOCUMENTS COMPONENTS:
1. DRAWINGS INCLUDING:
a. MECHANICAL SYSTEMS PLAN DRAWINGS;
b. MECHANICAL SECTIONAL DRAWINGS, IF REQUIRED FOR CLARITY;
c. COMPLETED MECHANICAL ENERGY CODE FORMS;
2. MECHANICAL SPECIFICATIONS.
PART 3 EXECUTION
3.1 GENERAL
A. DRAWINGS:
1. COORDINATE DRAWINGS WITH OTHER DISCIPLINES, INCLUDING ARCHITECTURAL, STRUCTURAL, PLUMBING, AND ELECTRICAL.
2. SCREENED LINE TYPES AND FONTS SHALL REPRESENT WORK THAT IS NOT INCLUDED IN THIS CONTRACT.
3. BOLD LINE TYPES AND FONTS SHALL REPRESENT WORK THAT IS INCLUDED IN THIS CONTRACT.
4. REVISIONS TO DRAWINGS AFTER THE CONSTRUCTION DOCUMENTS SUBMITTAL SHALL BE NOTED WITH:
a. REVISION NOTES IN THE DRAWING TITLE BLOCK INCLUDING THE REVISION NUMBER, BRIEF DESCRIPTION, DATE, AND INITIALS OF THE PERSON RESPONSIBLE FOR THE REVISION.
b. "CLOUDS" ENCOMPASSING THE DRAWING REVISION.
c. "DELTA" BLOCKS ADJACENT TO THE CLOUDS WITH REVISION NUMBERS CORRESPONDING TO THE ASSOCIATED TITLE BLOCK REVISION NOTES.
B. EXISTING DOCUMENTATION:
1. COORDINATE WITH ZCS ENGINEERING & ARCHITECTURE TO OBTAIN RECORD DOCUMENTS (DRAWINGS AND/OR SPECIFICATIONS) OF THE EXISTING BUILDINGS...
C. EQUIPMENT EVALUATION:
1. EVALUATE EXISTING MECHANICAL EQUIPMENT AND COMPONENTS TO REMAIN AND VERIFY THE EQUIPMENT IS IN GOOD WORKING ORDER AND MEETS THE CURRENT CODE REQUIREMENTS.
D. MECHANICAL DESIGN:
1. MECHANICAL SYSTEM PERFORMANCE SHALL BE RETURNED TO THE STATE IN WHICH IT WAS BEFORE CONSTRUCTION.
2. MECHANICAL SYSTEMS SHALL INCLUDE HEATING, COOLING, AND VENTILATION.
3. MECHANICAL CALCULATIONS AND DESIGN SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE OMSC AND ASHRAE.
4. COORDINATE WITH THE OWNER, ENGINEER, AND OTHER DISCIPLINES TO DETERMINE LOCATIONS AND SPACE REQUIREMENTS OF ALL NEW EQUIPMENT AND DUCTWORK.

26 00 00 ELECTRICAL DESIGN-BUILD PERFORMANCE SPECIFICATION

- 1.1 DESCRIPTION OF WORK
A. THIS PROJECT CONSISTS OF REPLACING EXISTING HVAC EQUIPMENT AT THE HUMBOLT ELEMENTARY SCHOOL LOCATED IN CANYON CITY, OREGON. THIS SPECIFICATION SECTION COVERS DESIGN/BUILD PERFORMANCE REQUIREMENTS FOR THE MECHANICAL SYSTEMS. REFER TO CONSTRUCTION DRAWINGS FOR ADDITIONAL INFORMATION AND SCOPE OF WORK...
B. WORK SPECIFIED IN THIS SECTION SHALL BE DESIGNED UNDER THE RESPONSIBLE CHARGE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OREGON. DESIGN DOCUMENTS SHALL BE STAMPED AND SIGNED.
C. DESIGN DOCUMENTS SHALL MEET ALL OF THE FOLLOWING REQUIREMENTS:
1. SUITABLE FOR REVIEW BY THE OWNER AND THE OWNER'S CONSULTANTS.
2. MEET THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO THE BUILDING DEPARTMENT, THE FIRE MARSHAL, THE POWER COMPANY, AND ALL ASSOCIATED PARTIES.
3. CONFORM TO CODES, LAWS, AND ORDINANCES AS CALLED FOR IN THIS SPECIFICATION.
1.2 ASSUMPTION
A. THE EXISTING SERVICE IS SIZED TO ACCOMMODATE THIS PROJECT'S LOADS.
1.3 RELATED SECTIONS
A. SEE OTHER SPECIFICATION SECTIONS (MECHANICAL AND STRUCTURAL).
1.4 REFERENCES
A. ELECTRICAL AND LIGHTING SYSTEM DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC), OREGON ELECTRICAL SPECIALTY CODE (OESC) AND LOCAL LAWS AND ORDINANCES.
B. NEC - 2021 NATIONAL ELECTRICAL CODE
C. OESC - 2021 OREGON ELECTRICAL SPECIALTY CODE
D. OSSC - 2022 OREGON STRUCTURAL SPECIALTY CODE
E. OEESC - 2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE
1.5 REQUIREMENTS
A. THE ELECTRICAL AND LIGHTING SYSTEM DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.
B. SUBMITTALS SHALL BE SUBMITTED TO THE OWNER FOR REVIEW COINCIDING WITH THE CONSTRUCTION SCHEDULE. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE THESE SUBMITTALS. ANY LEAD-TIME ISSUES NEED TO BE BROUGHT TO THE GENERAL CONTRACTOR'S ATTENTION WITHIN 10 DAYS OF RECEIVING SIGNED CONTRACTS.
1. CONSTRUCTION SHALL NOT COMMENCE UNTIL THE DETAILED DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS HAVE BEEN ACCEPTED AND APPROVED BY THE OWNER AND THE REVIEWING AGENCIES.
C. CONSTRUCTION DOCUMENTS AND REVIEWING AGENCY SUBMITTALS:
1. DRAWINGS SHALL BE SCALABLE, DATED, STAMPED AND SIGNED BY THE CONTRACTOR'S REGISTERED ELECTRICAL ENGINEER FOR THE STATE OF OREGON...
2. SPECIFICATIONS SHALL BE PROVIDED IN HARD COPY FORMAT, 8.5" X 11" SIZE. DRAWINGS AND SPECIFICATIONS SHALL BE SUITABLE FOR SUBMISSION TO THE REVIEWING AGENCY FOR REVIEW...
D. COORDINATE WITH THE MECHANICAL DESIGN CONTRACTOR FOR MECHANICAL EQUIPMENT BEING INSTALLED AS PART OF THIS PROJECT.
1.6 SUBMITTALS FOR REVIEW
A. CONSTRUCTION DOCUMENTS COMPONENTS:
1. FIELD INVESTIGATION REPORT INCLUDING ITEMS DESCRIBED IN PART 3.2.
2. DRAWINGS INCLUDING:
a. LOCATIONS OF MAJOR EQUIPMENT REQUIRING NEW OR MODIFIED POWER DISTRIBUTION DESIGN.
b. CONVENIENCE RECEPTACLE AND DATA.
3. ELECTRICAL SPECIFICATIONS OUTLINE
a. COMPLETED LIGHTING ENERGY CODE FORMS.
b. OREGON ENGINEERING STAMP WITH SIGNATURES.
4. ELECTRICAL SPECIFICATIONS.
B. REVIEWING AGENCY SUBMITTAL:
1. REVIEWING AGENCY COMMENTS AND CONTRACTOR RESPONSES.
2. DRAWINGS WITH REVIEWING AGENCY COMMENTS INCORPORATED.
3. ELECTRICAL SPECIFICATIONS.
4. FINAL STAMPED, SIGNED AND APPROVED DRAWINGS SUITABLE FOR CONSTRUCTION.
3.1 GENERAL
A. DRAWINGS:
1. COORDINATE DRAWINGS WITH OTHER DISCIPLINES, INCLUDING ARCHITECTURAL, STRUCTURAL, PLUMBING, AND MECHANICAL.
2. SCREENED LINE TYPES AND FONTS SHALL REPRESENT WORK THAT IS NOT INCLUDED IN THIS CONTRACT.
3. BOLD LINE TYPES AND FONTS SHALL REPRESENT WORK THAT IS INCLUDED IN THIS CONTRACT.
4. REVISIONS TO DRAWINGS AFTER THE CONSTRUCTION DOCUMENTS SUBMITTAL SHALL BE NOTED WITH:
a. REVISION NOTES IN THE DRAWING TITLE BLOCK INCLUDING THE REVISION NUMBER, BRIEF DESCRIPTION, DATE, AND INITIALS OF THE PERSON RESPONSIBLE FOR THE REVISION.
b. "CLOUDS" ENCOMPASSING THE DRAWING REVISION.
c. "DELTA" BLOCKS ADJACENT TO THE CLOUDS WITH REVISION NUMBERS CORRESPONDING TO THE ASSOCIATED TITLE BLOCK REVISION NOTES.
B. EXISTING DOCUMENTATION:
1. COORDINATE WITH ZCS ENGINEERING & ARCHITECTURE TO OBTAIN RECORD DOCUMENTS (DRAWINGS AND/OR SPECIFICATIONS) OF THE EXISTING BUILDINGS...
C. EQUIPMENT EVALUATION:
1. EVALUATE EXISTING ELECTRICAL EQUIPMENT AND COMPONENTS TO REMAIN AND VERIFY THE EQUIPMENT IS IN GOOD WORKING ORDER, MEETS THE CURRENT CODE REQUIREMENTS, AND IS OF ADEQUATE CAPACITY. FOR DEFICIENCIES, PROVIDE DETAILED INFORMATION, INCLUDING RECOMMENDATIONS, AND COSTS THEREOF.
D. ELECTRICAL DESIGN:
1. ELECTRICAL CALCULATIONS AND DESIGN SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC.



