

GIG HARBOR FIRE AND MEDIC ONE

GIG HARBOR STATION 51

ADDENDUM #04

September 24, 2025

TO ALL BIDDERS:

The Bid Documents issued August 15, 2025, for the Project noted above are amended by this Addendum #04. This Addendum serves to clarify, revise, and supersede information in the Project Manual and Drawings.

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

PROJECT MANUAL REVISIONS

Division 00 Procurement

- ITEM 1** Section 000010 – TABLE OF CONTENTS VOLUME 1 (see attached)
ITEM 2 Section 000010 – TABLE OF CONTENTS VOLUME 2 (see attached)

Architectural

- ITEM 3** Section 024100 DEMOLITION
a) Paragraph 1.2.H., **revise** to read as “Section 311000 – Site Clearing.”
b) **Replace** Section 024100 DEMOLITION in its entirety.
- ITEM 4** Section 062000 FINISH CARPENTRY
a) **Revised** par. 2.2.E.1.a, and .e.
b) **Revised** par. 2.2.E.2.a, and .e.
c) **Replace** Section 062000 Finish Carpentry in its entirety.
- ITEM 5** Section 072100 THERMAL INSULATION
a) **Add** paragraph 2.2.E. “FOAMED-IN-PLACE MATERIALS”, paragraph “E1. Foamed-in-place: High density.....” In its entirety.
b) **Add** paragraph 2.4.B.1 and 2., under ACCESSORIES, “Vapor Retarder at batt insulation.....” in its entirety.
c) **Replace** Section 072100 THERMAL INSULATION in its entirety.
- ITEM 6** Section 072500 WEATHER BARRIERS
a) **Remove** paragraph 1.1.B, Flexible Flashings;
b) **Remove** paragraph 2.3.B., Self-Adhered Weather Barrier Sheet in its entirety;
c) **Remove** paragraph C.2., High Temperature Self-Adhering Membrane Flashing; in its entirety;
d) **Remove** paragraph 2.4.D., Counter-flashing and Transition Strips in its entirety;
e) **Remove** paragraph 2.4.F, Joint Reinforcing Strip;
f) **Remove** 2.4.H., Adhesive and Tape;
g) **Remove** 2.4.L Air Barrier Sealant in its entirety;
h) **Remove** 2.4.Termination Mastic in its entirety; and
i) **Remove** 3.6.B, Flexible Flashings in its entirety.
j) **Replace** Section 072500 WEATHER BARRIERS in its entirety.
- ITEM 7** Section 074113 METAL ROOF PANELS
a) **Add** paragraph 2.3.B. MATERIALS, “Vapor retarder/Temporary Roof:.....”
b) **Remove** paragraph 2.5.D. “Standing Seam Metal Roof Vent:.....” in its entirety.
c) **Replace** Section 074113 METAL ROOF PANEL in its entirety.

- ITEM 8** Section 074213 METAL WALL PANELS
a) Paragraph 2.5.C.3. Product: **Revise** sentence to read as “See Section 070543 CLADDING SUPPORT SYSTEMS for list of acceptable manufacturers.
b) **Replace** Section 070543 CLADDING SUPPORT SYSTEMS in its entirety.
- ITEM 9** Section 074646 FIBER CEMENT SIDING
a) **Revise** Paragraph 1.1.A. and **revise** Paragraph 3.2.D. from “Fluid-Applied.....” to “Liquid-Applied”.
b) **Replace** Section 074646 FIBER CEMENT SIDING in its entirety (see attached).
- ITEM 10** Section 075400 THERMOPLASTIC MEMBRANE ROOFING
a) **Revise** paragraph 2.1.A., DESCRIPTION, to add the words “...fully adhered....”;
b) **Revise** paragraph 2.3.A.1. MANUFACTURERS, **revise** a portion of the sentence to **add** “...Adhered Roof System...”;
c) **Revise** paragraph 2.4.A. Membrane Roofing Materials, to **add** 2.4.A.2. “Adhered system...”, and **revise** paragraph numbers A.3. through A.5.;
d) 2.4.B. Seaming Materials, **revise** word “recommended” to “required”;
e) **Revise** paragraph 2.5.B.2.a. sentence “Insulation Attachment:.....”; 2.5.1.a.2). add sentence “Adhered system.....”;
f) **Remove** paragraph 2.5.C.2., “At roof hatches and door openings....” in its entirety;
g) **Remove** paragraph 3.3.B. “Install electronic leak detection....” in its entirety.
h) **Replace** Section 075400 THERMOPLASTIC MEMBRANE ROOFING in its entirety (see attached).
- ITEM 11** Section 086200 UNIT SKYLIGHTS
a) **Revise** sentence in paragraph 3.2.A.2., INSTALLATION, to read as follows: Install unit skylights on curbs with tops of curbs parallel to the finish roof slope.
- ITEM 12** Section 086300 METAL FRAMED SKYLIGHTS
a) **Revise** Paragraph 3.2.A., INSTALLATION, to **add** paragraphs 3 and 4.
b) **Replace** Section 086200 METAL FRAMED SKYLIGHTS in its entirety.
- ITEM 13** Section 092116 GYPSUM BOARD ASSEMBLIES
a) Paragraph 2.3 MATERIALS, add paragraph C. backing board for wet areas in its entirety.
- ITEM 14** Section 096500 Resilient Flooring
a) **Revised** 2.6.A.2. to read as follows:, “Horizontal Surface: Raised round stair treads, matching color.
- ITEM 15** Section 101400, SIGNAGE
a) **Revised** par. 2.5.b.
b) **Added** par. 2.5.c., address sign.
c) **Replace** Section 101400, SIGNAGE in its entirety, see attached.

Mechanical

- ITEM 16** Section 220800 COMMISSIONING OF PLUMBING
a) **Add** Section 220800 in its entirety, see attached.
- ITEM 17** Section 230800 COMMISSIONING OF HVAC-R
a) **Add** Section 230800 in its entirety, see attached.

Electrical

- ITEM 18** Section 265000 LIGHTING
a) **Add** paragraph “2.9 LIGHTING SUBSTITUTION REQUEST APPROVAL LIST. See 265000 LIGHTING SUBSTITUTION REQUEST APPROVAL LIST – Addendum #4.” See attached.

DRAWING REVISIONS

Architectural

- ITEM 19** A00.03 – CODE SUMMARY: **Revised** to Zoning Code Summary

ITEM 20	A01.01 – LIFE SAFETY PLAN: Revised Life Safety Plan Main Level, fire extinguisher
ITEM 21	A03.01 – ASSEMBLY TYPES: Revised assemblies
ITEM 22	A11.01A – SITE DETAILS: Revised detail 13
ITEM 23	A11.01B – SITE DETAILS: Revised details
ITEM 24	A22.01 - FLOOR PLAN – MAIN LEVEL – ANNOTATION: Revised Floor Plan
ITEM 25	A25.01 – ROOF PLAN: Revised roof plan
ITEM 26	A26.01 – ENLARGED FLOOR PLANS: Revised detail 3
ITEM 27	A32.02 – BUILDING SECTIONS: Revised detail 2
ITEM 28	A33.01 – WALL SECTIONS: Revised details
ITEM 29	A33.02 – WALL SECTIONS: Revised detail 5
ITEM 30	A51.02 – EXTERIOR SECTION DETAILS: Revised details 5 and 6
ITEM 31	A52.02 – ROOF DETAILS: Revised details 1A and 3
ITEM 32	A71.01 – INTERIOR DETAILS: Added details 9 and 19

Structural

ITEM 33	S22.01 – FOUNDATION AND LEVEL 1 FRAMING PLAN: Add notes to Sheet S22.01 (see attached).
ITEM 34	S22.02 – LEVEL 2 & LOW ROOF FRAMING PLAN: Add notes to Sheet S22.02 (see attached).
ITEM 35	S22.03 – ROOF FRAMING PLAN: Add notes to Sheet S22.03 (see attached).
ITEM 36	S25.02 – PARTIAL PLANS: Add notes to Sheet S25.02 (see attached).

Electrical

ITEM 37	E31.01 – POWER PLAN – MAIN LEVEL: Revise MDB and Transformer TSBD dimensions in Electrical Room 150 per Sheet E31.01 (see attached).
ITEM 38	E31.02 – POWER PLAN – UPPER LEVEL: Revise construction notes. a) Revise construction note 9 per Sheet E31.02 (see attached). b) Revise construction note 10 per Sheet E31.02 (see attached).
ITEM 39	E31.03 – ROOF – POWER PLAN: Revise construction note 1 per Sheet E31.03 (see attached).
ITEM 40	E71.06 – ELECTRICAL DETAILS: Revise GAS SHUT OFF SCHEMATIC DIAGRAM per Sheet E71.06 (see attached).

SUBSTITUTION REQUESTS

ITEM 41	Section 113013 – RESIDENTIAL APPLIANCES a) Accepted as noted: Paragraph 2.1.E. Proposed Product: KitchenAid KCGC558JSS 48" 6 burner Natural Gas Range top w/chrome Infused Griddle.
ITEM 42	Section 113013 – RESIDENTIAL APPLIANCES: a) Not accepted: Paragraph 2.1.F Proposed Product: KitchenAid KOES630SPS Single wall oven w/ knob controls.
ITEM 43	Section 260923 NETWORK DIGITAL LIGHTING CONTROL SYSTEM Approval applies to manufacturer only and does not relieve the contractor/supplier from the responsibility of meeting all requirements of the plan and specifications, including providing custom colors to match the specified colors.

SECTION	PRODUCT	MANUFACTURER	ACCEPTED
260923	Lighting Control	Intelligent lighting controls	YES

QUESTIONS AND RESPONSES

ITEM 44	Q: On the Building Sign, A11.01B, it calls out shiplap cedar on both sides of the marine-grade ply? Is this a double-sided sign, or are the FCO letters just on one side? Response by architect of record: Letters are on one side. See drawings and specifications for letter/number information.
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- ITEM 45** **Q:** Can you please define which specification sections should be included in "Item 2 - Subtotal Base Bid Amount for All Site Work". **Response** from the architect of record: Site work is defined in the Bid Documents.
- ITEM 46** **Q:** Specification Section 024100 Demolition indicates in section 3.5 Schedule of Salvage Items, Section A – Salvage the following item for Owner that several items are to be removed and salvaged by Owner. Please clarify items indicated in this section removed and salvaged by Owner are by Owner and not by GC (since they are not listed in Section B – Salvage the following items by Owner). **Response** by architect of record: Paragraph A and B
- ITEM 47** **Q:** Foundation and First Floor Framing Plan Note #4 (drawing S22.01) references over excavating per the geotechnical engineer where required and placing suitable compacted fill as directed by the geotechnical engineer. Contractor assumes existing site soils will be adequate to support proposed footings, provided they are protected from moisture as indicated in previous Addenda responses to questions. Please confirm. **Response** from the architect of record: Design of the foundation system, see S22.01, is based on the Geotechnical information provided in the Project Manual for this project.

ATTACHMENTS

1. DOCUMENTS

- a. Section 000010 - Table of Contents Volume 1 (4 pages)
- b. Section 000010 - Table of Contents Volume 2 (3 pages)
- c. Section 024100 DEMOLITION (3 pages)
- d. Section 062000 FINISH CARPENTRY (4 pages)
- e. Section 072100 THERMAL INSULATION (5 pages)
- f. Section 072500 WEATHER BARRIERS (6 pages)
- g. Section 074113 METAL ROOF PANELS (5 pages)
- h. Section 074213 METAL WALL PANELS (6 pages)
- i. Section 074646 FIBER CEMENT SIDING (4 pages)
- j. Section 075400 THERMOPLASTIC MEMBRANE ROOFING (5 pages)
- k. Section 086300 METAL-FRAMED SKYLIGHTS (6 pages)
- l. Section 092116 GYPSUM BOARD ASSEMBLIES (5 pages)
- m. Section 101400 SIGNAGE (6 pages)
- n. Section 101419 CUT METAL CHARACTER SIGNAGE (4 pages)
- o. Section 220800 CX OF PLUMBING (2 pages)
- p. Section 230800 CX OF HVAC-R (2 pages)
- q. Section 265000 LIGHTING SUBSTITUTION REQUEST APPROVAL LIST – Addendum #4 (3 pages)

2. DRAWINGS

- a. Sheet A00.03 – CODE SUMMARY (1 page)
- b. Sheet A01.01 – LIFE SAFETY PLAN (1 page)
- c. Sheet A03.01 – ASSEMBLY TYPES (1 page)
- d. Sheet A11.01A – SITE DETAILS (1 page)
- e. Sheet A11.01B – SITE DETAILS (1 page)
- f. Sheet A22.01 – FLOOR PLAN – MAIN LEVEL – ANNOTATION (1 page)
- g. Sheet A25.01 – ROOF PLAN (1 page)
- h. Sheet A26.01 – ENLARGED FLOOR PLANS (1 page)
- i. Sheet A32.02 – BUILDING SECTIONS (1 page)
- j. Sheet A33.01 – WALL SECTIONS (1 page)
- k. Sheet A33.02 – WALL SECTIONS (1 page)
- l. Sheet A51.02 – EXTERIOR SECTION DETAILS (1 page)
- m. Sheet A52.02 – ROOF DETAILS (1 page)
- n. Sheet A71.01 – INTERIOR DETAILS (1 page)
- o. Sheet S22.01 - FOUNDATION AND LEVEL 1 FRAMING PLAN (1 page)
- p. Sheet S22.02 - LEVEL 2 & LOW ROOF FRAMING PLAN (1 page)
- q. Sheet S22.03 – ROOF FRAMING PLAN (1 page)

- r. Sheet S25.02 – PARTIAL PLANS (1 page)
 - s. Sheet E31.01 – POWER PLAN – MAIN LEVEL (1 page)
 - t. Sheet E31.02 – POWER PLAN – UPPER LEVEL (1 page)
 - u. Sheet E31.03 – ROOF – POWER PLAN (1 page)
 - v. Sheet E71.06 – ELECTRICAL DETAILS (1 page)
3. SUBSTITUTION REQUEST FORMS
- a. Substitution Request -1 Form-Rangetop (1 page)
 - b. Substitution Request -2 Single Wall Oven (1 page)

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SECTION 024100 - DEMOLITION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Building demolition excluding removal of hazardous materials and toxic substances.
- B. Selective demolition of built site elements.
- C. Abandonment and removal of existing utilities and utility structures.
- D. Schedule of existing items to be salvaged for Owner.

1.2 RELATED REQUIREMENTS

- A. Section 011000 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 011000 - Summary: Description of items to be removed by Owner.
- C. Section 011000 - Summary: Description of items to be salvaged or removed for re-use by Contractor.
- D. Section 015000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- E. Section 016000 - Product Requirements: Handling and storage of items removed for salvage and relocation.
- F. Section 017300 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.
- G. Section 017419 - Construction Waste Management and Disposal: Limitations on disposal of removed materials; requirements for recycling.
- H. Section 311000 - Site Clearing
- I. Section 312000 - Earth Moving: Fill material for filling holes, pits, and excavations generated as a result of removal operations.

1.3 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Fill Material: As specified in Section 312000 - Earth Moving.

PART 3 EXECUTION

3.1 SCOPE

- A. Remove the entire building designated as Existing Fire Station 51.
- B. Remove all other paving and curbs as indicated on drawings.
- C. Remove all existing foundation walls & footings.
- D. Remove concrete slabs on grade within site boundaries.
- E. Remove underground tanks.
- F. Remove other items indicated, for salvage, relocation, and recycling.
- G. Refer to drawings for scope of work.
- H. Fill excavations, open pits, and holes in ground areas generated as result of removals, using specified fill; compact fill as specified in Section 31 200.

3.2 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain and pay for all other required permits not obtained by the owner.
 - 2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 3. Provide, erect, and maintain temporary barriers and security devices.
 - 4. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 5. Do not close or obstruct roadways or sidewalks without permit.
 - 6. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
 - 7. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Do not begin removal until built elements to be salvaged or relocated have been removed.
- D. Protect existing structures and other elements that are not to be removed.
 - 1. Provide bracing and shoring.
 - 2. Prevent movement or settlement of adjacent structures.
 - 3. Stop work immediately if adjacent structures appear to be in danger.
- E. Underground Storage Tanks: Remove and dispose per civil drawings.

3.3 EXISTING UTILITIES

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.

- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.
- H. Peninsula Light Company will perform the following tasks:
 - 1. Shut-off power to the existing Station 51
 - 2. Removal existing transformer. This work does not include removal of the existing transformer vault.
 - 3. Removal of existing main feeders lines from the Station 51 transformer to an existing transformer located nearby the south property line. This work does not include removal of the existing buried conduits that house the existing main feeder lines.

3.4 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

3.5 SCHEDULE OF SALVAGE ITEMS

- A. Salvage the following items for Owner:
 - 1. Existing generator and automatic transfer switch: Owner to remove & salvage existing standby generator and automatic transfer switch.
 - 2. Existing above ground 1,000 gallon concrete fuel tank: Salvage, protect and relocate to new location on site per drawings. Owner to remove and salvage existing fuel dispensers and fuel management systems. Owner will remove & salvage existing fuel.
 - 3. Existing 60 lbs. Extractor and Gear Dryer (approximately 3' wide by 8' long): Salvage, protect and store each piece of equipment on appropriate sized pallet and secure to each pallet for pickup and transportation by owner.
 - 4. Existing Memorial Plaque: To be removed by owner prior to demolition.
 - 5. (2) Existing Conex Boxes: To be removed by owner prior to demolition.
- B. Salvage the following items by Owner:
 - 1. Existing DEF Tank: Prior to demolition owner will remove existing DEF Tank for their use.
 - 2. The Owner reserves the right to remove all or some of the existing equipment, furniture, built-in or non-built items prior to issuing Notification to Proceed.

END OF SECTION

SECTION 062000 - FINISH CARPENTRY

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Interior and Exterior Plywood.
- B. Interior and Exterior Standing and Running Trim.
- C. Soffit Vents.

1.2 RELATED REQUIREMENTS

- A. 099000 - Painting and Coating: For field finish of finish carpentry items.

1.3 SUBMITTALS

- A. Qualification Data: For fabricator.
- B. Product Data:
 - 1. Provide data on fire retardant treatment materials and application instructions.
 - 2. Provide instructions for attachment hardware and finish hardware.
- C. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.
 - 1. Minimum Scale of Detail Drawings: 1-1/2 inch to 1 foot.
 - 2. Provide the information required by AWI/AWMAC/WI (AWS) Architectural Woodwork Standards.
- D. Sample: Submit three samples of each type of wood exposed to view, 11 inches by width of board (or 8 inches max) inch in size illustrating wood grain and specified finish.
- E. Maintenance Data: For user operation and maintenance of system including:
 - 1. Methods for maintaining system's materials and finishes.
 - 2. Precautions about cleaning materials and methods that could be detrimental to components, finishes, and performance.

1.4 QUALITY ASSURANCE

- A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.
 - 1. Company with at least one project in the past 5 years with value of woodwork within 20 percent of cost of woodwork for this Project.
 - 2. Single Source Responsibility: Provide and install this work from single fabricator.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. As required by the Quality Certification Program for installation of the installed products to meet the Performance and Design Criteria.

1.6 REFERENCE STANDARDS

- A. ASTM D635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position; 2022.
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2024.
- C. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- D. PS 20 - American Softwood Lumber Standard; 2020.
- E. PS1 - Structural Plywood; 2019.

PART 2 PRODUCTS

2.1 DESCRIPTION

- A. Dimensional lumber and plywood, and wood trim. Carpentry items fabricated and finished in accordance with AWI/AWMAC/WI (AWS) Architectural Wood Work standards.

2.2 MATERIALS

- A. General:
 - 1. Lumber: DOC PS 20 and the following grading rules:
 - a. NLGA: National Lumber Grades Authority, "Standard Grading Rules for Canadian Lumber."
 - b. WCLIB: West Coast Lumber Inspection Bureau, Standard No. 17, "Grading Rules for West Coast Lumber."
 - c. WWPA: Western Wood Products Association, "Western Lumber Grading Rules."
 - 2. Factory mark each piece of lumber with grade stamp of inspection agency indicating grade, species, moisture content at time of surfacing, and mill.
- B. Exterior Woodwork Items:
 - 1. Exterior Soffit, paintable.
- C. Interior Woodwork Items:
 - 1. Interior Wainscot, sealed
 - 2. Lumber Trim.
- D. Sheet Materials:
 - 1. Plywood Soffit at Exterior, Exposed to View: 5/8" ABX, smooth exterior face, paintable.
 - 2. Hardwood Veneer Plywood Paneling at Interior: Exposed to View: (PLY-1) 5/8" thickness, sanded face, Clear, Birch.
 - a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Word include, but are not limited to the following:
 - 1) Mill Option
 - 2) Columbia Forest Products
 - 3) Georgia-Pacific
 - 4) National Plywood
 - 5) Weyerhaeuser Company
 - b. Veneer Grade: A; APA A-D; Group-1.

- c. Veneer Matching Selected for similar color and grain.
 - d. Backing Veneer Species: Any hardwood compatible with face species.
 - e. Construction: Veneer core
 - f. Thickness: 5/8-inch.
 - g. Panel Size: 48 by 96-inches.
 - h. Face Pattern: Flat
 - i. Location & Finish of Species: See drawings.
- E. Standing and Running Trim:
 - 1. Exterior Lumber Trim for Opaque-Stained or Painted Finish:
 - a. Species and Grade: IPE; Grade A; Western red cedar, Grade A; NLGA, WCLIB or WWPA.
 - b. Maximum Moisture Content: 15 percent with at least 85 percent of shipment at 12 percent or less.
 - c. Finger Jointing: Not allowed.
 - d. Face Surface: Surfaced Smooth.
 - e. Location & Finish Species: See drawings.
 - 2. Interior Lumber Trim for Opaque-Stained or Painted Finish:
 - a. Species and Grade: CVG Fir; Douglas fir-larch or Douglas fir south; NLGA, WCLIB, or WWPA.
 - b. Maximum Moisture Content: 15 percent with at least 85 percent of shipment at 12 percent or less.
 - c. Finger Jointing: Not allowed.
 - d. Face Surface: Surface Smooth.
 - e. Location & Finish of Species: See drawings.
- F. Soffit Vents:
 - 1. Continuous soffit vent non-mechanically fastened, minimum of 8' lengths.
 - 2. 2.5-inch wide, rectangular, mill finish with double leg return.
 - 3. Aluminum, series of vent slots, approximately 1/8" wide and minimum of 1" length.
- G. Field Finishing:
 - 1. In accordance with Section 099000.
- H. Fasteners for Interior Finish Carpentry: Pin nails and other anchoring devices of type, size, material and finish required for application indicated to provide secure attachment, concealed where possible.
 - 1. On items to receive transparent/clear finishes, use wood filler that matches surrounding surface and is of type recommended for the applicable finish.

2.3 ACCESSORIES

- A. All accessory materials required by the manufacturer for a warrantable installation of the installed products in a manner that meets the Performance and Design Criteria.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions meet the requirements of the quality standard specified before starting work.

3.2 PREPARATION

- A. Prepare surfaces to receive work in accordance with quality standard specified.

3.3 INSTALLATION

- A. General: Install all materials in accordance with quality standard specified based on conditions present.
- B. Install interior finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.
 - 1. Scribe and cut to fit adjoining work. Refinish and seal cuts as recommended by quality standard.
 - 2. Where face fastening is unavoidable, countersink fasteners, fill surface flush, and sand unless otherwise indicated.
 - 3. Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining interior finish carpentry with 1/32 inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.
- C. Install with 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 standing and running trim. Miter at returns, miter at outside corners, and cope at inside corners to produce tight-fitting joints with full-surface contact throughout length of joint. Use scarf joints for end-to-end joints.

3.4 PROTECTION

- A. Protect installed work as required by the quality standard to maintain product performance, design criteria, and warranty.

END OF SECTION 062000

SECTION 072100 - THERMAL INSULATION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Foam Board Insulation.
- B. Fiber Batt Insulation.
- C. Sound Attenuation Batt Insulation

1.2 RELATED REQUIREMENTS

- A. 092116 - Gypsum Board Assemblies: For acoustic insulation installed as a component of assemblies.

1.3 SUBMITTALS

- A. Product Data: Provide data on product characteristics, performance criteria, and product limitations.
- B. Test Report: Submit report of full-size mockup test for NFPA 285 fire performance, with project cladding assemblies highlighted, for foam insulation on exterior.
- C. Shop Drawings: Indicate required flashings, control joints, and expansion joints, and sealing details at openings, projections, penetrations, and sleeves to maintain continuous thermal barrier.
- D. Manufacturer's Installation Instructions: Indicate special preparation of substrate, installation and attachment methods, and perimeter conditions requiring special attention.
 - 1. Include recommended fastening components and spacing to control sag.
 - 2. Include manufacturer's recommended product for thermal barrier over foam insulation exposed to interior in accordance with IBC 2012.2603.4.
 - a. ". . . tested in accordance with and meets the acceptance criteria of both the Temperature Transmission Fire Test and the Integrity Fire Test of NFPA 275."

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing the work of this section with minimum 2 years' experience.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. As required by the manufacturer for a warrantable installation of the installed products to meet the Performance and Design Criteria.

1.6 REFERENCE STANDARDS

- A. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2019.
- B. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2017.

- C. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2019.
- D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2024.
- E. ASTM E136 - Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750 Degrees C; 2024c.
- F. NFPA 275 - Standard Method of Fire Tests for the Evaluation of Thermal Barriers; 2022.
- G. NFPA 285 - Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components; 2019.

PART 2 PRODUCTS

2.1 DESCRIPTION

- A. Batt thermal insulation and perimeter of foundation insulation.

2.2 MATERIALS

- A. Foam board insulation materials
 - 1. Extruded Polystyrene (XPS) Board Insulation: Comply with ASTM C578 with either natural skin or cut cell surfaces.
 - a. Flame Spread Index (FSI): Class A - 0 to 25, when tested in accordance with ASTM E84.
 - b. Smoke Developed Index (SDI): 450 or less, when tested in accordance with ASTM E84.
 - c. Type and Thermal Resistance, R-Value (RSI-value): Type IV, 5.0 (0.88), minimum, per 1 inch thickness at 75 degrees F mean temperature.
 - 1) See drawings for sizes.
 - d. Products:
 - 1) DuPont de Nemours, Inc: Styrofoam Brand.
 - 2) Kingspan Insulation LLC; GreenGuard XPS Type IV, 25 psi: www.kingspan.com/
 - 3) Owens Corning CorporationL FOAMULAR Extruded Polystyrene (XPS) Insulation: www.ocbuildingspec.com/
 - 4) Substitutions: See Section 016000 - Product Requirements.
 - 2. Nailbase Rigid Insulation
 - a. Manufacturer
 - 1) Acceptable Manufacturer: Hunter Panels, or approved equal.
 - 2) Requests for substitutions with be in accordance with the provisions of Section 012500 - Substitution Procedures.
 - b. Nailbase panels shall consist of a top layer of APA exterior grade laminated off-line to black fiber reinforced faced polyisocyanurate foam insulation.
 - 1) Polyisocyanurate foam insulation shall conform to ASTM C1289, Type V with a compressive strength of:
 - a) Grade 3: 25 psi (145 kPa) minimum.
 - 2) Plywood Top layer substrate shall conform to PS2 and shall be as follows:
 - a) Type:
 - 1) Standard CDX Sheathing grade.
 - b) With a thickness of:

- 1 3/4 inch
 - c) Edge Detail:
 - 1 Routed
 - 3) R-Value: R-48.
 - c. Unfaced panels shall consist of polyisocyanurate insulation foam insulation.
 - 1) Grade 3: 25 psi (145 kPa) minimum.
 - 2) R-Value: R-48.
 - d. Panel Fasteners
 - 1) Fastners shall be FM Approved Hunter Panel SIP/WD Panel fasteners for wood deck application. Fasteners have a 3/16 inch shank, and are corrosion resistant with oversized heads. Length of fasteners shall be as recommended by the panel manufacturer. See the Hunter Panels application guide for instructions.
 - a) Fasteners shall penetrate the wood deck a minimum of 1 inch.
- B. Fiber Batt Insulation:
 - 1. Mineral Fiber Batt Insulation: Unfaced preformed batt, complying with ASTM C665; friction fit.
 - a. Basis of Design: Owens Corning Thermafiber Mineral Wool.
 - b. Performance Criteria:
 - 1) Combustibility: Non-combustible, when tested in accordance with ASTM E136.
 - 2) Manufactured with binder containing no added urea formaldehyde.
 - 3) Flame Spread Index: 25 or less, when tested with facing, if any, in accordance with ASTM E84.
 - 4) Smoke Developed Index: 450 or less, when tested in accordance with ASTM E84.
 - 5) Thermal Resistance (R Value) at 40 degrees F/inch of thickness: 3.1.
 - c. Features:
 - 1) Formaldehyde Free.
- C. Sound Attenuation Batt Insulation:
 - 1. Mineral Fiber Batt Insulation: Flexible preformed batt or blanket, complying with ASTM C665; friction fit and suspended with netting to floor structure.
 - a. Basis of Design: MinWool Sound Attenuation Fire Batts by Johns Manville.
 - b. Performance Criteria:
 - 1) Combustibility: Non-combustible, when tested in accordance with ASTM E136.
 - 2) Manufactured with binder containing no added urea formaldehyde.
 - 3) Flame Spread Index: 25 or less, when tested with facing, if any, in accordance with ASTM E84.
 - 4) Smoke Developed Index: 450 or less, when tested in accordance with ASTM E84.
 - 5) Thermal Resistance (R Value) at 40 degrees F/inch of thickness: 3.1.
 - c. Features:
 - 1) Formaldehyde Free.
- D. Sheet Vapor Retarder:
 - 1. Vapor Retarder: Specification is based on MemBrain by Certainteed or approved equal.
 - a. Substitutions for products by manufacturers other than those listed above: See Section 01 60 00 - Product Requirements.
 - 2. Performance C

- a. Water Permeance: 1 perm (57.2 ng/(s.m2.Pa)) or less when tested to ASTM E96/E96M, dry cup method and increases to greater than 10 perms (572.1ng/(s.m2.Pa)) using the wet cup method.
 - b. Corrosivity: No unusual aspect of corrosion such as pitting, cracking and adhesions cure inhibition, tested per ASTM C655.
 - c. Fungi Resistance: No growth, tested per ASTM C1338.
 - d. Surface Burning Characteristics: Tested per ASTM E84.
 - 1) Flame Spread Index: Maximum 20.
 - 2) Smoke Developed Index: Maximum 55.
3. Features:
- a. Material: Polyamide film.
 - b. Thickness: 2 mil (0.051 mm)

E. FOAMED-IN-PLACE MATERIALS

1. Foamed-in-place Insulation: High density, rigid, closed cell polyurethane foam; foamed on-site, using a blowing agent of water or non-ozone-depleting gas.
 - a. Regulatory Requirements: Comply with applicable code for flame and smoke, concealment, and overcoat limitations.
 - b. Thermal Resistance: R-value of 7.0, minimum, per 1 inch thickness at 75 degrees F mean temperature when tested in accordance with ASTM C518.
 - c. Air Permeance: 0.004 cfm per square foot, maximum when tested at intended thickness in accordance with ASTM E1278 at 1.57 psf.

2.3 PANEL FASTENERS

- A. Fasteners shall be FM Approved Hunter Panel SIP/WD Panel fasteners for wood deck application. Fasteners have a 3/16 inch shank, and are corrosion resistant with oversized heads. Length of fasteners shall be as recommended by the panel manufacturer. See the Hu

2.4 ACCESSORIES

- A. All accessory materials required by the manufacturer for a warrantable installation of the installed products in a manner that meets the Performance and Design Criteria.
- B. Vapor Retarder at batt insulation installed under and/or within the roof and/deck structure:
1. Basis of Design: T-Foil by JAS Enterprises.
 2. Performance Criteria:
 - a. Insulation holder/hanging sy
 - b. Polypropylene, Scrim, Kraft - White
 - c. Flame Spread 10, Smoke Developed 35 ASTM E84/UL 723.
 - d. Permeance ASTM E96 .02 Perm Perforated ASTM E96 Procedure A.
 - e. Hanging system does not compress insulation.
 - f. Drop card size based on width of structural roof framing.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions meet the manufacturer's requirements before starting work.

3.2 PREPARATION

- A. Prepare surfaces to receive work in accordance with manufacturer's instructions.

3.3 INSTALLATION

- A. General: Install all materials in accordance with manufacturer's instructions based on conditions present.

3.4 PROTECTION

- A. Protect installed work as required by the manufacturer to maintain product performance, design criteria, and warranty.

END OF SECTION

SECTION 072500 - WEATHER BARRIERS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Liquid Applied Weather Barrier Coating.

1.2 RELATED REQUIREMENTS

- A. 07 21 00 - Thermal Insulation: Vapor retarder and air barrier components installed in conjunction with insulation.
- B. 07 54 00 - Thermoplastic Membrane Roofing: Vapor retarder and air barrier components installed in conjunction with roofing membrane.
- C. 07 62 00 - Sheet Metal Flashing and Trim: Metal flashings installed in conjunction with weather barriers.

1.3 DEFINITIONS

- A. Weather Barrier: Assemblies that form water-resistive barriers, air barriers, or vapor retarders.
- B. Air Barrier: Air tight barrier made of material that is relatively air impermeable but water vapor permeable, both to the degree specified, with sealed seams and with sealed joints to adjacent surfaces.
- C. Vapor Retarder: Air tight barrier made of material that is relatively water vapor impermeable, to the degree specified, with sealed seams and with sealed joints to adjacent surfaces.
- D. Water-Resistive Barrier: Water-shedding barrier made of material that is moisture-resistant, to the degree specified, intended to be installed to shed water without sealed seams.

1.4 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene one month before starting work of this section in accordance with Section 01 31 00 - Project Management and Coordination.
 - 1. Review all related project requirements and submittals, status of substrate work and preparation, areas of potential conflict and interface, availability of air barrier system materials and components, installer's training requirements, equipment, facilities and scaffolding, and coordinate methods, procedures and sequencing requirements for full and proper installation, integration and protection of continuous air barrier.

1.5 SUBMITTALS

- A. Qualification Data: For manufacturer and installer.
- B. Product Data: Provide product criteria, characteristics, accessories, jointing and seaming methods, and termination conditions.
- C. Shop Drawings: Indicate extents, special joint or termination conditions, and conditions of interface with other materials. Indicate line of continuous air barrier at building exterior.

- D. Manufacturer's Field Service Reports: Provide site reports from authorized field service representative, indicating observation of air barrier system installation.
- E. Test Report: Submit report of full-size mockup test for NFPA 285 fire performance.
- F. Field test results.
- G. Manufacturer's Installation Instructions: Indicate special preparation of substrate, installation and attachment methods, perimeter conditions requiring special attention, and storage and handling criteria.
- H. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualification: Company specializing in the manufacture of work specified in this section with minimum 5 years of experience with local product representation available to review product installation.
- B. Installer Qualifications: Company specializing in performing the work of this section, using specified materials with minimum 5 years of experience on projects of similar size and complexity.

1.7 MOCKUP

- A. Construct mockup of 100 sq ft of horizontal waterproofing, representing finished work including internal and external corners.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. As required by the manufacturer for a warrantable installation of the installed products to meet the Performance and Design Criteria.

1.9 WARRANTY

- A. Manufacturer's warranty for air barrier system performance for a period of ten (10) years from date of Purchase.
 - 1. Preinstallation meeting and jobsite observations by air barrier manufacturer may be required for specified warranty.

PART 2 PRODUCTS

2.1 DESCRIPTION

- A. Components of vapor retarder and air barrier assemblies under opaque cladding; including liquid, sheet, and flexible transition flashings.

2.2 PERFORMANCE AND DESIGN CRITERIA

- A. Air Permeability:
 - 1. The system: Air permeability not to exceed 0.04 cfm/ft² under a pressure differential listed, when tested per ASTM E2357

- B. Air Infiltration: 0.004 cfm/sq ft maximum per ASTM E283.
- C. Fire Performance: Tested in accordance with, and complying with the acceptance criteria of, NFPA 285; testing must be performed specifically for this project.
- D. Fire Performance: Combustible exterior wall coverings shall be tested in accordance with NFPA 268.
 - 1. 2012 IBC.1406.1.1.

2.3 MATERIALS

- A. Liquid Applied Weather Barrier Membrane:
 - 1. Specification is based on Prosoco R-Guard Cat-5 Rain Screen by Prosoco.
 - a. Comparable products by one of the following are also acceptable. See Section 01 60 00 - Product Requirements for submittal requirements.
 - 1) DOWSIL Silicone Air Barrier System.
 - 2) Carlisle Coatings and Waterproofing.
 - 3) Henry Company.
 - 4) GRACE.
 - 5) Tremco.
 - b. Substitutions for products by manufacturers other than those listed above: See Section 01 60 00 - Product Requirements.
 - 2. Performance Criteria:
 - a. Air Permeance: Pass: 0.004 cubic feet per minute per square foot, maximum, when tested in accordance with ASTM E2178.
 - b. Water Vapor Permeance: 15 perms, minimum, when tested in accordance with ASTM E96/E96M.
 - 3. Features:
 - a. Material Thickness: 12-15 mils as recommended by manufacturer to attain the performance criteria specified over the substrates present.
 - b. Ultraviolet and Weathering Resistance: Approved in writing by manufacturer for ultraviolet and weather exposure.
 - 4. Full line of accessories:
 - a. Flexible Flashing: Prosoco FastFlash
 - b. Porous preparation.
 - c. Joint and seam sealer. Prosoco CAT-5
 - d. Edge Sealer / Primer: Prosoco GypPrime
 - e. Cat-5.
- B. Flexible Flashings.
 - 1. Liquid Flashing Membrane: Product recommended by weather barrier manufacture to maintain performance criteria while transitioning to rough openings.
 - 2. Liquid Mastic: Liquid mastic recommended by flashing manufacturer.
 - 3. Primers, Cleaners, Insulation Adhesive, Joint Compound, and Sealant Materials: As recommended by air barrier manufacturer, appropriate to application, and compatible with adjacent materials.

2.4 ACCESSORIES

- A. All accessory materials required by the manufacturer for a warrantable installation of the installed products in a manner that meets the Performance and Design Criteria.
- B. Liquid Flashing Membrane:
 - 1. At locations recommended by air and water resistant membrane manufacturer.

- C. Primer:
 - 1. Liquid waterborne or solvent-borne primer recommended for substrate by air and water barrier material manufacturer.
- D. Liquid-Applied Flashing:
 - 1. Manufacturer's recommended gun-grade waterproofing, adhesive, and detailing company that combines the best of silicone and polyurethane properties. The single component, Silyl-Terminated-Poly-Ether (STPE) produces a highly durable, seamless, elastomeric that should treat joints, seams, cracks, and provide the flashing membrane in rough openings of structural walls and to counter-flash waterproofing and air barrier components.
- E. Substrate-Patching Membrane:
 - 1. Manufacturer's standard trowel-grade substrate filler.
- F. Metal Flashings:
 - 1. Per 07 62 00 - Sheet Metal Flashing and Trim.
- G. Sprayed Polyurethane Foam Sealant:
 - 1. Per 07 21 00 - Thermal Insulation.
- H. Joint Sealant:
 - 1. Per 07 90 05 - Joint Sealers.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions meet the manufacturer's requirements before starting work.

3.2 PREPARATION

- A. Prepare surfaces to receive work in accordance with manufacturer's instructions.

3.3 INSTALLATION

- A. General: Install all materials in accordance with manufacturer's instructions based on conditions present.
- B. Follow specific requirements for lapping and integration with flashings described in the details to form an air and weather tight installation.
- C. Where primer is required, primer substrates at a rate required by air and water barrier manufacturer and allow it to dry. Limit priming to areas that will be covered by material on same day. Re-prime areas exposed for more than 24 hours.
- D. Connect and seal exterior wall air and water barrier material continuously to the following areas where applicable, using accessory materials as indicated in the Drawings:
 - 1. Roofing-membrane, concrete below-grade structures, floor-to-floor construction, exterior glazing and window systems, glazed curtain-wall systems, storefront systems, exterior louvers, exterior door framing, and other construction used in exterior wall openings.
- E. Install air and water barrier as recommended by the manufacturer around window and door rough openings and at penetrations after sheathing is installed and penetrations have been secured. Provide minimum overlaps as require.

- F. Coordinate installations with Section 07 62 00 - Sheet Metal Flashing and Trim to provide air tight transitions within the air and weather barrier membrane including but not limited to rough opening and penetration heads, ledger angles, and cross cavity through wall flashings. Install tapes and sealant continuously as required to provide an air tight installation.
- G. Secure and/or adhere the air and weather barrier system as required by manufacturer.
- H. Ensure that air and weather barrier is air tight, free from holes, tears, and punctures.
- I. Cover air and weather barrier system within manufacturer's recommended exposure timeframe.

3.4 CLEANING

- A. Clean dust, dirt, and debris from the surface of air and water resistant barriers prior to installation of furring and/or cladding materials.

3.5 PROTECTION

- A. Protect air and water barrier system from damage during application and remainder of construction period, according to manufacturer's written instructions.
 - 1. Protect air and weather barrier from exposure to UV light and harmful weather exposure as required by manufacturer. If exposed to these conditions for longer than manufacturer's recommended timeframe, remove and replace fluid-applied air and weather barrier or install additional, full-thickness, fluid-applied air and weather barrier application after repairing and preparing the overexposed membrane according to fluid-applied air and weather barrier manufacturer's written instructions.
 - 2. Protect liquid-applied air and weather barrier from contact with incompatible materials and sealants not approved by liquid-applied air and weather barrier manufacturer.
- B. Repair damage before proceeding with subsequent construction.
- C. Clean spills, stains, and soiling from construction that would be exposed in the completed work using cleaning agents and procedures recommended by manufacturer of affected construction.
- D. Remove masking materials after installation.

3.6 SCHEDULE

- A. Liquid Applied Weather Barrier Coating.
 - 1. Locations: Typical unless noted otherwise.
- B. Flexible Flashings:
 - 1. Liquid Flashing Membrane: At locations recommended by weather barrier manufacturer.

END OF SECTION

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SECTION 074113 - METAL ROOF PANELS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Architectural Metal Roof Panels.

1.2 RELATED REQUIREMENTS

- A. 072100 - Thermal Insulation
- B. 079200 - Joint and Acoustical Sealants: For joint sealant installed with system.

1.3 SUBMITTALS

- A. Qualification Data: For manufacturer, installer, and design engineer.
- B. Product Data: Provide product criteria, characteristics, accessories, jointing and seaming methods, and termination conditions.
 - 1. Summary of test results, indicating compliance with specified requirements.
 - 2. Specimen warranty.
- C. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.
 - 1. Show work to be field-fabricated or field-assembled.
- D. Sample: For each roofing system specified, submit samples of minimum size 12 inches square, representing actual roofing metal, thickness, profile, color, and texture.
- E. Manufacturer's Installation Instructions: Indicate special preparation of substrate, installation and attachment methods, and perimeter conditions requiring special attention.
- F. Specimen Warranty: Submit manufacturer's weathertightness and finish warranties.
- G. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.
- H. Maintenance Data: For user operation and maintenance of system including:
 - 1. Methods for maintaining system's materials and finishes.
 - 2. Precautions about cleaning materials and methods that could be detrimental to components, finishes, and performance.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in the manufacture of roofing systems similar to those required for this project.
 - 1. Not less than 5 years of documented experience.
 - 2. Accredited by IAS according to IAS AC472.
- B. Installer Qualifications: Company trained and authorized by roofing system manufacturer and specializing in performing the work of this section with minimum 5 years of experience.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. As required by the manufacturer for a warrantable installation of the installed products to meet the Performance and Design Criteria.

1.6 WARRANTY

- A. Manufacturer's Weathertightness Warranty: 20 years.
- B. Finish Warranty: Provide manufacturer's special warranty covering failure of factory-applied exterior finish on metal roof panels and agreeing to repair or replace panels that show evidence of finish degradation, including significant chalking, cracking, or peeling within specified warranty period of 20 year period from date of Substantial Completion.

1.7 REFERENCE STANDARDS

- A. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2021.
- B. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2024a.
- C. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2014 (Reapproved 2021).
- D. ASTM E1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference; 2005 (Reapproved 2017).
- E. IAS AC472 - Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems; 2018.
- F. UL 580 - Standard for Tests for Uplift Resistance of Roof Assemblies; Current Edition, Including All Revisions.

PART 2 PRODUCTS

2.1 DESCRIPTION

- A. Complete roofing assemblies, including factory formed panels with factory applied finish roof panels, clips, fasteners, connectors, and miscellaneous accessories, tested for conformance with performance criteria.

2.2 PERFORMANCE AND DESIGN CRITERIA

- A. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E330/E330M:
 - 1. Design and size components to withstand dead and live loads caused by positive and negative wind pressure acting normal to plane of wall as calculated in accordance with code.
 - 2. Maximum Allowable Deflection of Panel: 1/180 of span.
- B. Roof Covering External Fire-Resistance Classification: UL Class A.
- C. Wind Uplift: Class 90 wind uplift resistance of UL 580.

- D. Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.
- E. Provide continuity of thermal barrier at building enclosure elements and continuity of air barrier and vapor retarder seal at building enclosure elements in conjunction with materials specified in Section 072500 - Weather Barriers.
- F. Accommodate movement within system without damage to components or deterioration of seals, movement within system; movement between system and perimeter components when subject to seasonal temperature cycling; dynamic loading and release of loads; and deflection of structural support framing.
- G. Fabricate and finish panels and accessory items at factory, using manufacturer's standard processes as required to achieve specified appearance and performance requirements.
- H. Factory-install captive gaskets, sealants, or separator strips at panel joints to provide weathertight seals, eliminate metal-to-metal contact, and minimize noise from panel movements.

2.3 MATERIALS

- A. Aluminum Sheet: ASTM B209 (ASTM B209M), smooth surface texture; continuous-coil-coated on exposed surfaces with specified finish coating and on panel back with specified panel back coating.
 - 1. Features:
 - a. Sheet Thickness: As scheduled below.
 - b. Alloy: Manufacturer's standard, selected for best appearance and finish durability.
- B. Vapor retarder/Temporary Roof: Material approved by the roof manufacturer complying with requirements of fire rating classification; compatible with roofing and insulation materials.
 - 1. Features:
 - a. Approved by manufacturer as part of tested assemblies.
 - b. Approved by manufacturer to be exposed without cover and use as a temporary roof.

2.4 METAL ROOF PANELS

- A. Basis of Design: Design Span HP by ASC Building Products.
 - 1. Substitutions: See Section 016000 - Product Requirements
 - a. Substitution requests will not be considered after bids are opened.
- B. Performance Criteria:
 - 1. Structural Design Criteria: Provide panel assemblies designed to safely support design loads at support spacing indicated, with deflection not to exceed 1/180 of the span when tested in accordance with ASTM E1592.
 - 2. ASTM E1592: Structural uniform static air pressure, ASTM 1646: Water infiltration, ASTM 2140: Water infiltration, ASTM 1680: Air infiltration.
- C. Features:
 - 1. 22 ga.
 - 2. Coverage: 18".
 - 3. Color: Dura Tech 5000, (PVDF), Cool Slate Grey

2.5 ACCESSORIES

- A. All accessory materials required by the manufacturer for a warrantable installation of the installed products in a manner that meets the Performance and Design Criteria.
- B. Miscellaneous Sheet Metal Items:
 - 1. Provide flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, and equipment curbs of the same material, thickness, and finish as used for the roofing panels.
- C. Underlayment:
 - 1. Self-adhering rubber-modified asphalt sheet complying with ASTM D1970/D1970M; 22 mil total thickness; with strippable release film and woven polypropylene sheet top surface.
 - a. Basis of Design: GRACE Ice and Water Shield by GCP Applied Technologies.
 - 1) Approved Alternate: WIP 300 HT by Carlisle.
 - b. Performance Criteria:
 - 1) Self Sealability: Passing nail sealability test specified in ASTM D1970/D1970M.
 - 2) Low Temperature Flexibility: Passing test specified in ASTM D1970/D1970M.
 - 3) High Temperature: Must meet AAMA 711 specification for heat exposure range Level 3.
 - 4) Water Vapor Permeance: 0.067 perm, when tested in accordance with ASTM E96/E96M Procedure A (desiccant method).
 - 5) Functional Temperature Range: Minus 70 degrees F to 212 degrees F.
- D. E. EPDM flashing boots for metal roof penetrations.
 - 1. Basis of design: "Dektite Premium"
 - 2. High temperature per mechanical and plumbing requirements.
 - 3. Low profile base
 - 4. 20 year warranty
 - 5. Grey EPDM to match roof panel color.
- E. Sealants: Refer to Section 079200 - Joint and Acoustical Sealants.
- F. Miscellaneous Secondary Framing:
 - 1. Light gauge steel framing incidental to structural supports; fabricated from steel sheet.
 - a. Profile: Manufacturer's standard profile for conditions present.
 - b. Material: As required for material compatibility with panel sheet material.
- G. Attachment:
 - 1. Concealed System: Provide manufacturer's standard stainless steel concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions meet the manufacturer's requirements before starting work.

3.2 PREPARATION

- A. Prepare surfaces to receive work in accordance with manufacturer's instructions.

3.3 INSTALLATION

- A. General: Install all materials in accordance with manufacturer's instructions based on conditions present.
- B. Coordinate with installation of associated counterflashings and other components installed under other sections.

3.4 CLEANING

- A. Clean exposed sheet metal work at completion of installation. Remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving the work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to the finish.

3.5 PROTECTION

- A. Protect installed work as required by the manufacturer to maintain product performance, design criteria, and warranty. Inspection requirements as required by manufacturer.

END OF SECTION

SECTION 074213 - METAL WALL PANELS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Metal wall panels.

1.2 RELATED REQUIREMENTS

- A. 050513 - Shop-Applied Coatings for Metal: For finish on panels.
- B. 072100 - Thermal Insulation: For insulation and exterior insulation thermal spacers installed with system.
- C. 072500 - Weather Barriers: For weather barrier underlayments installed with system wall panels.
- D. 076200 Sheet Metal Flashing and Trim.
- E. 079005 - Joint Sealants: For joint sealant installed with system.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene one week before starting work of this section in accordance with Section 013100 - Project Management and Coordination.
 - 1. Review preparation and installation procedures and coordinating and scheduling required with related work.

1.4 DEFINITIONS

- A. Rainscreen: Exterior wall assembly in which cladding stands off from the moisture-resistant surface of an air and water barrier applied to the sheathing to create a capillary break and to allow drainage and evaporation.
- B. Metal Wall Panels: Roll-formed panel; typically less than 1/8 inch thick.
- C. Metal Plate Wall Panels: Panel formed with brake machine; typically 1/8 thick or greater.
- D. Weather-tight: Significantly affecting air and water performance requirements though may not be pressure-equalizing or designed to prevent water intrusion.
- E. DBCV: Drained and back-ventilated cavity rainscreen system designed to drain and dry water entering cavity through drainage channels, weeps, and air ventilation.
- F. PER: Pressure-equalized rainscreen system designed for no water intrusion, with equal pressure within air cavity and outside cladding barrier.

1.5 SUBMITTALS

- A. Qualification Data: For manufacturer, installer, fabricator, and design engineer.

- B. Delegated-Design Submittal: For assemblies indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- C. Delegated-Design Submittal: For Pressure-equalized rainscreen system assemblies indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- D. Product Data: Include material descriptions, dimensions of individual components and profiles, and finishes for each type of metal wall panel and accessory.
- E. Shop Drawings: Include layouts of panels, details of edge and penetration conditions, spacing and type of connections, flashings, and special conditions.
 - 1. Show work to be field-fabricated or field-assembled.
 - 2. Indicate joint and reveal sizes and path for water drainage.
- F. Sample: For each panel specified, submit samples of minimum size 12 inches square, representing actual metal panel including material, thickness, profile, color, and texture.
- G. Manufacturer's Installation Instructions: Indicate special preparation of substrate, installation and attachment methods, and perimeter conditions requiring special attention.
- H. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.
- I. Maintenance Data: For user's operation and maintenance of system including:
 - 1. Methods for maintaining system's materials and finishes.
 - 2. Precautions about cleaning materials and methods that could be detrimental to components, finishes, and performance. Confirm cleaners are compatible with adjacent materials and face sealers.
- J. Certificate of tested assemblies meeting PER performance requirements.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in the manufacture of panels specified in this section with minimum 5 years of experience.
- B. Designer Qualifications: Professional structural engineer with 5 years of documented experience in design of this work and licensed in the location of the project.
- C. Fabricators Qualifications: Company specializing in performing the work of this section with minimum 5 years of experience on projects of similar size and complexity.
- D. Installer Qualifications: Company trained and authorized by panel system manufacturer and specializing in performing the work of this section with minimum 3 years of experience.
- E. PER Testing Agency Qualifications:

1.7 MOCKUP

- A. Construct mockup of 100 sq ft of system, representing finished work including internal and external corners.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. As required by the manufacturer for a warrantable installation of the installed products to meet the Performance and Design Criteria.

1.9 WARRANTY

- A. Manufacturer's Finish Warranty: Correct defective work within a 20 year period after Substantial Completion for degradation of panel finish, including color fading caused by exposure to weather (10-year weather tight warranty).
 - 1. Panel Finish Criteria are listed AAMA 2605.

PART 2 PRODUCTS

2.1 DESCRIPTION

- A. Manufactured metal panels for walls and soffits, with insulation, liners, related flashings, and accessory components.
- B. Substitutions: See Section 016000 - Product Requirements
 - 1. Substitution requests will not be considered after bids are opened.

2.2 PERFORMANCE AND DESIGN CRITERIA

- A. General:
 - 1. Design system to accommodate without deformation anticipated thermal movement over ambient temperature range of 100 degrees F.
 - 2. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E330/E330M.
 - a. Design and size components to withstand dead and live loads caused by positive and negative wind pressure acting normal to plane of wall as calculated in accordance with code.
 - b. Maximum Allowable Deflection of Panel: 1/180 of span.
 - 3. Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.
 - 4. Provide continuity of thermal barrier at building enclosure elements and continuity of air barrier and vapor retarder seal at building enclosure elements in conjunction with materials specified in Section 07 25 00.
 - 5. Accommodate movement within system without damage to components or deterioration of seals, movement within system; movement between system and perimeter components when subject to seasonal temperature cycling; dynamic loading and release of loads; and deflection of structural support framing.
 - 6. Fabricate and finish panels and accessory items at factory, using manufacturer's standard processes as required to achieve specified appearance and performance requirements.
 - 7. Factory-install captive gaskets, sealants, or separator strips at panel joints to eliminate metal-to-metal contact, and minimize noise from panel movements.
- B. Panels that do not meet the following ASTM standards are not acceptable. Performance testing must be proprietary to manufacturer's specific panel system.
- C. Testing and Certification
 - 1. Air Infiltration: Panel system to meet the following standard when tested in accordance with ASTM E 283-04

- a. With recommended joint sealant: 0.00 CFM (No Leakage) at 6.24 psf.
2. Water Penetration: Panel system to meet the following standard when tested in accordance with ASTM E 331-00
 - a. With recommended joint sealant: 0.00 CFM. (No Leakage) at 15.0 psf.
3. Structural Performance: Individual panel meet the following standard when tested in accordance with ASTM E 72
 - a. Using recommended fastener configuration for maximum wind load (see manufacturer's recommended fastener chart): average ultimate load (held for 1 minute) must exceed 115 lbs.
 - b. Manufacture must provide a transverse load table utilizing data attained from ASTM E 72 structural testing.
4. Fastener Pull Through: Panel steel and fasteners to meet the following standard when tested in accordance with ASTM E 1761a
 - a. Using the recommended fastener (#8 modified truss head / phillips wafer head screw) average pull through or screw failure must exceed 875lbs.
5. ASTM E84 Flame spread 25 or less, Smoke development <250
6. Zincalume® substrates ASTM A 792 and A250
7. Exterior finish includes a 0.2 mil thick corrosion-resistant primer and a 0.8 mil thick finish coat of polyvinylidene fluoride (PVF2), full 70% Kynar 500®/Hylar 5000® for a total 1.0 mil dry film thickness with a specular gloss of 10-15% when tested in accordance with ASTM D-523-89 at 60o.
8. Protective coating conforms to ASTM A792, AZ50 (Zincalume®).

2.3 MATERIALS

A. Fabrication

1. Panels shall be factory formed. Field formed or general shop formed panels are not acceptable. Provide profiles and sizes indicated in drawings.
2. Form panel lines, breaks, and angles sharp and true.
3. Fabricate panels to include integral fully bonded stiffeners required to maintain flat face surface fabrication tolerances.
4. Provide panels with [choose one] smooth face, embossed.

B. Flashing

1. Material and Finish: Match panels in base metal, color and gauge. Do not use lead or copper.

2.4 METAL WALL PANELS

A. Basis of Design: Taylor Metal "Contour Reveal" panels.

1. Substitutions: See Section 016000 - Product Requirements
 - a. Substitution requests will not be considered after bids are opened.
2. 1-1/2-inches deep by 12-inches vertical panels.
3. Kynar 500 finish.
4. Air and Water Infiltration Testing ASTM E283 and E331.
5. Provide standoff panel attachment clips with concealed fasteners that provide 1/2-inch ventilation space behind the panels.
6. Provide all associated, flashing, closures, and clips for weather tight installation of system.
7. Provide continuous "Cor-a-vent" ventilation strip / insect screen at top & bottom of panels.

B. Concealed Fastener Metal Wall Panels:

1. Taylor Contour Reveal Panels

- C. (MTL-1) Taylor Contour Reveal Panel:
 - 1. Color: Metallic Silver.
 - 2. Reveal Width: 1-inch
 - 3. Reveal Width: 1-inch.
- D. Parapet Coping, Eave Fascia, Miscellaneous Flashing: See Section 07 62 00 Sheet Metal Flashing and Trim.
- E. Substitutions: See Section 016000 - Product Requirements
 - 1. Substitution requests will not be considered after bids are opened.

2.5 ACCESSORIES

- A. All accessory materials required by the manufacturer for a warrantable installation of the installed products in a manner that meets the Performance and Design Criteria.
- B. Miscellaneous Metal Subframing and Furring:
 - 1. Material recommended by manufacturer for compatibility with panel base metal and conditions present. Metal Compatibility and furring and continuous insulation as detailed.
 - 2. Profile: Manufacturer's standard profile for conditions present.
- C. Thermal Z-Girts for Insulation Retention and Panel Attachment:
 - 1. Depth as required.
 - 2. Drainage Weeps on horizontal surface.
 - 3. Product: See section 070543 CLADDING SUPPORT METAL WALL PANELS for list of acceptable manufacturers.
- D. Miscellaneous Sheet Metal Items:
 - 1. Provide flashings, trim, moldings, closure strips, of the same material, thickness, and finish as used for the panels.
- E. Sealants:
 - 1. As specified in Section 07 90 05.
 - 2. Exposed sealant must cure to rubber-like consistency.
 - 3. Concealed sealant must be non-hardening type.
- F. Clips:
 - 1. Interlocking side lap feature which conceals the fasteners and is installed using clips to allow for thermal movement. Clips shall be designed to hold the panel 1/2 inch minimum from exterior insulation to create a drainage plane and ventilation cavity. Load span tables must include evaluation of clip and side joint interaction.
- G. Factory Applied Sealant:
 - 1. Concealed within the interlocking joint.
- H. Internal and External Corners:
 - 1. Same material, thickness, and finish as exterior sheets; profile to suit system; shop cut and factory mitered to required angles.
- I. Expansion Joints:
 - 1. Same material, thickness and finish as exterior sheets; 20 gage; manufacturer's standard brake formed type, of profile to suit system.
- J. Trim, Closure Pieces, Caps, Flashings, Facias, and Infills:
 - 1. Same material, thickness and finish as exterior sheets; brake formed to required profiles.

- K. Anchors:
 - 1. Galvanized steel or Stainless steel.
- L. Fasteners:
 - 1. Manufacturer's standard type to suit application; with soft neoprene washers, steel, hot dip galvanized. Fastener cap same color as exterior panel.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions meet the manufacturer's requirements before starting work.

3.2 PREPARATION

- A. Prepare surfaces to receive work in accordance with manufacturer's instructions.

3.3 INSTALLATION

- A. General: Install all materials in accordance with manufacturer's instructions based on conditions present.
- B. Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.
- C. Coordinate with installation of associated counterflashings and other components installed under other sections.

3.4 TOLERANCES

- A. Maximum Offset From True Alignment Between Adjacent Members Butting or In Line: 1/16 inch.
- B. Maximum Variation from Plane or Location Indicated on Drawings: 1/4 inch.

3.5 CLEANING

- A. Clean exposed sheet metal work at completion of installation. Remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving the work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to the finish.

3.6 PROTECTION

- A. Protect installed work as required by the manufacturer to maintain product performance, design criteria, and warranty.

END OF SECTION

SECTION 074646 - FIBER CEMENT SIDING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Fiber-cement panel siding and battens.

1.2 RELATED REQUIREMENTS

- A. Section 061000: Rough Carpentry.
- B. Section 072500 - Weather Barriers: Water-resistive barrier under siding.
- C. Section 079200 - Joint and Acoustical Sealants: Sealing joints between siding and adjacent construction and fixtures.

1.3 REFERENCE STANDARDS

- A. ASTM C1186 - Standard Specification for Flat Fiber-Cement Sheets; 2022, with Editorial Revision (2023).
- B. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2023).

1.4 SUBMITTALS

- A. See Section 013100 - Project Management and Coordination for submittal procedures.
- B. Product Data: Submit manufacturer's data sheets on each product to be used, including:
 - 1. Manufacturer's requirements for related materials to be installed by others.
 - 2. Preparation instructions and recommendations.
 - 3. Storage and handling requirements and recommendations.
 - 4. Installation methods, including nail patterns.
- C. Shop Drawings: Indicate dimensions, layout, joints, construction details, support clips, and methods of anchorage.
- D. Installer's qualification statement.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing work of type specified in this section with not less than three years of experience.
- B. Follow all manufacturer's installation guidelines and requirements, including clearance and flashing requirements. Refer to "Hardie HZ10 Best Practice Guide."

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store materials in manufacturer's unopened packaging, with labels intact, until ready for installation.

- B. Store materials under dry and waterproof cover, well ventilated, and elevated above grade on a flat surface.

1.7 FIELD CONDITIONS

- A. Do not install panels when air temperature or relative humidity are outside manufacturer's limits.

1.8 WARRANTY

- A. Product Warranty: Limited, non-pro-rated product warranty.
 - 1. HardiePlank HZ10 vertical siding for 30 years.
- B. Manufacturer Warranty: Provide manufacturer warranty for years as indicated under Fiber-Cement Siding article sub-headings for "Warranty". Complete forms in Owner's name and register with manufacturer.

PART 2 PRODUCTS

2.1 PERFORMANCE AND DESIGN CRITERIA

- A. Water Leakage Test:
 - 1. Under Static Pressure: No evidence of water leakage per ASTM E331 at 20 percent of positive wind load design pressure, but not less than 12 psf.

2.2 FIBER-CEMENT SIDING

- A. Panel Siding: Individual horizontal boards made of cement and cellulose fiber formed under high pressure with integral surface texture, complying with ASTM C1186, Type A, Grade II; with machined edges, for nail attachment. Provide BoD: James Hardie, or approved equal to match existing pattern.
 - 1. Basis of Design: Hardie Panel Vertical Siding, HZ10, by James Hardie Building Products.
 - 2. Vertical Pattern: 48-inch wide sheets with wood-grain texture and grooves 12 inches o.c. Align panels to reveals as noted in drawings.
 - 3. Length (height): 96-inches, nominal.
 - 4. Width: 48-inches.
 - 5. Thickness: 5/16-inch, nominal.
 - 6. Battens: Batten Board Rustic: 2.50" wide and 3/4" thick.
 - 7. Trim: Batten Board Rustic 2.50" wide and 3/4" thick.
 - 8. Finish: Factory primed for painting.
 - 9. Warranty: 30-year, non-prorated, limited warranty.
- B. Substitutions: See Section 016000 - Product Requirements
 - 1. Substitution requests will not be considered after bids are opened.

2.3 METAL TRIM AND REVEALS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Fry Reglet.
- B. Aluminum is to be extruded alloy 6063 T5.
- C. Provide these shapes throughout:

1. J-Channel.
2. Inside Corner.
3. Outside Corner.
4. Horizontal.

- D. Substitutions: See Section 016000 - Product Requirements
1. Substitution requests will not be considered after bids are opened.

2.4 ACCESSORIES

- A. Colors for Decorative Accessories: As selected by Architect from manufacturer's full range of industry colors.
- B. Flashing: Provide aluminum flashing complying with Section 076200 - Sheet Metal Flashing and Trim where indicated on drawings.
1. Finish for Aluminum Flashing: Pre-finished unless otherwise noted on drawings.
- C. Fasteners:
1. For fastening to wood, use ribbed bugle-head screws of sufficient length to penetrate a minimum of 1 inch into substrate.
 2. For fastening to metal, use ribbed bugle-head screws of sufficient length to penetrate a minimum of 1/4 inch, or three screw-threads, into substrate.
 3. For fastening fiber cement, use hot-dip galvanized fasteners.
- D. Trim: Same material and texture as siding.
- E. Fasteners: Galvanized or corrosion resistant; length as required to penetrate, 1-1/4 inches, minimum.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrate, clean and repair as required to eliminate conditions that would be detrimental to proper installation.
- B. Do not begin until unacceptable conditions have been corrected.
- C. If substrate preparation is responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Protect surrounding areas and adjacent surfaces during execution of this work.
- B. Clean surfaces thoroughly prior to installation.
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- D. Install a water-resistive barrier as required in accordance with local building code requirements. See Section 072500 - Liquid-Applied Weather Resistive Barrier (WRB).

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions and recommendations.
 - 1. Read warranty and comply with terms necessary to maintain warranty coverage.
 - 2. Use trim details as indicated on drawings.
 - 3. Touch up field cut edges before installing.
 - 4. Allow minimum vertical clearance between the edge of siding and any other material in strict accordance with the manufacturer's installation instructions.
 - 5. Provide rainscreen ventilation gap at top and bottom of all exterior walls and at head and sill of openings.
- B. Do not install siding less than 6 inches from ground surface, or closer than 1 inch to roofs, patios, porches, and other surfaces where water may collect.
- C. After installation, seal joints except lap joints of lap siding; seal around penetrations, and paint exposed cut edges.

3.4 CLEANING

- A. Clean faced panels in accordance with manufacturer's maintenance instructions, using cleaning materials and methods acceptable to manufacturer.

3.5 PROTECTION

- A. Protect installed products until Date of Substantial Completion.
- B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

SECTION 075400 - THERMOPLASTIC MEMBRANE ROOFING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Vapor retarder.
- B. Insulation.
- C. Cover Board.
- D. Roof Edge Securement.
- E. Thermoplastic roofing membrane

1.2 RELATED REQUIREMENTS

- A. 06 10 00 - Rough Carpentry: Wood nailers, curbs and cant strips.
- B. 07 62 00 - Sheet Metal Flashing and Trim: Counterflashings and reglets.
- C. 07 72 00 - Roof Accessories: Roof-mounted units; prefabricated curbs.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene one week before starting work of this section in accordance with Section 01 30 00 - Project Coordination.
 - 1. Review preparation and installation procedures and coordinating and scheduling required with related work.
 - 2. Review UL, FM and Owner requirements for quality assurance and testing.

1.4 SUBMITTALS

- A. Qualification Data: For Manufacturer and Installer.
- B. Product Data: Provide data indicating membrane materials, flashing materials, insulation, vapor retarder, surfacing, and fasteners.
- C. Shop Drawings: Provide data indicating membrane materials, flashing materials, insulation, vapor retarder, surfacing, and fasteners.
- D. Sample: Submit manufacturer's standard sample size.
- E. Samples of Aggregate: Submit two one lb containers of aggregate ballast.
- F. Samples of Pavers: Submit two.
- G. Fire Classification Test Report: Showing test reports for classification, assembly, application and roof slopes indicated.
- H. Installer's Field Reports: Indicate procedures followed, ambient temperatures, humidity, wind velocity during application, and supplementary instructions given.

- I. Manufacturer's Installation Instructions: Manufacturer's Installation Instructions: Indicate membrane seaming precautions and perimeter conditions requiring special attention.
- J. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.
- K. Maintenance Data: For user's operation and maintenance of system including:
 - 1. Methods for maintaining system's materials and finishes.
 - 2. Precautions about cleaning materials and methods that could be detrimental to components, finishes, and performance.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum 10 years of documented experience in TPO roof membrane manufacture.
- B. Installer Qualifications: Company specializing in performing the work of this section with a minimum five years of experience and approved by the manufacturer. Applicator shall have installed at least three (3) roofing applications of this type or similar (single-ply membrane) system of equal or greater size within the past three (3) years.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. As required by the manufacturer for a warrantable installation of the installed products to meet the Performance and Design Criteria.
- B. Roof-covering materials shall be delivered in packages bearing the manufacturer's identifying marks and approved testing agency labels required in accordance with ICC (IBC)-2015 Section 1505. Bulk shipments of materials shall be accompanied with the same information issued in the form of a certificate or on a bill of lading by the manufacturer.
 - 1. ICC (IBC)-2015.1506.1.

1.7 WARRANTY

- A. Installation Warranty: Contractor shall correct defective Work within a 2 year period after Date of Substantial Completion.
- B. Manufacturer Warranty: Provide 20 year manufacturer's Total Roofing System (no dollar limit) Warranty covering all materials incorporated into the roof and labor.

PART 2 PRODUCTS

2.1 DESCRIPTION

- A. Single ply thermoplastic membrane fully adhered roofing system including cover board insulations, vapor retarder and all manufacturer's required accessories for watertight, warrantable installation.

2.2 PERFORMANCE AND DESIGN CRITERIA

- A. Fire Classification: Class B per ASTM E108 or UL 790; for application and roof slopes indicated.
 - 1. ICC (IBC)-2015.1505.1.

- B. Slope: Thermoplastic single-ply membrane roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope).
 - 1. ICC (IBC)-2015.1507.13.1.
- C. Exposure Category: As indicated.
 - 1. ICC (IBC)-2015.1504.8 Maximum mean roof height table.
- D. Nominal Design Wind Speed: As indicated.
 - 1. ICC (IBC)-2015.1504.8 Maximum mean roof height table.
- E. Wind Resistance: Roof coverings installed on roofs in accordance with Section 1507 that are mechanically attached or adhered to the roof deck shall be designed to resist the design wind load pressures for components and cladding in accordance with Section 1609.
 - 1. ICC (IBC)-2015.1504.3.
 - 2. Design Wind Load Pressure: As indicated.
- F. Insulation Thermal Value (R), minimum: As indicated on Drawings; provide insulation of thickness required.
- G. Perform work in accordance with NRCA Roofing and Waterproofing Manual, and manufacturer's instructions.
- H. Detail roofing system as required by membrane manufacturer to attain required warranty and comply with performance criteria indicated.
- I. Solar Reflectance Index (SRI): 78, minimum, calculated in accordance with ASTM E1980.
 - 1. Requirement for white roofing only.
 - 2. Field applied coating may not be used to achieve specified SRI.
- J. Thermal Emissivity: 0.80, minimum, initial, and 0.79, minimum, 3-year, certified by Cool Roof Rating Council.
 - 1. Requirement for white roofing only.

2.3 MANUFACTURERS

- A. Thermoplastic Polyolefin (TPO) Membrane Roofing Materials:
 - 1. Carlisle Roofing Systems, Inc; Sure-Weld Adhered Roofing System TPO: www.carlisle-syntec.com/#sle.
 - 2. Firestone Building Products, LLC: www.firestonebpco.com.
 - 3. GAF; EverGuard Extreme TPO 60 mil: www.gaf.com/sle.

2.4 MEMBRANE ROOFING AND ASSOCIATED MATERIALS

- A. Membrane Roofing Materials:
 - 1. TPO: Thermoplastic polyolefin (TPO) complying with ASTM D6878/D6878M, sheet contains reinforcing fabrics or scrims.
 - a. Thickness: 60 mil, 0.060 inch, minimum.
 - 2. Adhered system as required by roof membrane manufacturer.
 - 3. Sheet Width: Factory fabricated into largest sheets possible.
 - 4. Solar Reflectance: 0.75, minimum, initial, and 0.65, minimum, 3-year, certified by Cool Roof Rating Council.
 - 5. Color: White.
- B. Seaming Materials: As required by membrane manufacturer.

- C. Flexible Flashing Material: Same material as membrane.

2.5 MATERIALS

- A. Vapor retarder/Temporary Roof: Material approved by roof manufacturer complying with requirements of fire rating classification; compatible with roofing and insulation materials.
1. Features:
 - a. Approved by manufacturer as part of tested assemblies.
 - b. Approved by manufacturer to be exposed without cover and use as temporary roof.
 - c. Attachment per roof membrane manufacturer requirements.
- B. Insulation: Polyisocyanurate Board Insulation: Closed cell polyisocyanurate foam with glass reinforced mat laminated to faces.
1. Performance Criteria:
 - a. Passes the tests of FM 4470 or UL 1256 when tested as an assembly.
 - 1) ICC (IBC)-2015 1508.
 - b. Polyisocyanurate board ASTM C1289, Type I or Type II.
 - 1) ICC (IBC)-2015 1508.2.
 - c. Compressive Strength: 20 psi when tested in accordance with ASTM C1289.
 2. Features:
 - a. Insulation Attachment: VOC compliant cold adhesive as required by roof membrane manufacturer. Seals insulation joints.
 - b. Thickness: As required to meet system performance criteria.
 - c. Ozone Depletion Potential: Zero; made without CFC or HCFC blowing agents.
 - d. Recycled Content: 19 percent post-consumer and 15 percent post-industrial, average.
- C. Cover Board:
1. Typical: Non-combustible, water resistant gypsum core with embedded glass mat facers, complying with ASTM C1177/C1177M:
 - a. Basis of Design:
 - 1) As recommended by the roof membrane manufacturer for installation indicated and in accordance with system performance testing and warranty.
 - 2) Adhered system as required by the roof membrane manufacturer.
 - b. Features:
 - 1) Thickness: 1/2 inch.
- D. Roof Edge Securement: Continuous metal edge member serving as termination of roof membrane and retainer for metal fascia; watertight with no exposed fasteners; mounted to roof edge nailer.
1. Performance Criteria:
 - a. Designed and installed for wind loads in accordance with Chapter 16 and tested for resistance in accordance with Test Methods RE-1, RE-2, and RE-3 of ANSI/SPRI ES-1, except Vault wind speed shall be determined from Figure 1609A, 1609B, or 1609C as applicable.
 - 1) ICC (IBC)-2015.1504.5.
 - b. Retain Fascia while allowing for free thermal cycling of fascia.

2.6 ACCESSORIES

- A. All accessory materials required by the manufacturer for a warrantable installation of the installed products in a manner that meets the Performance and Design Criteria.

- B. Wood Nailers:
 - 1. PS 20 dimension lumber, Structural Grade No. 2 or better Southern Pine, Douglas Fir; or PS 1, APA Exterior Grade plywood; pressure preservative treated.
- C. Walkway Pad:
 - 1. Manufacturer's recommended product to increase viability and slip-resistance and puncture resistance in walkway areas.
 - a. Layout per Architectural Drawings.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions meet the manufacturer's requirements before starting work.
- B. Do not start work until Pre-Installation Notice has been submitted to manufacturer as notification that this project requires a manufacturer's warranty.

3.2 PREPARATION

- A. Prepare surfaces to receive work in accordance with manufacturer's instructions.

3.3 INSTALLATION

- A. General: Install all materials in accordance with manufacturer's instructions based on conditions present.

3.4 FIELD QUALITY CONTROL

- A. Inspection by Manufacturer: Provide final inspection of the roofing system by a Technical Representative employed by roofing system manufacturer specifically to inspect installation for warranty purposes.
- B. Perform all corrections necessary for issuance of warranty.

3.5 PROTECTION

- A. Protect installed work as required by the manufacturer to maintain product performance, design criteria, and warranty.

END OF SECTION

SECTION 086300 - METAL-FRAMED SKYLIGHTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Aluminum-clad composite polymer-framed skylight daylighting assemblies.

1.2 RELATED REQUIREMENTS

- A. Division 07 roofing section for roofing terminations at skylight flashings.
- B. Section 076200 - Sheet Metal Flashing and Trim
- C. Section 086200 "Unit Skylights" for unit skylights.

1.3 REFERENCE STANDARDS

- A. General: Applicable edition of references cited in this section is current edition published on date of issue of project specifications, unless otherwise required by building code in force.
- B. American Architectural Manufacturers Association (www.aamanet.org), Window & Door Manufacturers Association (www.wdma.com) Canadian Standards Association, (www.csagroup.org/us/en/services):
 - 1. AAMA/WDMA/CSA 101/I.S.2/A440 - North American Fenestration Standard/ Specification for Windows, Doors, and Skylights (NAFS)
- C. Illuminating Engineering Society of North America (IESNA): www.ies.org:
 - 1. IESNA – The Lighting Handbook
- D. Code of Federal Regulations:
 - 1. 29 CFR 1910.29 (e) - Occupational Safety and Health Administration Standard: Fall protection systems and falling object protection – criteria and practices
- E. National Fenestration Rating Council: www.nfrc.org:
 - 1. NFRC 100 - Procedure for Determining Fenestration Product U-factors
 - 2. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence
- F. National Fire Protection Association: www.nfpa.org:
 - 1. NFPA 70 - National Electrical Code

1.4 COORDINATION

- A. Coordinate dimensions, locations and details of skylight curbs and sub-construction specified in 061000 Rough Carpentry and 074113 Metal Roof Panel with approved shop drawings.

1.5 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at project site prior to delivery of skylights and installation of roof deck and curbs.

1.6 ACTION SUBMITTALS

- A. Product Data: For skylights. Include standard construction details, product performance characteristics, and material descriptions, dimensions of individual components and profiles, and finishes, and sub-construction interface requirements.
 - 1. Include test reports of qualified independent testing agency or third party certificates verifying compliance with performance requirements.
- B. Shop Drawings: For skylight assemblies. Include plans, elevations, sections, details, and connections to supporting structure and other adjoining work.

1.7 INFORMATIONAL SUBMITTALS

- A. Qualifications: For manufacturer and Installer.
- B. Test reports of qualified independent testing agency or third party certificates verifying compliance with performance requirements.
- C. Warranty: Sample of manufacturer warranty.
- D. End Reactions: Manufacturer provides reaction loads to be accommodated by the subconstruction provided by others, based on uniform and concentrated design loads specified by the purchasing entity.

1.8 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data for skylights.

1.9 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer listed in this section, producing specified products in ISO 9001- and ISO 14001- certified facilities, with minimum 30 years' experience in the US manufacturing similar products in successful use on similar projects and able to provide skylights meeting requirements.
 - 1. Approval of Manufacturers and Comparable Products: Submit the following in accordance with project substitution requirements, within time allowed for substitution review:
 - a. Completed and signed Substitution Request form.
 - b. Product data, including photometric data and independent test data indicating compliance with requirements.
 - c. Sample product warranty.
- B. Installer Qualifications: Experienced installer equipped and trained by manufacturer for installation and maintenance of units required for this project.

1.10 WARRANTY

- A. Manufacturer's Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of skylights that fail in materials or workmanship under normal use within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Deterioration of metals, metal finishes and other materials beyond normal weathering.
 - b. Water infiltration through skylight assembly.

2. Warranty Period:
 - a. Skylight Assembly: 10 years from completion of work.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide products of VELUX America LLC, Greenwood, SC 29648; www.VELUXusa.com; (800) 888-3589, specifications@veluxusa.com.
 1. Substitutions: Substitution requests will not be considered after bids are opened.
- B. Source Limitations: Obtain skylights through single source from basis-of-design manufacturer.

2.2 ALUMINUM-CLAD COMPOSITE POLYMER-FRAMED SKYLIGHTS

- A. System Description: Modular skylight daylighting assemblies with composite polymer structural frames, formed aluminum exterior cladding, and prefinished interior surfaces, factory-assembled and factory-glazed with insulating glass units, with mounting hardware, prefabricated prefinished modular flashing, and accessories as required to meet installation and performance requirements indicated.
 1. (W12) Basis of Design: VELUX America LLC, Model HFC Fixed Velux Modular Skylights in sizes indicated on the drawings in the following configuration:
 - a. Gabled Ridge Installation: 25 to 40 degree slope: VELUX Ridgelight.
- B. Unit Frames and Sash: Pultruded glass-fiber and polyurethane composite frames, with interior factory-finished with grey polyurethane coating to exterior manufacturer's color.
- C. Weatherproofing Gaskets: Manufacturer's standard dual-seal EPDM rubber and PVC perimeter gaskets.
- D. Mounting Hardware: Manufacturer's standard mill-galvanized steel brackets, factory-supplied with flashing kits.
- E. Exterior Cladding: Manufacturer's standard factory-formed 0.06 inch (1.52 mm) thick extruded aluminum, powder-coated in manufacturer standard grey and supplied with flashing kits.
- F. Flashings: Manufacturer's standard factory-formed minimum 0.03 inch (0.76 mm) thick roll-formed aluminum sheet, with integrated mineral wool insulation and snow stop, of type required by skylight unit configuration indicated on drawings, powder-coated in manufacturer standard grey.

2.3 GLAZING

- A. [High-Performance Low-E Insulating Laminated Glazing Unit:
 1. Basis of Design Product: VELUX, Type 11L Low Energy with Solar Protection Dual Pane.
 2. Outdoor lite: Fully hardened (tempered) glass.
 - a. Thickness of outdoor glass lite: 0.24 inch (6.1 mm).
 - b. Coating: Sun protection coating referenced as Sun 1 (SunGuard SN 51 HT) on second surface.
 3. Interspace: 0.87 inch (22.1 mm) thick, argon-filled.
 4. Indoor lite: Two plies of float glass.
 - a. Minimum thickness of each glass ply: 0.19 inch (4.83 mm).
 - b. Minimum thickness of interlayer: 0.03 inch (0.76 mm).]

2.4 ACCESSORIES

- A. Curbs: Refer to Section 061000 "Rough Carpentry for site-constructed wood curbs.