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GRANT SCHOOL DISTRICT
323 N. HUMBOLT ST.
CANYON CITY, OR 97020

HUMBOLT ELEMENTARY SCHOOL HVAC



AS.10

EXP. 06-30-24

REVISION ID: DATE:

PROJECT NO: P-2670-23

DRAWN: LIS
CHECKED: DJS
DATE: 10-04-2023

AS.10

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DRAWN: LIS
CHECK

PROJECT STRUCTURAL NOTES (CANYON CITY, GRANT COUNTY, OR, 07820)

GENERAL INFORMATION:

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

CODE REQUIREMENT:

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

DESIGN CRITERIA:

- DESIGN IS BASED ON THE STRENGTH AND DEFLECTION CRITERIA OF THE OSSC. IN ADDITION TO THE DEAD LOADS, THE FOLLOWING LOADING AND ALLOWABLE LOAD IS USED FOR DESIGN:

A. LIVE LOADS:	
SLAB ON GRADE	100 PSF
ROOF	20 PSF
B. GROUND SNOW LOAD:	
SNOW IMPORTANCE FACTOR	8 PSF
THERMAL FACTOR	1.1
MINIMUM FLAT ROOF SNOW LOAD	20 PSF
FLAT ROOF SNOW LOAD	22 PSF
C. WIND LOAD:	
BASIC WIND SPEED (3-SECOND GUST)	108 MPH
WIND EXPOSURE	C
BUILDING CATEGORY	III
INTERNAL PRESSURE COEFFICIENT	0.18
TOPOGRAPHIC FACTOR	1.00
D. EARTHQUAKE DESIGN DATA:	
RISK CATEGORY	III
S _s	0.310g
S ₁	0.123g
S _{0.05}	0.321g
S _{0.1}	0.193g
SITE CLASS	D
SEISMIC DESIGN CATEGORY	C
SEISMIC COMPONENT IMPORTANCE FACTOR	1.0
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE
BASIC SEISMIC-FORCE RESISTING SYSTEMS:	
AIR-SIDE HVAC/ACR CONSTRUCTED OF SHEET METAL FRAMING	R = 6
RESPONSE MODIFICATION FACTOR	R = 6
SEISMIC RESPONSE COEFFICIENT	C _s = 0.096
ROOF-MOUNTED STACK BRACED BELOW CENTER OF MASS	R = 3
RESPONSE MODIFICATION FACTOR	R = 3
SEISMIC RESPONSE COEFFICIENT	C _s = 0.321

SPECIAL INSPECTION & STRUCTURAL OBSERVATIONS:

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

SUBMITTALS:

- SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION REGARDING ALL STRUCTURAL ITEMS, INCLUDING THE FOLLOWING:
 - CONCRETE MIX DESIGNS, CONCRETE AND MASONRY REINFORCEMENT (INCLUDING MILL TEST REPORTS), STRUCTURAL STEEL (INCLUDING MILL TEST REPORTS)
 - ANY CHANGES TO THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ARE SUBJECT TO REVIEW AND ACCEPTANCE OF THE STRUCTURAL ENGINEER OF RECORD.
 - DESIGN DRAWINGS, SHOP DRAWINGS, AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS, INCLUDING: UNISTRUT CATWALKS AND ATTACHMENTS, STEEL & UNISTRUT ROOFTOP RACK SYSTEM SHALL BEAR THE SEAL AND SIGNATURE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OREGON, AND SHALL BE INCLUDED FOR CONNECTIONS TO THE STRUCTURE, CONSIDERING LOCALIZED EFFECTS ON STRUCTURAL ELEMENTS INDUCED BY THE CONNECTION LOADS. DESIGN SHALL BE BASED ON THE REQUIREMENTS OF THE OSSC WITH THE FOLLOWING:
 - EARTHQUAKE AND WIND LOADS AS NOTED IN DESIGN CRITERIA
 - MAXIMUM INELASTIC STORY DRIFT 1/8" (N/S DIRECTION) & 0.253 INCHES (E/W DIRECTION).
 - THE CONTRACTOR SHALL COORDINATE SEISMIC RESTRAINTS OF MECHANICAL, PLUMBING, AND ELECTRICAL EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING WITH THE STRUCTURE. ANY CONNECTIONS TO THE STRUCTURE SHALL CONFORM TO THE OSSC AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION.

DIVISION 03 - CONCRETE

CONCRETE:

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

ABSOLUTE WATER-CEMENT RATIO BY WEIGHT			
f'c (psi)	NON AIR-ENTRAINED	AIR-ENTRAINED	USE
3,000	N/A	0.50	MECHANICAL PAD
- DESIGNED FOR f'c = 2,500 PSI, NO SPECIAL INSPECTION REQUIRED.
- VERIFY WATER/CEMENT RATIO WITH FLOOR COVERING MANUFACTURER FOR CONCRETE FLOORS WITH MOISTURE SENSITIVE FLOOR COVERINGS, AND VERIFY COORDINATE WITH PROJECT SPECIFICATIONS.
- MINIMUM CEMENT CONTENT PER CUBIC YARD SHALL BE AS FOLLOWS:
 - 4,500 psi
 - 550 lb
- FLY ASH CONFORMING TO ASTM C618 (INCLUDING TABLE 2A) TYPE F, MAY BE USED TO REPLACE UP TO 20% OF THE CEMENT CONTENT, PROVIDED THAT THE MIX STRENGTH IS SUBSTANTIATED BY TEST DATA.
- THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS, ALONG WITH TEST DATA COMPLIANT WITH OSSC SECTION 1905, A MINIMUM OF TWO WEEKS PRIOR TO PLACING CONCRETE. NO WATER MAY BE ADDED TO CONCRETE IN THE FIELD UNLESS SPECIFICALLY APPROVED IN WRITING BY THE CONCRETE SUPPLIER IN CONJUNCTION WITH THE CONCRETE MIX DESIGN.
- A WATER-REDUCING ADMIXTURE CONFORMING TO ASTM C494, USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, SHALL BE INCORPORATED IN CONCRETE DESIGN MIXES. A HIGH-RANGE WATER-REDUCING (HRWR) ADMIXTURE CONFORMING TO ASTM C494, TYPE F OR G, MAY BE USED IN CONCRETE MIXES PROVIDING THAT THE SLUMP DOES NOT EXCEED 9". AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260 SHALL BE USED IN CONCRETE MIXES FOR EXTERIOR HORIZONTAL SURFACES EXPOSED TO WEATHER. THE AMOUNT OF ENTRAINED AIR SHALL BE 5% +/- 1% BY VOLUME.

CONCRETE CAST IN PLACE:

- STRUCTURAL CALCULATIONS ARE BASED ON 2,500 PSI CONCRETE STRENGTH, THEREFORE SPECIAL INSPECTION IS NOT REQUIRED PER OSSC 1703.1
- CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4" WITHOUT THE USE OF ADMIXTURES AS NOTED.
- CONCRETE MATERIALS, FORM WORK, MIXING, PLACING AND CURING SHALL CONFORM WITH THE SPECIFICATIONS CONTAINED IN THE ACI MANUAL OF CONCRETE PRACTICE.
- AT AREAS OF DEPRESSIONS FOR SLABS AND BEAMS, PROVIDE MINIMUM THICKNESS OF DEPTH AS FOR ADJACENT AREAS, UNLESS NOTED OTHERWISE.
- CONCRETE SHALL NOT BE PLACED ON FROZEN GROUND.
- ALL EXPOSED CORNERS SHALL HAVE 3/4" CHAMFER, UNLESS NOTES OTHERWISE.