2.5 PERFORMANCE REQUIREMENTS

- A. Unit Skylight Standard: AAMA/WDMA/CSA 101/I.S.2/A440 (NAFS-edition 2017):
1. Design Pressure (DP): Ridgelight assembly with HFC fixed modules with a total assembly design pressure of 70 psf and negative design pressure of 50 psf.
 2. Water Test Pressure: In accordance with ASTM E547 a minimum of 15 psf with no leakage at 5 gallons per minute spray rate.
 3. Air Leakage Rate: 0.01 cfm/sq. ft. as determined according to ASTM E 283 at a static pressure differential of 1.57 lbf/ sq. ft.
- B. [Windborne-Debris Resistance:
- a. HFC fixed module 39.37 inches (1000 mm) x 118.11 inches (2999.99 mm) with special order impact glazing: Tested and certified in accordance with ASTM E1886 and ASTM E1996, cycle pressure +/-50, Missile level C, Wind Zone 3.]
- C. Surface-Burning Characteristics of Frames: Provide frames meeting NAFS and identical to specimens tested for fire-exposure behavior in accordance with test method indicated below by a testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.
1. Self-Ignition Temperature: 950 deg F (510 deg C) or more with thickness indicated when tested per ASTM D1929.
 2. Flash-Ignition Temperature: 806 degrees Fahrenheit (430 degrees Celsius) or more with thickness indicated when tested per ASTM D1929.
 3. Smoke Density: 70 or less when tested per ASTM D2843.
 4. Burning Characteristics: Tested and labeled in accordance with ASTM D635: Class CC1.
- D. Fire Ratings for Roof Assemblies with Fire Classifications: Skylight module tested in accordance with ASTM E108 and listed as passing Burning Brand test with target classification of Class B
- E. Energy Performance
1. Thermal Transmittance: NFRC 100 maximum U-factor:
 - a. [Ridgelight] modular units:
 - 1) [Glazing unit Type 11L Low Energy with Solar Protection Dual Pane:
 - a) Fixed (HFC): 0.38 Btu/sq. ft. x h x deg F.
 2. Solar Heat-Gain Coefficient (SHGC): NFRC 200 maximum whole-unit SHGC:
 - a. [Ridgelight] modular units:
 - 1) [Glazing unit Type 11L Low Energy with Solar Protection Dual Pane:
 - a) Fixed (HFC): 0.22
 3. Visible Transmittance (VT):
 - a. [Ridgelight] modular units:
 - 1) [Glazing unit Type 11L Low Energy with Solar Protection Dual Pane:
 - a) Fixed (HFC): 0.42
- F. Fall Protection Standard Compliance: 29 CFR 1910.29(e):
1. [HFC fixed module, size as shown on drawings:
 - a. Static load: 400 pounds placed on center of glass with no damage.
 - b. Dynamic load: 100 pounds dropped from 20 feet (609.6 cm) with no damage.]

2.6 MATERIALS

- A. Composite Polymer: 80 percent glass fiber and 20 percent two-component polyurethane resin formulated for use as pultruded structural composite.
- B. Joint Sealants: As specified in Section 079200 "Joint Sealants."

2.7 FABRICATION

- A. Provide manufactured modular skylight units completely factory-assembled including frames, sash, insulating glass units, flashings, and indicated accessories. Factory glaze units utilizing silicone-based exterior seal.
- B. Fabricate frame components to tolerances utilized on units tested to meet performance requirements, accommodating installation and movement of sash and dynamic movement of perimeter weather gasketing.
- C. Incorporate permanent external drainage channels to manage water flow and drain to the exterior. Provide internal drainage of glazing spaces to exterior through gasketing.
- D. Factory-glaze units with glazing selection specified.

2.8 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- C. Aluminum Finishes
 - 1. Pretreatment: Mechanically clean and chemically pretreat fabricated items in accordance with coating manufacturer's requirements and AAMA requirements for finish indicated.
 - 2. Application: Apply powder coating in accordance with coating manufacturer's requirements and AAMA requirements for finish indicated.
 - 3. Powder Coatings, High Performance Coating Finish Process: One-coat dry system with modified polyester resin, meeting performance requirements of AAMA 2604 and the following:
 - a. Product: AkzoNobel Coatings, Inc., Interpon D2000 Series Super Polyester Powder Coating, or comparable product acceptable to Architect.
 - b. Color: Manufacturer's standard grey.
 - c. Dry Film Thickness, ASTM D 1400: Not less than 60 microns.
 - d. Specular Gloss: 10 percent, plus or minus 5 percent.
 - e. Surface: Rough texture, matte surface.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with skylight installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install skylights in accordance with manufacturer's written instructions and approved shop drawings. Coordinate installation of units with installation of substrates, air and vapor retarders, roof insulation, roofing membrane, and flashing as required to ensure that each element of the Work performs properly and that finished installation is weather tight.
 - 1. Install skylights true to line and without distortion.
 - 2. Anchor skylights securely to supporting substrates.
 - 3. Install unit skylights on curbs with tops of curbs, running parallel to finished roof slope, to match the pitch of skylight system.
 - 4. Skylight installer to provide and install required shims and metal plate, for skylight attachment, as required by the skylight manufacturer. Plate and shim fasteners spacing as required by skylight manufacturer.
- B. Where metal surfaces of skylights will contact incompatible metal or corrosive substrates, including preservative-treated wood, apply bituminous coating on concealed metal surfaces, or provide other permanent separation recommended in writing by skylight manufacturer.

3.3 CLEANING AND PROTECTION

- A. Clean exposed skylight surfaces according to manufacturer's written instructions. Touch up damaged metal coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.
- B. Replace glazing that has been damaged during construction period.
- C. Protect skylight surfaces from contact with contaminating substances resulting from construction operations.

END OF SECTION

SECTION 092116 - GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Gypsum Board.
- B. Glass Mat Faced Gypsum Board.
- C. Acoustical Wall Accessories.
- D. Cementitious Backer Board.

1.2 RELATED REQUIREMENTS

- A. 061000: Building framing and sheathing.
- B. 078400 - Firestopping: Top-of-wall assemblies at fire rated walls.
- C. 079200 Joint and Acoustical Sealants: Acoustic sealant.

1.3 SUBMITTALS

- A. Product Data: Provide data on gypsum board, glass mat faced gypsum board, accessories, joint finishing system, and cement board.
- B. Shop Drawings: Indicate special details associated with fireproofing and acoustic seals.
- C. Test Reports: For all stud framing products that do not comply with ASTM C645 or ASTM C754, provide independent laboratory reports showing maximum stud heights at required spacings and deflections.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing the work of this section with minimum 5 years of experience on projects of similar size and complexity.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. As required by the manufacturer for a warrantable installation of the installed products to meet the Performance and Design Criteria.

1.6 REFERENCE STANDARDS

- A. ANSI A118.9 - American National Standard Specifications for Test Methods and Specifications for Cementitious Backer Units; 2023.
- B. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2017 (Reapproved 2022).
- C. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members; 2018.

- D. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2020.
- E. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2023.
- F. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2019.
- G. ASTM C1325 - Standard Specification for Fiber-Mat Reinforced Cementitious Backer Units; 2019.
- H. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2024.
- I. ASTM C1629/C1629M - Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels; 2023.
- J. ASTM C1658/C1658M - Standard Specification for Glass Mat Gypsum Panels; 2019, with Editorial Revision (2020).
- K. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2021.
- L. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009 (Reapproved 2016).
- M. ASTM E413 - Classification for Rating Sound Insulation; 2022.
- N. GA-216 - Application and Finishing of Gypsum Panel Products; 2021.
- O. GA-600 - Fire Resistance and Sound Control Design Manual; 2021.

PART 2 PRODUCTS

2.1 DESCRIPTION

- A. Includes Gypsum wallboard finishing, metal trim and accessories, and acoustical sealants and insulation.

2.2 PERFORMANCE AND DESIGN CRITERIA

- A. Provide completed gypsum board assemblies complying with ASTM C840 and GA-216.
- B. Shaft Walls: Provide completed assemblies with the following characteristics:
 - 1. Air Pressure Within Shaft: Sustained loads of 7.5 lbf/sq ft with maximum mid-span deflection of L/240.
 - 2. Acoustic Attenuation: Unless otherwise indicated on drawings, STC of 35-39 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.
 - 3. Soft Body Impact: Meet or exceed Soft Body Impact Classification Level 2 measured in accordance with ASTM C1629/C1629M.
 - a. Required at stairs and elevators.
- C. Fire Rated Assemblies: Provide completed assemblies complying with UL listed assemblies indicated and ratings indicated on life safety drawings.
 - 1. Gypsum Association File Numbers: Comply with requirements of GA-600 for the particular assembly.

2. UL Assembly Numbers: Provide construction equivalent to that listed for the particular assembly in the current UL Fire Resistance Directory.
- D. Interior Partitions Indicated as Acoustic: Provide completed assemblies with the following characteristics:
 1. Acoustic Attenuation: STC of 45-49 calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.

2.3 MATERIALS

- A. Gypsum Board:
 1. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
 - a. Application: Use for vertical surfaces, unless otherwise indicated.
 - b. Type X: Thickness 5/8 inch.
 - 1) Edges: Tapered.
 - 2) Products:
 - a) USG; Sheetrock Firecode X panels, and Sheetrock EcoSmart Panels Firecode X.
 - b) CertainTeed Gypsum, Inc.; GlasRoc.
- B. Shaftwall:
 1. Glass Mat Faced Type: Glass mat shaftliner gypsum panel or glass mat coreboard gypsum panel as defined in ASTM C1658/C1658M.
 - a. Application: Elevator shafts, stair cores and other assemblies that span floors.
 - b. Type X Thickness: 1 inch.
 - c. Edges: Beveled long edges and square cut ends.
 - d. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
 - e. Products:
 - 1) Georgia-Pacific Gypsum; DensGlass Shaftliner (mold-resistant).
- C. Backing Board For Wet Areas: One of the following products:
 1. Application: Horizontal surfaces behind tile in wet areas including countertops.
 2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
 3. ANSI Cement-Based Board: Non-gypsum-based; aggregated Portland cement panels with glass fiber mesh embedded in front and back surfaces complying with ANSI A118.9 or ASTM C1325.
 - a. Fire-Resistance-Rated Type: Type X core, thickness: 5/8 inch (16 mm).
 - b. Products:
 - 1) Custom Building Products; ____: www.custombuildingproducts.com/#sle.
 - 2) PermaBASE Building Products, LLC provided by National Gypsum Company; PermaBase Cement Board: www.goldbondbuilding.com/#sle.
 - 3) USG Corporation; ____: www.usg.com/#sle.
 - 4) Substitutions: See Section 016000 - Product Requirements.

2.4 ACCESSORIES

- A. All accessory materials required by the manufacturer for a warrantable installation of the installed products in a manner that meets the Performance and Design Criteria.
- B. Acoustical Wall Accessories:
 1. Resilient Sound Isolation Clips (RSIC): RFM RC
 - a. Product: Subject to compliance with requirements, provide GenieClip RST by Pliteq, Inc., RSIC-1 by PAC International, LLC., or a comparable product.

- b. Transmission Loss: No less than an additional 16 dB.
- C. Acoustic Sealant:
 - 1. As specified in Section 079200 - Joint and Acoustical Sealants.
- D. Stepped outside corner trim: Fry reglet stepped outside corner
 - 1. Color: gun metal gray
- E. Finishing Accessories:
 - 1. ASTM C1047, galvanized steel or rolled zinc, unless otherwise indicated.
 - a. Types: As detailed or required for finished appearance.
 - b. Special Shapes: In addition to conventional cornerbead and control joints, provide U-bead at exposed panel edges.
- F. Joint Materials:
 - 1. ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
 - a. Tape: 2 inch wide, coated glass fiber tape for joints and corners, except as otherwise indicated.
 - b. Typical: Ready-mixed vinyl-based joint compound.
- G. High Build Drywall Surfer:
 - 1. Vinyl acrylic latex-based coating for spray application, designed to take the place of skim coating and separate paint primer in achieving Level 5 finish.
- H. Anchorage to Substrate:
 - 1. Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions meet the manufacturer's requirements before starting work.

3.2 PREPARATION

- A. Prepare surfaces to receive work in accordance with manufacturer's instructions.

3.3 INSTALLATION

- A. General: Install all materials in accordance with manufacturer's instructions based on conditions present.
- B. Comply with ASTM C840 and GA-216. Install to minimize butt end joints, especially in highly visible locations.
- C. Fire-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.

3.4 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.
 - 1. Not more than 30 feet apart on walls and ceilings over 50 feet long.

- B. Corner Beads: Install at external corners, using longest practical lengths.
- C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials and as indicated.

3.5 JOINT TREATMENT

- A. Glass Mat Faced Gypsum Board and Exterior Glass Mat Faced Sheathing: Use fiberglass joint tape, bedded and finished with chemical hardening type joint compound.
- B. Paper Faced Gypsum Board: Use paper joint tape, bedded with ready-mixed vinyl-based joint compound and finished with ready-mixed vinyl-based joint compound.
- C. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
 - 1. Level 4: Gypsum.
 - 2. Level 1: Fire rated wall areas above finished ceilings, whether or not accessible in the completed construction.
 - 3. Level 0: Temporary partitions and surfaces indicated to be finished in later stage of project.
 - 4. Level 0: Surfaces indicated to be finished in later stage of project.
- D. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
 - 1. Feather coats of joint compound so that camber is maximum 1/32 inch.
- E. Where Level 5 finish is indicated, spray apply high build drywall surfacer over entire surface after joints have been properly treated; achieve a flat and tool mark-free finish.
- F. Fill and finish joints and corners of cementitious backing board as recommended by manufacturer.

3.6 FIELD OBSERVATION AT "PUNCH"

- A. Finish will be judged from a viewing difference of 4 feet.
- B. Ceilings will be viewed from a standing position.
- C. Finished lighting system or temporary lighting similar to proposed finished lighting should be used for judging the wall.
- D. Eye catching discrepancies and or blemishes, including "fuzzy" wall board surfaces, will be rejected.

3.7 PROTECTION

- A. Protect installed work as required by the manufacturer to maintain product performance, design criteria and warranty.

3.8 SCHEDULE

- A. Typical: Gypsum Board, Type X, 5/8 thickness.
- B. Elevator Shaft and Stairs: Glass Mat Gypsum board.

END OF SECTION 092116

SECTION 101400 - SIGNAGE

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Dimensional character signs.
- B. Panel Signs.
- C. Illuminated panel signs.
- D. Applied Decal Signs.

1.2 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene one week before starting work of this section in accordance with Section 013100 - Project Management and Coordination.
 - 1. Review preparation and installation procedures and coordinating and scheduling required with related work.

1.3 SUBMITTALS

- A. Qualification Data: For fabricator and design engineer.
- B. Product Data: Provide product criteria, characteristics, accessories, jointing and attachment methods.
- C. Shop Drawings:
 - 1. Show sign mounting heights, locations of supplementary supports, and accessories.
 - 2. Provide message list, typestyles, graphic elements, including tactile characters and Braille, and layout for each sign.
 - 3. Wiring Diagrams: Power, signal, and control wiring.
- D. Sample: For each of the following products and for the full range of color, texture, and sign material indicated, of sizes indicated:
 - 1. Dimensional Characters: Full-size Samples of each type of dimensional character (letter, number, and graphic element).
 - 2. Aluminum: For each form, finish, and color, on 6 inch long sections of extrusions and squares of sheet at least 4 by 4 inches.
 - 3. Acrylic Sheet: 8 by 10 inches for each color required.
 - 4. Panel Signs: Not less than 12 inches square for each type.
 - 5. Accessories: One of each, for each type.
- E. Manufacturer's Installation Instructions: Indicate special preparation of substrate, installation and attachment methods, and perimeter conditions requiring special attention.
- F. Maintenance Data: For user's operation and maintenance of system including:
 - 1. Methods for maintaining system's materials and finishes.
 - 2. Precautions about cleaning materials and methods that could be detrimental to components, finishes, and performance.
 - 3. Include manufacturers' brochures and parts lists describing the actual materials installed.

1.4 MAINTENANCE MATERIAL

- A. Spare parts, extra stock, tools.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualification: Company specializing in the manufacture of work specified in this section with minimum 5 years of experience.
- B. Designer Qualifications: Professional structural engineer with 5 years of documented experience in design of this work and licensed in the location of the project.
- C. Fabricators Qualifications: Company specializing in performing the work of this section with minimum 5 years of experience on projects of similar size and complexity.
- D. Installer Qualifications: Company specializing in performing the work of this section with minimum 5 years of experience on projects of similar size and complexity.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. As required by the manufacturer for a warrantable installation of the installed products to meet the Performance and Design Criteria.

1.7 REFERENCE STANDARDS

- A. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2014 (2015 Errata).
- B. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
- C. ASTM A240/A240M - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications; 2019.
- D. ASTM A529/A529M - Standard Specification for High-Strength Carbon-Manganese Steel of Structural Quality; 2019.
- E. ASTM A572/A572M - Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel; 2021, with Editorial Revision.
- F. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2015.
- G. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2014.
- H. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.

PART 2 PRODUCTS

2.1 DESCRIPTION

- A. Signage as required by code and to facilitate wayfinding.

2.2 PERFORMANCE AND DESIGN CRITERIA

- A. Tactile and Braille Characters: Text and symbols complying with ADA-ABA Accessibility Guidelines and with ICC/ANSI A117.1. Produce precisely formed characters with square-cut edges free from burrs and cut marks. Text shall be accompanied by Grade 2 Braille. Braille dots with domed or rounded shape produced using Raster Method.
 - 1. Raised-Copy Thickness: Not less than 0.7 mm and not more than 3 mm.

2.3 MATERIALS

- A. Aluminum Sheet and Plate: ASTM B209, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 5005-H32.
- B. Aluminum Extrusions: ASTM B221, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 6063-T5.
- C. Stainless-Steel Sheet: ASTM A240/A240M or ASTM A666, Type 304, stretcher-leveled standard of flatness.
- D. Steel Members Fabricated from Plate or Bar Stock: ASTM A529/A529M or ASTM A572/A572M, 42,000-psi (290-MPa) minimum yield strength.
- E. Applied Vinyl: Transfer-cut characters from vinyl film of nominal thickness of 3-4 mils (0.076 mm) with pressure-sensitive adhesive backing, suitable for exterior applications.
 - 1. Printed Vinyl Sheet: Digitally printed vinyl film of nominal thickness of 3-4 mils with pressure-sensitive adhesive backing. Apply UV and water resistant coating to face of sheet.

2.4 FINISHES

- A. Aluminum Clear Anodic Finish: Manufacturer's standard Class 1 clear anodic coating, 0.018 mm or thicker, over a satin (directionally textured) mechanical finish, complying with AAMA 611.
- B. Stainless Steel: No. 4 finish.
- C. Painted Finishes: Specification is based on products listed by Matthews Paint.
 - 1. Comparable products by one of the following are also acceptable. See Section 016000 - Product Requirements for submittal requirements.
 - a. Akzo Nobel.
 - 2. Substitutions for products by manufacturers other than those listed above: See Section 016000 - Product Requirements.
 - 3. Steel and Galvanized Steel:
 - a. Primer: 274 Series Epoxy Primer, color as required for topcoat color indicated, 1.5 - 2.0 mils DFT.
 - b. Topcoat: MAP Low VOC Satin Acrylic Polyurethane, 2.0 mils DFT minimum, satin sheen unless indicated otherwise.
 - 4. Aluminum:
 - a. Primer: 274 Series Epoxy Primer, color as required for topcoat color indicated, 1.5 - 2.0 mils DFT.
 - b. Topcoat: MAP Low VOC Satin Acrylic Polyurethane, 2.0 mils DFT minimum, satin sheen unless indicated otherwise.
 - 5. Acrylic, Polycarbonate:
 - a. Primer: 74777SP/01 Tie Bond 0.4 - 0.6 mils DFT.

- b. Topcoat: MAP Low VOC Satin Acrylic Polyurethane, 2.0 mils DFT minimum, satin sheet unless indicated otherwise.
- 6. Clear Coat:
 - a. 281228SP/01, VOC Satin Clear, 2.0 mils DFT minimum, satin sheen unless indicated otherwise.

2.5 FABRICATION

- A. Panel Signs:
 - 1. Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner signs.
 - 2. Edge Condition: Square.
 - 3. Corner Condition: Square.
 - 4. Mounting: Unframed, as indicated.
 - a. Wall or Projection mounted with concealed attachment.
 - b. Manufacturer's standard anchors for substrates encountered.
 - 5. Tactile Characters: Characters and Grade 2 Braille raised 1/32 inch (0.8 mm) above surface with contrasting colors.
- B. Applied Decal Signs:
 - 1. Applied Vinyl Signage: Transfer-cut fire district logo and characters from vinyl film of nominal thickness of 3 - 4 mils with pressure-sensitive adhesive backing. Matte finish. Apply to surface as indicated on drawings.
 - 2. Architect to provide logo.
- C. Address Sign:
 - 1. Red aluminum, individually stud-mounted number, minimum 1/4-inch thickness.
 - 2. See drawings for location.

2.6 ACCESSORIES

- A. All accessory materials required by the manufacturer for a warrantable installation of the installed products in a manner that meets the Performance and Design Criteria.
- B. Manufacturer's optional accessories required by the project:
 - 1. Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.
 - 2. Brackets: Fabricate brackets and fittings for bracket-mounted signs from extruded aluminum to suit panel sign construction and mounting conditions indicated. Factory paint brackets in color matching background color of panel sign.
 - 3. Cable: Fabricate cable and fittings for cable mounted signs from stainless steel cable to suit panel sign construction and mounting conditions indicated.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing conditions meet the manufacturer's requirements before starting work.

3.2 PREPARATION

- A. Prepare surfaces to receive work in accordance with manufacturer's instructions.

3.3 INSTALLATION

- A. General: Install all materials in accordance with manufacturer's instructions based on conditions present.
- B. Install neatly, with horizontal edges level.
- C. Locate signs and mount at heights indicated on drawings and in accordance with ADA Standards and ICC A117.1.
- D. Protect from damage until Date of Substantial Completion; repair or replace damaged items.

3.4 ADJUSTING

- A. Adjust and lubricate hardware for proper operation.

3.5 PROTECTION

- A. Protect installed work as required by the manufacturer to maintain product performance, design criteria and warranty.

3.6 SCHEDULE

- A. Building Image Identification Signs:
 - 1. Design: As indicated on Volume 1 Drawing Sheets A11.01B and A31.01 - Building Exterior Elevations. Min. 3/8" aluminum plate to ensure no flexing of signage.
 - 2. Material: To be selected by Architect.
 - 3. Image: 4 color logo emblem design - to be provided by Owner.
 - 4. Colors/Finish: To be selected by Architect. Weatherproof, UV stable and durable color coatings.
 - 5. Mechanically attach with concealed attachments.
- B. Building Address Signage:
 - 1. Comply with Requirements indicated on Drawing Sheet AS0.03 - Code Summary.
 - 2. Material: Aluminum.
 - 3. Font: Helvetica.
 - 4. Color/Finish: Painted, color to be selected by architect.
 - 5. Mechanically attach with concealed attachments.
- C. Room Identification Signs: In compliance with Local Code.
 - 1. Requirements: ADA complying.
 - 2. Text: 1 inch high "Optima" Semi-bold.
 - 3. Braille: Grade 2; all signs.
 - 4. Construction: Acrylic, 1/2 inch thick.
 - 5. Color: As selected by Owner's Representative from manufacturer's standard line of colors. Border and text/pictograms to contrast with background.
 - a. Note: International Symbol of Access shall be white on blue background per RCW 10.92.120.
 - 6. Features: Border, with radiused corners.
 - 7. Size: 8.5 inch x 8.5 inch.

8. Mounting: 1/16 inch vinyl foam tape on wall surface adjacent doors.
9. Schedule:
 - a. RESTROOM SIGNAGE.
 - 1) Room: 111, 128, 144.
 - 2) Text "Restroom".
 - 3) Pictogram: Man/Woman.
 - b. ADA RESTROOM SIGNAGE
 - 1) Room: 101, 112, 126, 206, 207.
 - 2) Text: "Restroom".
 - 3) Pictogram: Man/Woman and International Accessibility Symbol.
 - c. PRESSURE SENSITIVE VINYL SIGNS
 - 1) Vinyl film:
 - a) Provide opaque vinyl film, with pressure-sensitive adhesive backing suitable for exterior applications: minimum 1 inch high text.
 - b) Locations:
 - 1 "Fire Alarm Panel", coordinate door location with Architect.
 - 2 "Sprinkler Riser". Coordinate door location with Architect.

END OF SECTION

SECTION 101419 - CUT METAL CHARACTER SIGNAGE

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Cut Metal Characters with integrated backlit light fixture.

1.3 COORDINATION

- A. Furnish templates for placement of electrical service embedded in permanent construction by other installers.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For cut metal characters & integrated illumination backlighting.
 - 1. Elevations of letters specifying character height, width, thickness, all radii, and angles of letter sides.
 - 2. Include fabrication and installation details and attachments to other work.
 - 3. Show sign mounting heights, locations of supplementary supports to be provided by other installers, and accessories.
 - 4. Show message list, typestyles, graphic elements, and layout for each character at least half size or at a specified drawing scale where letters are taller than 12 high.
- C. Product Schedule: For dimensional cut metal characters. Use same designations indicated on Drawings or specified.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and manufacturer.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For signs to include in maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer of products an entity that employs installers and supervisors who are trained and approved by manufacturer.
- B. Provide all characters of each type (height) from a single manufacturer.

PART 2 PRODUCTS

2.1 DIMENSIONAL CHARACTERS

- A. Cut Letters: Characters with uniform faces; square-cut, smooth edges; precisely formed lines and profiles; and as follows.
 - 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. A.R.K. Ramos.
 - b. ASI Sign Systems, Inc.
 - c. Diskey Architectural Signage Inc.
 - d. Approved substitution refer to section 012500, "Substitution Requirements", section 01300, "Submittal Procedures", and 016000, "Product Requirements".
 - 2. Character Material: Aluminum cut from sheet material.
 - 3. Character Height: Per Drawings
 - 4. Thickness: Manufacturer's standard thickness for size (height) of character.
 - 5. Color / Finish: Painted finish. Color to be selected by architect.
 - 6. Mounting: Projecting studs with spacers (characters to stand off from façade face material). Provide galvanic insulation between studs and characters where applicable.
 - 7. Typeface: Helvetica, or manufacturer's standard approved by Architect
- B. Illuminated Characters: Characters with concealed LED lighting, including transformers, insulators, and other accessories; with provision for servicing and concealing connections to building electrical system. Space lamps apart from each other and away from character surfaces as needed to illuminate evenly.
 - a. Power: As indicated on electrical Drawings.
 - b. Light Color: Confirm with Architect.

2.2 DIMENSIONAL CHARACTER MATERIALS

- A. Aluminum Sheet and Plate: ASTM B 209, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.

2.3 ACCESSORIES

- A. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of signs, noncorrosive and compatible with each material joined, and complying with the following:
 - 1. For exterior exposure, furnish hot-dip galvanized devices unless otherwise indicated.
 - 2. Exposed Metal-Fastener Components, General:
 - a. Fabricated from same basic metal and finish of fastened metal unless otherwise indicated.
 - b. Fastener Heads: For nonstructural connections, use flathead screws and bolts with tamper-resistant Allen-head spanner-head or one-way-head slots unless otherwise indicated.
 - 3. Sign Mounting Fasteners:
 - a. Projecting mount: Threaded studs with sleeve spacer and collars, welded or brazed to back of sign material, screwed into back of sign assembly, or screwed into tapped lugs cast integrally into back of cast sign material, unless otherwise indicated. Apply adhesive per manufacturer requirements.

2.4 FABRICATION

- A. General: Provide manufacturer's standard sign assemblies according to requirements indicated.
 - 1. Preassemble signs and assemblies in the shop to greatest extent possible. Disassemble signs and assemblies only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation; apply markings in locations concealed from view after final assembly.
 - 2. Mill joints to a tight, hairline fit. Form assemblies and joints exposed to weather to resist water penetration and retention.
 - 3. Comply with AWS for recommended practices in welding and brazing. Provide welds and brazes behind finished surfaces without distorting or discoloring exposed side. Clean exposed welded and brazed connections of flux, and dress exposed and contact surfaces.
 - 4. Conceal connections if possible; otherwise, locate connections where they are inconspicuous.
 - 5. Internally brace dimensional characters for stability, to meet structural performance loading without oil-canning or other surface deformation, and for securing fasteners.
 - 6. Provide rabbets, lugs, and tabs necessary to assemble components and to attach to existing work. Drill and tap for required fasteners. Use concealed fasteners where possible; use exposed fasteners that match sign finish.

2.5 GENERAL FINISH REQUIREMENTS

- A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- C. Directional Finishes: Run grain with long dimension of each piece and perpendicular to long dimension of finished trim or border surface unless otherwise indicated.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Verify that sign-support surfaces are within tolerances to accommodate signs without gaps or irregularities between backs of signs and support surfaces unless otherwise indicated.
- C. Verify that electrical service is correctly sized and located to accommodate signs.
- D. Verify prior to sign fabrication that electrical supply junction box location will be concealed by letter/number characters.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Install signs and concealed illumination lamps using mounting methods indicated and according to manufacturer's written instructions.

1. Install signs level, plumb, true to line, and at locations and heights indicated on drawings, with sign surfaces free of distortion and other defects in appearance.
2. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.
3. Corrosion Protection: Coat concealed surfaces of exterior aluminum in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

B. Mounting Methods:

1. Projecting Studs: Using a template, drill holes in substrate aligning with studs on back of sign. Remove loose debris from hole and substrate surface.
 - a. Thin or Hollow Surfaces: Place spacers on studs, place sign in position with spacers pinched between sign and substrate, and install washers and nuts on stud ends projecting through opposite side of surface, and tighten.

3.3 ADJUSTING AND CLEANING

- A. Remove and replace damaged or deformed characters and signs that do not comply with specified requirements. Replace characters with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.
- B. Remove temporary protective coverings and strippable films as signs are installed.
- C. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

END OF SECTION

220800 – COMMISSIONING OF PLUMBING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Reference specification 01 91 13 for Contractor requirements to support Commissioning of Service Heating Water (Domestic Hot Water) and Controls systems in accordance with WA State Energy Code.

1.2 RELATED SECTIONS

- A. Division 01 91 13

1.3 REFERENCES

- A. Reference specification 01 91 13.

1.4 DEFINITIONS

- A. Commissioning is defined within specification 01 91 13 as the process of verifying and documenting that the installation and performance of building systems meet the specified design criteria and therefore satisfies the design intent and the Owner's operational needs.

1.5 SUBMITTALS

- A. Reference specification 01 91 13.

PART 2 - PRODUCTS

2.1 CONTRACTOR REPORTS

- A. Reference specification 01 91 13.

2.2 COMMISSIONING TEAM

- A. Reference specification 01 91 13.

2.3 RESPONSIBILITIES

- A. The Contractor shall be responsible for participation in the commissioning process as outlined within specification 01 91 13, and in subsequent sectional references and attachments throughout the project documents.

2.4 COMMISSIONING PROCESS

- A. Work includes the completion and documentation of formal commissioning procedures by the Contractor on selected equipment and systems to be commissioned.
- B. Commissioning procedures shall be designed and conducted under the direction of the Commissioning Authority and coordinated by the Plumbing Contractor's Commissioning Coordinator.

2.5 TEST EQUIPMENT

- A. Reference specification 01 91 13.

PART 3 - EXECUTION

3.1 SYSTEMS TO BE COMMISSIONED:

- A. Service Heating Water (Domestic Hot Water) and Controls

3.2 MEETINGS

- A. Reference specification 01 91 13.

3.3 FUNCTIONAL PERFORMANCE TESTING

- A. Reference specification 01 91 13.

3.4 DEFICIENCY REPORT AND RESOLUTION RECORD

- A. Reference specification 01 91 13.

3.5 OPERATIONS AND MAINTENANCE TRAINING

- A. Reference specification 01 91 13.

3.6 FINAL COMMISSIONING REPORT

- A. Reference specification 01 91 13.

3.7 DEFERRED TESTING

- A. Reference specification 01 91 13.

END OF SECTION

230800 – COMMISSIONING OF HVAC/R

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Reference specification 01 91 13 for Contractor requirements to support Commissioning of HVAC/R and Controls systems in accordance with WA State Energy Code.

1.2 RELATED SECTIONS

- A. Division 01 91 13

1.3 REFERENCES

- A. Reference specification 01 91 13.

1.4 DEFINITIONS

- A. Commissioning is defined within specification 01 91 13 as the process of verifying and documenting that the installation and performance of building systems meet the specified design criteria and therefore satisfies the design intent and the Owner's operational needs.

1.5 SUBMITTALS

- A. Reference specification 01 91 13.

PART 2 - PRODUCTS

2.1 CONTRACTOR REPORTS

- A. Reference specification 01 91 13.

2.2 COMMISSIONING TEAM

- A. Reference specification 01 91 13.

2.3 RESPONSIBILITIES

- A. The Contractor shall be responsible for participation in the commissioning process as outlined within specification 01 91 13, and in subsequent sectional references and attachments throughout the project documents.

2.4 COMMISSIONING PROCESS

- A. Work includes the completion and documentation of formal commissioning procedures by the Contractor on selected equipment and systems to be commissioned.
- B. Commissioning procedures shall be designed and conducted under the direction of the Commissioning Authority and coordinated by the HVAC/R and Controls Contractor's Commissioning Coordinator.

2.5 TEST EQUIPMENT

- A. Reference specification 01 91 13.

PART 3 - EXECUTION

3.1 SYSTEMS TO BE COMMISSIONED:

- A. HVAC/R and Controls.

3.2 MEETINGS

- A. Reference specification 01 91 13.

3.3 FUNCTIONAL PERFORMANCE TESTING

- A. Reference specification 01 91 13.

3.4 DEFICIENCY REPORT AND RESOLUTION RECORD

- A. Reference specification 01 91 13.

3.5 OPERATIONS AND MAINTENANCE TRAINING

- A. Reference specification 01 91 13.

3.6 FINAL COMMISSIONING REPORT

- A. Reference specification 01 91 13.

3.7 DEFERRED TESTING

- A. Reference specification 01 91 13.

END OF SECTION

26 50 00 LIGHTING SUBSTITUTION REQUEST APPROVAL LIST - ADDENDUM #4

SYMBOL	PLS	SEA-TAC Lighting	TLG	
AL1	HLI - Beacon	McGraw-Edison	(Specified product)	
AL2	HLI - Beacon	McGraw-Edison	(Specified product)	
AL3	HLI - Beacon	McGraw-Edison	(Specified product)	
AL4	HLI - Beacon	McGraw-Edison	(Specified product)	
AL5	HLI - Beacon	McGraw-Edison	(Specified product)	
FL1	WAC	(Specified product)		
LL1	Lumenpulse	(Specified product)	Lumascap	
PL1	Columbia lighting	(Specified product)	Lithonia lighting	
PL1E	Columbia lighting	(Specified product)	Lithonia lighting	
PL2	Litecontrol	(Specified product)	Mark Architectural Lighting	
PL2E	Litecontrol	(Specified product)	Mark Architectural Lighting	
PL3	Delray	(Specified product)	ALW	
PL4	Delray	(Specified product)	ALW	
PL5	Columbia lighting	(Specified product)	Lithonia lighting	
PL5E	Columbia lighting	(Specified product)	Lithonia lighting	
PL6E	Delray	(Specified product)	ALW	
PL8	Columbia lighting	(Specified product)	Lithonia lighting	
PL9	Litecontrol	(Specified product)	Mark Architectural Lighting	
PL9E	Litecontrol	(Specified product)	Mark Architectural Lighting	
RL1	Prescolite	(Specified product)	Lithonia lighting	

RL1E	Prescolite	(Specified product)	Lithonia lighting	
RL2	Columbia lighting	Metalux	(Specified product)	
RL2E	Columbia lighting	Metalux	(Specified product)	
RL3	Columbia lighting	Metalux	(Specified product)	
RL3E	Columbia lighting	Metalux	(Specified product)	
RL4	Vode lighting	(Specified product)	Lumenwerx	
RL5	Columbia lighting	Metalux	(Specified product)	
RL6E	Columbia lighting	(Specified product)		
RL7	Prescolite	(Specified product)	Lithonia lighting	
RL7E	Prescolite	(Specified product)	Lithonia lighting	
RL8	Litecontrol	(Specified product)	Mark Architectural Lighting	
RL8E	Litecontrol	(Specified product)	Mark Architectural Lighting	
RL9	Alphabet	Liteline	CSL Lighting	
RL10	Litecontrol	(Specified product)	Mark Architectural Lighting	
RL11	Ace Illuminations	Beulux		
RL12	Kelvix	(Specified product)		
SL1	(Specified product)	Leviton	Kurtzon	
SL2	Columbia lighting	(Specified product)	Lithonia lighting	
SL2E	Columbia lighting	(Specified product)	Lithonia lighting	
SL3	Ace Illuminations	(Specified product)	Q-Tran	
SL4	Ace Illuminations	(Specified product)	Q-Tran	
SL5	Ace Illuminations	(Specified product)	Q-Tran	
SL6	Ace Illuminations	(Specified product)	Q-Tran	

SL7E	Ace Illuminations	(Specified product)	Q-Tran	
SL8		(Specified product)	Q-Tran	
UC1	Columbia lighting	(Specified product)	Dals Lighting	
WL1	Beacon	(Specified product)	NLS Lighting	
WL1E	Beacon	(Specified product)	NLS Lighting	
WL2	Columbia lighting	(Specified product)	Lithonia lighting	
WL3	Beacon	(Specified product)	NLS Lighting	
WL3E	Beacon	(Specified product)	NLS Lighting	
WL4	WAC Lighting	Oxygen	Indessa lighting	
WL5	Brownlee	(Specified product)		
WL6				
WL7	Barron	(Specified product)	Lithonia lighting	
WL8E	Litecontrol	(Specified product)	Mark Architectural Lighting	
WL9	Brownlee	(Specified product)		
WL10	Litecontrol	(Specified product)		
EX1	Compass	(Specified product)	Lithonia lighting	
EX2	Compass	Sure-Lites	Lithonia lighting	
INVERTER		Emergi-Lite		

SPECIAL INSPECTIONS

NON-STRUCTURAL SPECIAL INSPECTIONS AND TESTS (CHAPTER 17) & WSEC STATEMENT OF SPECIAL INSPECTIONS FOR GENERAL TRADES, MECHANICAL, AND ELECTRICAL SYSTEMS

1. SPECIAL INSPECTIONS SHALL BE PROVIDED PER THE REQUIREMENTS OF THE IBC AND REFERENCED STANDARDS.

2. REFER TO STRUCTURAL DRAWINGS FOR SPECIAL INSPECTION REQUIREMENTS OF STRUCTURAL SYSTEMS.

3. TESTING AND SPECIAL INSPECTION REPORTS PREPARED BY THE SPECIAL INSPECTOR SHALL BE SUBMITTED TO THE BUILDING OFFICIAL, ARCHITECT, ENGINEER, AND OWNER ON A DAILY BASIS WHENEVER TESTING OR SPECIAL INSPECTIONS ARE PERFORMED.

SPECIAL INSPECTIONS AND TESTS						
SYSTEM	REFERENCE 2021 IBC, UNO	VERIFICATION AND INSPECTION	INSPECTION METHODS			TYPICAL DIVISIONS
			CONTINUOUS	TESTING	PERIODIC	
WIND OR SEISMIC-RESISTING COMPONENTS	1704.4	CONTRACTORS STATEMENT OF RESPONSIBILITY FOR SPECIAL INSPECTION	NO	NO	YES	REQUIRED FOR EACH CONTRACTOR RESPONSIBLE FOR CONSTRUCTION OF WIND OR SEISMIC-RESISTING SYSTEMS OR COMPONENTS.
ELECTRICAL EQUIPMENT FOR EMERGENCY OR STANDBY POWER SYSTEMS	1705.12.6(1)	ANCHORAGE	NO	NO	YES	SEISMIC DESIGN CATEGORY C, D, E OR F.
VIBRATION ISOLATION SYSTEMS	1705.12.6(5)	INSTALLATION AND ANCHORAGE	NO	NO	YES	APPLICABLE FOR SEISMIC ZONE C, D, E OR F
MECHANICAL AND ELECTRICAL EQUIPMENT	1705.12.6(6)	INSTALLATION	NO	NO	YES	AUTOMATIC FIRE SPRINKLER SYSTEMS ARE INSTALLED IN RISK CATEGORY IV STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C,D,E OR F.
FIRE-RESISTANT PENETRATIONS AND JOINTS	1705.17	INSPECTION	NO	NO	YES	REQUIRED FOR BUILDINGS OF RISK CATEGORY IV PER TABLE 1604.5
BUILDING ENVELOPE AIR BARRIER	WSEC C402.5.1.2	AIR LEAKAGE RATE	NO	YES AT BLDG COMPLETION	NO	SEE C402.5.1.2.1 - C402.5.8 FOR REQUIREMENTS. IF TEST FAILS, FOLLOW WITH VISUAL INSPECTION, SEAL LEAKS TO THE EXTENT PRACTICAL AND SUBMIT REPORT OF CORRECTIVE ACTION.
SUSPENDED CEILING GRIDS	ASCE 7-10 11.A1.3.9 (2)	INSTALLATION	NO	NO	YES	APPLICABLE FOR SEISMIC DESIGN CATEGORY D, E OR F.
ELECTRICAL EQUIPMENT	1705.12.6(2)	ANCHORAGE	NO	NO	YES	SEISMIC ZONE E AND F

APPLICABLE CODES

WASHINGTON STATE AMENDMENTS

2021 WASHINGTON STATE ENERGY CODE - COMMERCIAL (WSEC)

2021 INTERNATIONAL BUILDING CODE (IBC)

2021 INTERNATIONAL MECHANICAL CODE (IMC)

2021 INTERNATIONAL FIRE CODE (IFC)

2021 UNIFORM PLUMBING CODE (UPC)

2021 INTERNATIONAL FUEL GAS CODE (IFGC)

2020 NATIONAL ELECTRICAL CODE (NEC)

2017 ICC A117.1 ACCESSIBILITY STANDARD

GIG HARBOR MUNICIPAL CODE - TITLE 15 BUILDINGS AND CONSTRUCTION

DEFERRED SUBMITTALS

1. FIRE SPRINKLER SYSTEM
2. FIRE ALARM SYSTEM
3. SIGNAGE
4. LIGHT STANDARD POLE BASE DESIGN
5. FUEL STATION COVER (CANOPY)
6. FUEL TANK
7. ELEVATOR DESIGN

SEISMIC & RISK CATEGORY

SEISMIC ZONE: D COMMERCIAL

RISK CATEGORY - IV DESIGNATED ESSENTIAL FACILITY

FIRE DISTRICT

GIG HARBOR FIRE AND MEDIC ONE

STATION 50 HEADQUARTERS

10222 BUJAICH ROAD NW, GIG HARBOR WASHINGTON 98332

ZONING CODE SUMMARY

SEE SITE PLAN FOR MORE INFO

ZONING CODE SUMMARY		
CRITERIA	REQUIRED	PROVIDED
NEIGHBORHOOD	GIG HARBOR PENINSULA COMMUNITY PLAN AREA.	-
ZONING	B2 - GENERAL BUSINESS DISTRICT	-
ZONING OVERLAY	NOT APPLICABLE	-
LAND USE	-	-
LOT SIZE	-	-
SETBACK	MIN 25'-0" FRONT SETBACK, MIN. 10' INTERIOR SETBACK, MIN 30' REAR SETBACK	5.86 ACRES = 255,262 SF
PARKING STALLS	STANDARD STALL 9' W x 18' L COMPACT 8' W x 16' L DOWNTOWN MIN WIDTH 8'-6" STANDARD, 9'-0" W COMPACT, 4'-6" MOTORCYCLE	20x10' STALLS AND 2 ADA STALLS PROVIDED
BUILDING HEIGHT	35' MAXIMUM HEIGHT ALLOWED	31'-0" FROM FINISH GRADE TO THE TOP OF ROOF.

BUILDING CODE SUMMARY

BUILDING USE

FIRE STATION PUBLIC SAFETY FACILITY

TYPE OF CONSTRUCTION - V-B

BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC NFPA 13 SPRINKLER SYSTEM IN ACCORDANCE WITH 903.3.1.1. NON SEPARATED OCCUPANCIES 508.3. MOST RESTRICTIVE PROVISIONS OF CHAPTER 9 (OCCUPANCY A-3) AND CHAPTER 9 SHALL APPLY.

OCCUPANCY CLASSIFICATION AND USE (CHAPTER 3)

303.4 ASSEMBLY, GROUP A-3: TRAINING ROOM, EXTERIOR BALCONIES

304.1 BUSINESS, GROUP B: OFFICE SPACE / ADMINISTRATION

310.3 RESIDENTIAL, GROUP R-2: SLEEPING UNITS

311.3 STORAGE, GROUP S-2: APPARATUS BAY PARKING & SUPPORT AREAS (PARKING GARAGES, OPEN OR ENCLOSED)

SPECIAL DETAILED REQUIREMENTS BASED ON OCCUPANCY & USE (CHAPTER 4)

408.2.5 OPENING BETWEEN A MOTOR VEHICLE-RELATED OCCUPANCY AND A ROOM USED FOR SLEEPING PURPOSE IS NOT PERMITTED.

420.2 SEPARATION WALLS: WALLS SEPARATING DWELLING UNITS IN THE SAME BUILDING, WALLS SEPARATING SLEEPING UNITS IN THE SAME BUILDING AND WALLS SEPARATING DWELLING OR SLEEPING UNITS FROM OTHER OCCUPANCIES CONTIGUOUS TO THEM IN THE SAME BUILDING SHALL BE CONSTRUCTED AS FIRE PARTITIONS IN ACCORDANCE WITH SECTION 708.

420.4 AUTOMATIC SPRINKLER SYSTEM: GROUP R OCCUPANCIES SHALL BE EQUIPPED THROUGHOUT WITH AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.2.8

GENERAL BUILDING HEIGHTS AND AREAS (CHAPTER 5)

SEE EXTERIOR ELEVATIONS AND SITE PLAN FOR MORE INFO

506.2.1 SINGLE-OCCUPANCY, ONE-STORY BUILDINGS

506.2.1 SINGLE-OCCUPANCY, ONE-STORY BUILDINGS

THE ALLOWABLE AREA OF A SINGLE-OCCUPANCY BUILDING WITH NO MORE THAN ONE STORY ABOVE GRADE PLANE SHALL

BE DETERMINED IN ACCORDANCE WITH EQUATION 5-1:

$$A_a = A_t + (NS \times I_f) \quad (\text{EQUATION 5-1})$$

WHERE:

A_a = ALLOWABLE AREA (SQUARE FEET)

A_t = TABULAR ALLOWABLE AREA FACTOR (NS, S1, S13R OR S13D VALUE, AS APPLICABLE) IN ACCORDANCE WITH TABLE

506.2

NS = TABULAR ALLOWABLE AREA FACTOR IN ACCORDANCE WITH TABLE 506.2 FOR NONSPRINKLERED BUILDING

(REGARDLESS OF WHETHER THE BUILDING IS SPRINKLERED).

IF = AREA FACTOR INCREASE DUE TO FRONTAGE (PERCENT) AS CALCULATED IN ACCORDANCE WITH SECTION 506.3

ASSEMBLY A-3: A_t = 24,000 SF, NS = 6,000 SF, I_f = .75 (SEE 506.3.3 FOR CALCULATION)

A_a = 18,000 SF + (6,000 SF x .75)

A_a = 18,000 SF + (4,500 SF)

A_a = 22,500 SF ALLOWABLE AREA + 22,100 SF PROPOSED TOTAL SF

TABLE 504.3 ALLOWABLE BUILDING HEIGHT ABOVE GRADE PLANE			
OCCUPANCY CLASSIFICATION	SPRINKLER	CONSTRUCTION TYPE VB	PROPOSED HEIGHT
A	S (NFPA 13)		
B	S (NFPA 13)	60'	+ APPARATUS BAY AT 32'-4"
R	S (NFPA 13)		
S	S (NFPA 13)		

TABLE 504.4 ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE			
OCCUPANCY CLASSIFICATION	SPRINKLER	TYPE VB	PROPOSED NUMBER OF STORIES
A-3	S (NFPA 13)	2	
B	S (NFPA 13)	3	
R-2	S (NFPA 13)	3	2
S-2	S (NFPA 13)	3	

TABLE 506.2 ALLOWABLE AREA FACTOR (SF)			
OCCUPANCY CLASSIFICATION	SPRINKLER	CONSTRUCTION TYPE	ALLOWABLE AREA
ASSEMBLY (A-3) MOST RESTRICTIVE	SM	VB	18,000 SF
BUSINESS (B)	SM	VB	27,000 SF
RESIDENTIAL (R-2)	SM	VB	21,000 SF
STORAGE (S-2)	SM	VB	40,000 SF

BUILDING CODE SUMMARY, CONTINUED

506.3 FRONTAGE INCREASE

506.3.1 MINIMUM PERCENTAGE OF PERIMETER

TO QUALIFY FOR AN AREA FACTOR INCREASE BASED ON FRONTAGE, A BUILDING SHALL HAVE NOT LESS THAN 25 PERCENT OF ITS PERIMETER ON A PUBLIC WAY OR OPEN SPACE. SUCH OPEN SPACE SHALL BE EITHER ON THE SAME LOT OR DEDICATED FOR PUBLIC USE AND SHALL BE ACCESSIBLE FROM A STREET OR APPROVED FIRE LANE.

506.3.2 MINIMUM FRONTAGE DISTANCE

TO QUALIFY FOR AN AREA FACTOR INCREASE BASED ON FRONTAGE, THE PUBLIC WAY OR OPEN SPACE ADJACENT TO THE BUILDING PERIMETER SHALL HAVE A MINIMUM DISTANCE (W) OF 20 FEET (6096 MM) MEASURED AT RIGHT ANGLES FROM THE BUILDING FACE TO ANY OF THE FOLLOWING:

1. THE CLOSEST INTERIOR LOT LINE.
 2. THE ENTIRE WIDTH OF A STREET, ALLEY OR PUBLIC WAY.
 3. THE EXTERIOR FACE OF AN ADJACENT BUILDING ON THE SAME PROPERTY.
- THE FRONTAGE INCREASE SHALL BE BASED ON THE SMALLEST PUBLIC WAY OR OPEN SPACE THAT IS 20 FEET (6096 MM) OR GREATER, AND THE PERCENTAGE OF BUILDING PERIMETER HAVING A MINIMUM 20 FEET (6096 MM) PUBLIC WAY OR OPEN SPACE.

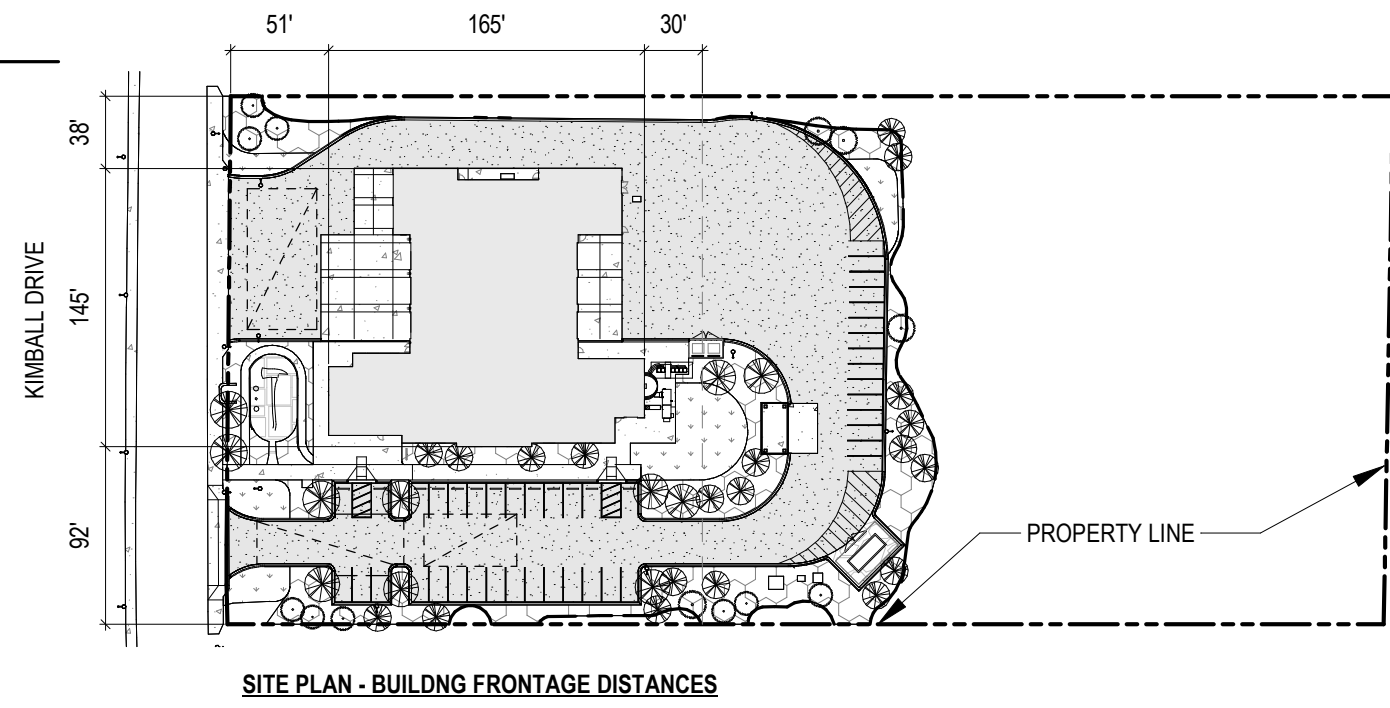
506.3.3 AMOUNT OF INCREASE

THE AREA FACTOR INCREASE BASED ON FRONTAGE SHALL BE DETERMINED IN ACCORDANCE WITH TABLE 506.3.3.

TABLE 506.3.3 FRONTAGE INCREASE FACTOR				
PERCENTAGE OF BUILDING PERIMETER	OPEN SPACE (FEET)			
	0 TO LESS THAN 20	20 TO LESS THAN 25	25 TO LESS THAN 30	30 OR GREATER
0 TO LESS THAN 25	0	0	0	0
25 TO LESS THAN 50	0	0.17	0.21	0.25
50 TO LESS THAN 75	0	0.33	0.42	0.5
75 TO LESS THAN 100	0	0.5	0.63	0.75

100% OF BUILDING PERIMETER HAS GREATER THAN 30 FEET OF OPEN SPACE.

FRONTAGE INCREASE FACTOR = 0.75



SITE PLAN - BUILDING FRONTAGE DISTANCES

508 MIXED USE AND OCCUPANCY

508.3 NONSEPARATED OCCUPANCIES

508.3.1 OCCUPANCY CLASSIFICATION

NONSEPARATED OCCUPANCIES SHALL BE INDIVIDUALLY CLASSIFIED IN ACCORDANCE WITH SECTION 302.1. THE REQUIREMENTS OF THIS CODE SHALL APPLY TO EACH PORTION OF THE BUILDING BASED ON THE OCCUPANCY CLASSIFICATION OF THAT SPACE. IN ADDITION, THE MOST RESTRICTIVE PROVISIONS OF CHAPTER 9 THAT APPLY TO THE NONSEPARATED OCCUPANCIES SHALL APPLY TO THE TOTAL NONSEPARATED OCCUPANCY AREA.

508.3.2 ALLOWABLE BUILDING AREA, HEIGHT AND NUMBER OF STORIES

THE ALLOWABLE BUILDING AREA, HEIGHT AND NUMBER OF STORIES OF THE BUILDING OR PORTION THEREOF SHALL BE BASED ON THE MOST RESTRICTIVE ALLOWANCES FOR THE OCCUPANCY GROUPS UNDER CONSIDERATION FOR THE TYPE OF CONSTRUCTION OF THE BUILDING IN ACCORDANCE WITH SECTION 503.1.

508.3.3 SEPARATION: NO SEPARATION IS REQUIRED BETWEEN NONSEPARATED OCCUPANCIES.

EXCEPTIONS 2: DWELLING UNITS AND SLEEPING UNITS SHALL BE SEPARATED FROM OTHER DWELLING OR SLEEPING UNITS AND FROM OTHER OCCUPANCIES CONTIGUOUS TO THEM IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 420. (420.2 SEPARATION WALLS, WALLS SEPARATING DWELLING UNITS CONSTRUCTED AS FIRE PARTITIONS IN ACCORDANCE WITH SECTION 708) PER 708.3 EXCEPTION 2 SLEEPING UNIT SEPARATIONS SHALL NOT BE LESS THAN 1/2 HOUR WHEN FULLY SPRINKLERED PER SECTION 903.3.1.1

DESIGN NOTE: PER WAC 296-305-06507 ALL SLEEPING AREAS IN FIRE STATIONS MUST BE SEPARATED FROM VEHICLE STORAGE AREAS BY AT LEAST ONE-HOUR FIRE RESISTIVE ASSEMBLIES.

CONSTRUCTION TYPE (CHAPTER 6)

SEE LIFE SAFETY PLAN AND/OR BUILDING SECTION FOR RATED ASSEMBLY LOCATIONS

TABLE 601 FIRE-RESISTANCE RATING: BUILDING ELEMENT (HOURS)		
BUILDING ELEMENT	TYPE VB	
PRIMARY STRUCTURAL FRAME	0	
BEARING WALLS, EXTERIOR	0	
NONBEARING WALLS AND PARTITIONS, EXTERIOR	SEE TABLE 602	
NONBEARING WALLS AND PARTITIONS, INTERIOR	0	
BEARING WALLS, INTERIOR	0	
FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS	0	
ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS	0	

TABLE 705.5 FIRE-RESISTANCE RATING: EXTERIOR WALLS (HOURS)		
FIRE SEPARATION DISTANCE = X (FT)	TYPE OF CONSTRUCTION	OCCUPANCY A, B, S-2
X < 5	ALL	1
5 ≤ X < 10	SB	1
10 ≤ X < 30	VB	0
X ≥ 30	ALL	0

FIRE AND SMOKE PROTECTION (CHAPTER 7)

AUTOMATIC SPRINKLER SYSTEM PROVIDED THROUGHOUT BUILDING PER SECTION 903

SEE ASSEMBLY TYPES FOR RATED ASSEMBLIES

708 FIRE PARTITIONS

1. SEPARATION WALLS AS REQUIRED BY SECTION 420.2 FOR GROUP R OCCUPANCIES
2. CORRIDOR WALLS REQUIRED BY SECTION 1026.1

708.3 FIRE PARTITIONS SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 1 HOUR EXCEPTION

1. CORRIDOR WALLS PERMITTED TO HAVE A 1/2 HOUR FIRE-RESISTANCE RATING BY TABLE 1026.1
2. SLEEPING UNIT SEPARATIONS IN BUILDING TYPE VB CONSTRUCTION SHALL HAVE FIRE-RESISTANCE RATINGS OF NOT LESS THAN 1/2 HOUR IN BUILDING EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1

708.5 CONTINUITY

- FIRE PARTITIONS SHALL EXTEND FROM TOP OF FLOOR TO UNDERSIDE OF FLOOR OR ROOF ABOVE

708.7 OPENINGS

- SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 716

708.7 PENETRATIONS SHALL COMPLY WITH SECTION 714

708.8 JOINTS MADE IN OR IN BETWEEN FIRE PARTITION SHALL COMPLY WITH SECTION 715

708.9 DUCTS AND AIR TRANSFER OPENINGS SHALL COMPLY WITH SECTION 717

INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY (TABLE 803.13)

SEE SPECIFICATIONS FOR CLASSIFICATION OF INTERIOR FINISH MATERIALS

TABLE 803.13 INTERIOR WALL & CEILING FINISH REQUIREMENTS BY...		
GROUP	CORRIDORS AND EXIT ACCESS STAIRWAY ENCLOSURES	SPRINKLERED ROOMS AND ENCLOSED SPACES
		C
A-3	A	C
B	C	C
S	C	C

MEANS OF EGRESS (CHAPTER 10)

SEE LIFE SAFETY PLAN FOR OCCUPANT LOAD CHART AND EGRESS INFORMATION

TABLE 1006.2.1 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY		
OCCUPANCY CLASSIFICATION	MAXIMUM OCCUPANT LOAD OF SPACE	MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (FT) WITH SPRINKLER SYSTEM
A	49	75
B	49	100
S	25	100

TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE	
OCCUPANCY	WITH SPRINKLER SYSTEM (FT)
A	250
B	300
S	400

ACCESSIBILITY (CHAPTER 11)

TABLE 1108.6.1.1 ACCESSIBLE DWELLING UNITS AND SLEEPING UNITS

TOTAL NUMBER OF UNITS PROVIDED	MINIMUM NUMBER OF ACCESSIBLE UNITS	TOTAL NUMBER OF REQUIRED ACCESSIBLE UNITS
10	1	0

PLUMBING SYSTEMS (CHAPTER 29)

TABLE 2902.1 MIN. NUMBER OF REQUIRED PLUMBING FIXTURES

OCCUPANCY DESCRIPTION	A-3	B	R-2	S-2
	ASSEMBLY SPACES WITHOUT PERMANENT SEATING	BUSINESS	FIRE FIGHTERS' LIVING QUARTER, STORAGE, APPARATUS BAYS	
OCCUPANT LOAD	93	15	45	82
OCCUPANT LOAD TOTAL		235		
O.L. PER GENDER				
MALE	46.5	7.5	22.5	41
FEMALE	46.5	7.5	22.5	41
WATER CLOSET CALC				
MALE	1/125	0.1/250	1/100	1/100
FEMALE	1/165	0.1/250		
WATER CLOSET REQUIRED	0.37	0.37		
WC REQUIRED TOTAL	0.72	0.6	4.50	0.82
WC PROVIDED		8		
LAVATORIES CALC				
1/200	0.1/200	1/100	1/100	
LAVATORIES REQUIRED	0.47	0.38	4.50	0.82
LAVATORIES REQD TOTAL		7		
LAV PROVIDED		15		
TUB / SHOWER CALC	-	-	1/8	-
TUB / SHOWER REQUIRED	0	0	5.63	0
T.B.S. REQUIRED TOTAL		6		
T.S PROVIDED		6		
DRINKING FOUNTAIN CALC		1 PER FLOOR		
DRINKING FNT REQD		2		
DRINKING FNT PROVIDED		2		

ENERGY CODE SUMMARY

COMMERCIAL ENERGY EFFICIENCY (CHAPTER 4)

SEE ASSEMBLY TYPES FOR PROPOSED R-VALUE

SEE AIR BARRIER SHEET FOR PROPOSED U-FACTOR AND SHGC

2021 WSEC		
TABLE C402.1.3 OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MIN. REQUIREMENTS, R-VALUE METHOD		
CLIMATE ZONE: MARINE 4	ALL OTHER	GROUP R
ROOF		
INSUL. ENTIRELY ABOVE DECK	R-38 d	R-38 d
WALLS, ABOVE GRADE		
MASS	R-9.5 d	R-13.3 d
WOOD FRAMING	R-13 + R-7.5d std or R-20 + R-3.8d std	R-13 + R-7.5d std or R-20 + R-3.8d std or R-25 std
WALLS, BELOW GRADE		
BELOW-GRADE WALL	SAME AS ABOVE GRADE	SAME AS ABOVE GRADE
FLOORS		
JOIST FRAMING	R-30	R-30
SLAB-ON-GRADE FLOORS		
UNHEATED SLABS	R-10 FOR 24" BELOW	R-10 FOR 24" BELOW

MAXIMUM AREA (SECTION C402.4)

TOTAL BUILDING FENESTRATION AREA SHALL NOT EXCEED 30% OF THE TOTAL BUILDING GROSS ABOVE-GRADE WALL AREA

SEE AIR BARRIER SHEET FOR PROPOSED FENESTRATION AREA

2021 WSEC		
TABLE C402.4 BUILDING ENVELOPE FENESTRATION MAXIMUM U-FACTOR AND SHGC REQUIREMENT		
CLIMATE ZONE : 5 & MARINE 4		
U-FACTOR FOR CLASS AW WINDOWS RATED IN ACCORDANCE WITH AIA/MCSCA1011.5.2/IA446, VERTICAL CURTAIN WALLS AND SITE-BUILT FENESTRATION PRODUCTS		
FIXED U-FACTOR	U-0.34	
OPERABLE U-FACTOR	U-0.36	
U-FACTOR FOR ALL OTHER VERTICAL FENESTRATION		
FIXED U-FACTOR	U-0.26	
OPERABLE OR MULLED WINDOWS WITH FIXED AND OPERABLE SECTIONS U-FACTOR	U-0.28	
ENTRANCE DOORS		
U-FACTOR	0.60	
SHGC FOR ALL VERTICAL FENESTRATION		
ORIENTATION	FIXED	OPERABLE
PF < 0.2	0.38	0.33
0.2 ≤ PF < 0.5	0.46	0.4
PF ≥ 0.5	0.61	0.53

TYPICAL CODE REQUIRED SIGNAGE

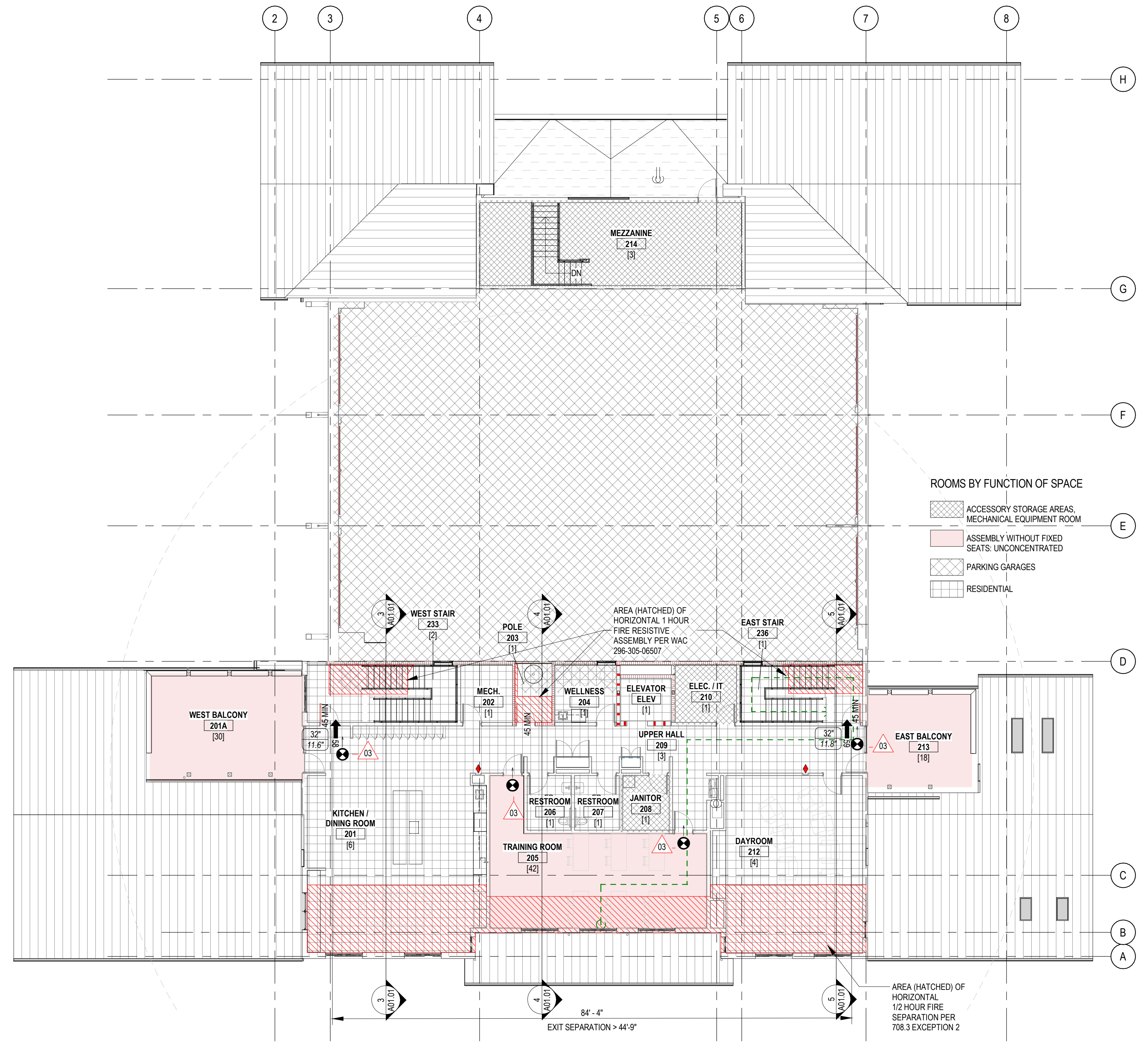
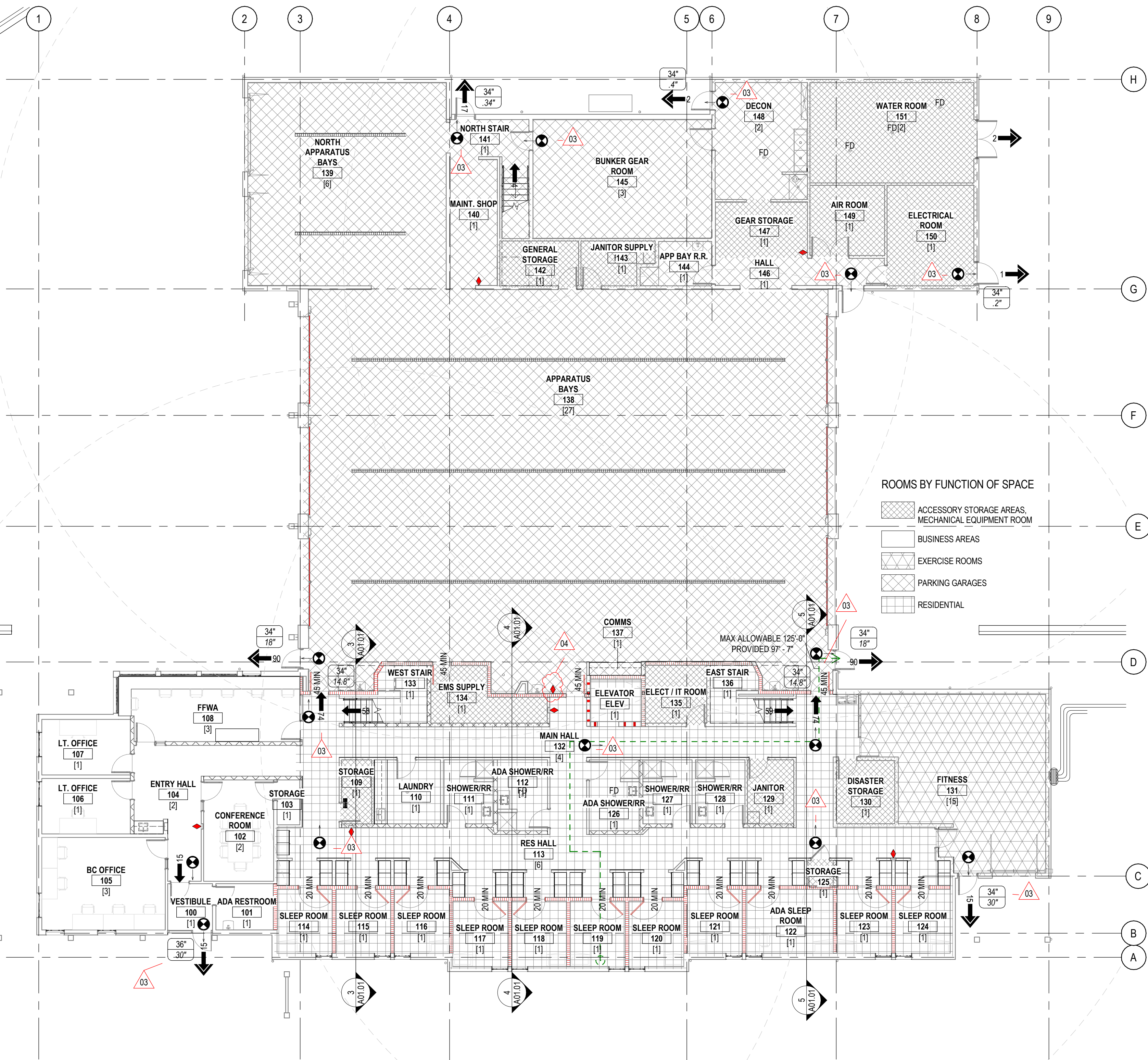
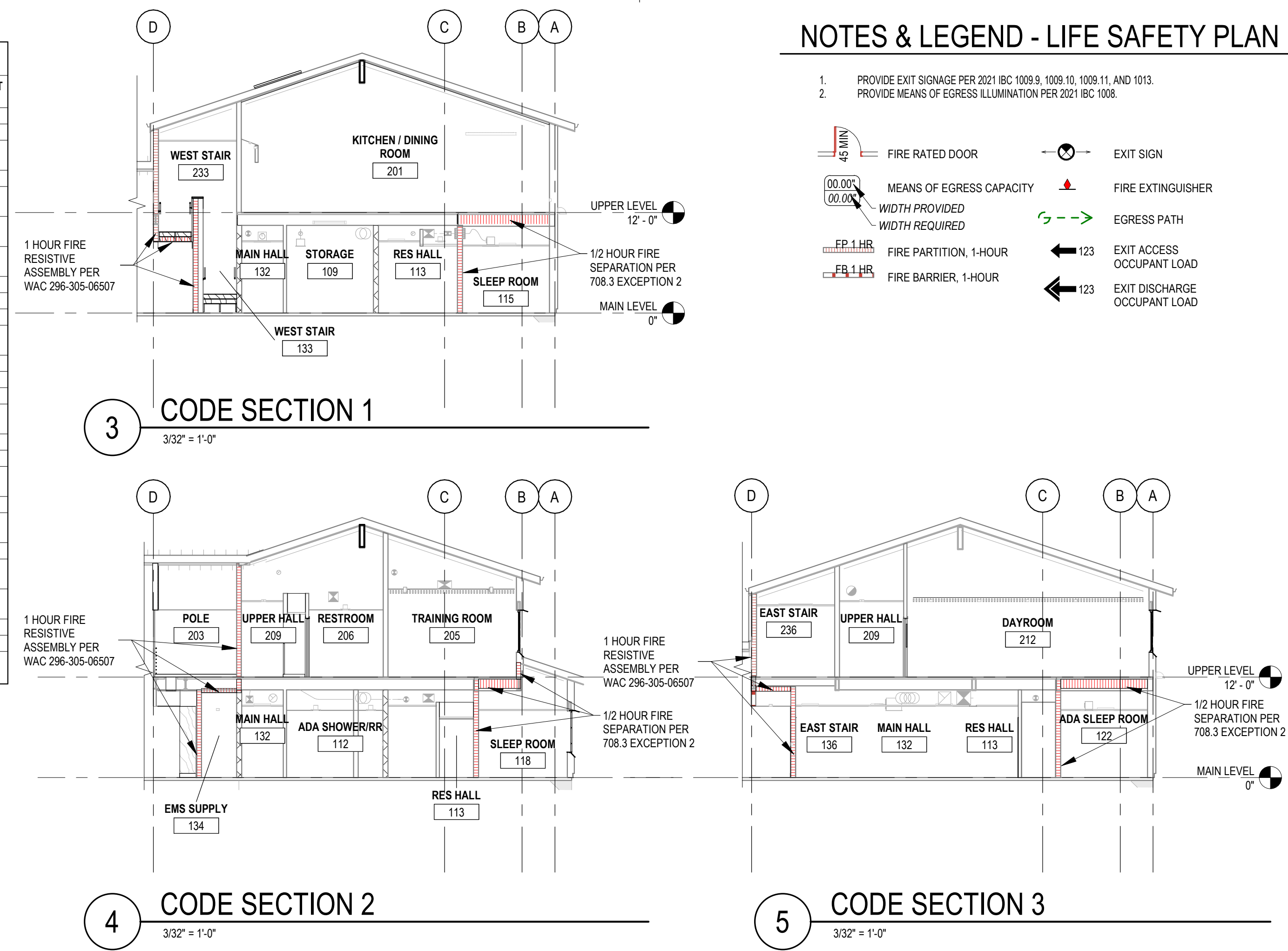
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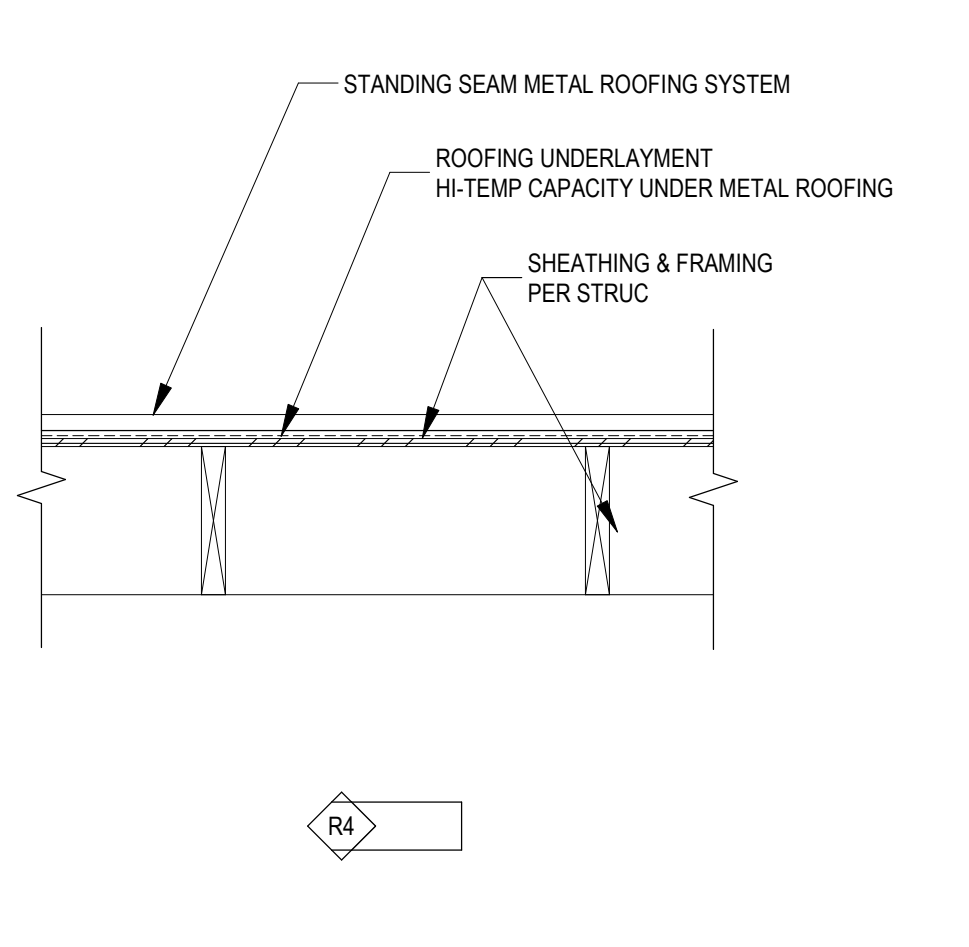
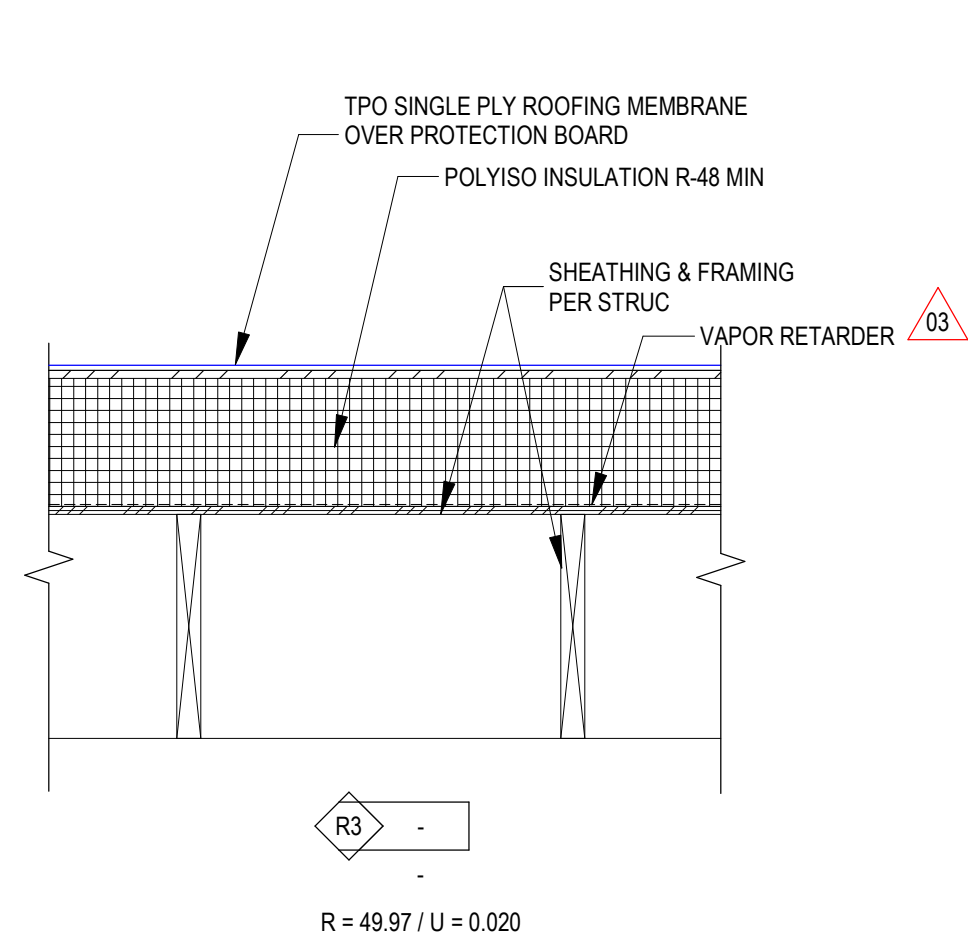
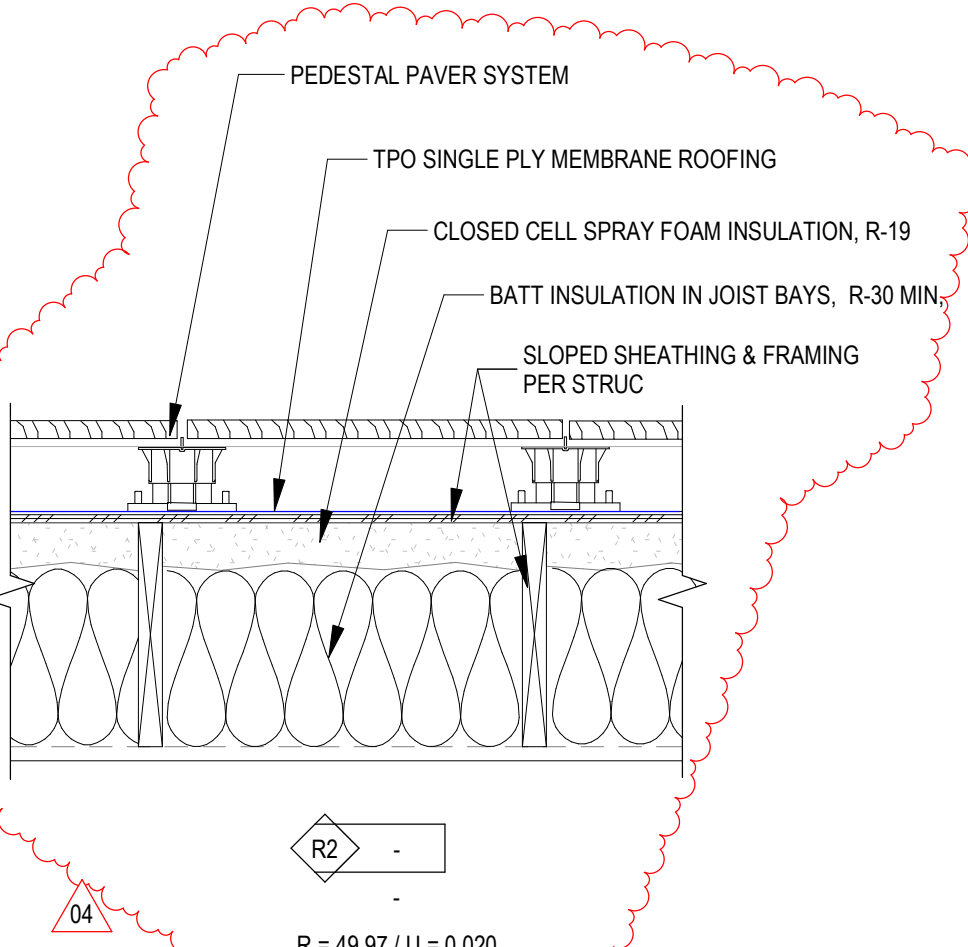
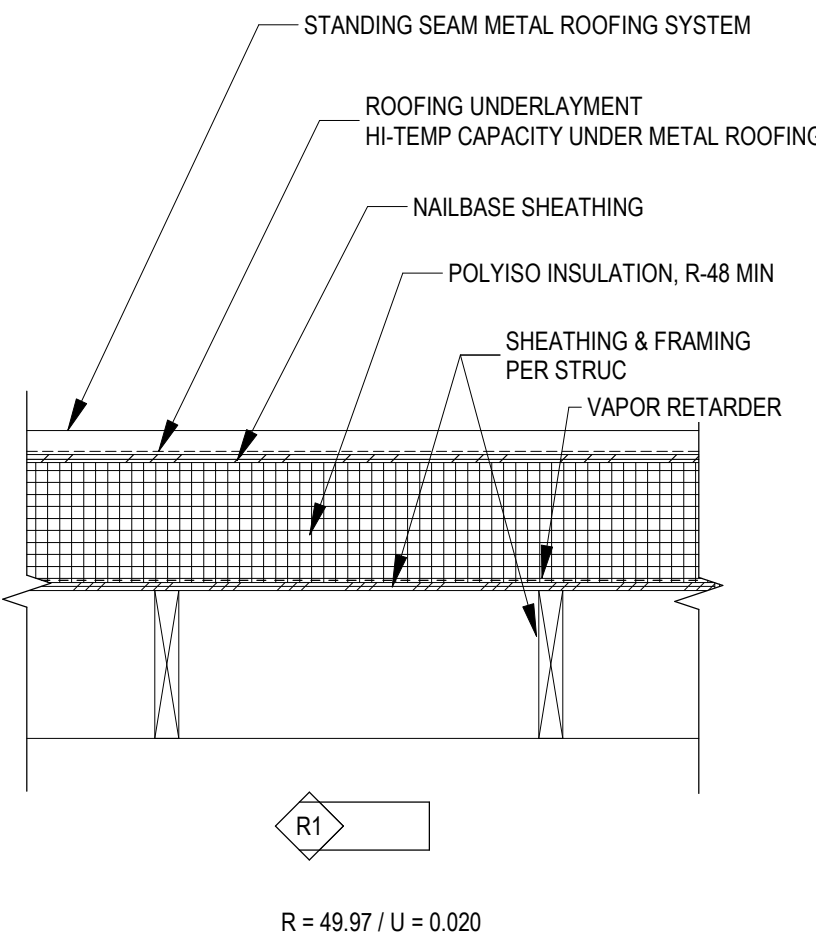
1. BUILDING ADDRESS NUMBERS (REFERENCE IFC 505.1 AND PER LOCAL FIRE CODE).
2. NO PARKING - FIRE LANE SIGNAGE (PER IFC 503.3 AND LOCAL FIRE CODE).
3. INTERIOR AND EXTERIOR ACCESS TO SHAFTWAYS UNLESS "EASILY DISCERNIBLE" (IFC 316.2).
4. ACCESSIBLE LOADING, PARKING SPACES, AUTOMOBILE AND VAN ACCESSIBLE (REFERENCE IBC 1112.1).
5. IDENTIFY TOILET ROOMS AND BATHING ROOMS WITH VISUAL CHARACTERS, RAISED CHARACTERS AND BRAILLE COMPLYING WITH ICC A117.1 WHERE PICTOGRAMS ARE PROVIDED, THEY SHALL HAVE VISUAL CHARACTERS, RAISED CHARACTERS AND BRAILLE COMPLYING WITH ICC A117.1 (PER IBC 1112.2).
- 6.