CONCRETE REINFORCING STEEL:

- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, FOR DEFORMED BARS AND ASTM A185 FOR SMOOTH WELDED WIRE FABRIC (WWF), UNLESS OTHERWISE NOTED. REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING STEEL SHALL BE SECURELY TIED IN PLACE WITH #16 ANNEALED IRON WIRE.
- BARS IN SLABS SHALL BE SUPPORTED ON WELL CURED CONCRETE BLOCKS OR APPROVED METAL CHAIRS, AS SPECIFIED BY THE CRSI MANUAL OF STRANDED PRACTICE, MSP-1. REINFORCING STEEL SHALL BE DETAINED IN ACCORDANCE WITH THE "ACI MANUAL OF STANDARD PRACTICE, MSP-1 REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315. LAP ALL REINFORCING BARS PER THE TYPICAL LAP SPLICE LENGTH SCHEDULE, EXCEPT AS NOTED. MECHANICAL SPLICES NOTED ON THE PLANS SHALL BE DAYTON BAR-GRIP SPLICES OR APPROVED WITH A CURRENT ICC APPROVAL REPORT.

BAR SIZE	TYPICAL LAP SPLICE LENGTH SCHEDULE							
	3,000 psi		4,000 psi		5,000 psi		6,000 psi	
	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
#3	22	32	19	28	17	25	16	23
#4	29	43	25	37	22	33	20	31

NOTES:

- DIMENSIONS ARE IN INCHES.
- CASES 1 AND 2 ARE DEFINED AS FOLLOWS: (db = BAR DIAMETER)
 - BEAMS OR COLUMNS:
 - CASE 1: COVER ≥ db AND c/c SPACING ≥ 2db
 - CASE 2: COVER < db OR c/c SPACING < 2db
 - ALL OTHERS:
 - CASE 1: COVER ≥ db AND c/c SPACING ≥ 3db
 - CASE 2: COVER < db OR c/c SPACING < 3db
- FOR TOP BARS, MULTIPLY LAP LENGTH ABOVE BY 1.3. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.
- REINFORCEMENT SHALL BE SECURED IN FORMS WITH TIES AND ANCHORAGE TO PREVENT DISPLACEMENT. ALL THE WIRE SHALL BE MIN. #16 ANNEALED STEEL.
- ALL REINFORCING STEEL SHALL BE TIED 100% ALONG ALL PERIMETER EDGES AND 50% FIELD.
- REINFORCING (MINIMUM UNLESS NOTED OTHERWISE ON PLANS)
 - PLACE TWO (2) NO. 4 CONTINUOUS AT BOTTOM, TOP AND AT DISCONTINUOUS ENDS OF ALL FOUNDATIONS.
 - PLACE 2-4" x 1-0" BARS AT CORNERS AND INTERSECTIONS FOR WALLS AND FOUNDATIONS EQUAL IN SIZE AND NUMBER TO HORIZONTAL REINFORCING.
 - PLACE TWO (2) NO. 4x OPENING DIMENSIONS PLUS 4-0" EACH SIDE OF ALL OPENINGS AND TWO (2) NO. 4x4-0" DIAGONAL BARS AT EACH CORNER OF ALL SLAB OPENINGS GREATER THAN 1'-0" IN DIMENSION.
- ALL WELDED WIRE FABRIC SHALL CONFORM WITH ASTM A 185. ALL WIRE FABRIC SHALL BE SUPPLIED, LAID IN FLAT SHEETS AND CHAIRED TO PROPER POSITION IN SLABS. LAP ONE (1) FULL MESH PLUS 2" ON SIDES AND ENDS.
- ALL REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI DETAILING MANUAL 315.
 - ALL REINFORCING STEEL SHALL BE ACCURATELY AND SECURELY PLACED.
 - REINFORCING SHALL NOT BE BENT OR DISPLACED FOR THE CONVENIENCE OF OTHER TRADES, UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
 - SPLAY REINFORCING STEEL AROUND OPENINGS WITH 1" IN 10" SPLAY, UNLESS NOTED OTHERWISE.
 - MINIMUM COVER FROM CONCRETE SURFACES TO REINFORCING STEEL SHALL BE:
 - 3" TO BOTTOM OF FOOTING
 - 3/4" SLAB TO TOP AND BOTTOM SURFACES, CENTER OF SLAB ON GRADE
- REINFORCEMENT BARS SHALL NOT BE TACK WELDED, WELDED, HEATED OR CUT, UNLESS INDICATED ON THE CONTRACT DOCUMENTS OR APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
- REINFORCEMENT COUPLERS SHALL BE LENTON, FOX-HOWLETT OR APPROVED, CAPABLE OF DEVELOPING ONE HUNDRED TWENTY-FIVE PERCENT (125%) OF THE SPECIFIED YIELD STRENGTH OF THE REINFORCEMENT.

CONCRETE ACCESSORIES:

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

DIVISION 06 - WOOD, PLASTICS AND COMPOSITES

FRAMING LUMBER:

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

NAILING AND FASTENERS:

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



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GRANT SCHOOL DISTRICT
323 N. HUMBOLT ST.
CANYON CITY, OR 97820

**HUMBOLT
ELEMENTARY
SCHOOL HVAC**



REVISION ID:	DATE:

PROJECT NO: P-2870-23
DRAWN: PWR
CHECKED: MRS
DATE: 10-04-2023

STRUCTURAL
GENERAL NOTES

S0.10

GENERAL - SPECIAL INSPECTIONS					
SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
FABRICATORS	1705.10 1704.2.5				SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATORS SHOP. SPECIAL INSPECTIONS SHALL BE PERFORMED DURING FABRICATION. PERFORMING SPECIAL INSPECTIONS IS NOT REQUIRED, WHERE FABRICATOR HAS BEEN APPROVED AS AN APPROVED FABRICATOR, PER SECTION 1704.2.5.1.
SUBMITTALS TO THE BUILDING OFFICIAL	1704.5			X	CERTIFICATES OF COMPLIANCE, REPORTS OF PRE-CONSTRUCTION TESTS, OR REPORTS OF MATERIAL PROPERTIES SHALL BE SUBMITTED TO THE BUILDING OFFICIAL.
POST INSTALLED MECHANICAL ANCHORS AND ADHESIVE ANCHORS (EXCLUDING CONDITIONS NOTED ABOVE) IN HARDENED CONCRETE AND COMPLETED MASONRY	TABLE 1705.3.4			X	
WIND RESISTING COMPONENTS - SPECIAL INSPECTIONS					
ROOF COVERING, ROOF DECK AND ROOF FRAMING CONNECTIONS	1705.12.3			X	
EXTERIOR WALL COVERING AND WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRAGMS AND FRAMING	1705.12.3			X	

REQUIRED SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE					
SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
ELECTRICAL COMPONENTS					
INSTALLATION OF ANCHORAGE OF OTHER ELECTRICAL EQUIPMENT	1705.13.6			X	
PLUMBING MECHANICAL COMPONENTS					
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR MECHANICAL SYSTEMS AND THEIR COMPONENTS	1705.13.6			X	
STRUCTURAL OBSERVATION					
SYSTEM OR MATERIAL	OSSC CODE REFERENCE	CODE OR STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
PRIOR TO COVERING STRUCTURAL ANCHORAGE AND ATTACHMENTS	1704.6.1			X	

STATEMENT OF SPECIAL INSPECTION NOTES:

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

CONTRACTOR RESPONSIBILITY:

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

- ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.
- ACKNOWLEDGEMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL.
 - PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTORS ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND DISTRIBUTION OF THE REPORTS.
 - IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION.

STRUCTURAL OBSERVATION:

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



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GRANT SCHOOL DISTRICT
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**HUMBOLT
ELEMENTARY
SCHOOL HVAC**



ONE INCH EQUALS FULL SCALE



REVISION ID:	DATE:



PROJECT NO: P-2870-23
DRAWN: PWR
CHECKED: MRS
DATE: 10-04-2023

SPECIAL INSPECTIONS
AND TESTING

S0.20

BID & PERMIT SET

FOUNDATION PLAN NOTES:

- A. DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CONFIRM w/ ARCHITECTURAL PLAN & DETAILS.
- B. SEE SHEET 50.10 FOR ALL NOTES AND SCHEDULES.
- C. ALL KEYNOTES INDICATE NEW ITEMS TYPICALLY, UNLESS NOTED OTHERWISE.
- D.  INDICATES LOCATION NEW SHEAR WALL COMPONENTS PER KEY NOTE DESCRIPTION.
- E.  INDICATES EXISTING WALL LOCATION.