OCCUPANT LOAD CHART BY ROOM					
NUMBER	ROOM INFORMATION	AREA	OCCUPANCY CLASSIFICATION	IBC 2018 TABLE 1004.5 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT	OCCUPANT LOAD
100	VESTIBULE	62 SF	BUSINESS AREAS	150 SF GROSS	1
101	ADA RESTROOM	19 SF	BUSINESS AREAS	150 SF GROSS	1
102	CONFERENCE ROOM	201 SF	BUSINESS AREAS	150 SF GROSS	2
103	STORAGE	33 SF	BUSINESS AREAS	150 SF GROSS	1
104	ENTRY HALL	300 SF	BUSINESS AREAS	150 SF GROSS	2
105	BC OFFICE	319 SF	BUSINESS AREAS	150 SF GROSS	3
106	LT. OFFICE	143 SF	BUSINESS AREAS	150 SF GROSS	1
107	LT. OFFICE	143 SF	BUSINESS AREAS	150 SF GROSS	1
108	FFWA	324 SF	BUSINESS AREAS	150 SF GROSS	3
109	STORAGE	57 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF GROSS	1
110	LAUNDRY	122 SF	RESIDENTIAL	200 SF GROSS	1
111	SHOWER/RR	94 SF	RESIDENTIAL	200 SF GROSS	1
112	ADA SHOWER/RR	103 SF	RESIDENTIAL	200 SF GROSS	1
113	RES HALL	1108 SF	RESIDENTIAL	200 SF GROSS	6
114	SLEEP ROOM	105 SF	RESIDENTIAL	200 SF GROSS	1
115	SLEEP ROOM	105 SF	RESIDENTIAL	200 SF GROSS	1
116	SLEEP ROOM	105 SF	RESIDENTIAL	200 SF GROSS	1
117	SLEEP ROOM	106 SF	RESIDENTIAL	200 SF GROSS	1
118	SLEEP ROOM	106 SF	RESIDENTIAL	200 SF GROSS	1
119	SLEEP ROOM	106 SF	RESIDENTIAL	200 SF GROSS	1
120	SLEEP ROOM	106 SF	RESIDENTIAL	200 SF GROSS	1
121	SLEEP ROOM	105 SF	RESIDENTIAL	200 SF GROSS	1
122	ADA SLEEP ROOM	162 SF	RESIDENTIAL	200 SF GROSS	1
123	SLEEP ROOM	105 SF	RESIDENTIAL	200 SF GROSS	1
124	SLEEP ROOM	105 SF	RESIDENTIAL	200 SF GROSS	1
125	STORAGE	21 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF GROSS	1
126	ADA SHOWER/RR	103 SF	RESIDENTIAL	200 SF GROSS	1
127	SHOWER/RR	93 SF	RESIDENTIAL	200 SF GROSS	1
128	SHOWER/RR	92 SF	RESIDENTIAL	200 SF GROSS	1
129	JANITOR	86 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF GROSS	1
130	DISASTER STORAGE	108 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF GROSS	1
131	FITNESS	729 SF	EXERCISE ROOMS	50 SF GROSS	15
132	MAIN HALL	756 SF	RESIDENTIAL	200 SF GROSS	4
133	WEST STAIR	142 SF	RESIDENTIAL	200 SF GROSS	1
134	EMS SUPPLY	143 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF GROSS	1
135	ELEC / IT ROOM	105 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF GROSS	1
136	EAST STAIR	154 SF	RESIDENTIAL	200 SF GROSS	1
137	COMMS	17 SF	PARKING GARAGES	200 SF GROSS	1
138	APPARATUS BAYS	5346 SF	PARKING GARAGES	200 SF GROSS	27
139	NORTH APPARATUS BAYS	1072 SF	PARKING GARAGES	200 SF GROSS	6
140	MAINT. SHOP	159 SF	PARKING GARAGES	200 SF GROSS	1
141	NORTH STAIR	149 SF	PARKING GARAGES	200 SF GROSS	1
142	GENERAL STORAGE	102 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF GROSS	1
143	JANITOR SUPPLY	86 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF GROSS	1
144	APP BAY R.R.	82 SF	PARKING GARAGES	200 SF GROSS	1

OCCUPANT LOAD CHART BY ROOM					
NUMBER	ROOM INFORMATION	AREA	OCCUPANCY CLASSIFICATION	IBC 2018 TABLE 1004.5 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT	OCCUPANT LOAD
145	BUNKER GEAR ROOM	560 SF	PARKING GARAGES	200 SF GROSS	3
146	HALL	129 SF	PARKING GARAGES	200 SF GROSS	1
147	GEAR STORAGE	136 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF GROSS	1
148	DECON	300 SF	PARKING GARAGES	200 SF GROSS	2
149	AIR ROOM	148 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF GROSS	1
150	ELECTRICAL ROOM	244 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF GROSS	1
151	WATER ROOM	454 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF GROSS	2
ELEV	ELEVATOR	66 SF	RESIDENTIAL	200 SF GROSS	1
MAIN LEVEL		15888 SF			116
201	KITCHEN / DINING ROOM	1085 SF	RESIDENTIAL	200 SF GROSS	6
201A	WEST BALCONY	447 SF	ASSEMBLY WITHOUT FIXED SEATS: UNCONCENTRATED	15 SF NET	30
202	MECH.	89 SF	RESIDENTIAL	200 SF GROSS	1
203	POLE	64 SF	RESIDENTIAL	200 SF GROSS	1
204	WELLNESS	105 SF	RESIDENTIAL	200 SF GROSS	1
205	TRAINING ROOM	626 SF	ASSEMBLY WITHOUT FIXED SEATS: UNCONCENTRATED	15 SF NET	42
206	RESTROOM	72 SF	RESIDENTIAL	200 SF GROSS	1
207	RESTROOM	73 SF	RESIDENTIAL	200 SF GROSS	1
208	JANITOR	76 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF GROSS	1
209	UPPER HALL	543 SF	RESIDENTIAL	200 SF GROSS	3
210	ELEC / IT	105 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF GROSS	1
212	DAYROOM	690 SF	RESIDENTIAL	200 SF GROSS	4
213	EAST BALCONY	264 SF	ASSEMBLY WITHOUT FIXED SEATS: UNCONCENTRATED	15 SF NET	18
214	MEZZANINE	604 SF	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 SF GROSS	3
233	WEST STAIR	238 SF	RESIDENTIAL	200 SF GROSS	2
236	EAST STAIR	193 SF	RESIDENTIAL	200 SF GROSS	1
UPPER LEVEL		5273 SF			116
TOTAL		21160 SF			232

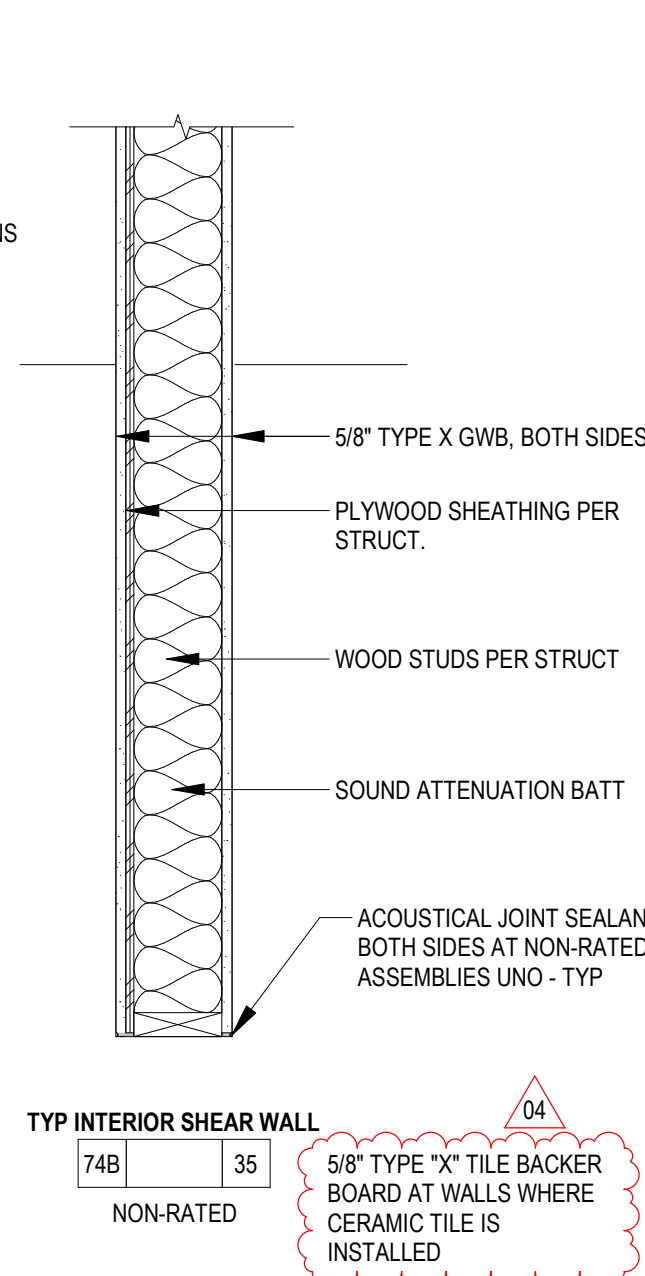
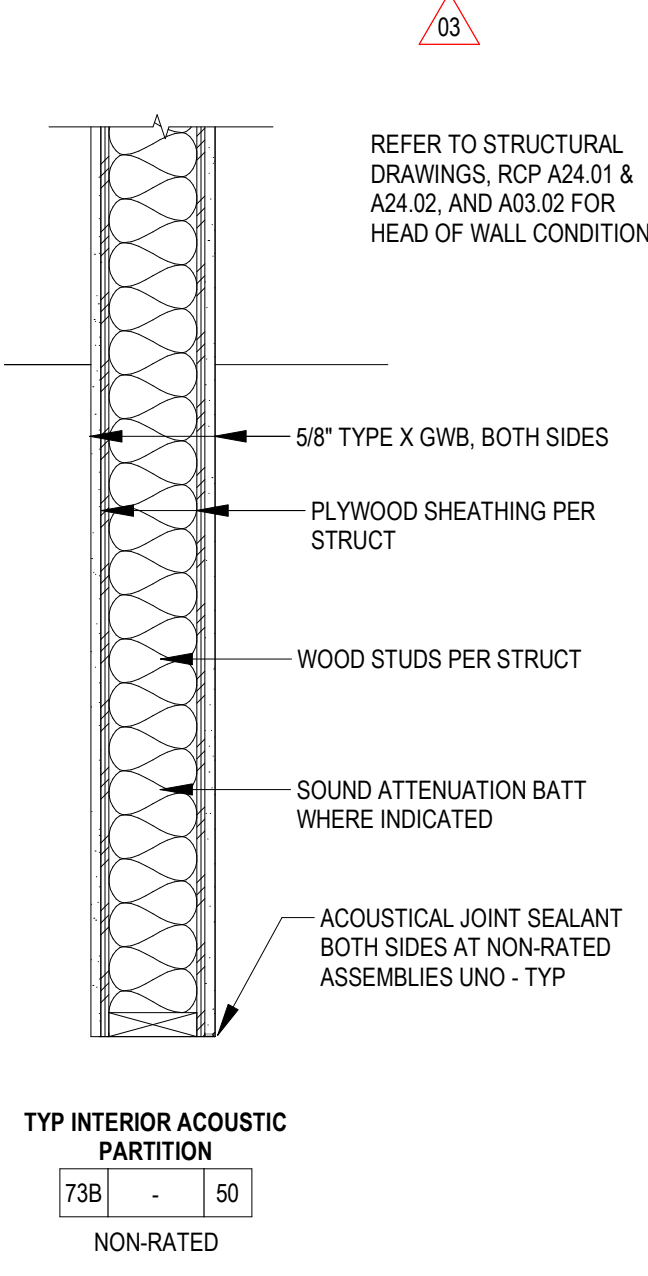
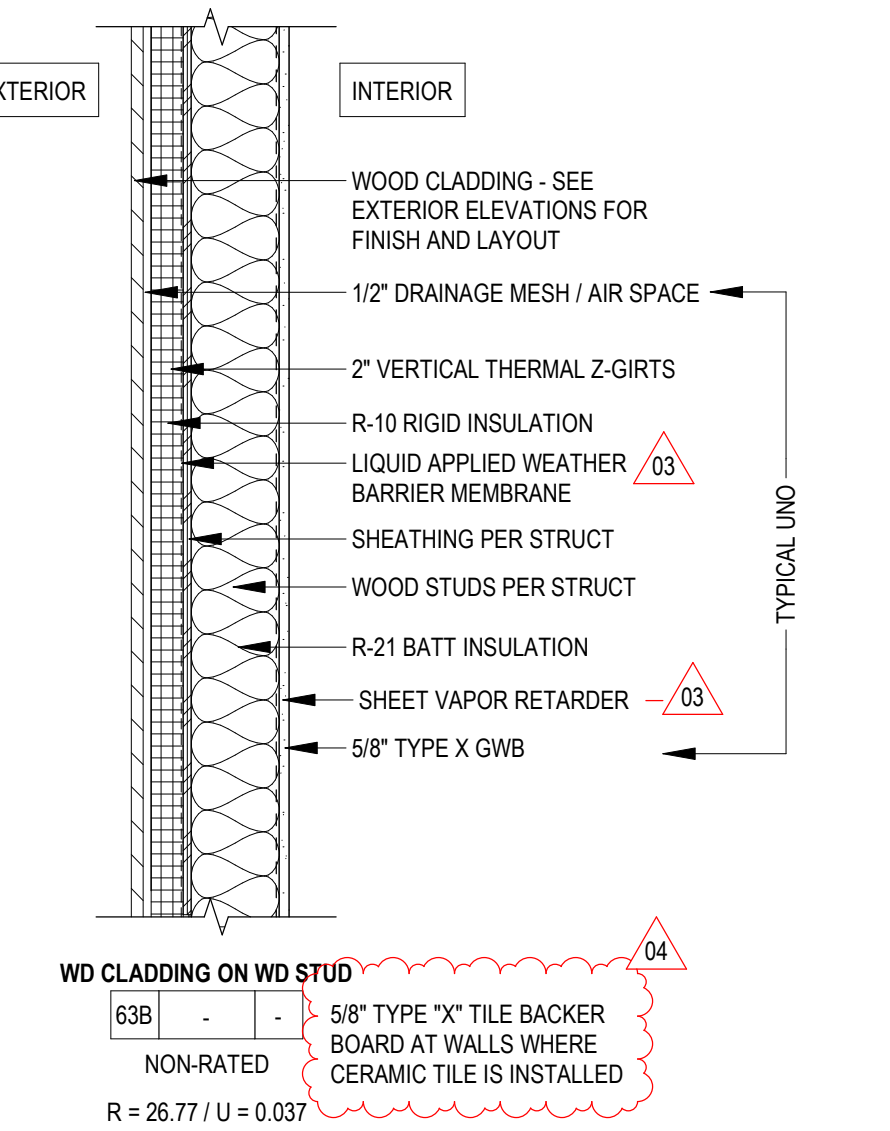
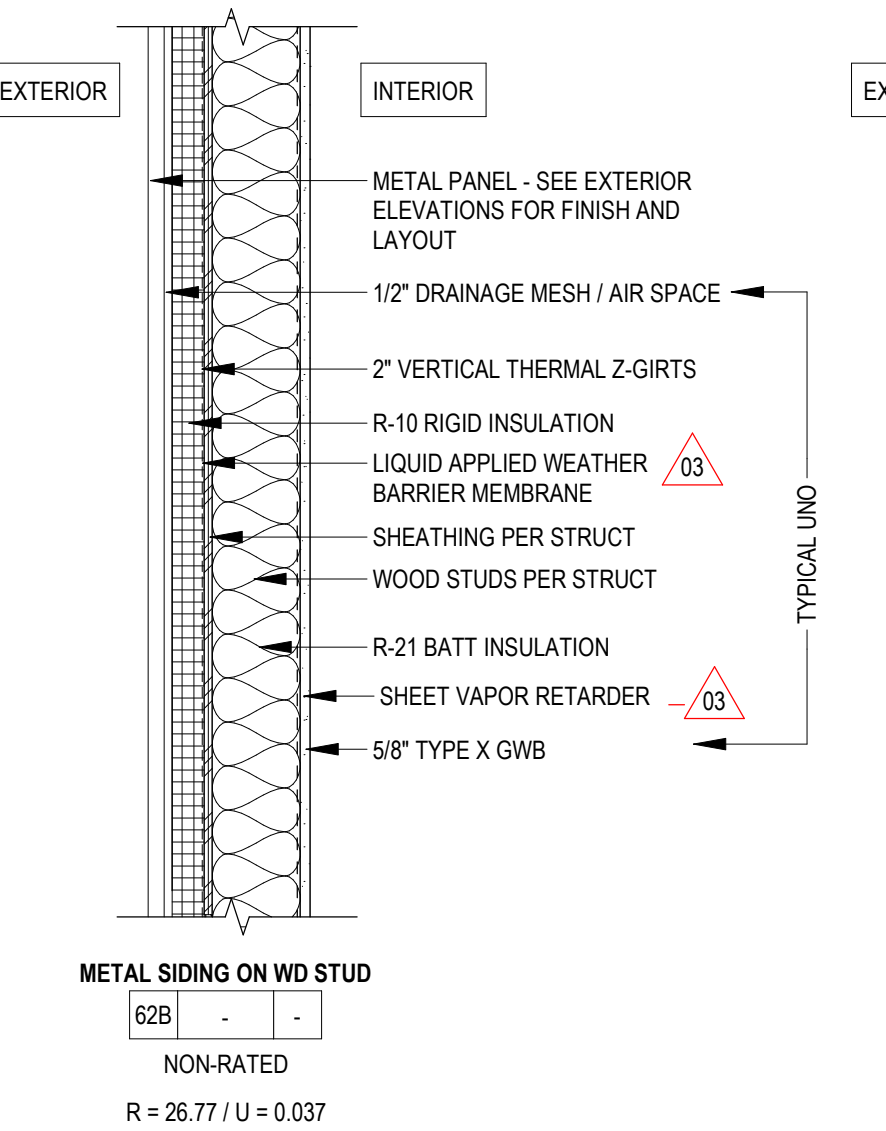
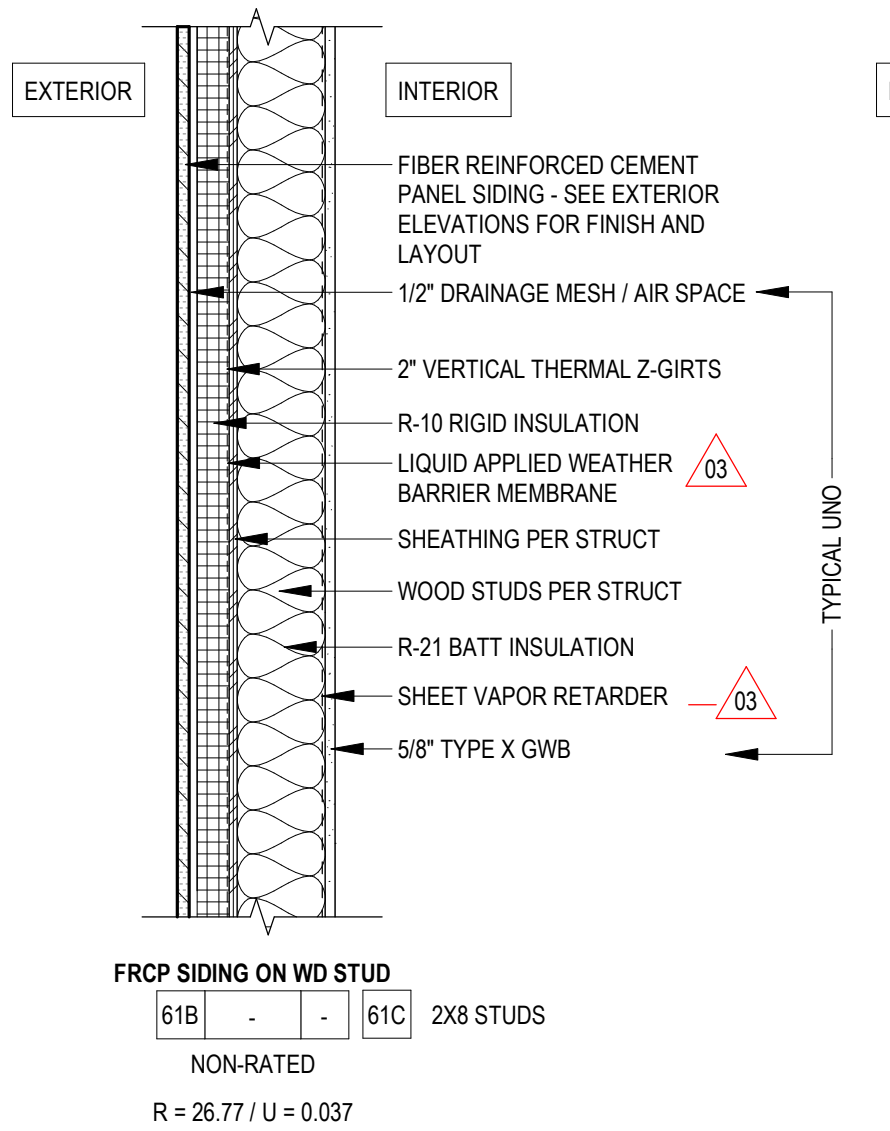
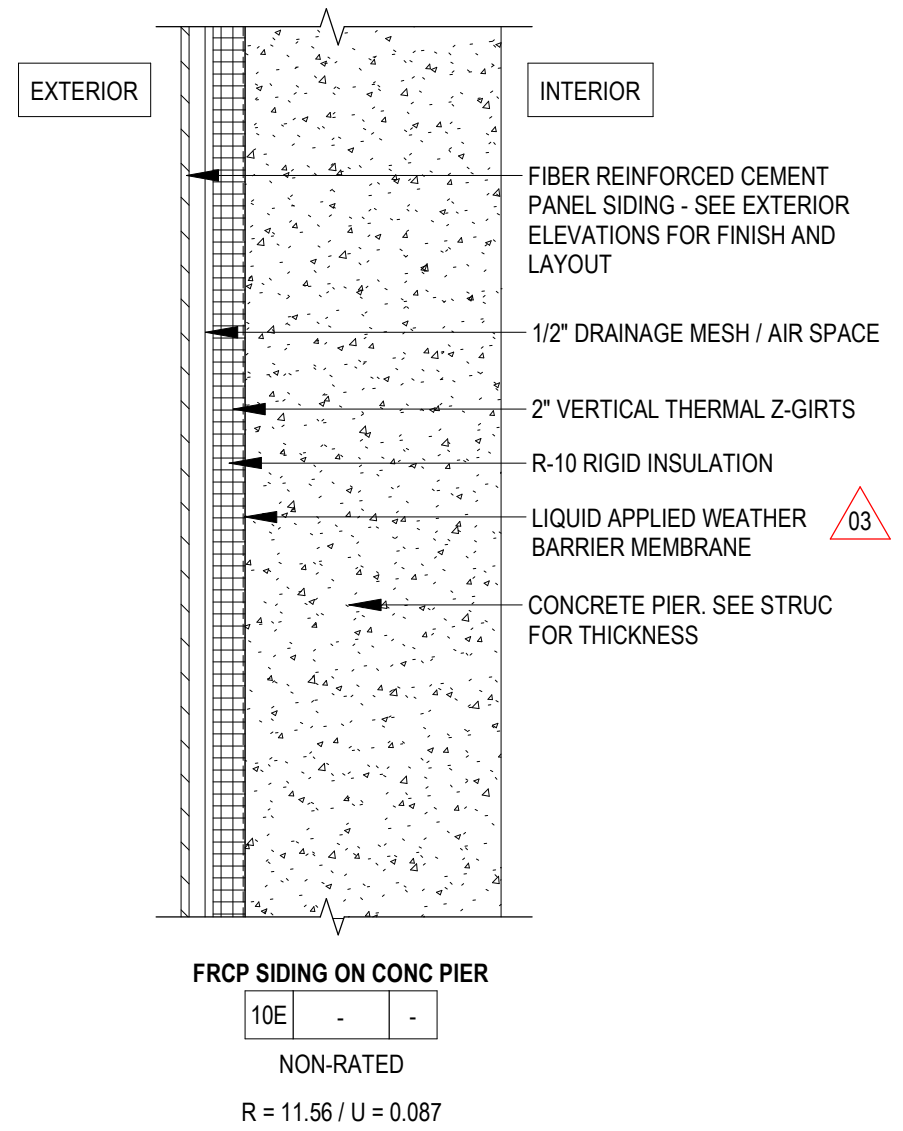
GROSS BUILDING AREA		
LEVEL	OCCUPANCY CLASSIFICATION	AREA
MAIN LEVEL	S	1,680 SF
MAIN LEVEL	R-2	5,300 SF
MAIN LEVEL	S-2	9,520 SF
UPPER LEVEL	A	1,450 SF
UPPER LEVEL	R	3,580 SF
UPPER LEVEL	S-2	570 SF
BUILDING TOTAL		22,100 SF





8 ROOF TYPES

1" = 1'-0"

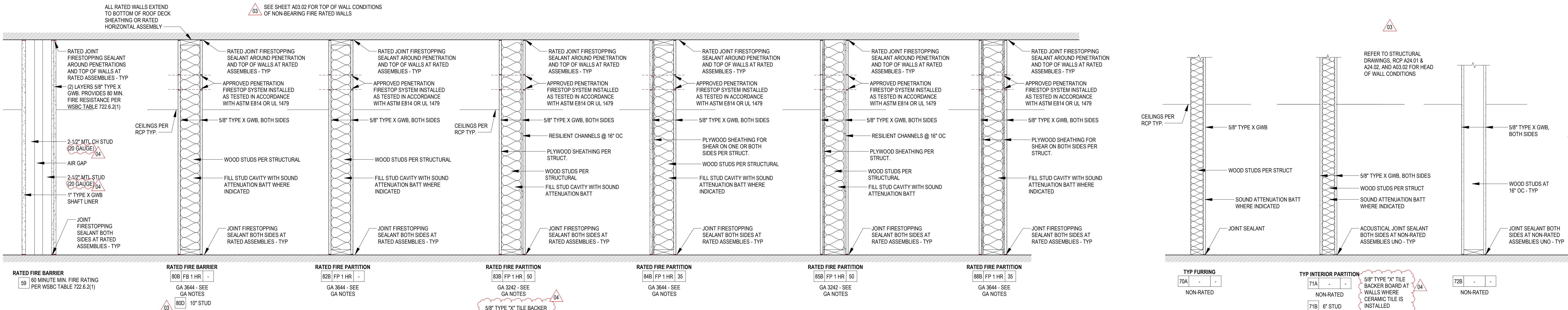


6 NON-RATED INTERIOR PARTITION TYPES - CONTINUED

1" = 1'-0"

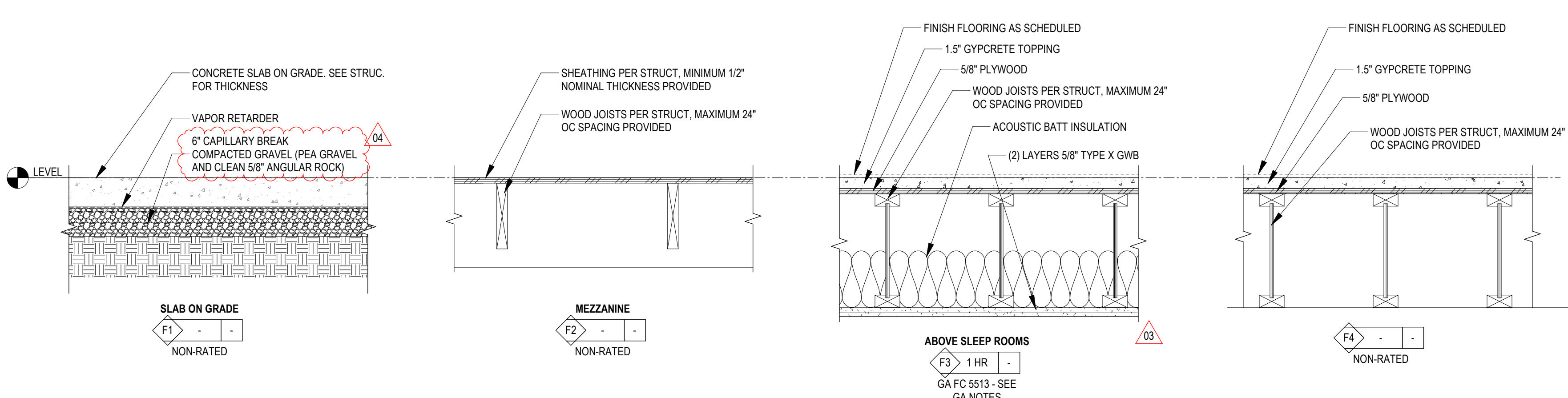
5 EXTERIOR WALL TYPES

1" = 1'-0"



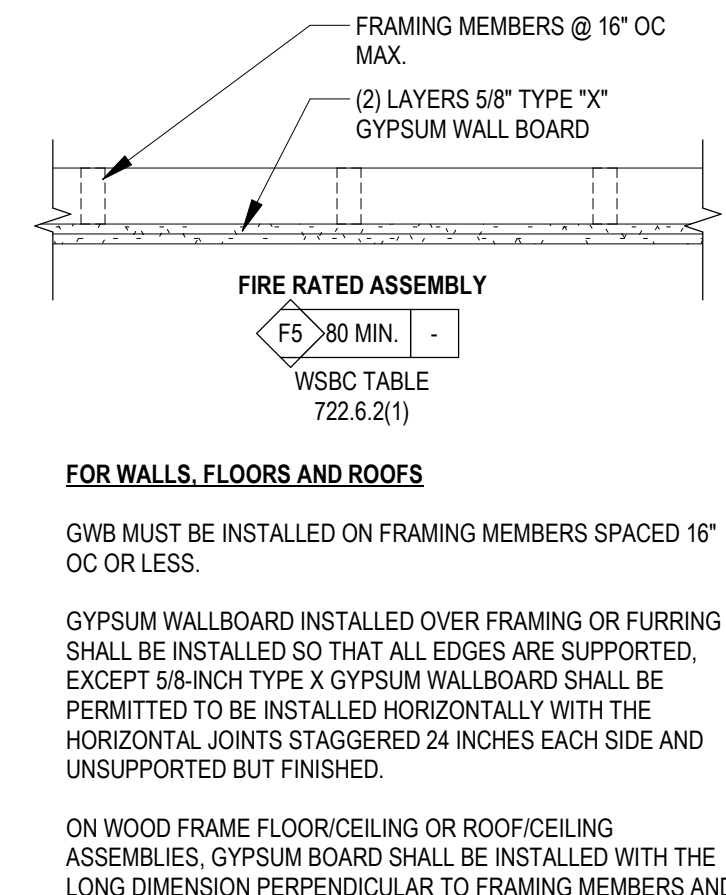
4 FIRE RATED INTERIOR PARTITION TYPES

1" = 1'-0"



1 FLOOR TYPES

1" = 1'-0"

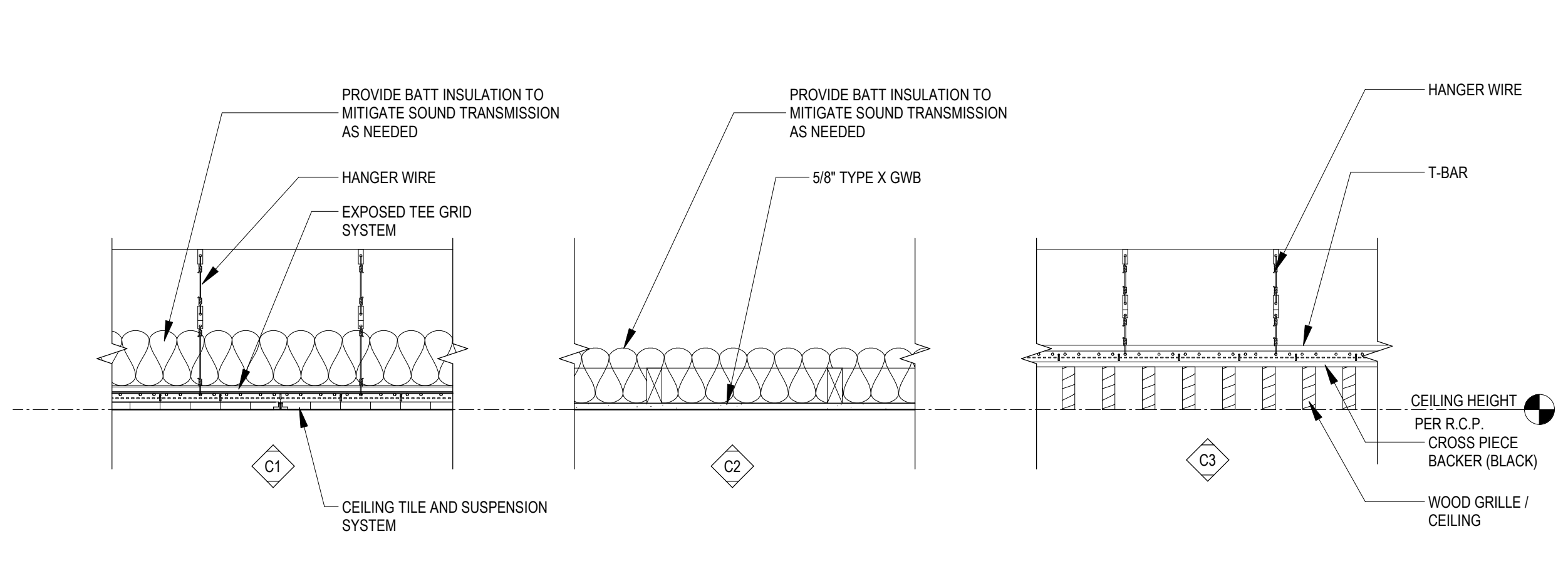


2 CEILING TYPES

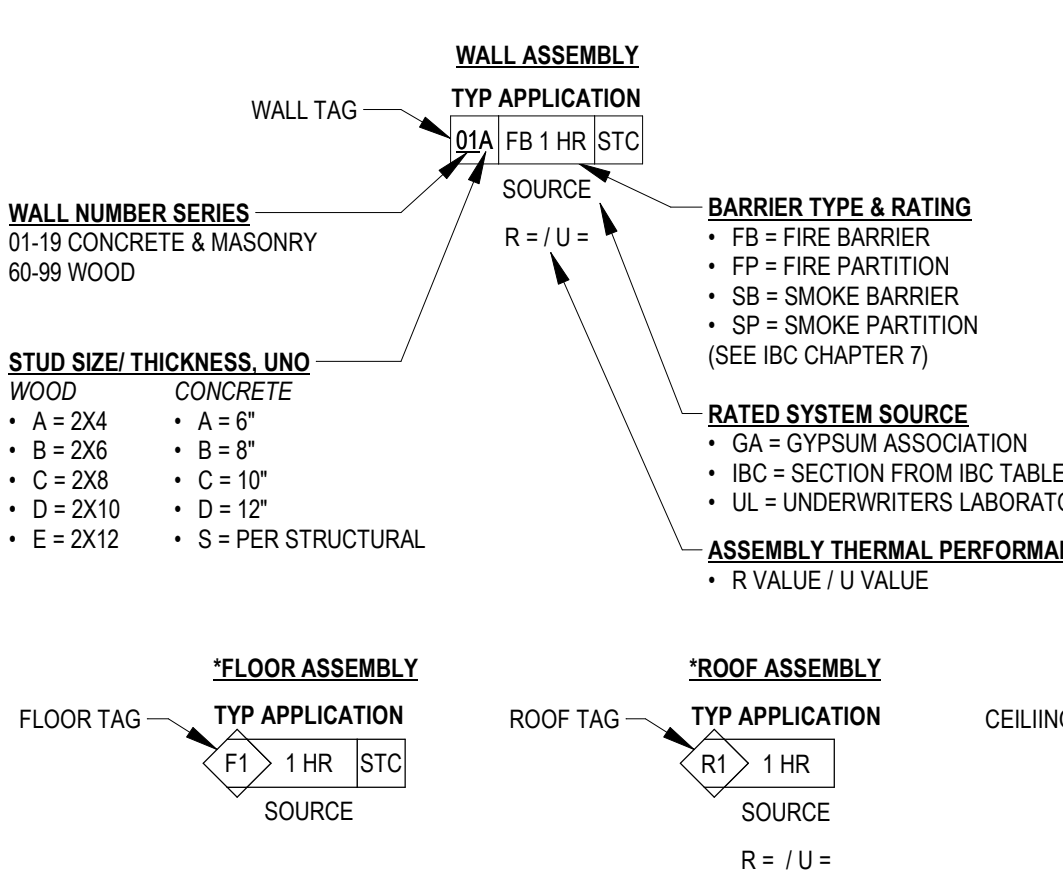
1" = 1'-0"

3 NON-RATED INTERIOR PARTITION TYPES

1" = 1'-0"



NOTES & LEGEND - ASSEMBLY TYPES



RATED ASSEMBLIES

TERMINATE FIRE RATED ASSEMBLIES AS DESCRIBED BELOW:

- EXTERIOR WALLS PER IBC 705
1. FIRE SEPARATION >10 FT. RATED FOR FIRE EXPOSURE FROM INSIDE
2. FIRE SEPARATION <10 FT. RATED FOR FIRE EXPOSURE FROM BOTH SIDES

FIRE BARRIERS PER IBC 707

VOIDS AT THE INTERSECTION OF A FIRE BARRIER AND A NON-FIRE RATED EXTERIOR WALL ASSEMBLY SHALL BE FILLED WITH A MATERIAL OR SYSTEM APPROVED BY THE JURISDICTION. TESTED ASSEMBLY NOT REQUIRED AT THIS LOCATION.

VERTICAL OPTIONS:

1. FROM TOP OF FOUNDATION OR HORIZONTAL ASSEMBLY BELOW; TERMINATE AT UNDERSIDE OF STRUCTURAL DECK ABOVE AND SECURELY ATTACHED THERETO.
2. FIRE BARRIERS AROUND SHAFT, EXIT STAIRWAY AND RAMP ENCLOSURES THAT DO NOT EXTEND TO UNDERSIDE OF ROOF DECK SHALL BE ENCLOSED AT THE TOP WITH CONSTRUCTION AT MINIMUM FIRE RATING AS THE TOPMOST FLOOR PENETRATED BY THE SHAFT AND THE FIRE RATING OF THE SHAFT ENCLOSURE.