FOUNDATION PLAN KEY NOTES:

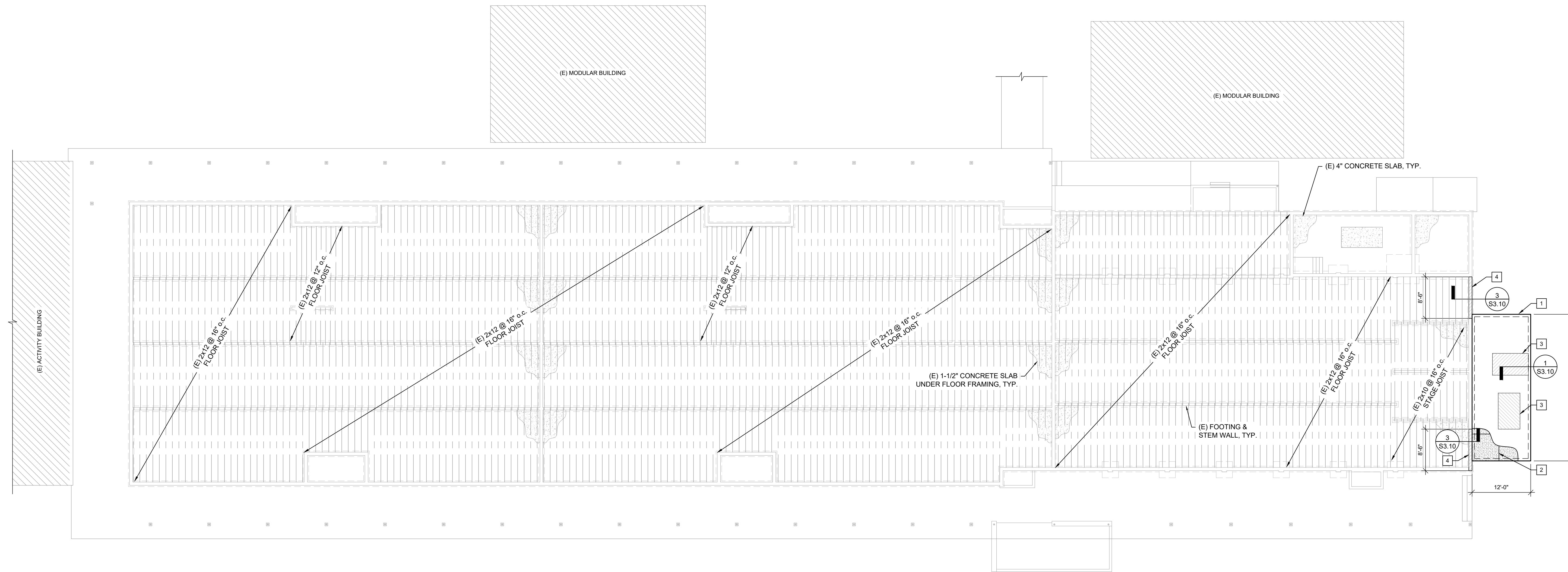
- 1. 4" CONCRETE SLAB w/ 6" TURNDOWN EDGE w/ #4 @ 18" o.c. E.W. SEE DETAIL 1/S3.10 FOR ADDITIONAL INFORMATION.
- 2. CONTROL JOINTS AT A MAX. SPACING OF 12'-0" o.c. SEE DETAIL 2/S3.10 FOR ADDITIONAL INFORMATION.
- 3. MECHANICAL UNIT BY OTHERS w/ (4) 3/8" SIMPSON TITEN HD ANCHORS w/ MINIMUM 2 1/2" EMBEDMENT.
- 4. INSTALL NEW 5/8" x 5" LONG TITEN HD ANCHOR BOLTS @ 4'-0" o.c. MAX. PER DETAIL 3/S3.10.



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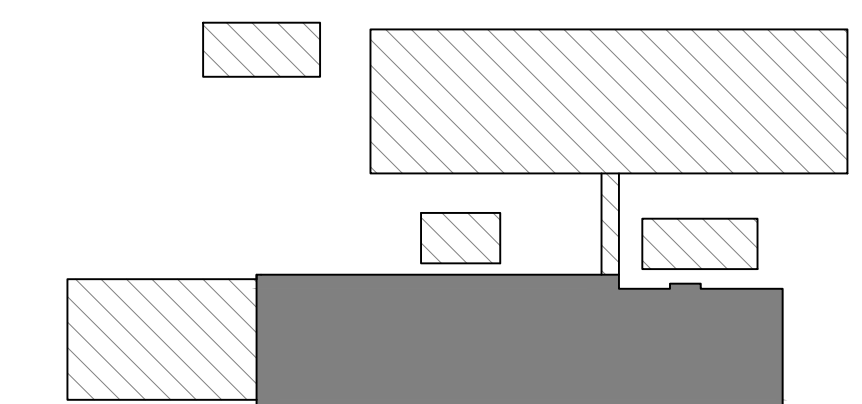
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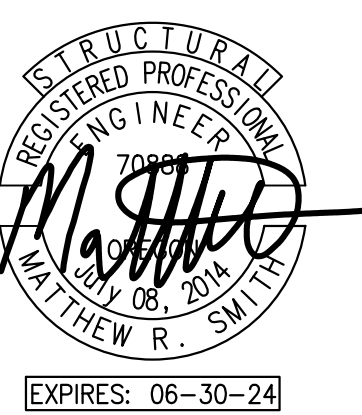
1 PARTIAL FOUNDATION PLAN

3/32" = 1'-0"

ONE INCH EQUALS FULL SCALE



0 BUILDING KEY



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PARTIAL FOUNDATION PLAN

S1.10

BID & PERMIT SET

ROOF FRAMING PLAN NOTES:

- A. DIMENSIONS SHOWN ARE FOR REFERENCE ONLY. CONFIRM W/ ARCHITECTURAL PLAN & DETAILS.
- B. SEE SHEET S0.10 FOR ALL NOTES AND SCHEDULES.
- C. ALL KEYNOTES INDICATE NEW ITEMS TYPICALLY, UNLESS NOTED OTHERWISE.
- D. INDICATES EXISTING WALL LOCATION.

ROOF FRAMING PLAN KEY NOTES:

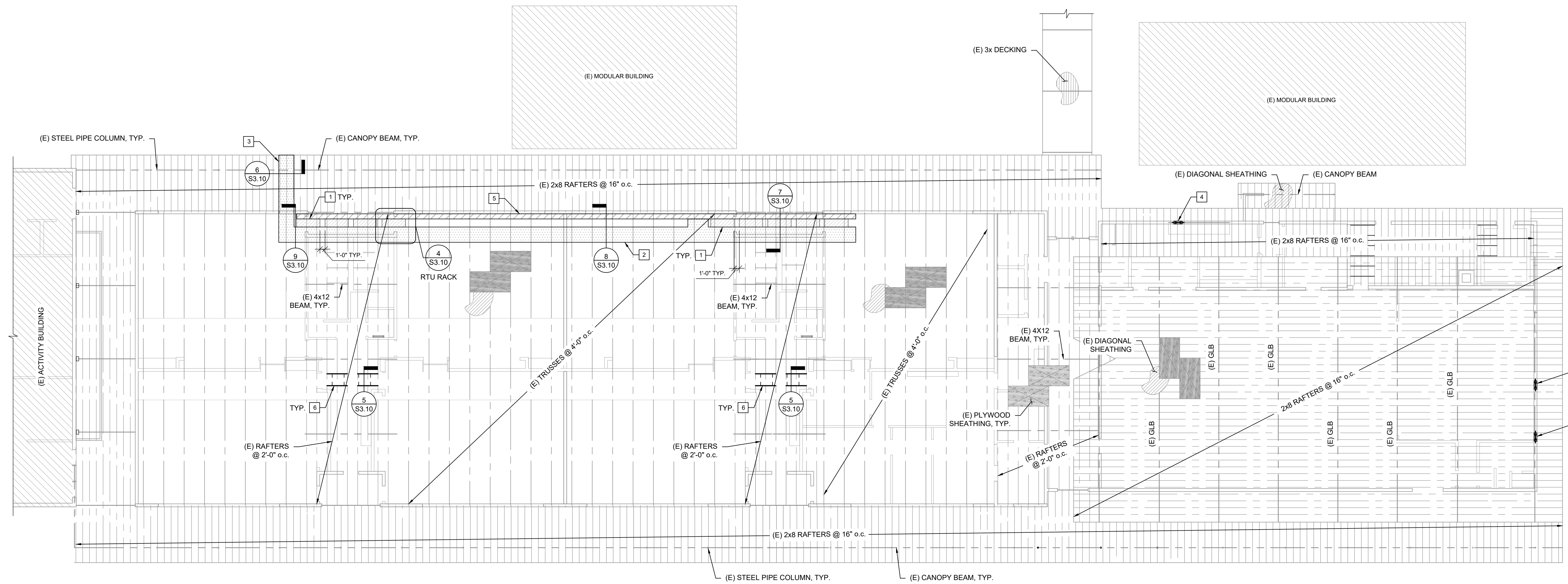
- 1. ROOFTOP MECHANICAL UNIT BY OTHERS (MAX. 300 LBS.) ON ROOFTOP RACK W/ BLOCKING & HANGERS PER DETAIL 7/S3.10.
- 2. UNISTRUT ROOF WALK PER DETAILS 6, 7 & 8/S3.10.
- 3. UNISTRUT ROOF WALK PER DETAILS 6, 7 & 8/S3.10.
- 4. MAX 24" WIDE LOUVER OPENING. PROVIDE 4x8 HEADER OVER OPENING W/ (1) TRIMMER STUD & (1) FULL HEIGHT KING STUD EACH SIDE.
- 5. 12" WIDE CONDUIT SUPPORT PER DETAIL 7 & 8/S3.10.
- 6. BLOCKING UNDER NEW MECHANICAL CURB PER DETAIL 5/S3.10.