FIRE PARTITIONS PER IBC 708

FROM TOP OF FOUNDATION OR HORIZONTAL ASSEMBLY BELOW; TERMINATE AT UNDERSIDE OF STRUCTURAL DECK OR TO FIRE RATED HORIZONTAL ASSEMBLY ABOVE AND SECURELY ATTACHED THERETO. IN COMBUSTIBLE CONSTRUCTION, THE SPACE WITHIN THE FIRE RATED CEILING AND DECK ABOVE SHALL BE FIREBLOCKED OR DRAFTSTOPPED AT THE PARTITION LINE.

HORIZONTAL ASSEMBLIES PER IBC 711

VERTICAL OPENINGS NOT ALLOWED EXCEPT WHEN CONSTRUCTED AS A SHAFT ENCLOSURE OR PROTECTED PENETRATIONS AND JOINTS PER IBC 712.

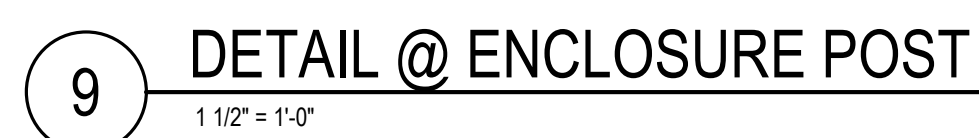
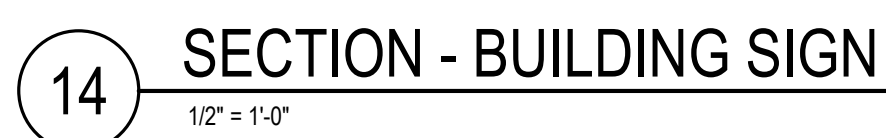
FIREBLOCKING PER IBC 718.2

FIREBLOCKING MATERIALS (I.E. 2X LUMBER, 1/2" GYPSUM BOARD, SECURED BATT INSULATION AND OTHER MATERIALS LISTED IN IBC 718.2.1) SHALL BE INSTALLED IN COMBUSTIBLE CONCEALED SPACES TO FORM AN EFFECTIVE BARRIER BETWEEN FLOORS AND BETWEEN TOP STORY AND ROOF ATTICS. THE FOLLOWING ARE THE MINIMUM REQUIRED LOCATIONS:

1. CONCEALED WALL SPACES
2. VERTICALLY AT THE CEILING AND FLOOR LEVELS
3. HORIZONTALLY AT 10 FT MAXIMUM INTERVALS
4. CONNECTIONS BETWEEN HORIZONTAL AND VERTICAL SPACES
5. CONCEALED SPACES AT THE TOP AND BOTTOM OF THE RUN OF STAIR STRINGERS
6. ANNULAR SPACE AROUND PENETRATING COMPONENTS IN CEILING AND FLOOR OPENINGS
7. CONCEALED SPACES OF EXTERIOR COMBUSTIBLE WALL COVERINGS AT MAXIMUM 20 FT INTERVALS IN EITHER DIRECTION AND MAXIMUM 100 SF BETWEEN FIREBLOCKING. (SEE IBC 718.2.6 FOR EXCEPTIONS)
8. CONCEALED SLEEPER SPACES AT MAXIMUM 100 SF

DRAFTSTOPPING PER IBC 718.3 & 718.4

DRAFTSTOPPING IS NOT REQUIRED IN BUILDINGS SPRINKLERED THROUGHOUT PER NFPA 13.



KEYNOTES

#	NOTE
101	PROVIDE IN-WALL BLOCKING FOR OWNER'S DISPATCH MONITOR AND HARDWARE.
103	WALL MOUNTED BUNKER GEAR LOCKERS (L-1). SEE DRAWINGS FOR QUANTITIES.
104	MOBILE BUNKER GEAR LOCKERS (L-2). SEE DRAWINGS FOR QUANTITIES.

NOTES & LEGEND - FLOOR PLAN

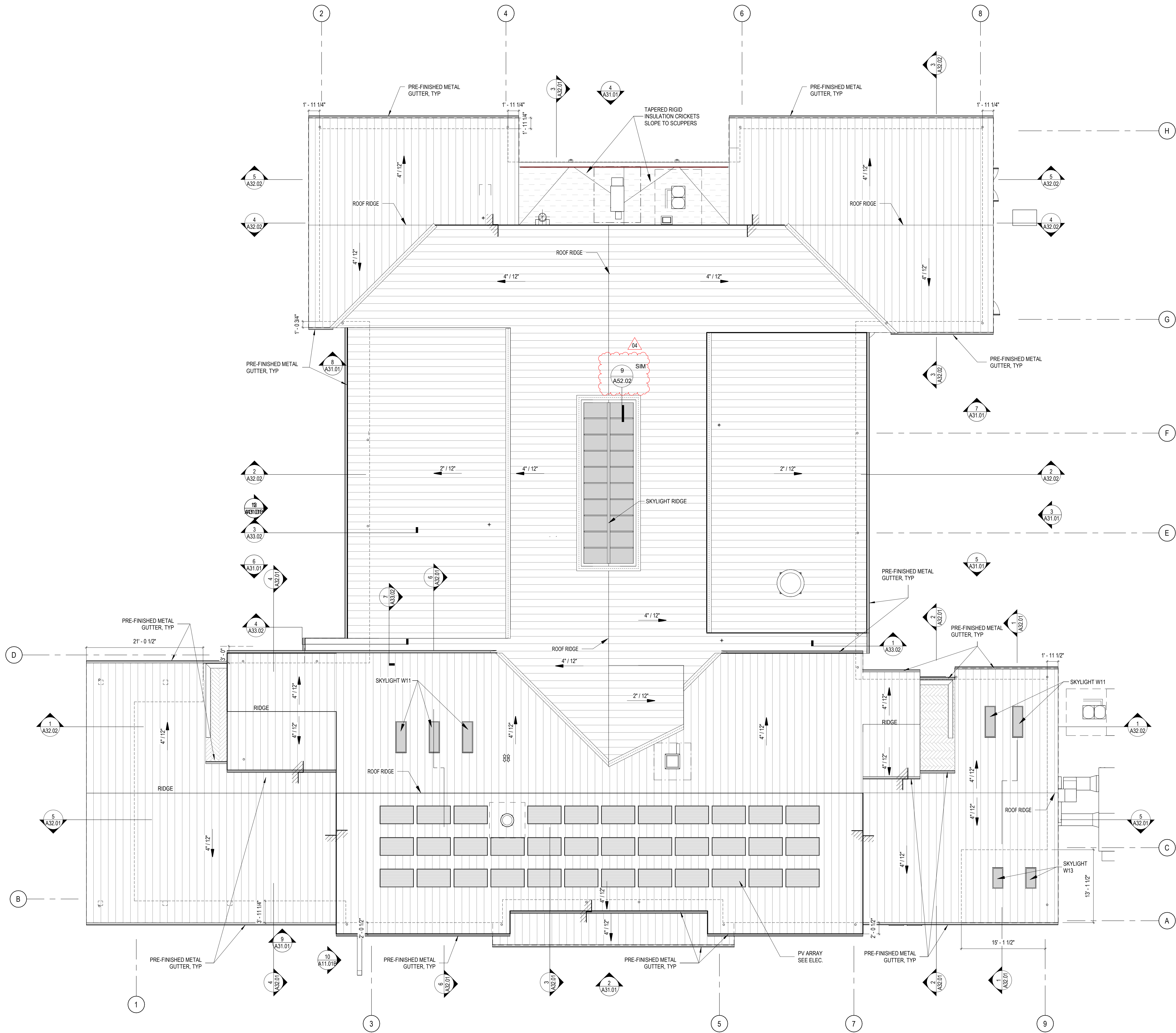
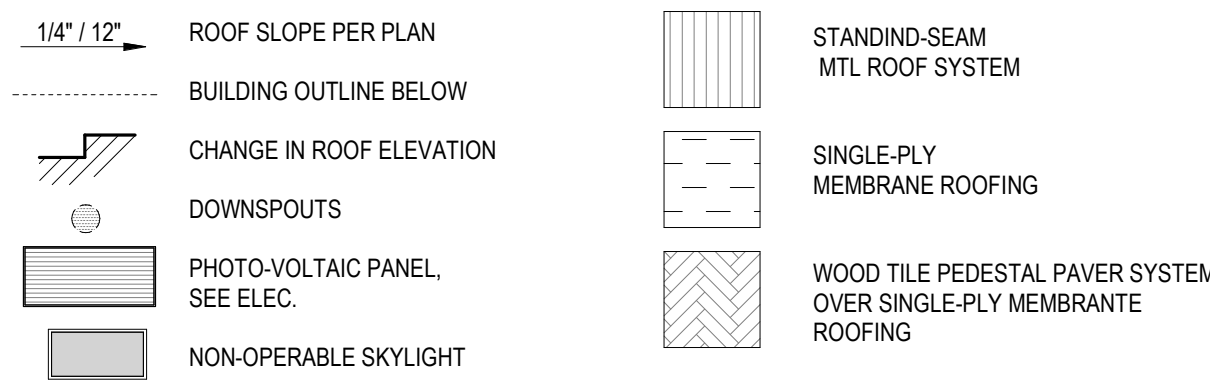
- DIMENSIONS ARE TO ROUGH FRAMING OR TO FACE OF EXISTING FINISHES, TYP UNO.
- DIMENSIONS INDICATED AS "MIN" OR "CLR" ARE FROM NEAREST FINISH SURFACE, INCLUDING TRIM.
- ROUGH DOOR OPENINGS ARE LOCATED 4" FROM NEAREST INTERSECTING WALL FRAMING, TYP UNO.

- ROOF OVERHANG
- 5'-7" DIAMETER TURNING SPACE
- SOUND ATTENUATION BATT
- CLEAR FLOOR SPACE 30' X 52' UNO

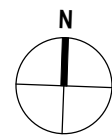


1 FLOOR PLAN - MAIN LEVEL - ANNOTATIONS
1/8" = 1'-0"

1. VERIFY EQUIPMENT CLEARANCES WITH MANUFACTURER REQUIREMENTS PRIOR TO INSTALL.
2. FIELD CONFIRM DIMENSIONS AND REPORT DISCREPANCIES, IF ANY, TO ARCHITECT PRIOR TO CONSTRUCTION.
3. DIMENSIONS ARE FROM GRIDLINE, CENTERLINE OF ELEMENTS, OR FACE OF STRUCTURAL FRAMING, UNO.



1 ROOF PLAN
1/8" = 1'-0" 0 4'



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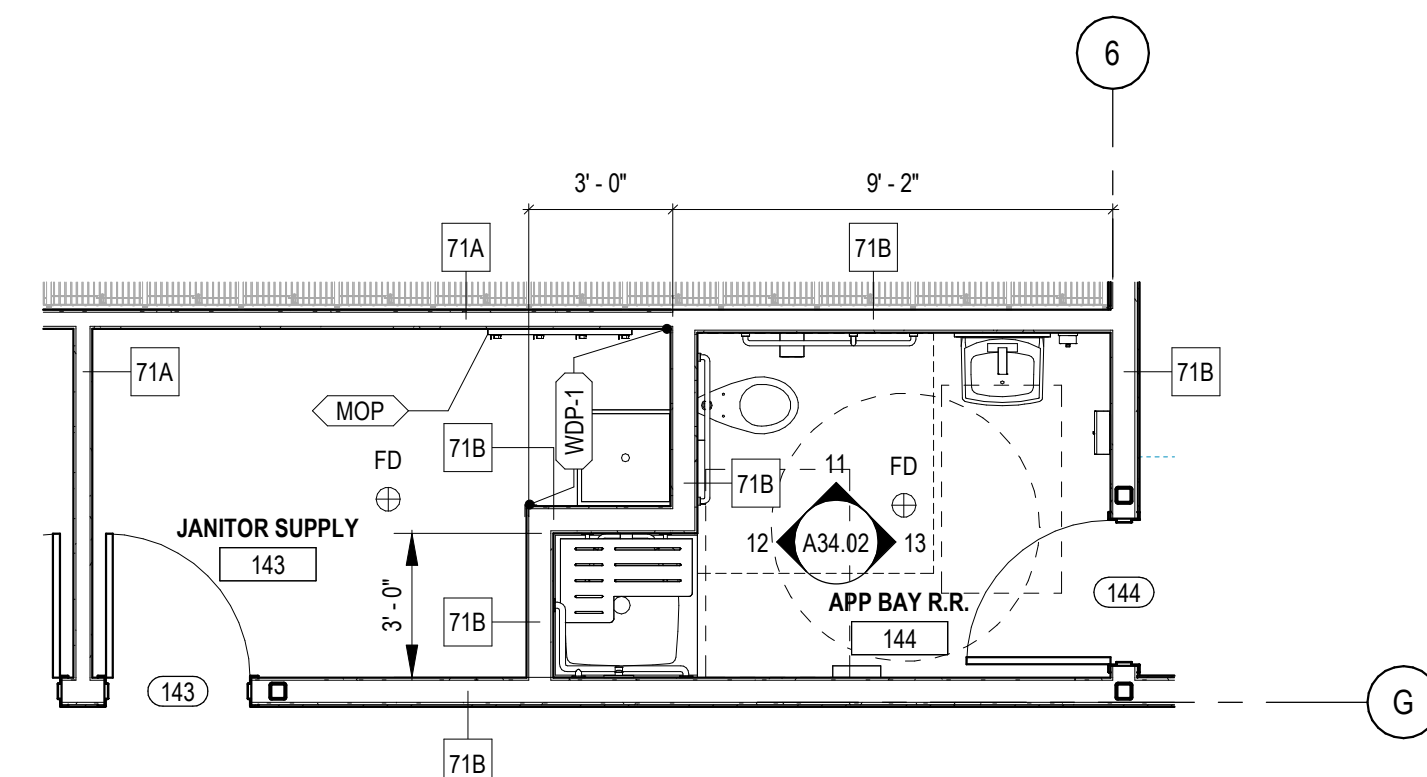
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03	ADDENDUM #03	9/19/2025
04	ADDENDUM #04	9/24/2025

AHJ APPROVAL STAMP

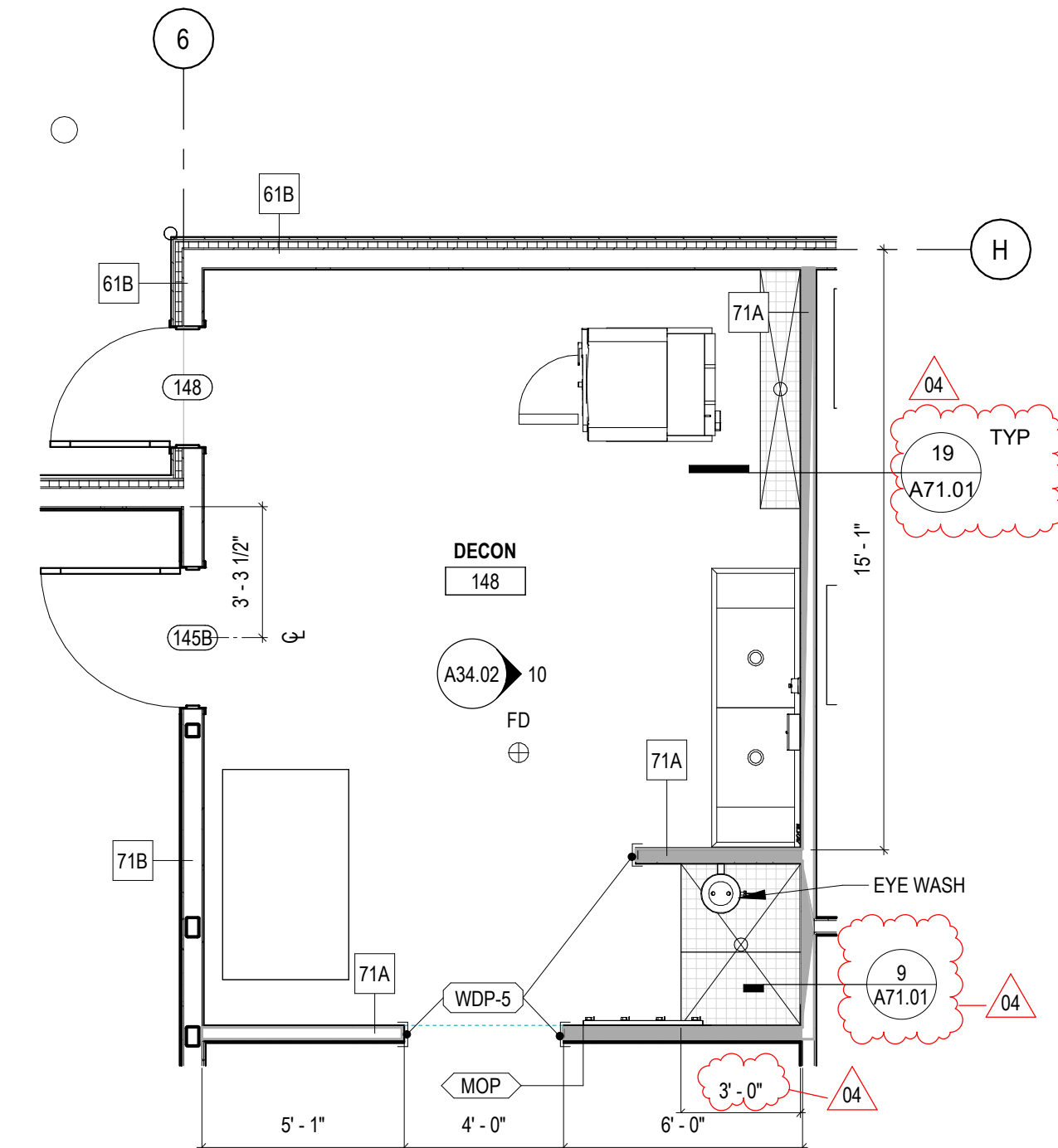
ENLARGED FLOOR
PLANS

SHEET #

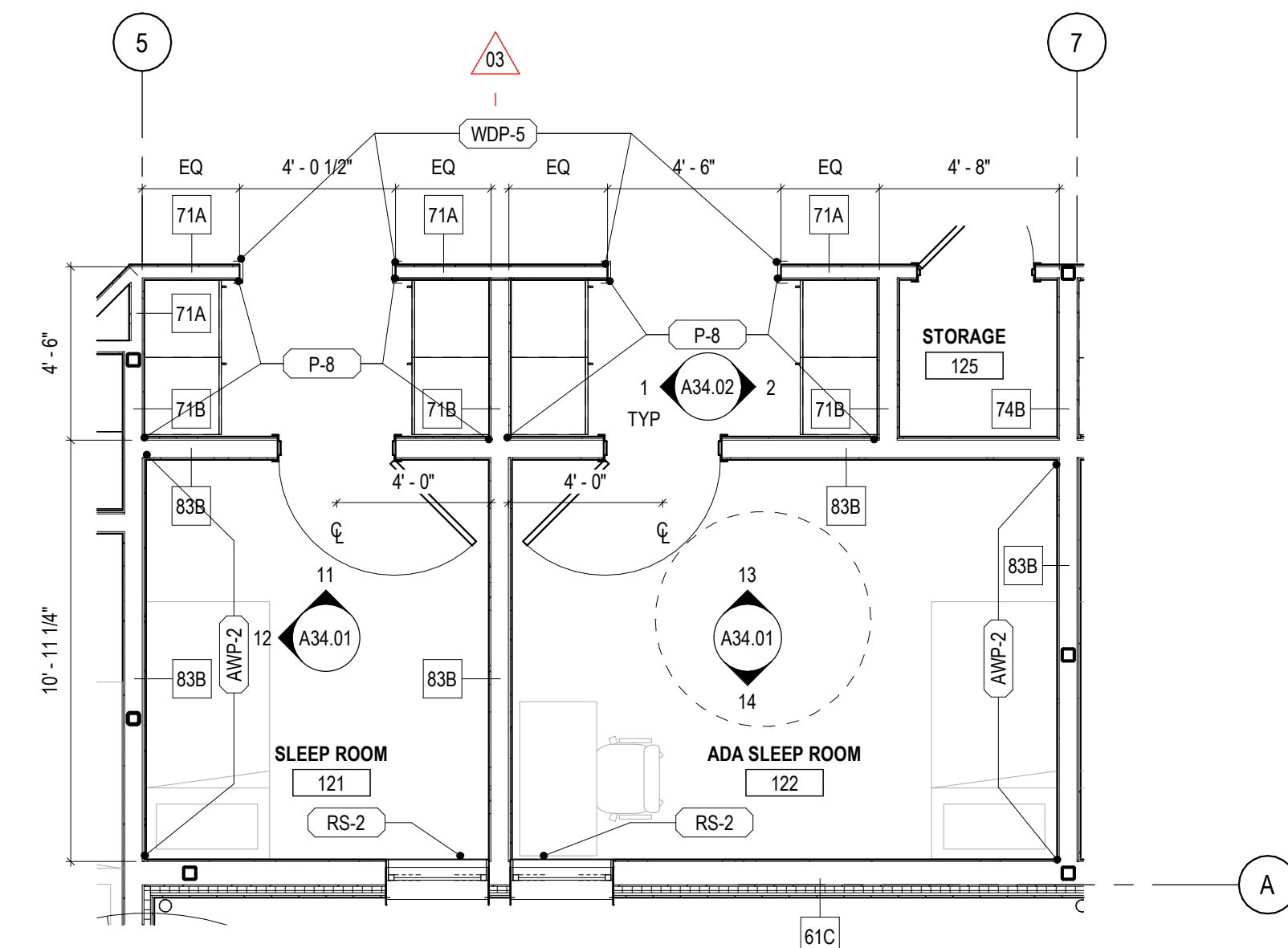
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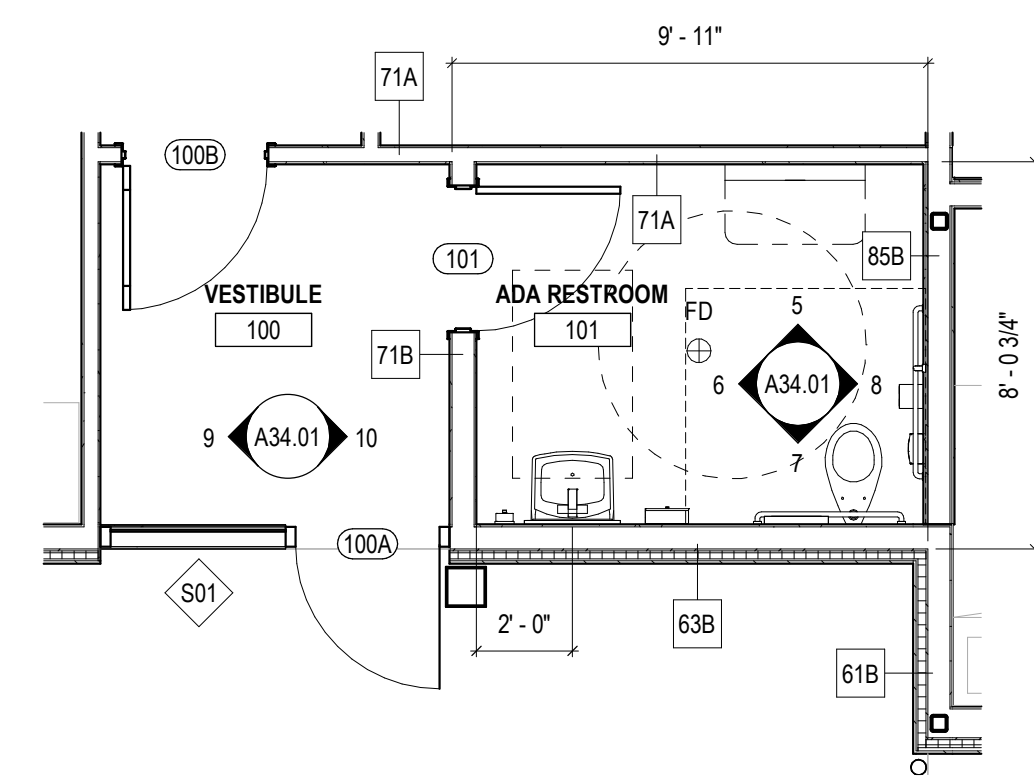
4 JANITOR / APP BAY R.R. - ENLARGED PLAN
1/4" = 1'-0"



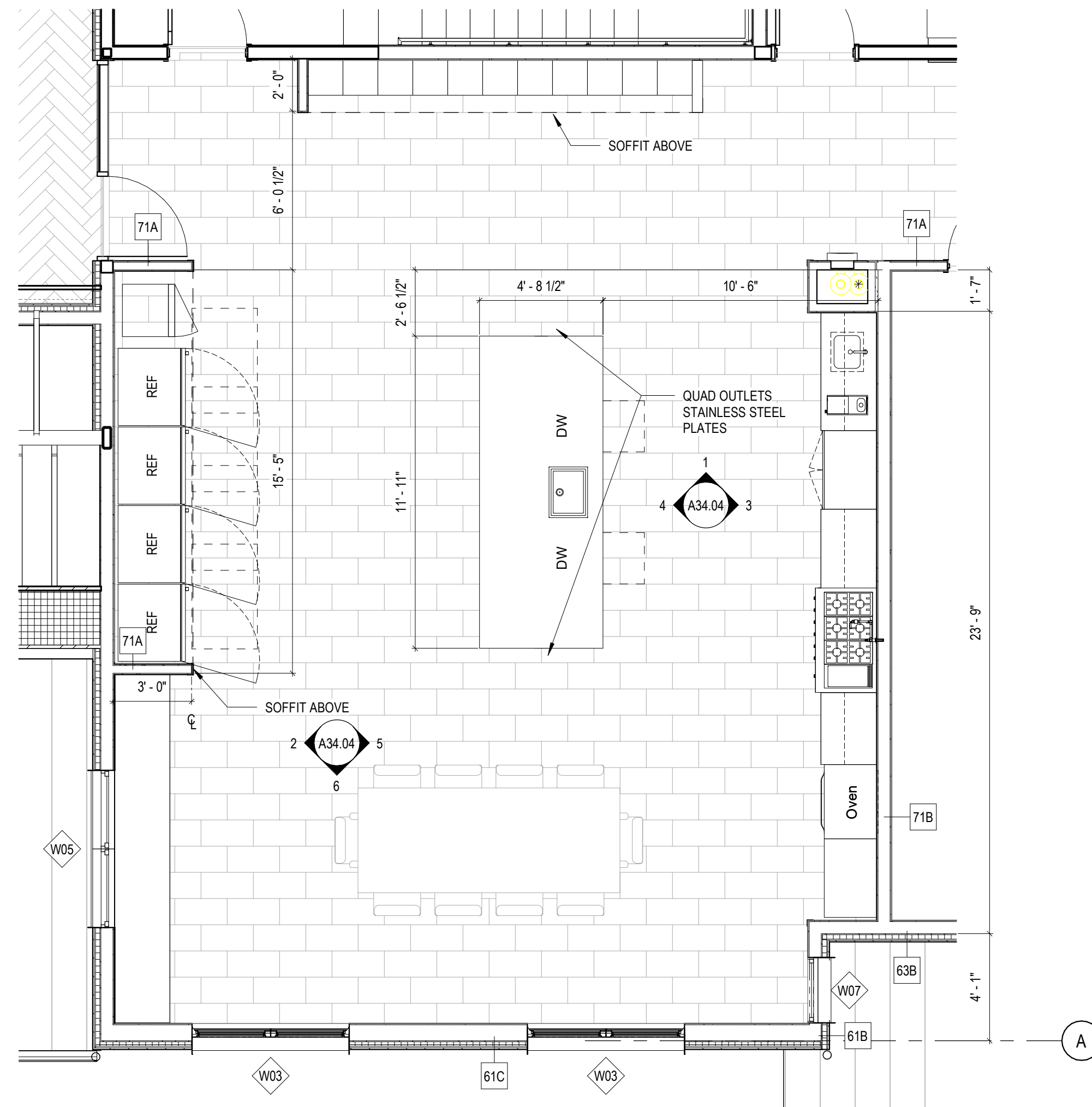
3 DECON - ENLARGED PLAN
1/4" = 1'-0"



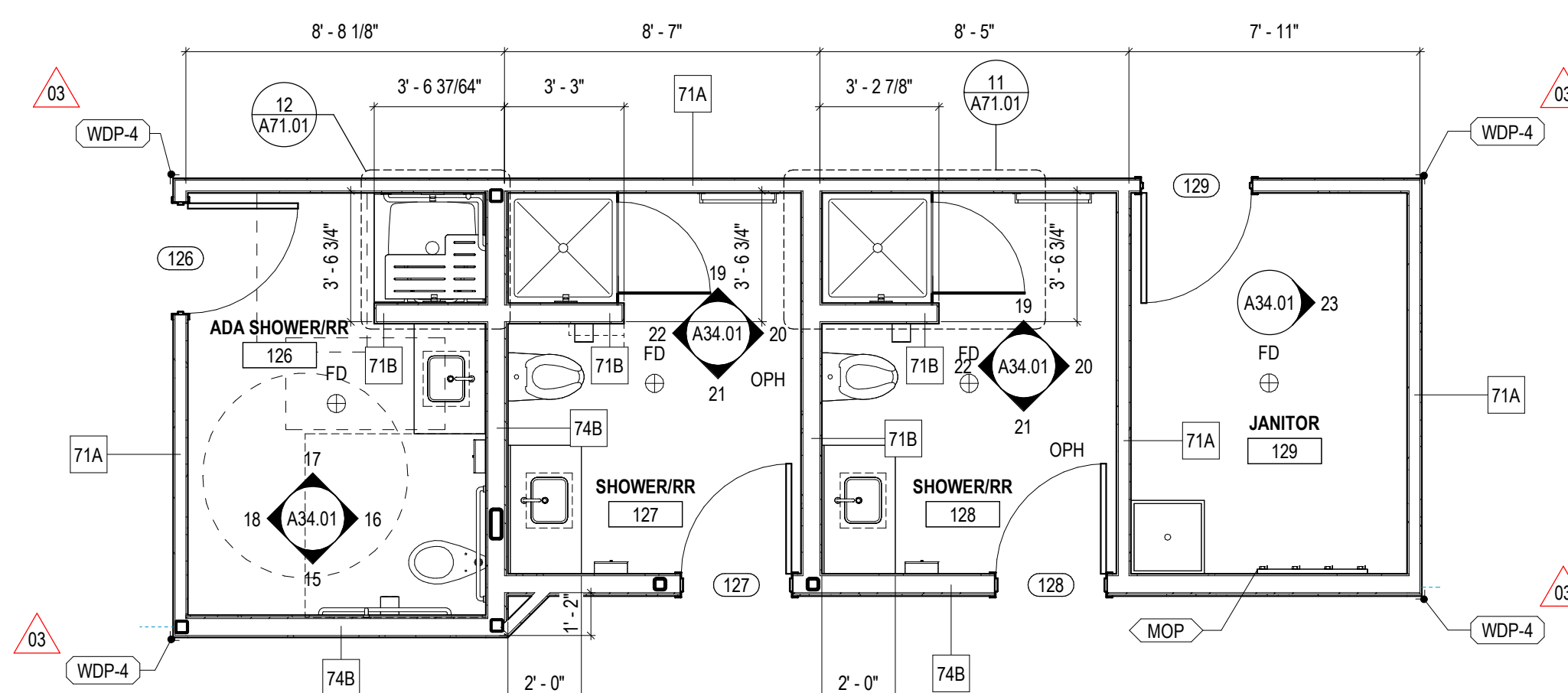
2 SLEEP ROOMS - TYP ENLARGED PLAN
1/4" = 1'-0"



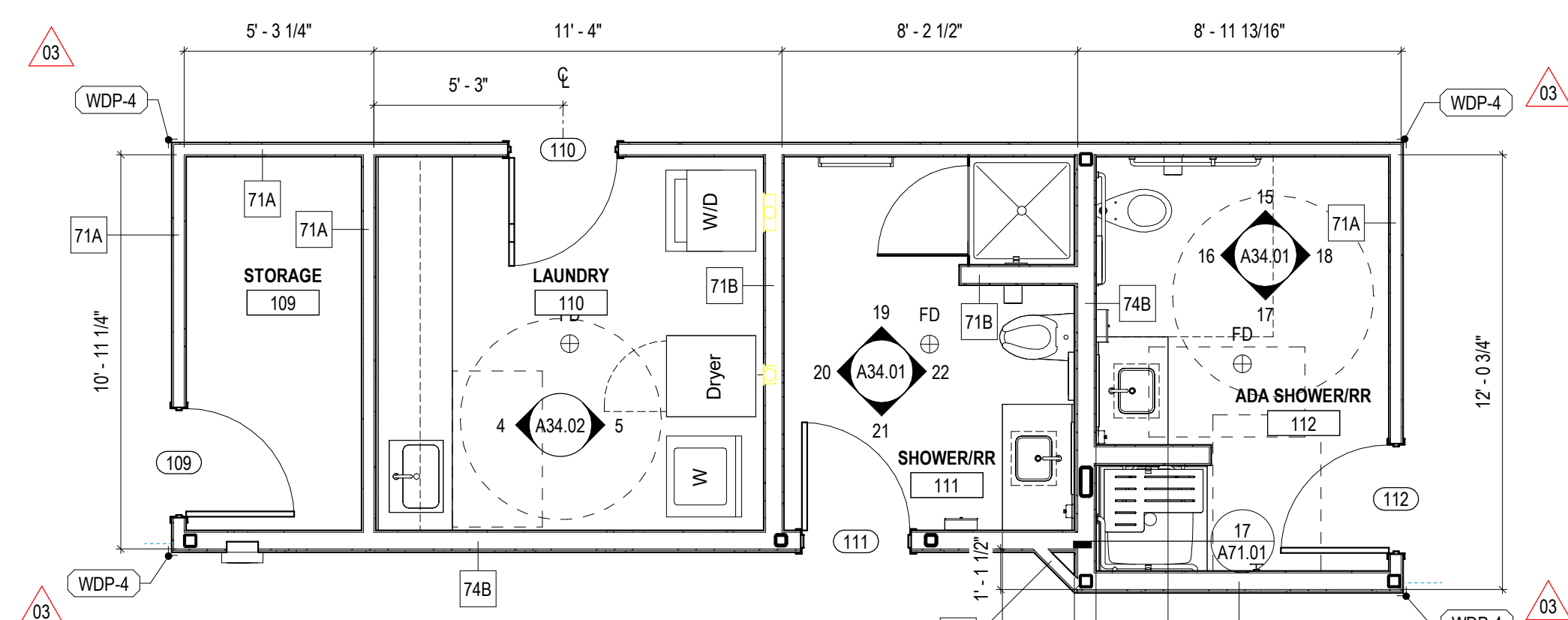
1 PUBLIC RESTROOM - ENLARGED PLAN
1/4" = 1'-0"



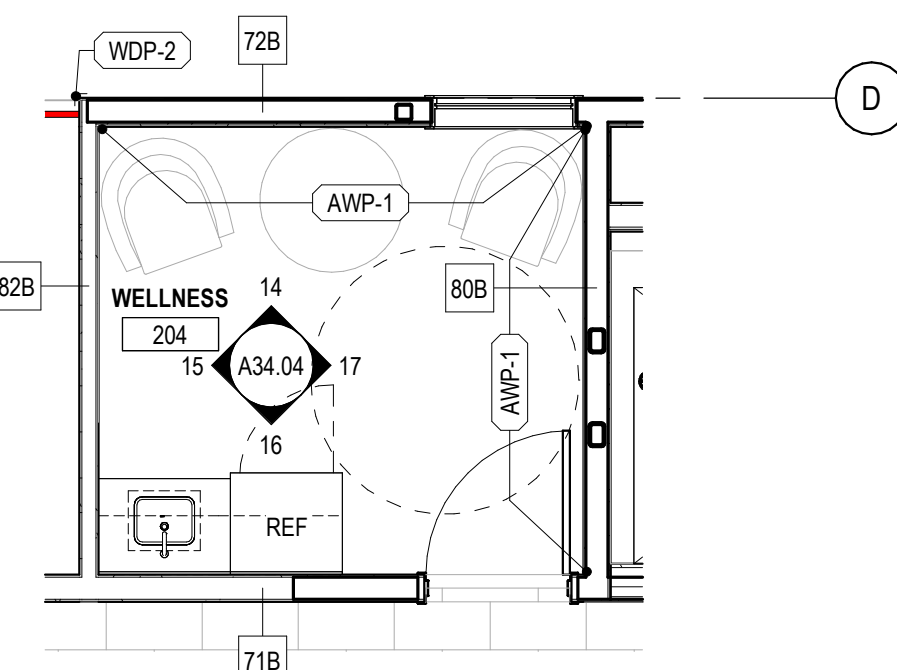
7 KITCHEN / DINING - ENLARGED PLAN
1/4" = 1'-0"



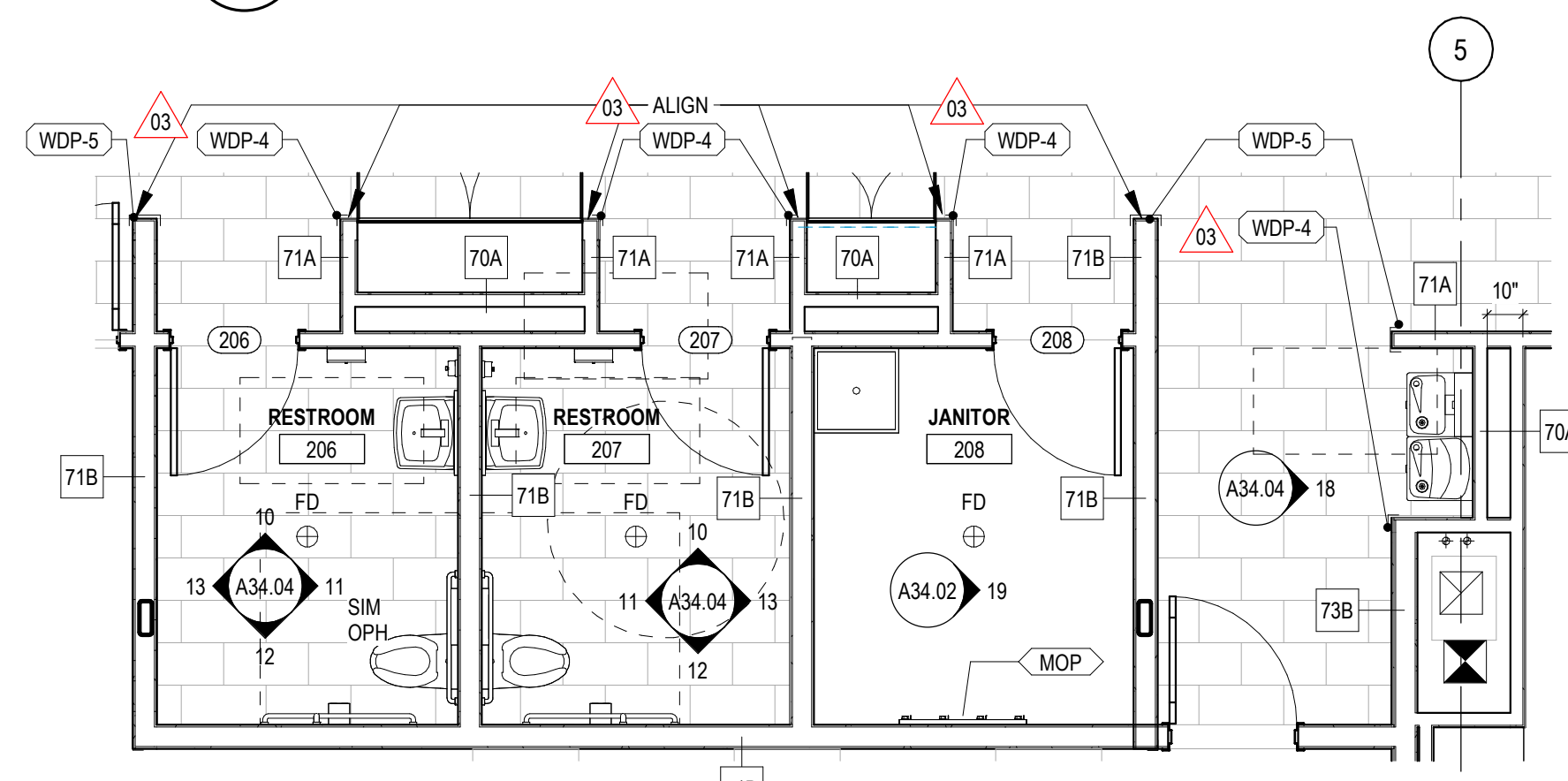
6 JANITOR / RESTROOMS - ENLARGED PLAN
1/4" = 1'-0"