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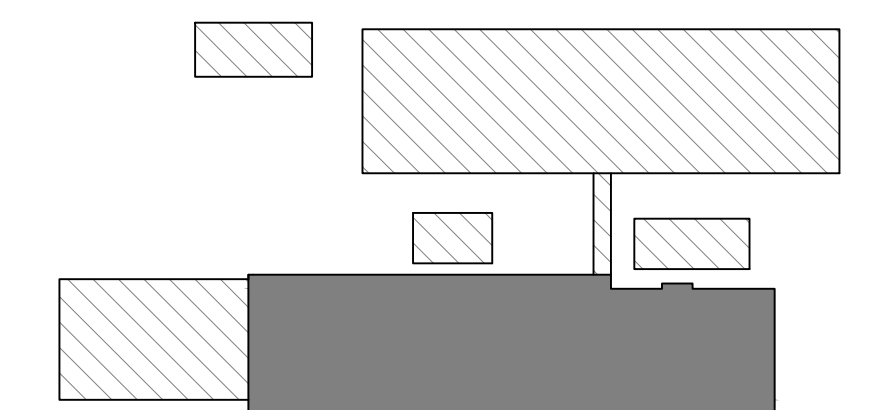
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1 PARTIAL ROOF FRAMING PLAN
S2.10

3/32" = 1'-0"

ONE INCH EQUALS FULL SCALE



0 BUILDING KEY
S2.10 NTS



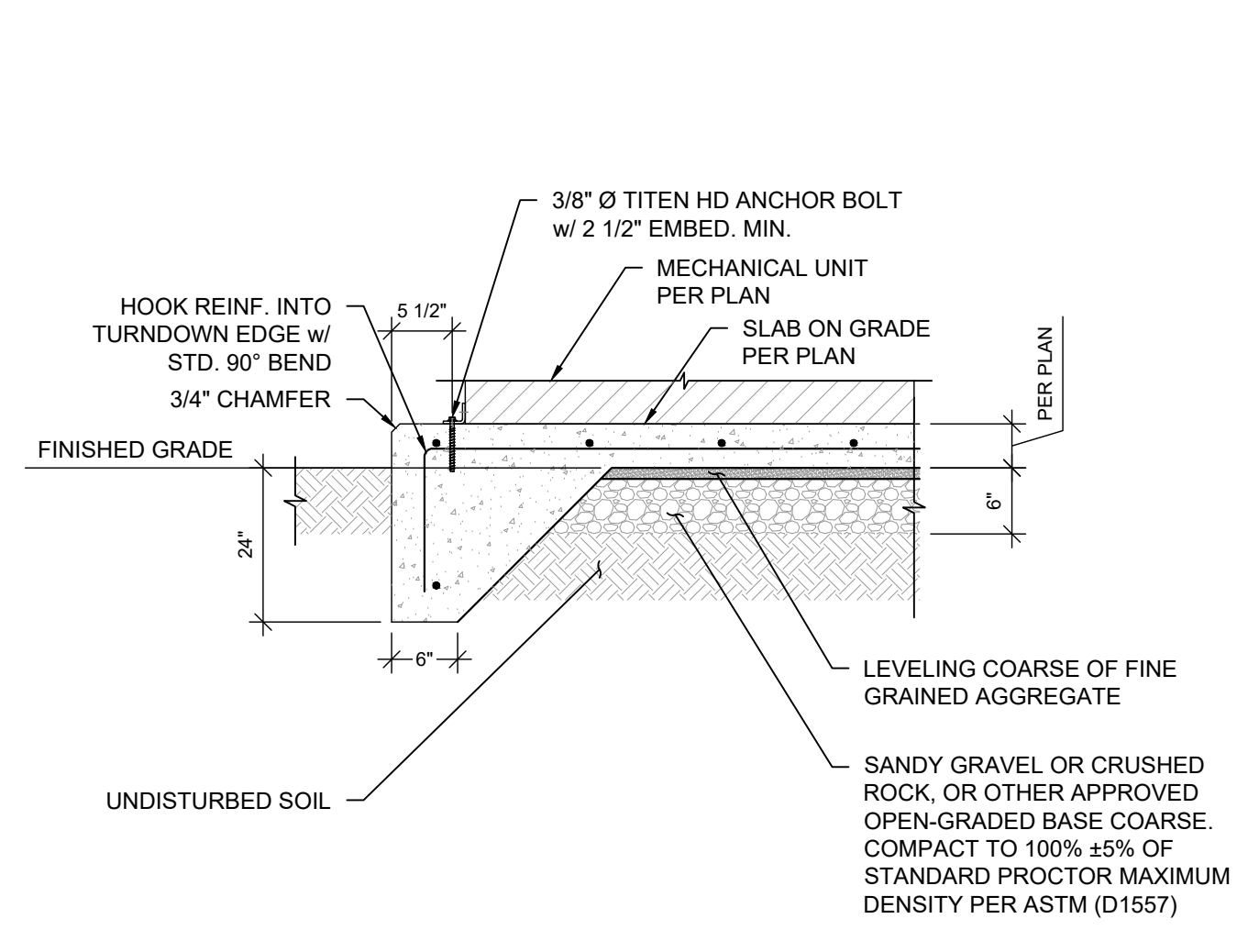
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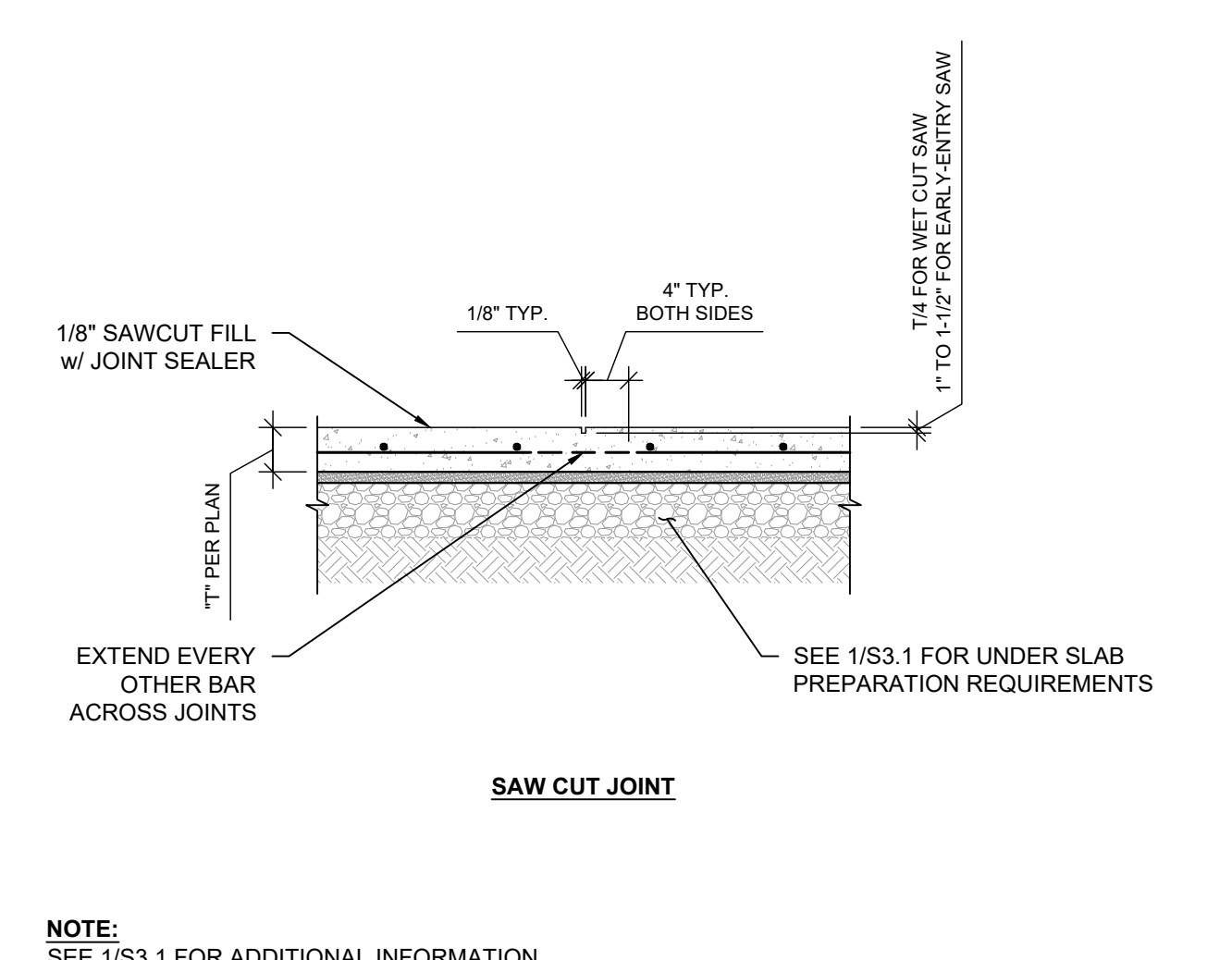
PARTIAL ROOF FRAMING PLAN

S2.10

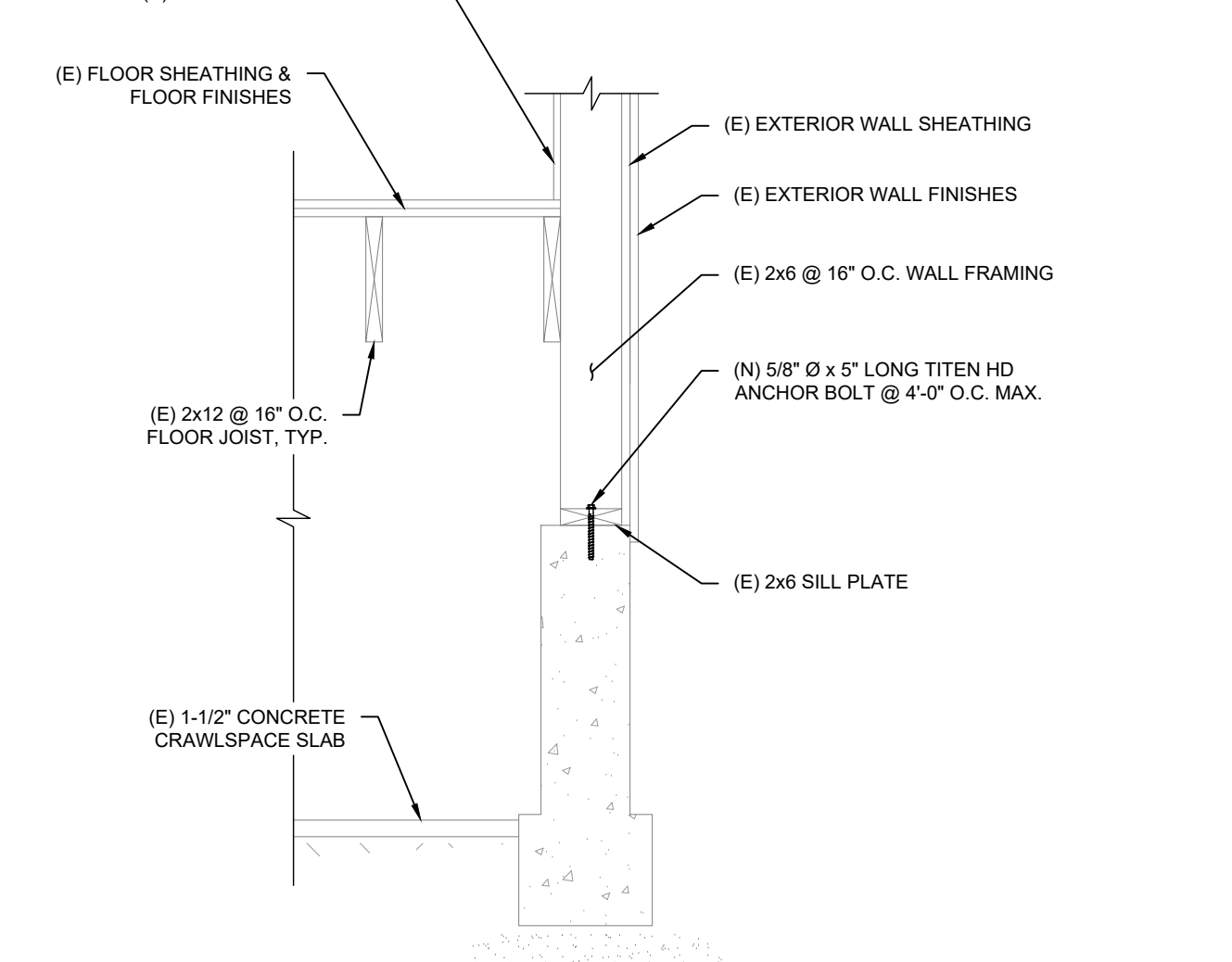
BID & PERMIT SET



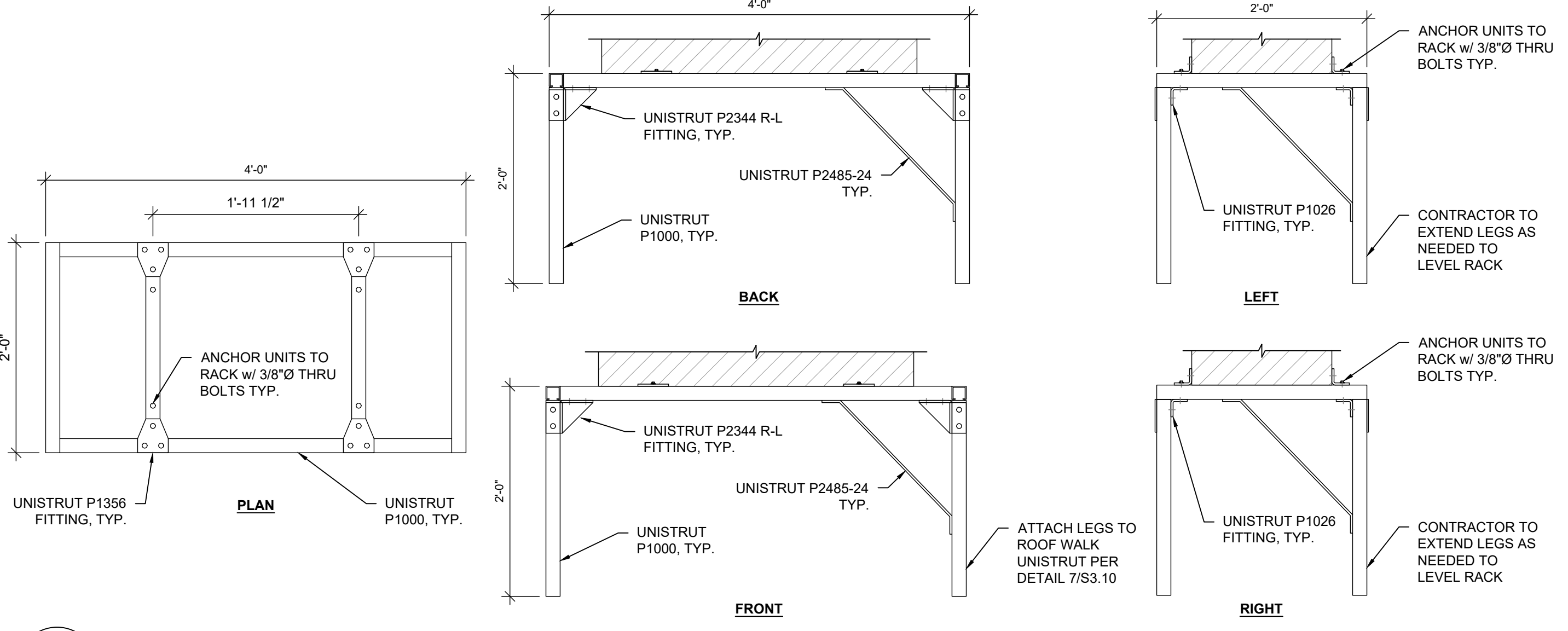
1 UNDER SLAB PREP. SLAB -ON-GRADE
S3.10 3/4" = 1'-0"