5 RESTROOMS / LAUNDRY / MECH - ENLARGED PLAN
1/4" = 1'-0"



9 WELLNESS - ENLARGED PLAN
1/4" = 1'-0"

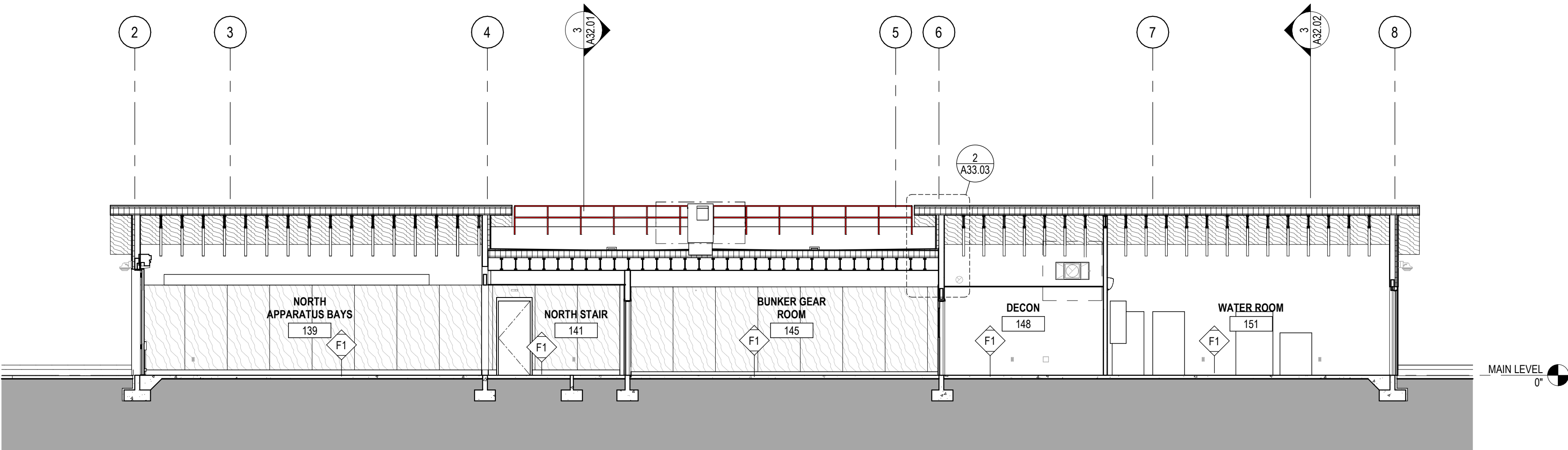
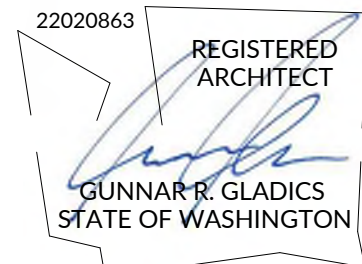


8 R.R. / JANITOR - ENLARGED PLAN
1/4" = 1'-0"

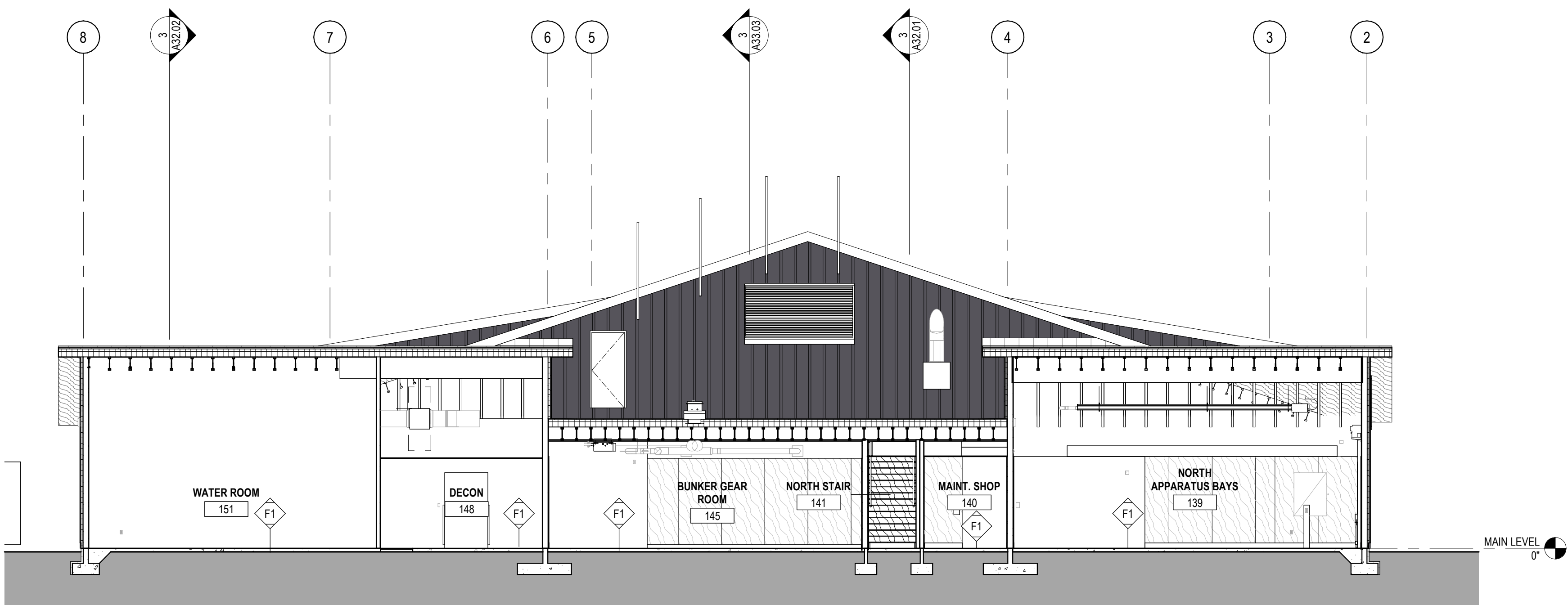
NOTES & LEGEND - SECTIONS

1. REFERENCE A03.01 AND A03.02 FOR ASSEMBLY TYPES AND CONSTRUCTION.

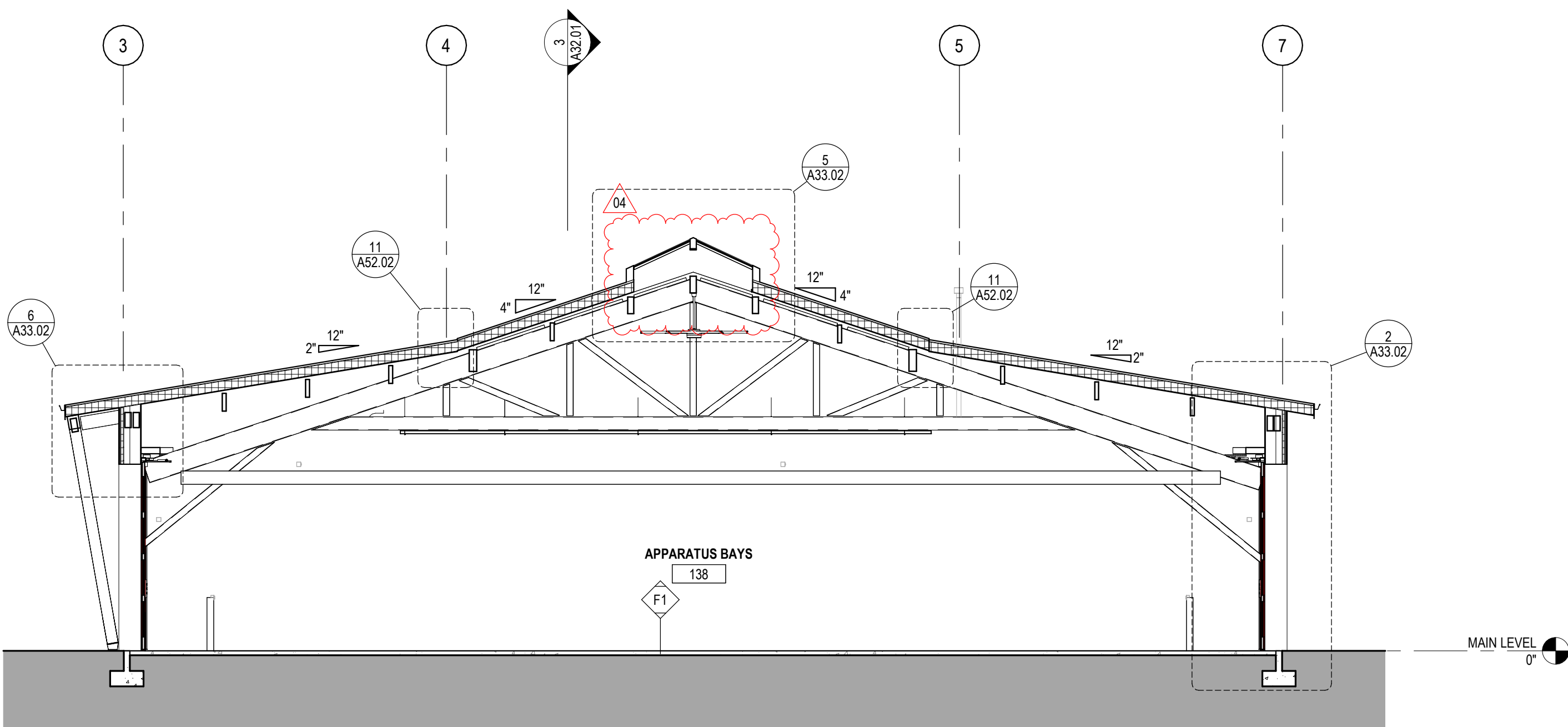
Rice Ferguson Miller
ARCHITECTURE INTERIORS PLANNING VIZLAB
275 FIFTH STREET, SUITE 100
BREMERTON, WA 98537
360-377-8773
RFMARCH.COM



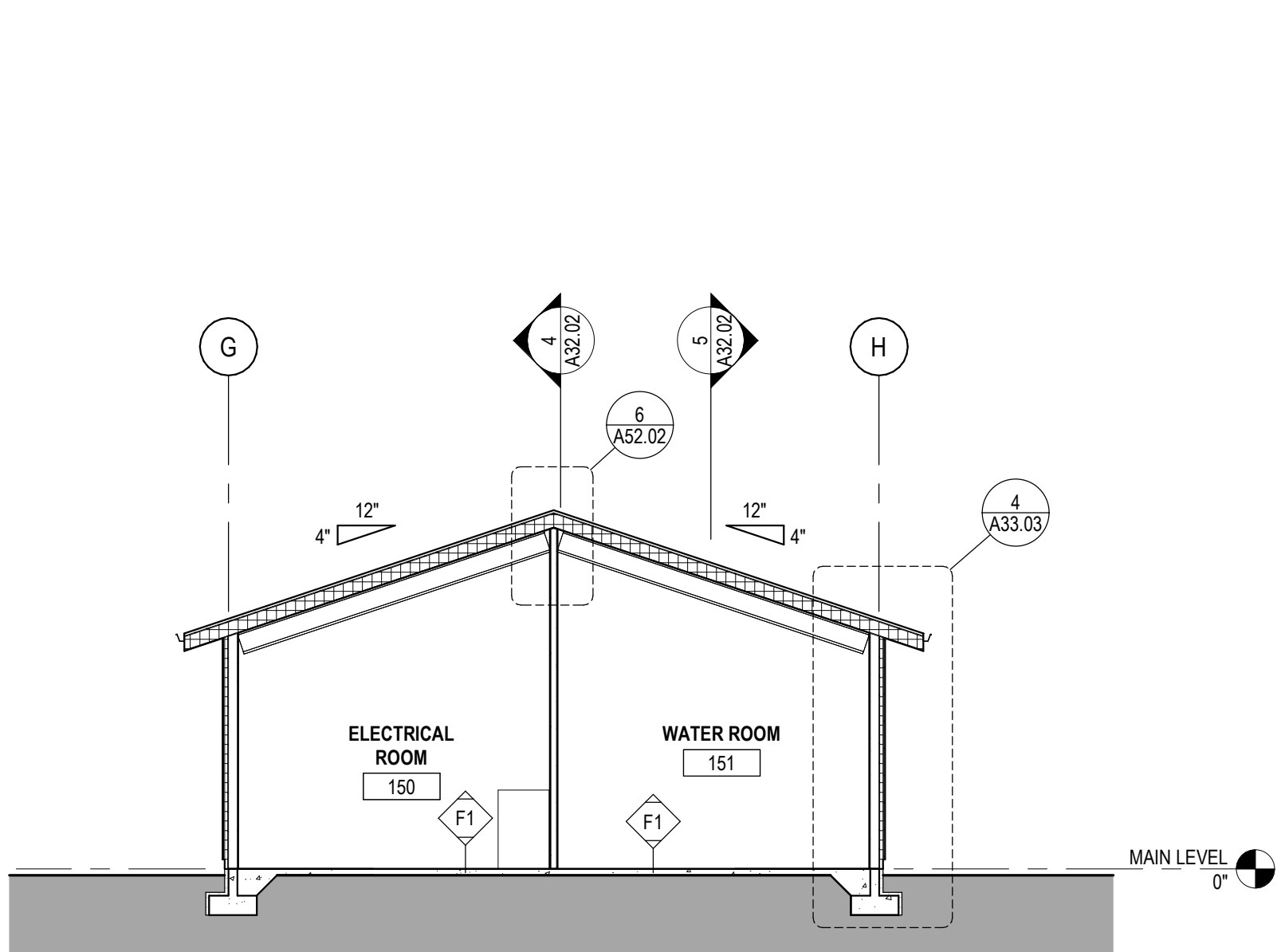
5 LONGITUDINAL BUILDING SECTION AT OPERATIONS WING 2
1/8" = 1'-0"



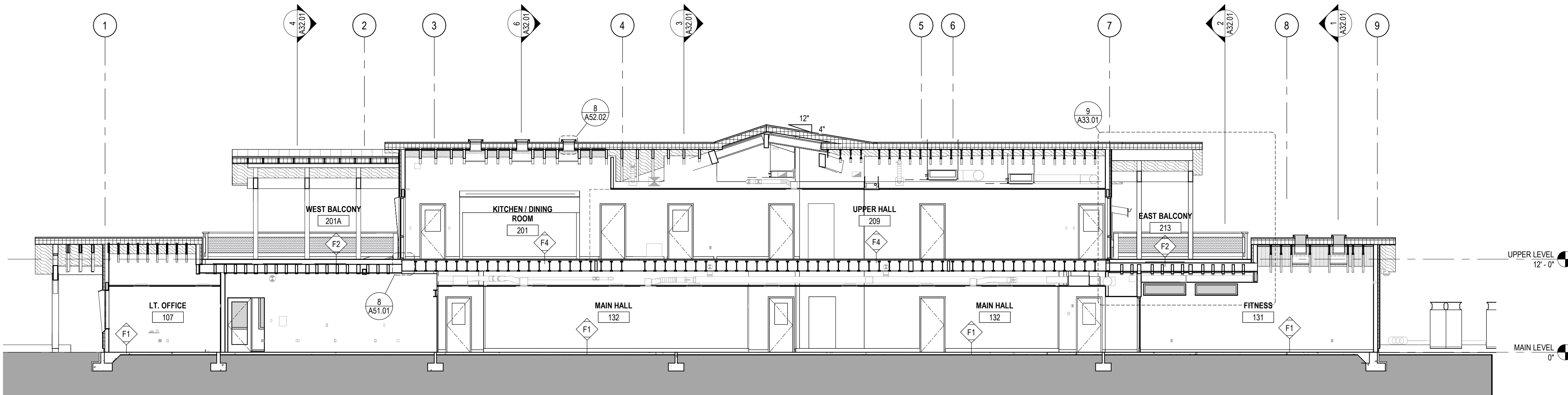
4 LONGITUDINAL BUILDING SECTION AT OPERATIONS WING
1/8" = 1'-0"



2 TRANSVERSE BUILDING SECTION AT APPARATUS BAYS
1/8" = 1'-0"



3 TRANSVERSE BUILDING SECTION AT OPERATIONS WING
1/8" = 1'-0"



1 LONGITUDINAL BUILDING SECTION AT RES. / ADMIN. WING 2
1/8" = 1'-0"

GIG HARBOR FIRE STATION 51
GIG HARBOR FIRE & MEDIC ONE
6711 KIMBALL DRIVE
GIG HARBOR, WA 98336

PROJECT # 2022011

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03	ADDENDUM #03	9/19/2025
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AHJ APPROVAL STAMP

BUILDING SECTIONS

SHEET #

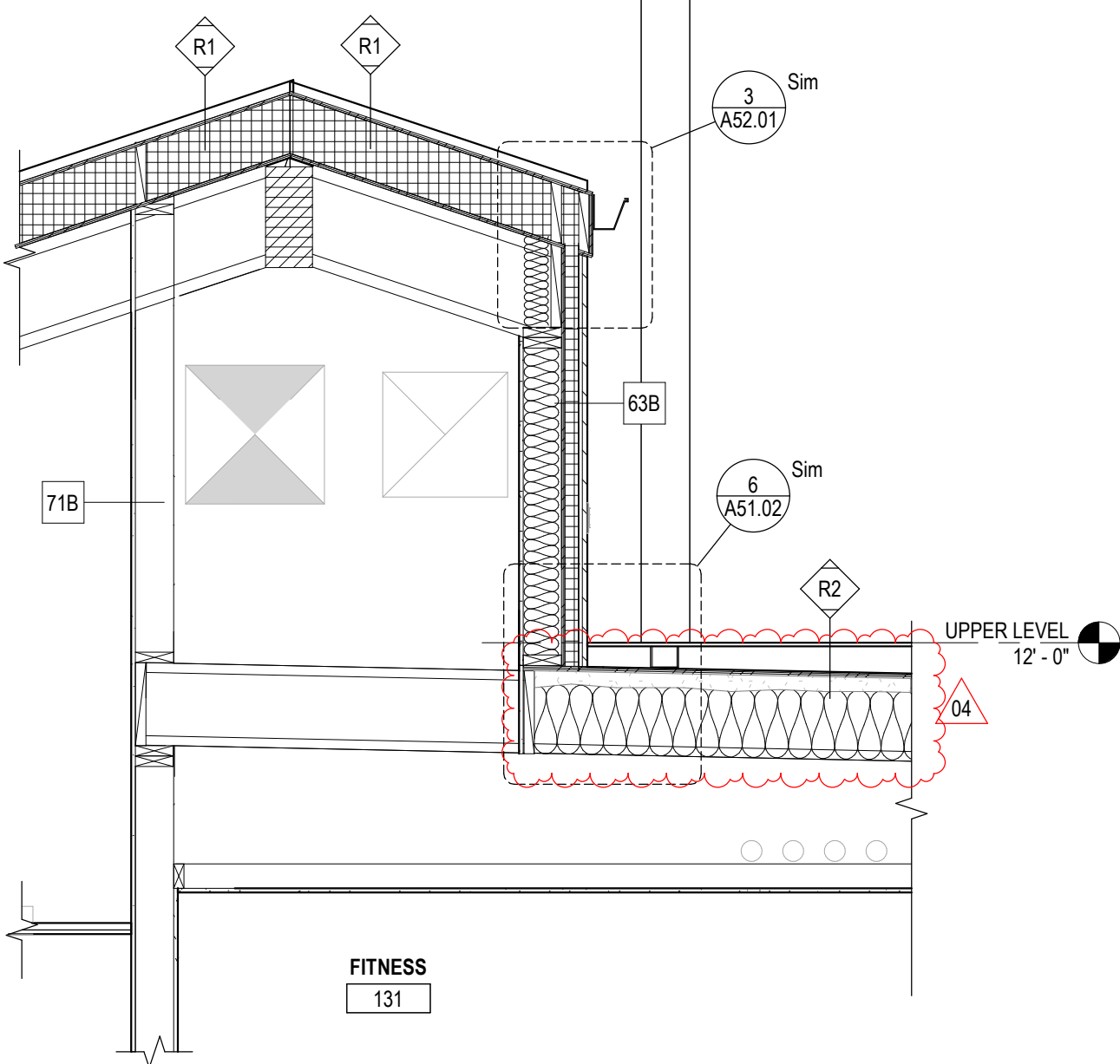
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NOTES & LEGEND - SECTIONS

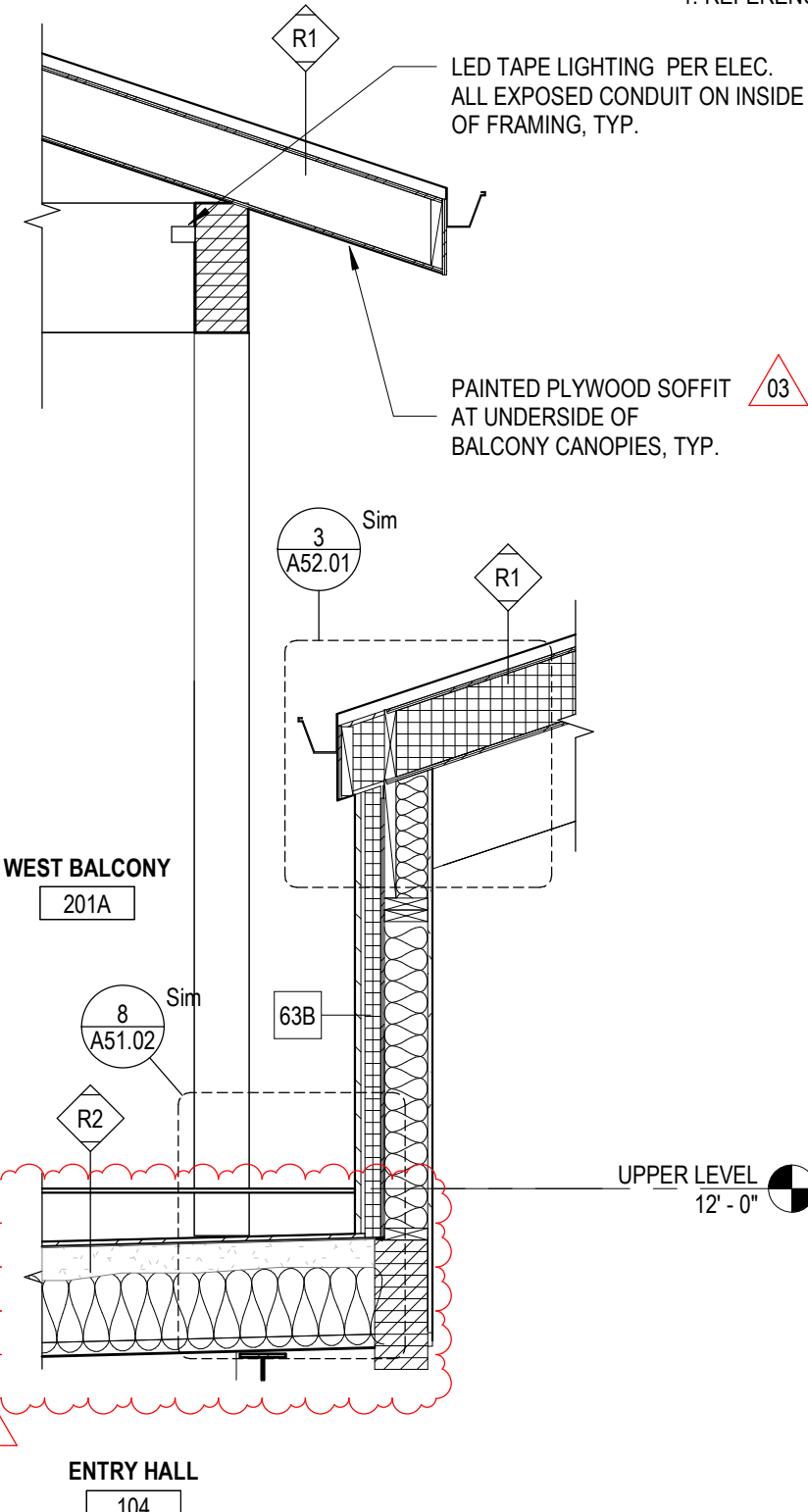
1. REFERENCE A03.01 AND A03.02 FOR ASSEMBLY TYPES AND CONSTRUCTION.

LED TAPE LIGHTING PER ELEC.
ALL EXPOSED CONDUIT ON INSIDE FACE
OF FRAMING, TYP.

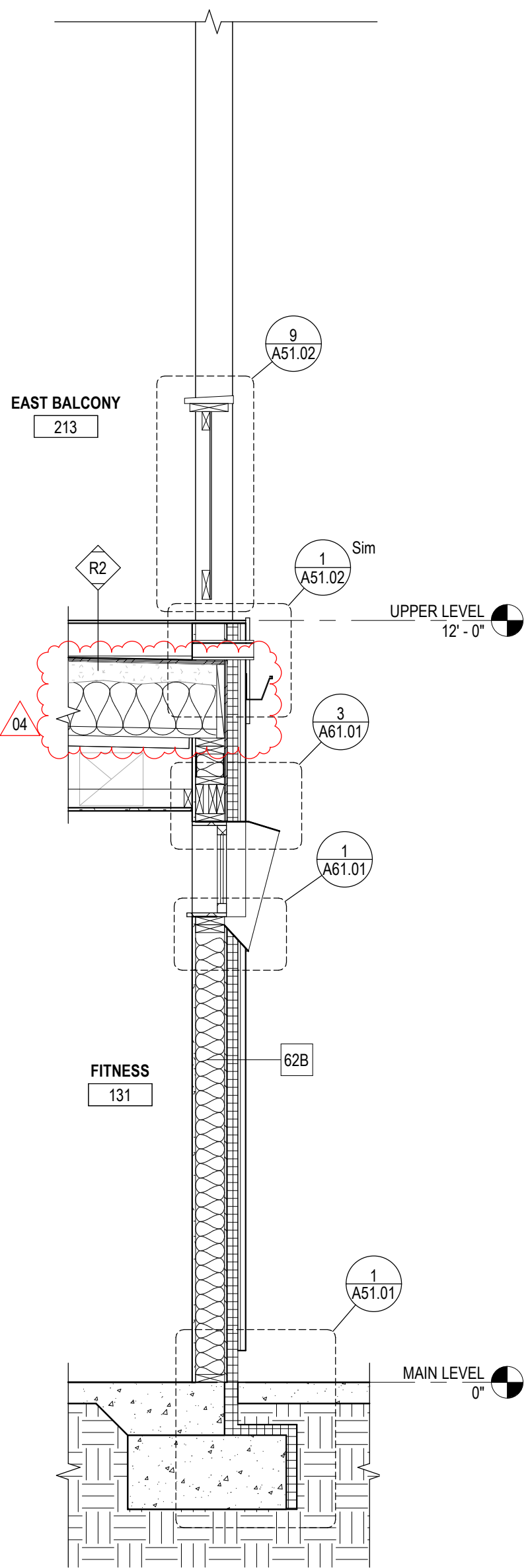
PAINTED PLYWOOD SOFFIT
AT UNDERSIDE OF
BALCONY CANOPIES, TYP.



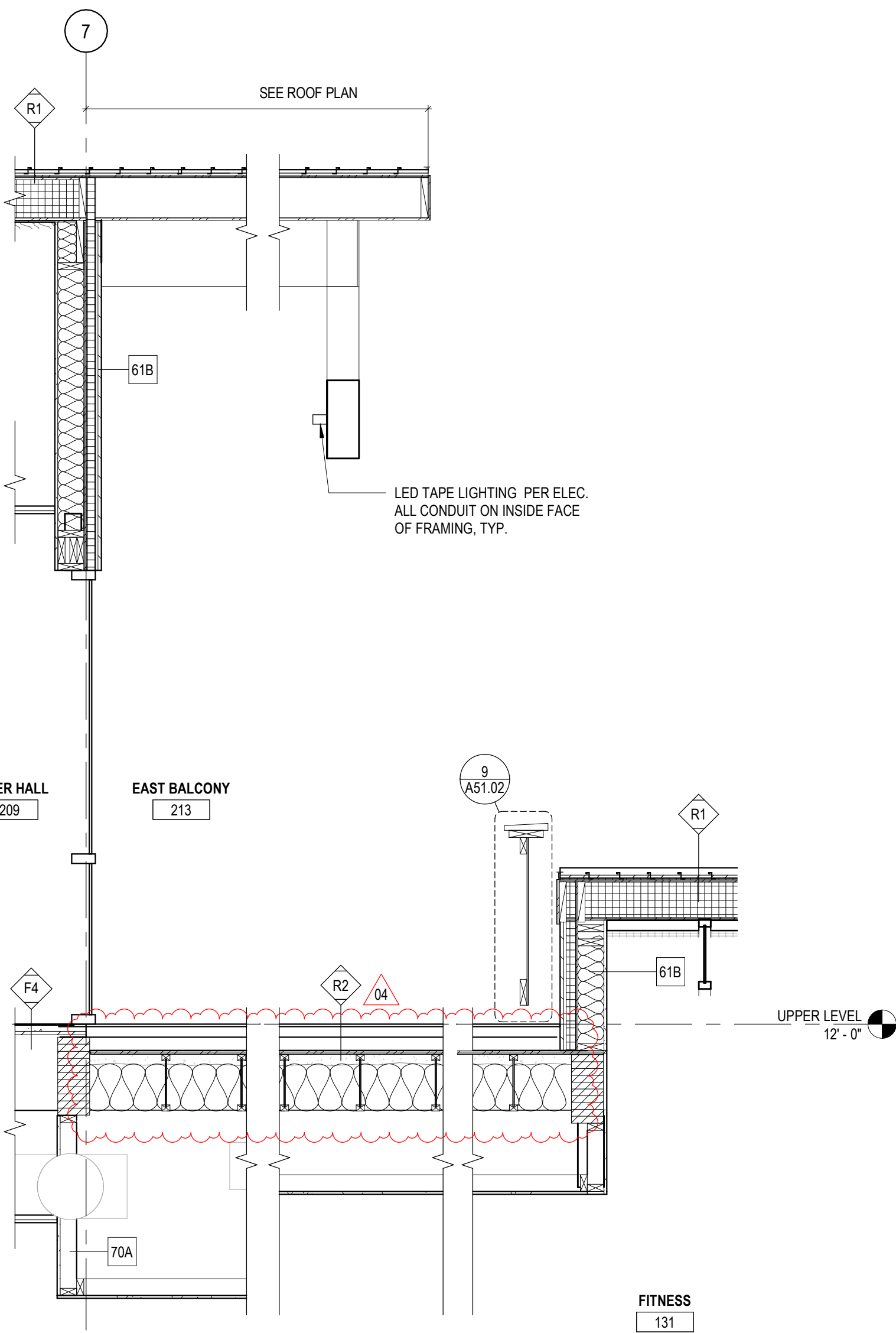
8 WALL SECTION AT HVAC CHASE OVER FITNESS
1/2" = 1'-0"



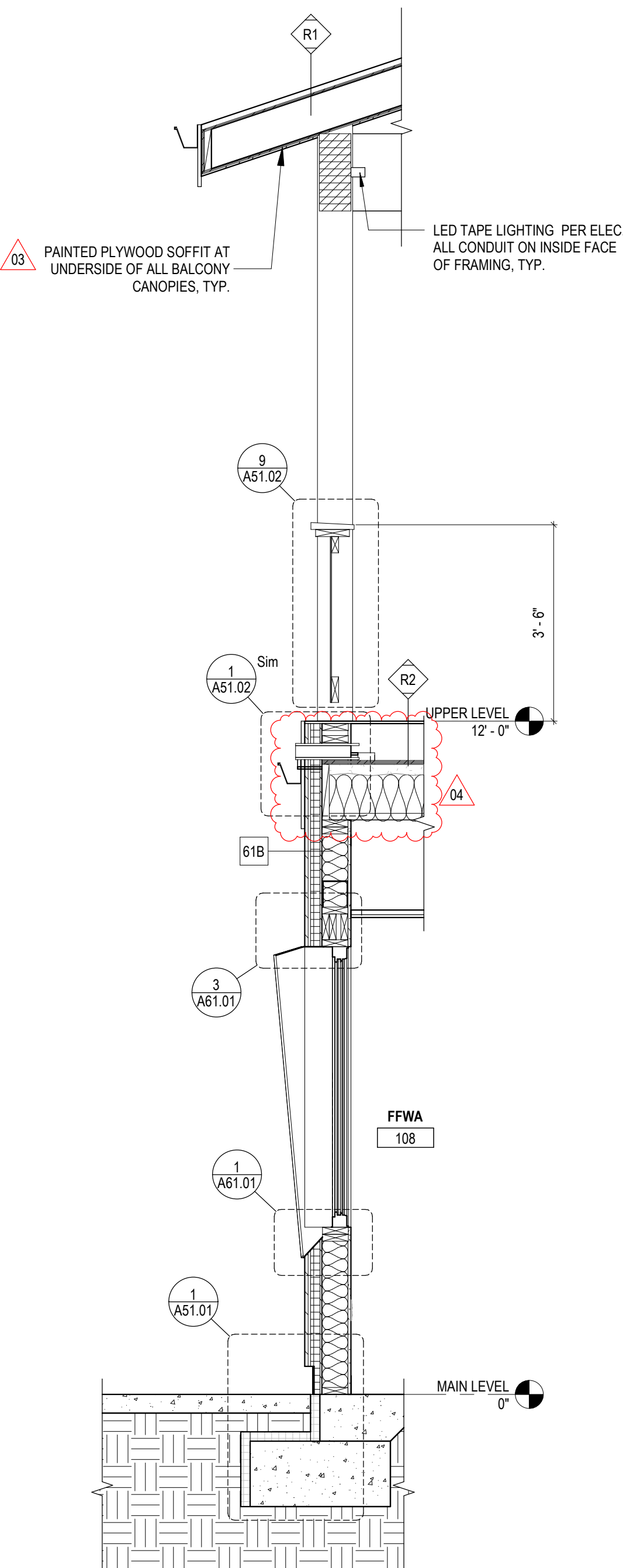
7 WALL SECTION AT WEST BALCONY
1/2" = 1'-0"



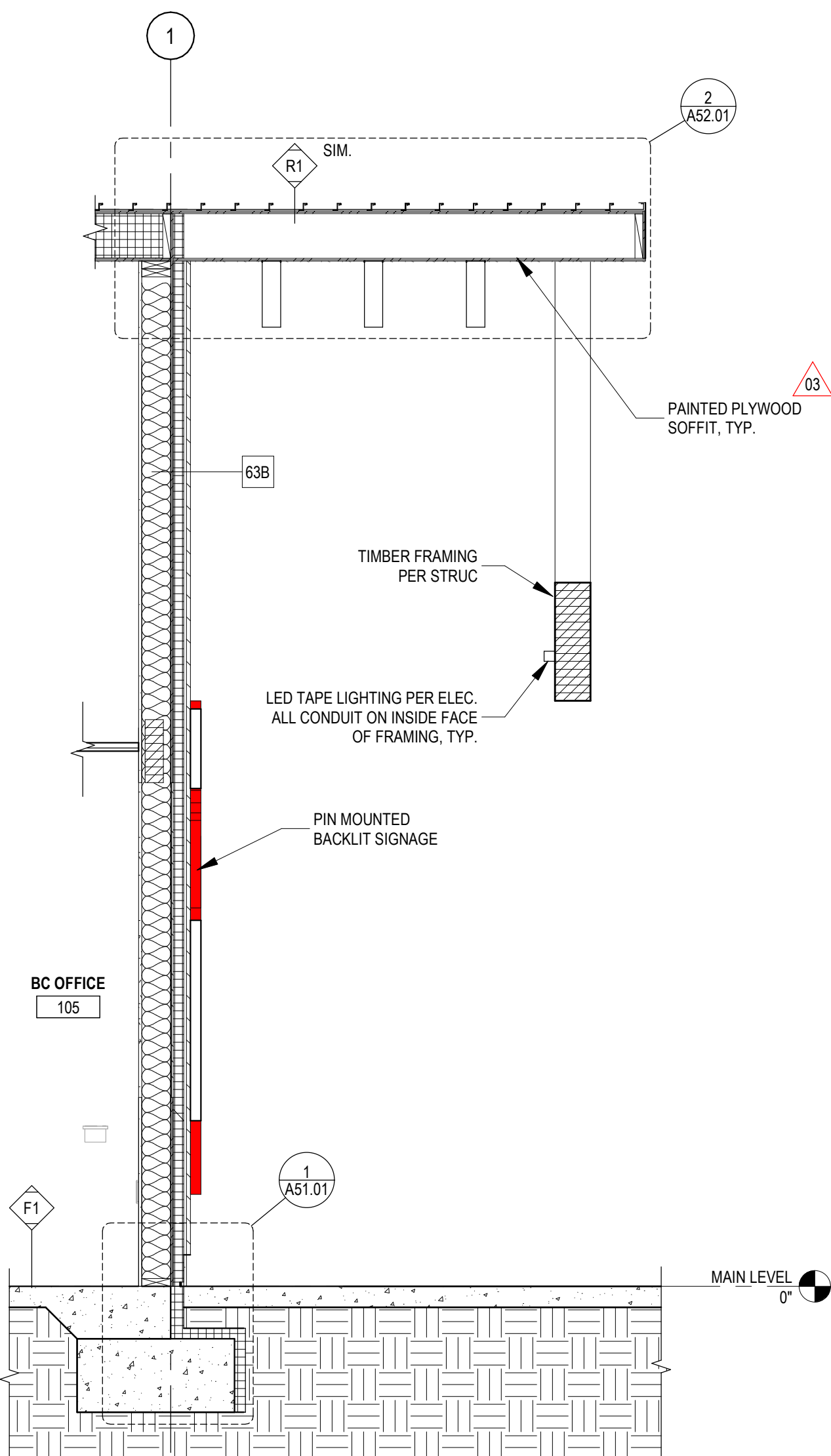
6 WALL SECTION AT EAST BALCONY EDGE
1/2" = 1'-0"



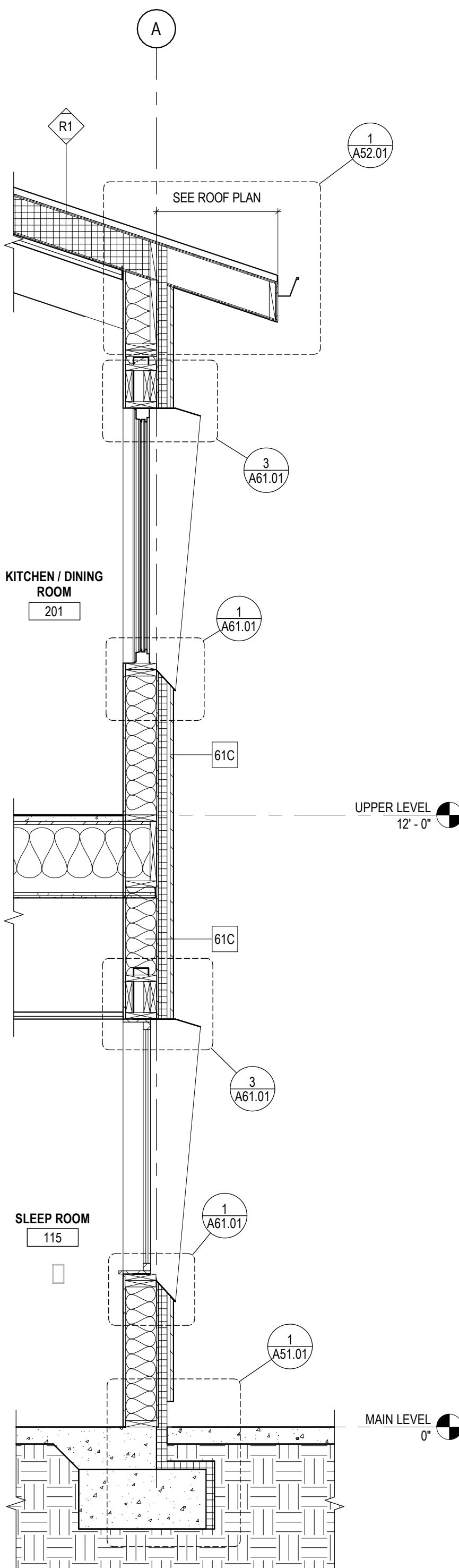
9 WALL SECTION AT EAST BALCONY ENTRY
1/2" = 1'-0"



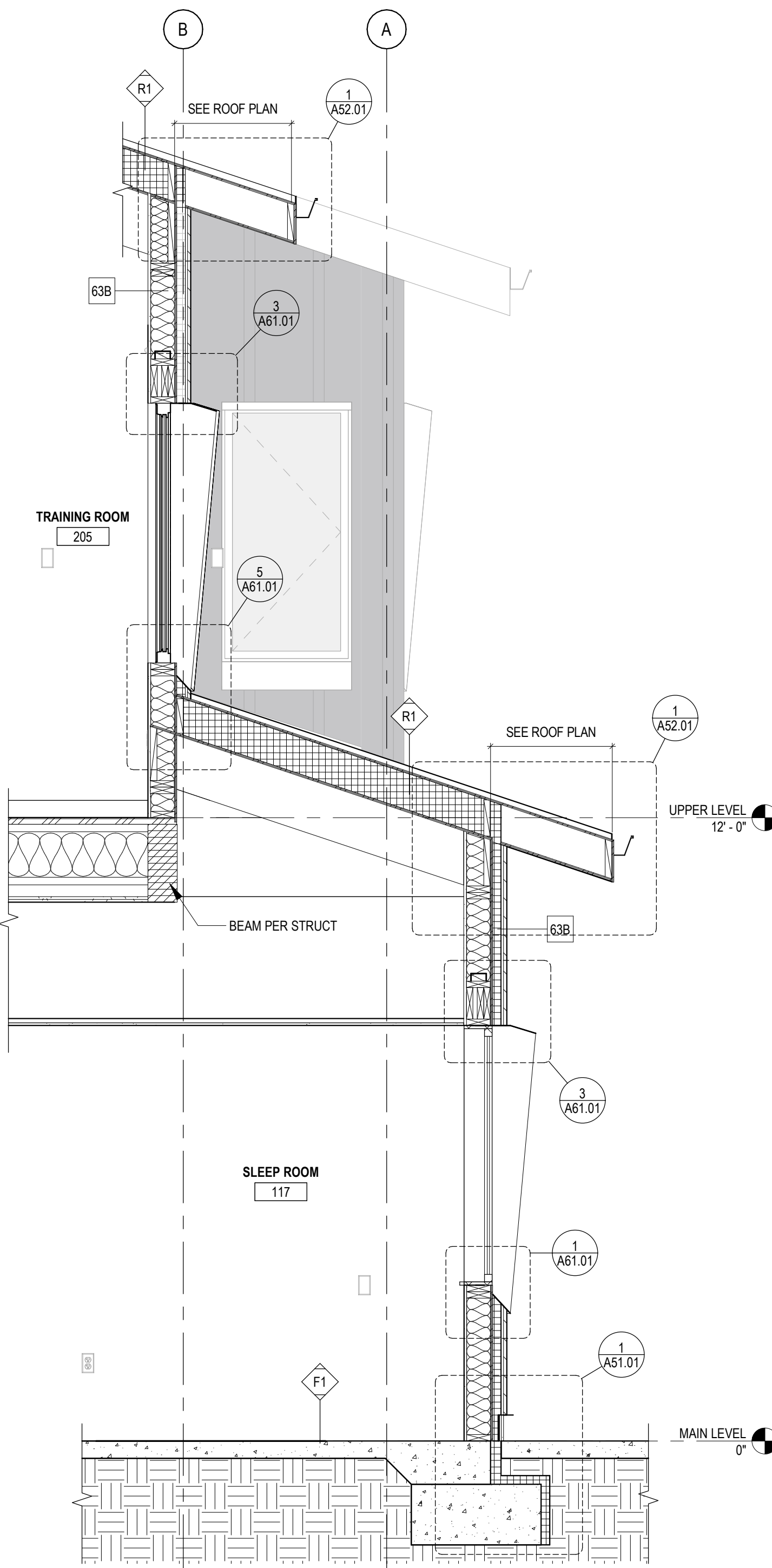
10 WALL SECTION AT FFWA
1/2" = 1'-0"