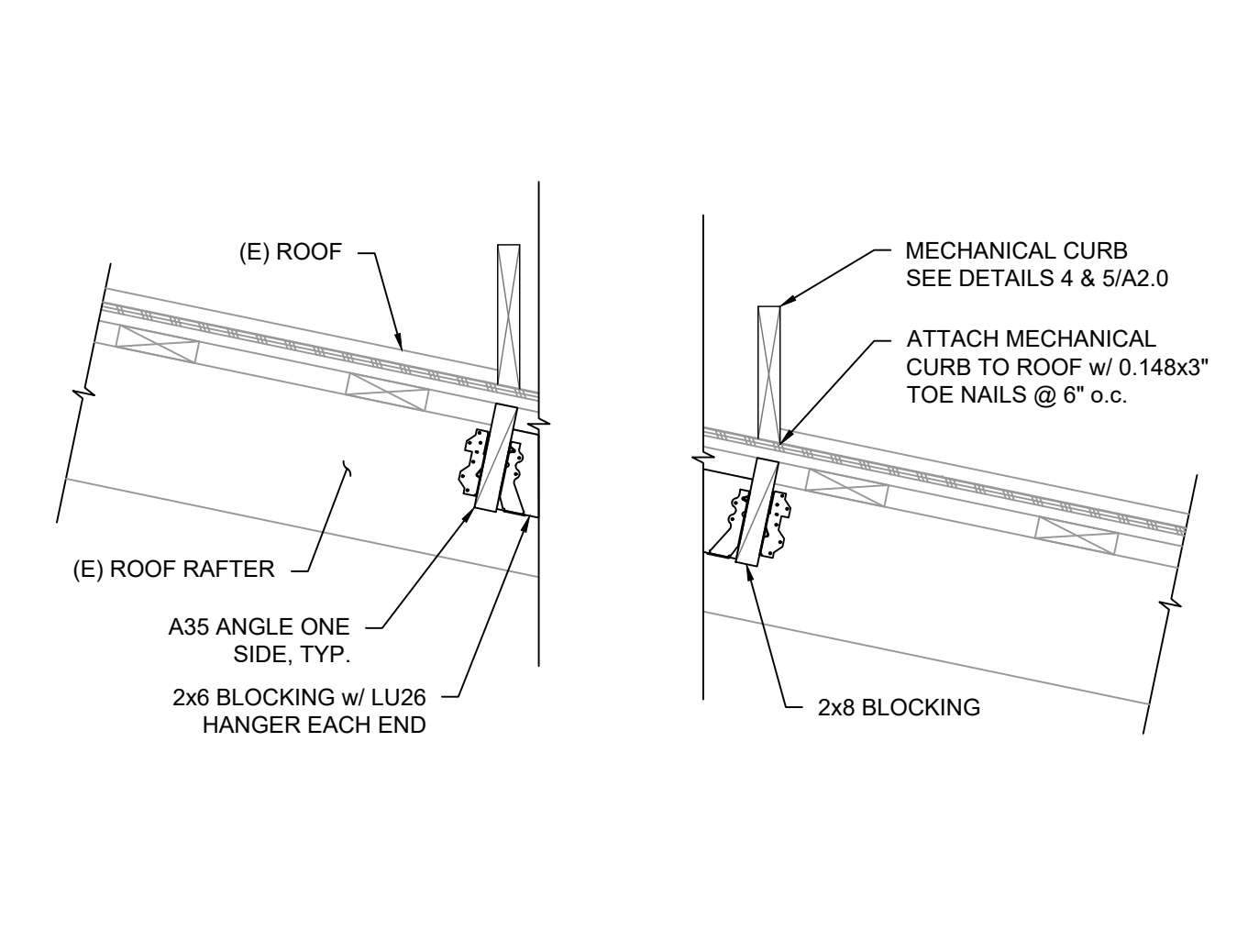
2 CONTROL JOINTS IN SLAB ON GRADE
S3.10 3/4" = 1'-0"



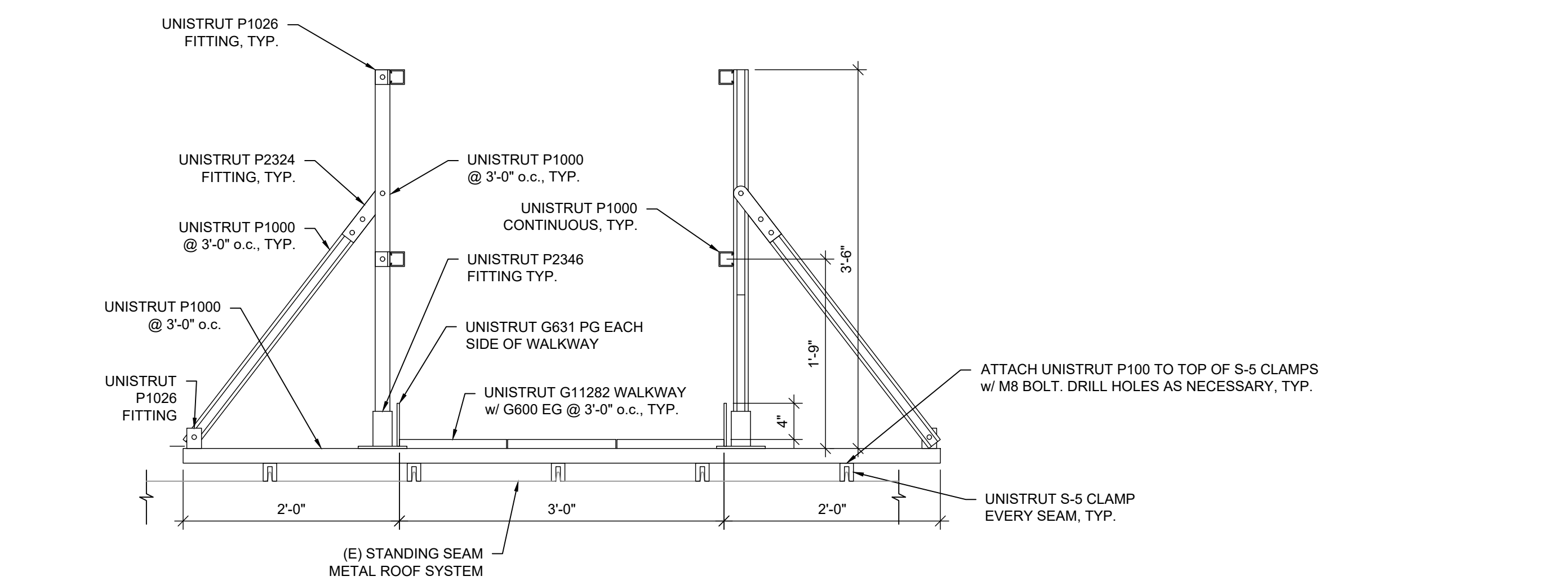
3 NORTH STAGE ROOM EXT. WALL AT FOUNDATION
S3.10 3/4" = 1'-0"



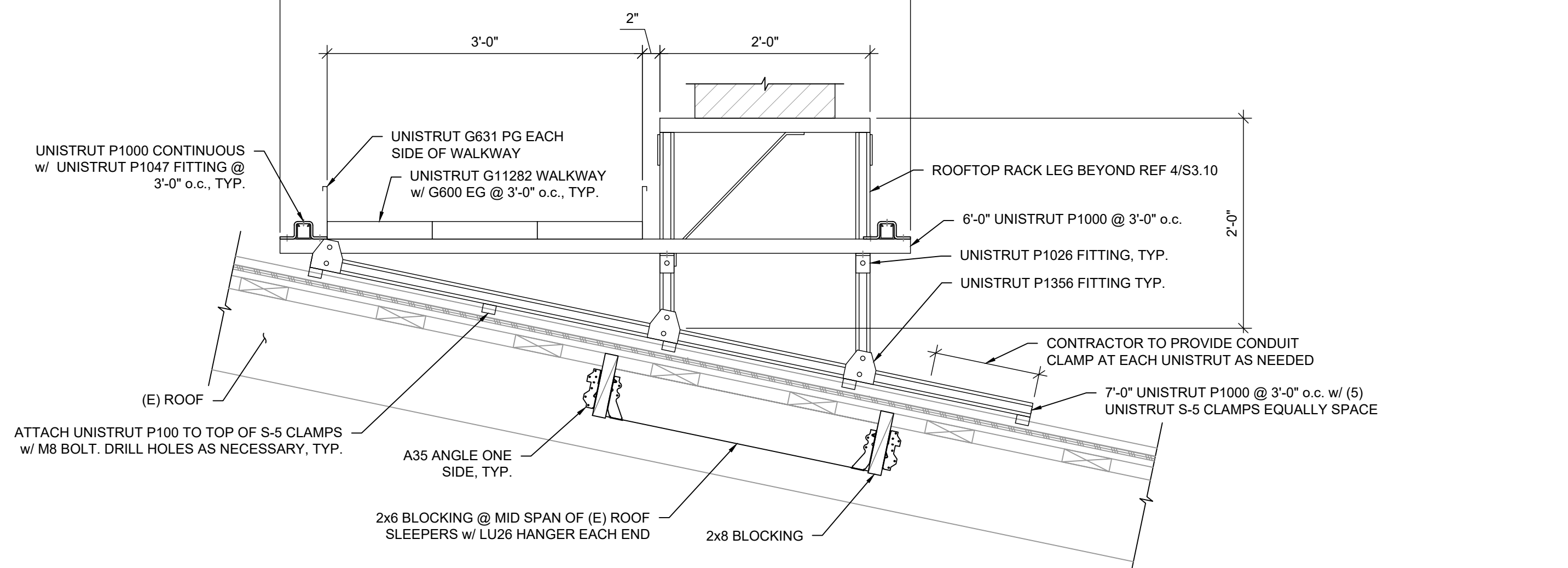
4 ROOFTOP RACK
S3.10 1" = 1'-0"



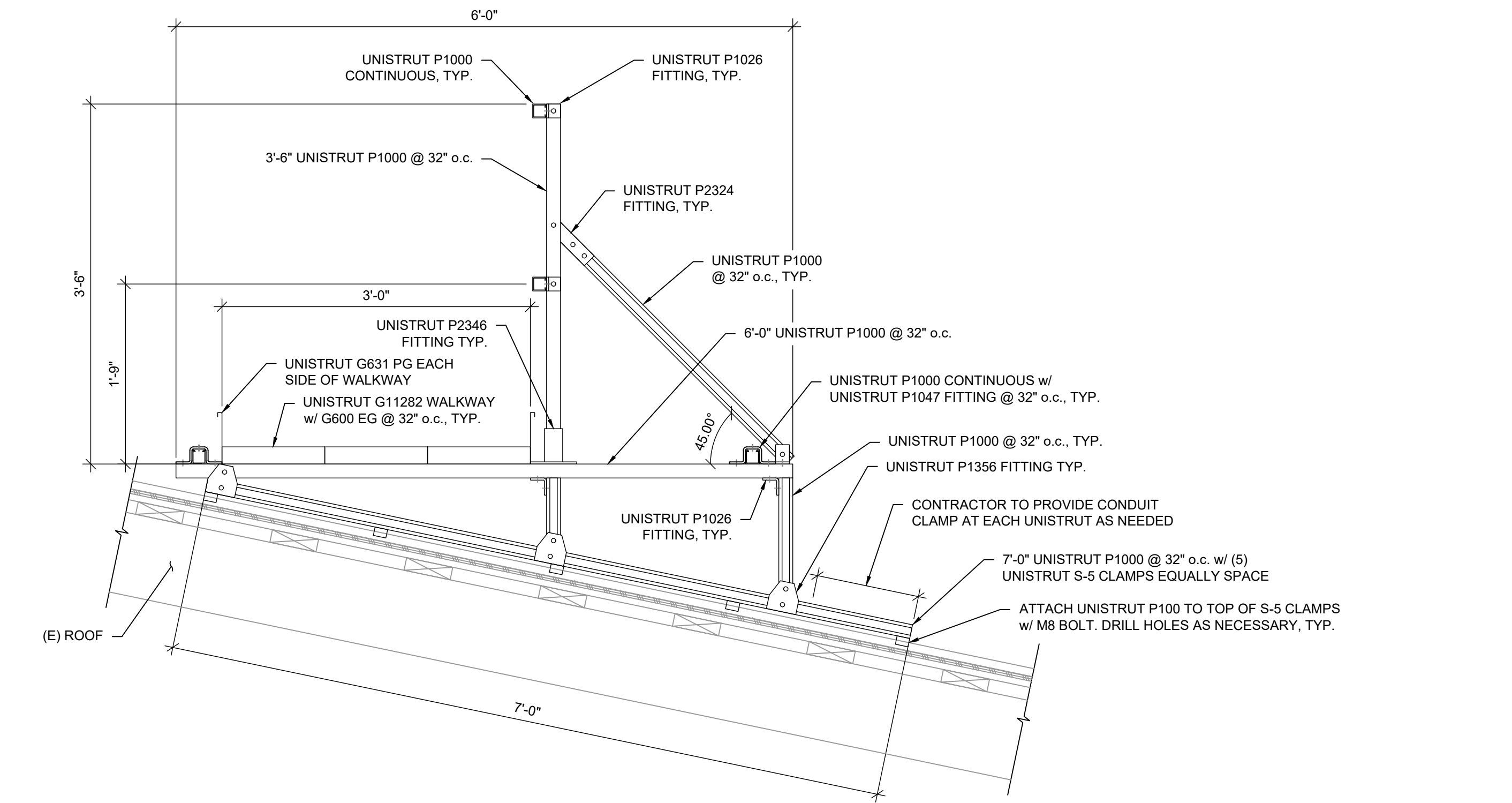
5 MECHANICAL CURB BLOCKING
S3.10 1" = 1'-0"



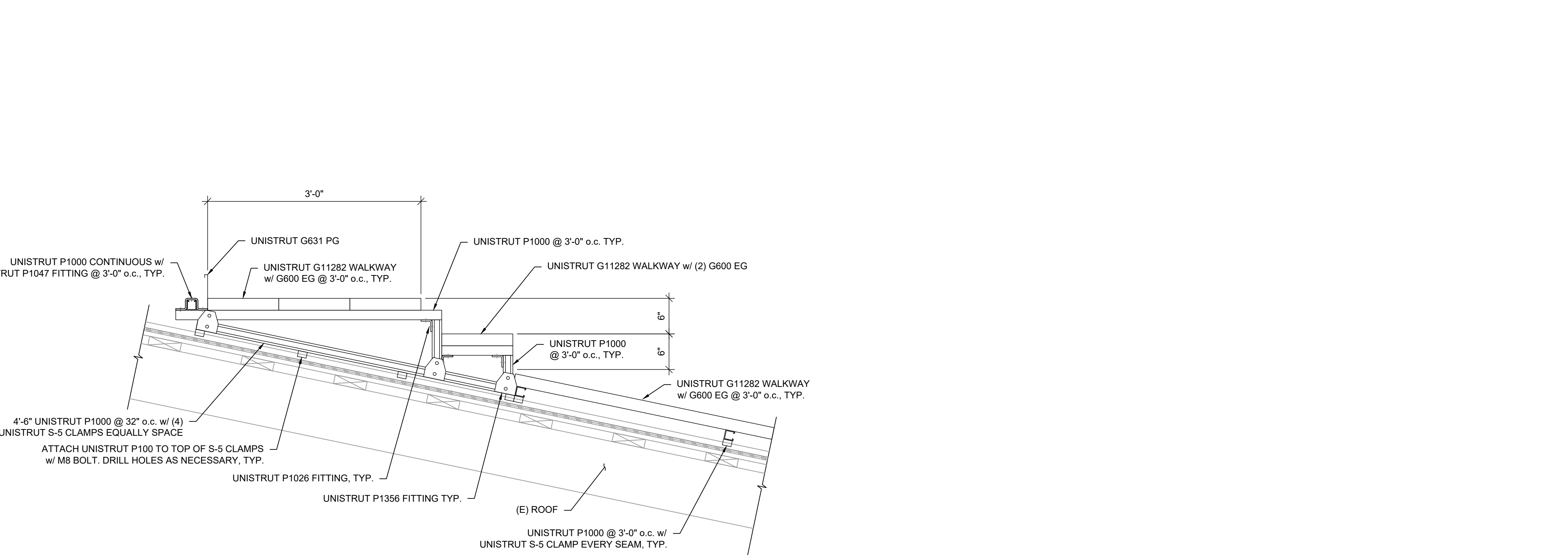
6 UNISTRUT ROOF WALK PARALLEL TO METAL ROOF PANELS
S3.10 1" = 1'-0"



7 UNISTRUT ROOF WALK AT ROOFTOP RACK
S3.10 1" = 1'-0"



8 UNISTRUT ROOF WALK PERPENDICULAR TO METAL ROOF PANELS
S3.10 1" = 1'-0"



9 UNISTRUT ROOF WALK STEP
S3.10 1" = 1'-0"



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FOUNDATION AND ROOF DETAILS

S3.10 BID & PERMIT SET