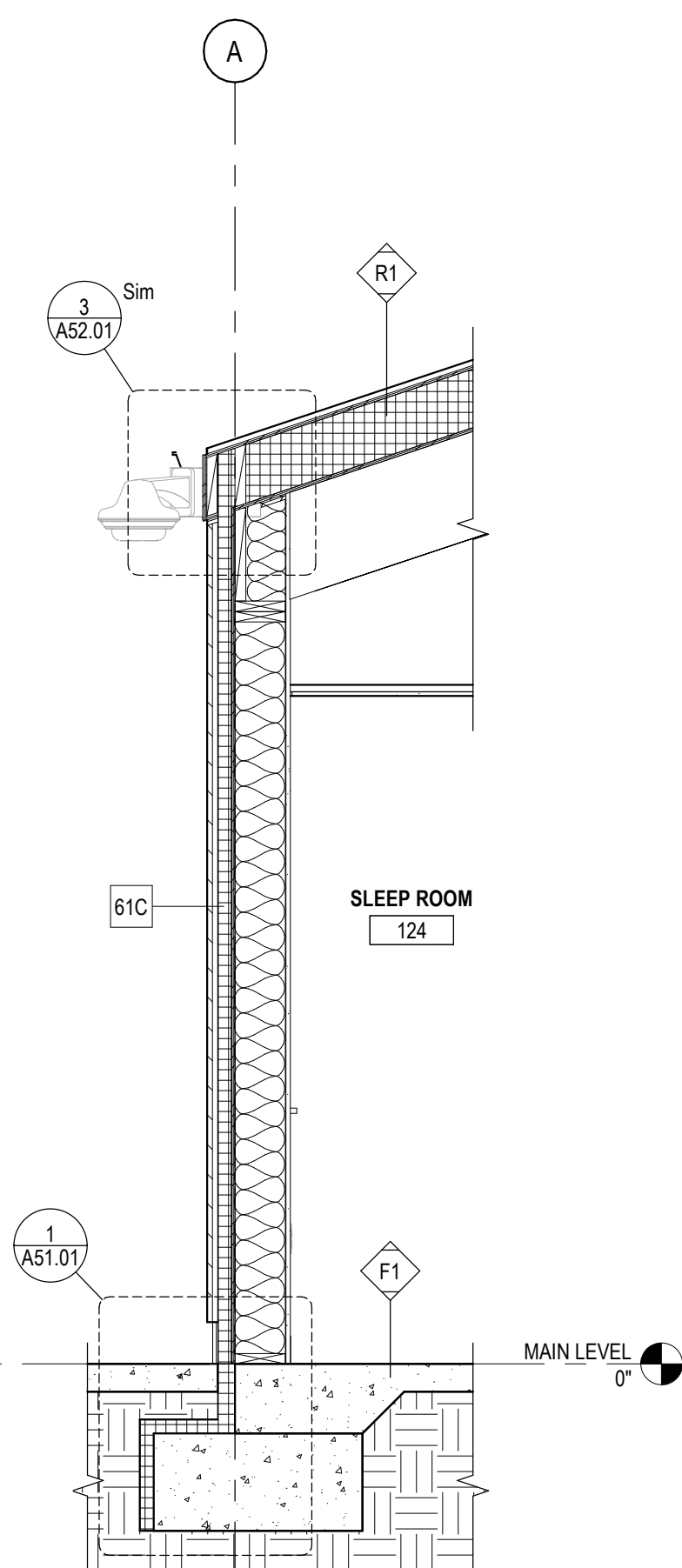
4 WALL SECTION AT BC OFFICE
1/2" = 1'-0"



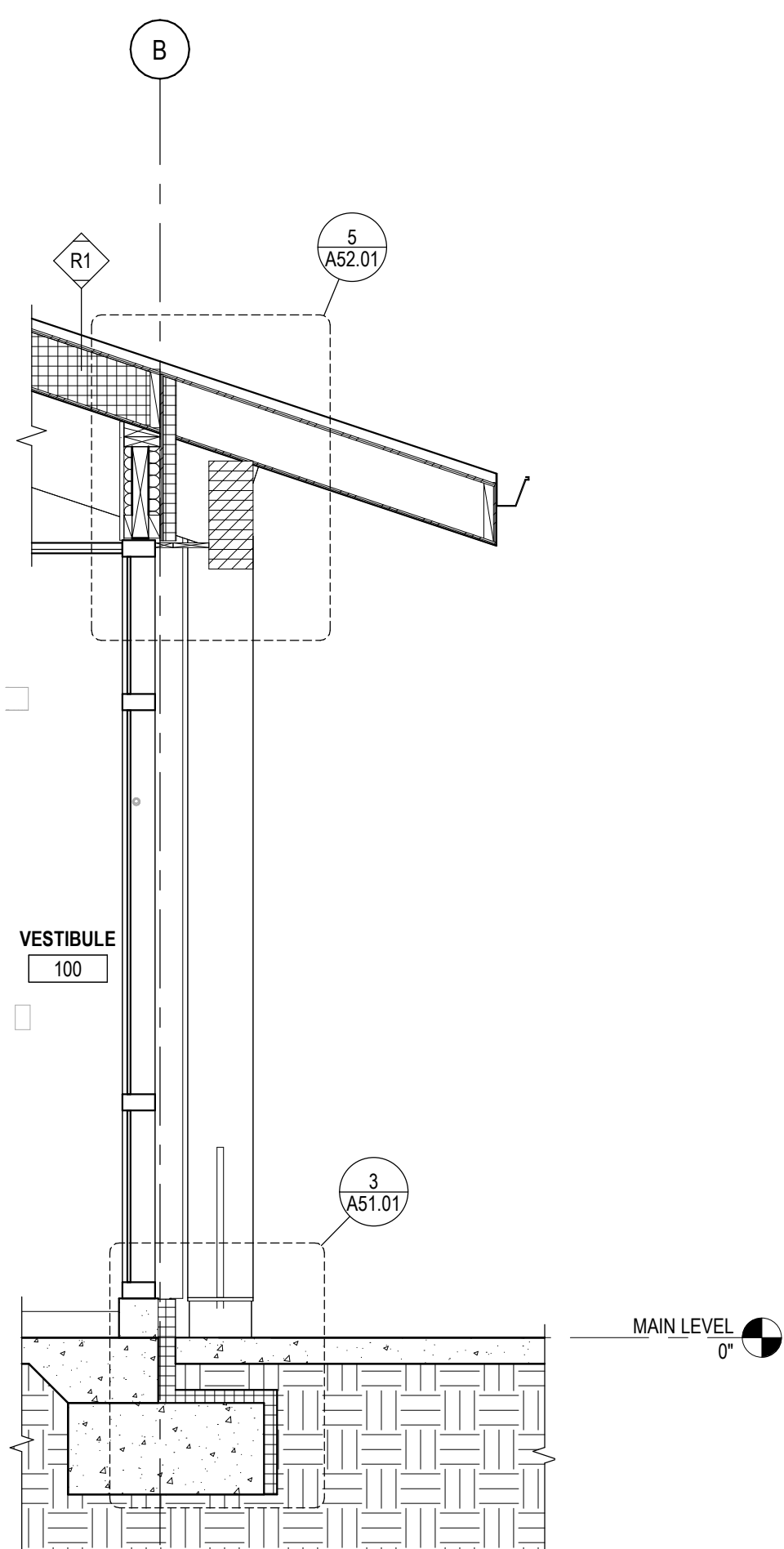
3 WALL SECTION AT RESIDENTIAL
1/2" = 1'-0"



2 WALL SECTION AT SLEEP ROOM BAY
1/2" = 1'-0"



1 WALL SECTION AT SLEEP ROOM 2
1/2" = 1'-0"



5 WALL SECTION AT VESTIBULE
1/2" = 1'-0"

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04 ADDENDUM #04 9/24/2025

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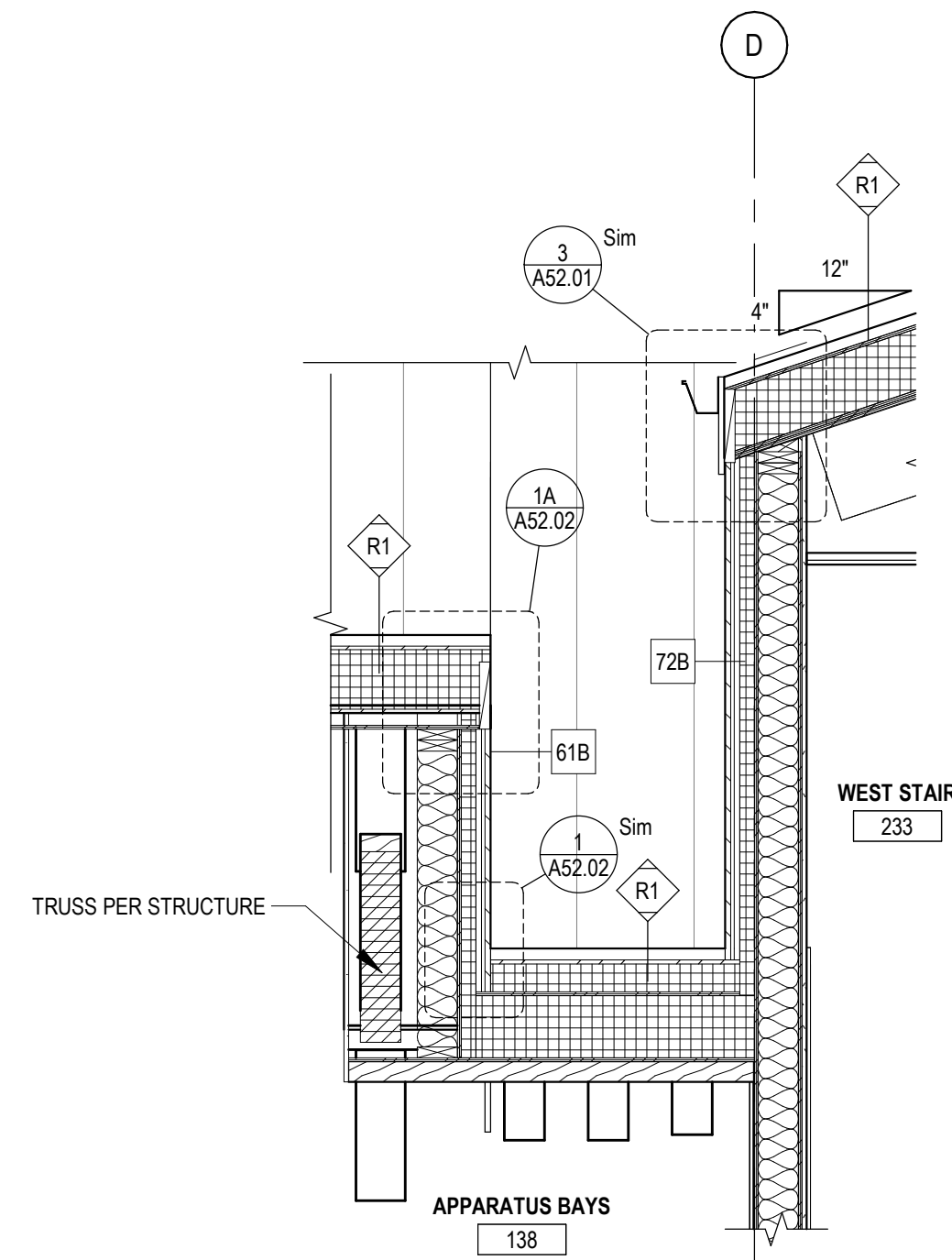
WALL SECTIONS

SHEET #

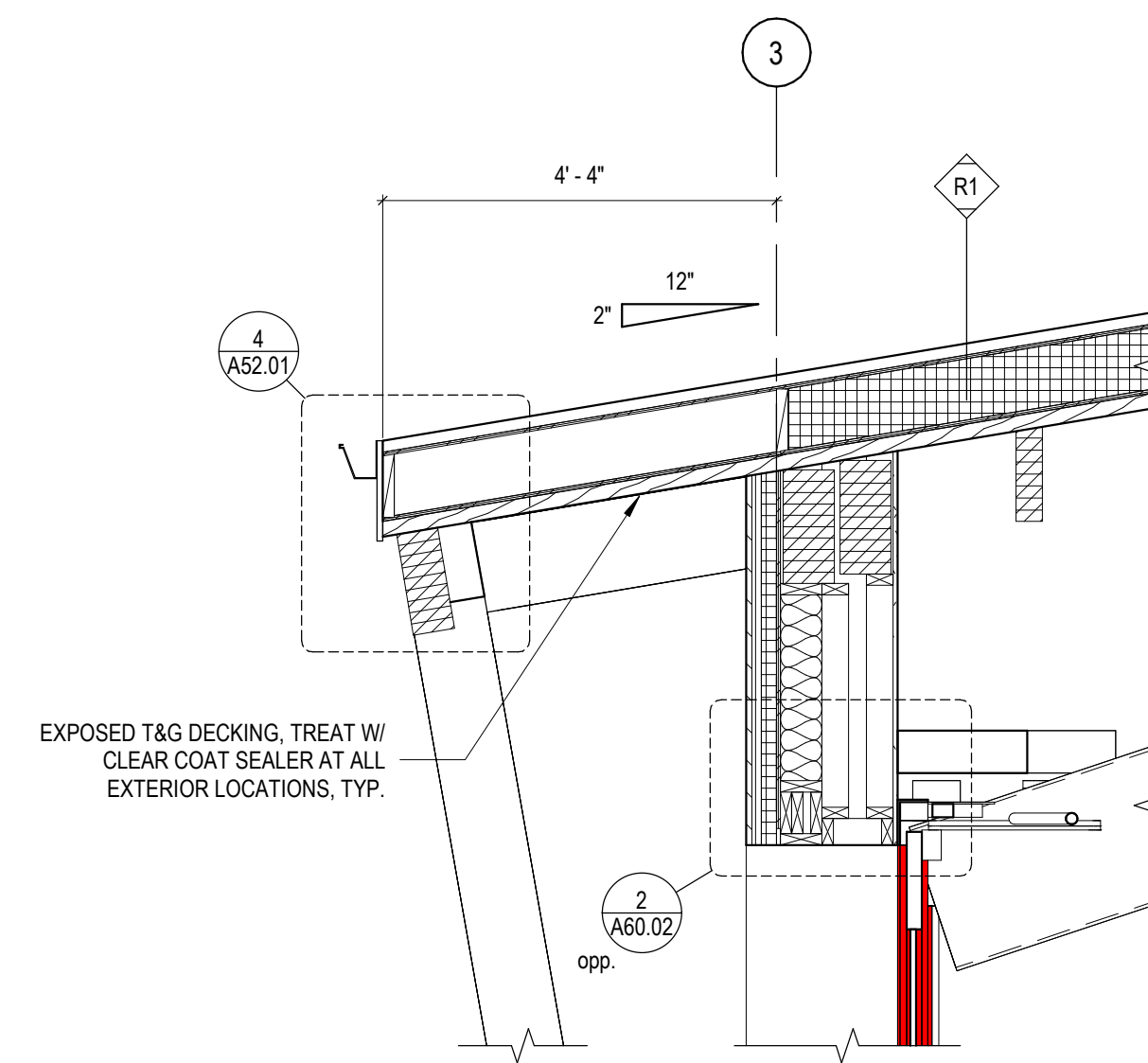
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NOTES & LEGEND - SECTIONS

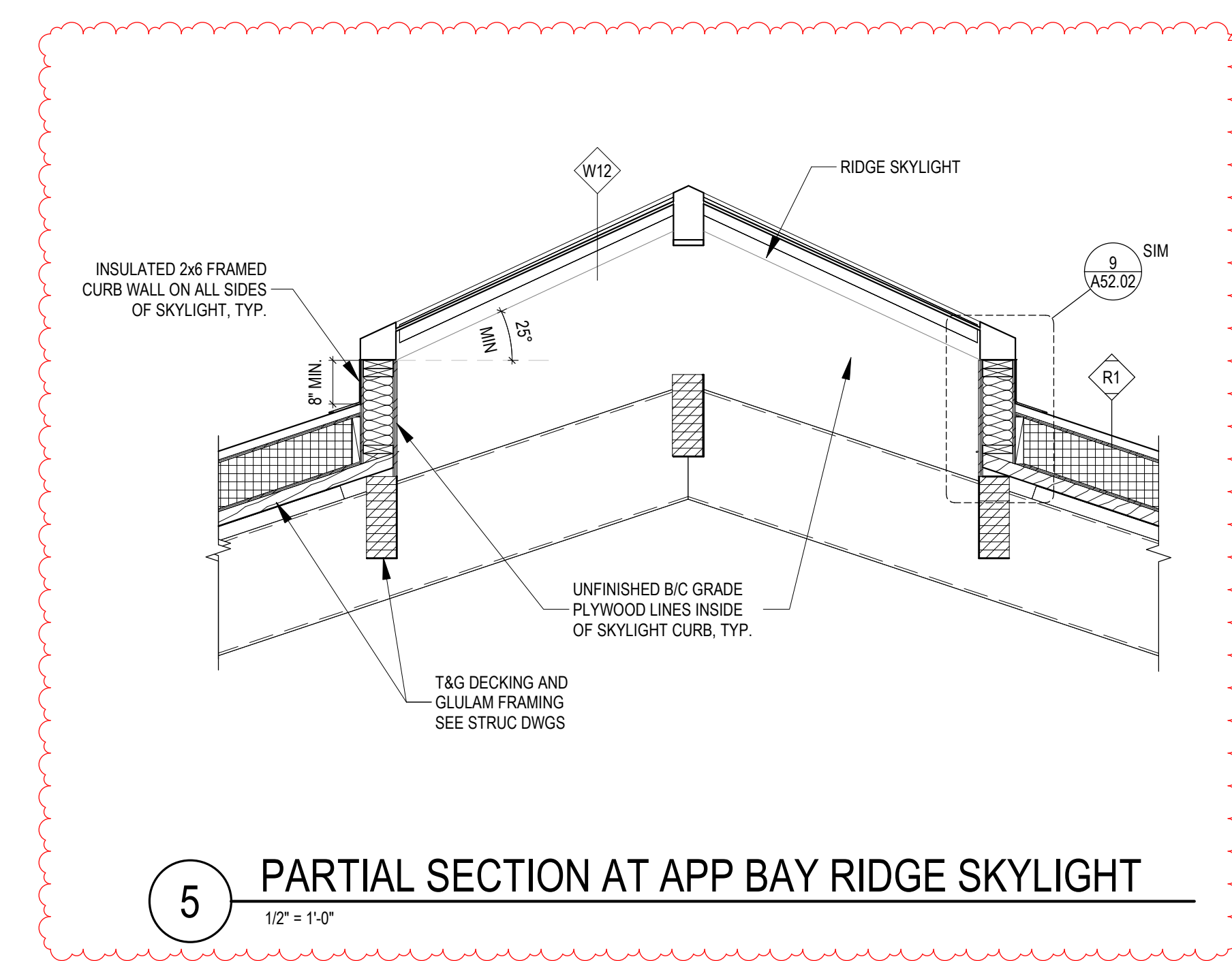
1. REFERENCE A03.01 AND A03.02 FOR ASSEMBLY TYPES AND CONSTRUCTION.



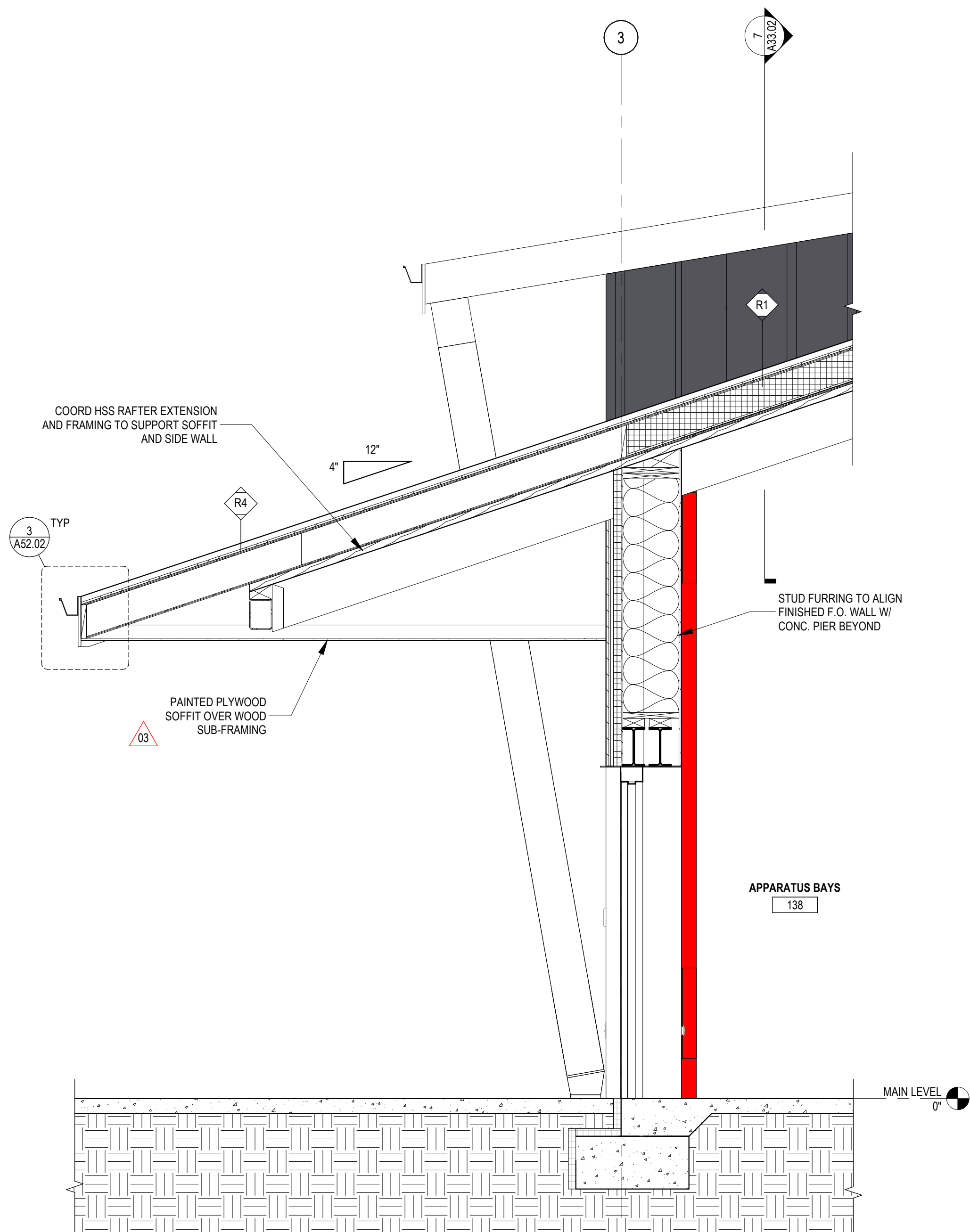
7 PARTIAL SECTION AT DORMER RAKE WALL
1/2" = 1'-0"



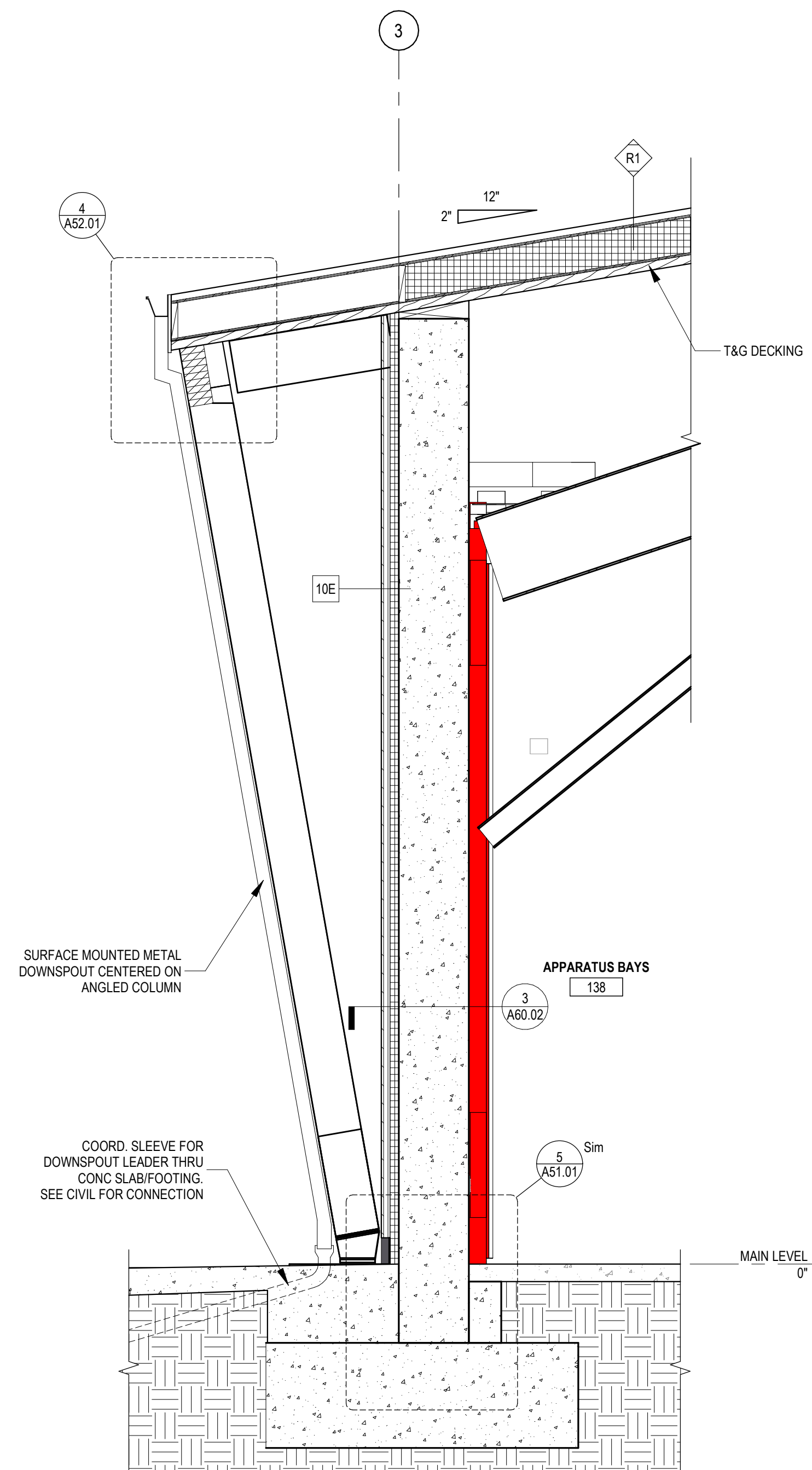
6 PARTIAL SECTION AT APP BAY DOOR WEST
1/2" = 1'-0"



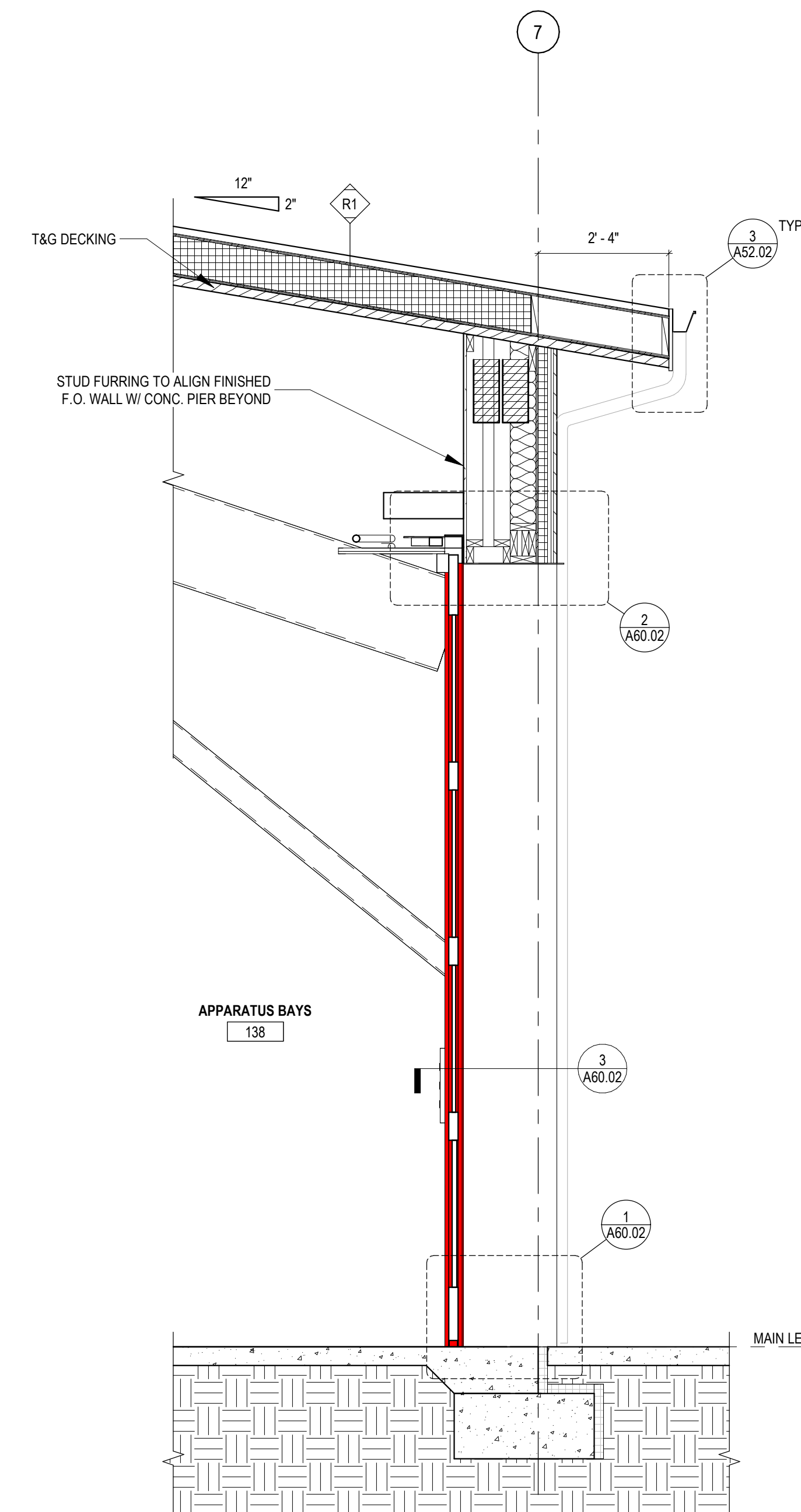
5 PARTIAL SECTION AT APP BAY RIDGE SKYLIGHT
1/2" = 1'-0"



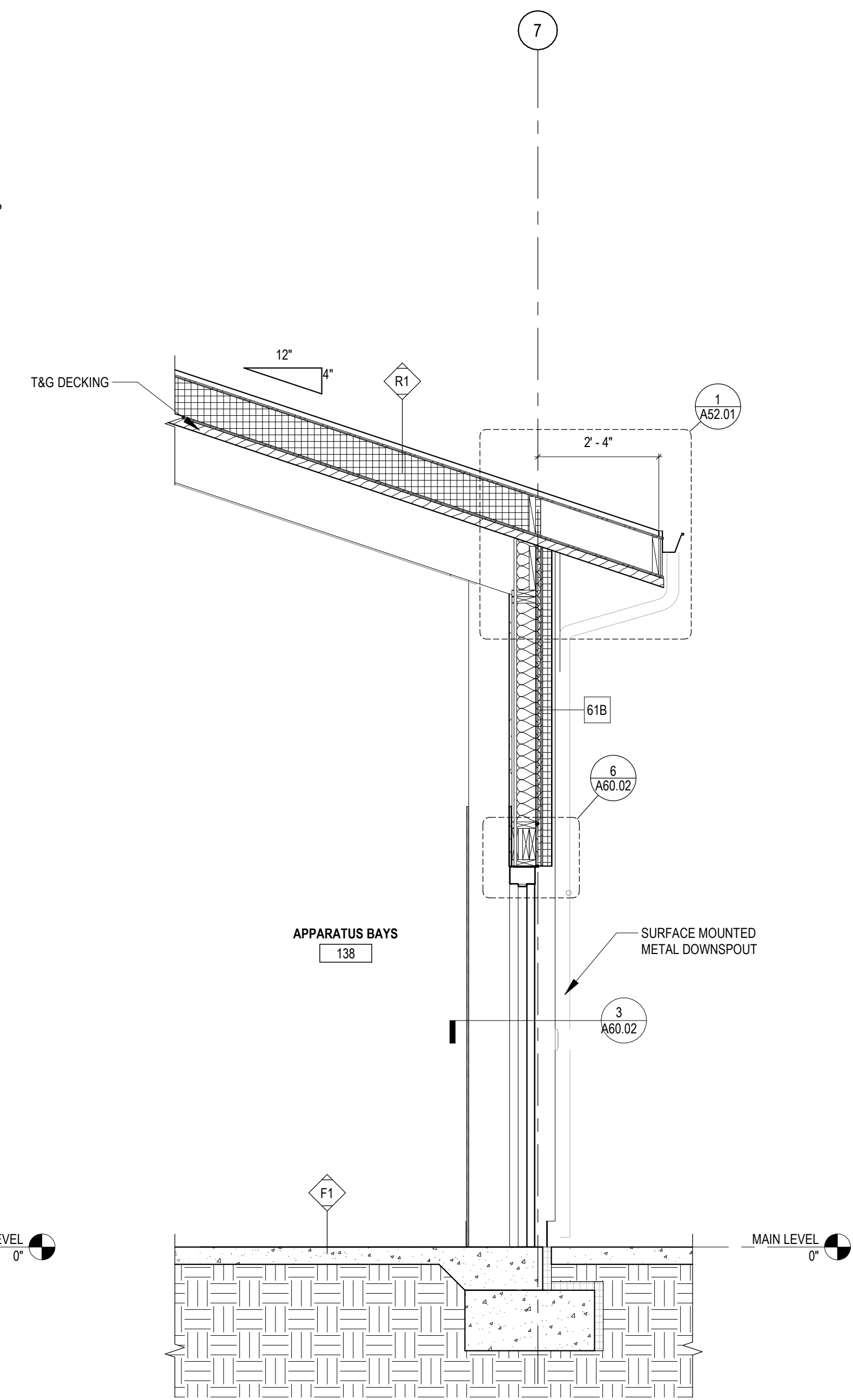
4 WALL SECTION AT APP BAY WEST
1/2" = 1'-0"



3 WALL SECTION AT APP BAY PIER WEST
1/2" = 1'-0"



2 WALL SECTION AT APP BAY DOOR EAST
1/2" = 1'-0"



1 WALL SECTION AT APP BAY EAST
1/2" = 1'-0"

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ISSUE DATE	AUGUST 15, 2025
REVISION SCHEDULE	
03	ADDENDUM #03 9/19/2025
04	ADDENDUM #04 9/24/2025

AHJ APPROVAL STAMP

WALL SECTIONS

SHEET #

A33.02

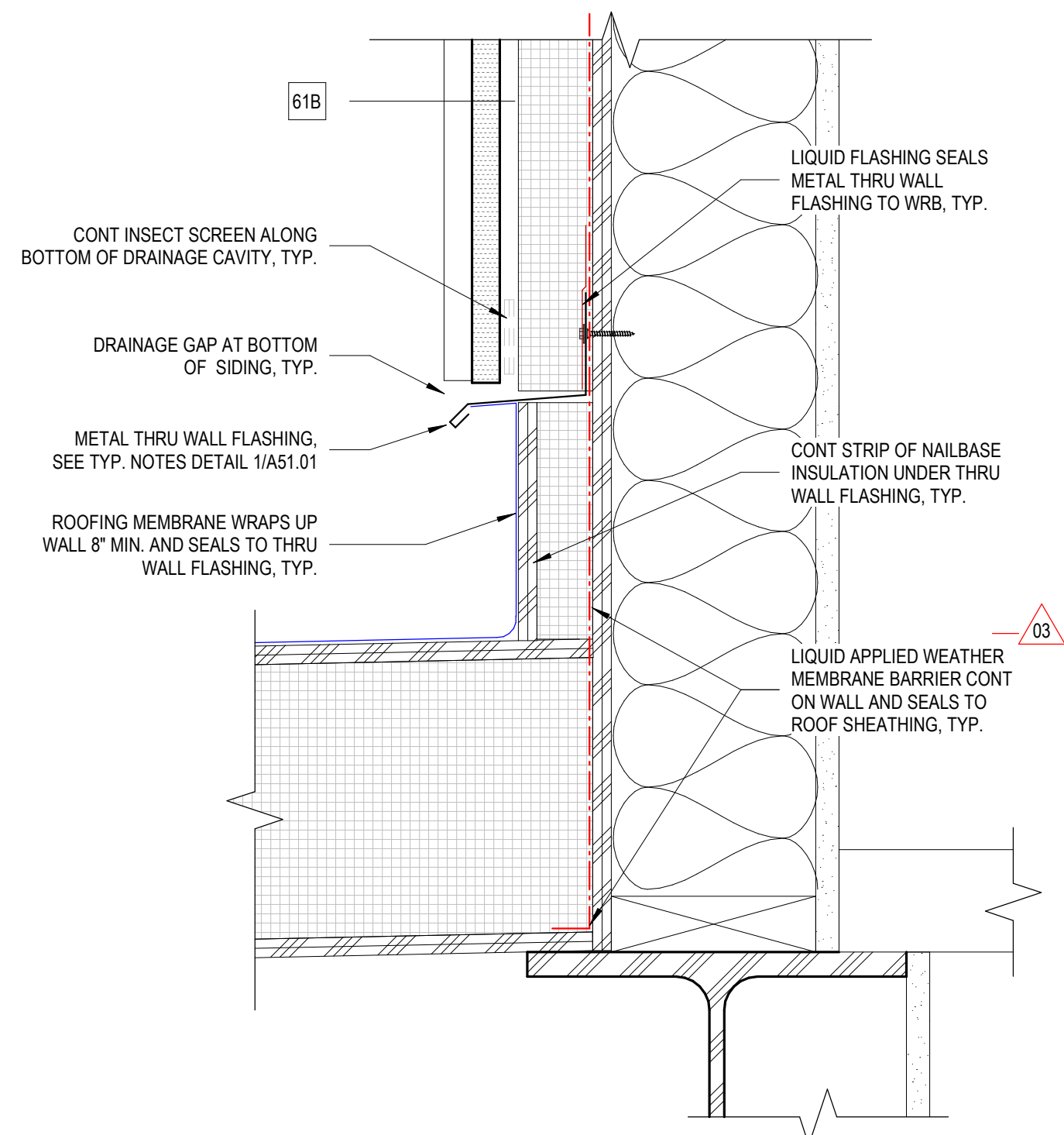
PROJECT #	2022011
BID SET	
ISSUE DATE	AUGUST 15, 2025
REVISION SCHEDULE	
03 ADDENDUM #03	9/19/2025
04 ADDENDUM #04	9/24/2025

AHJ APPROVAL STAMP

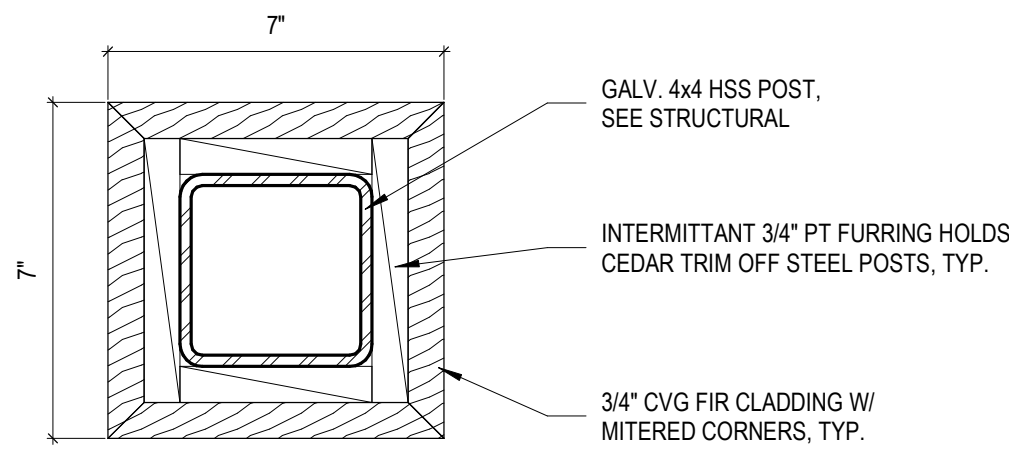
EXTERIOR SECTION
DETAILS

SHEET #

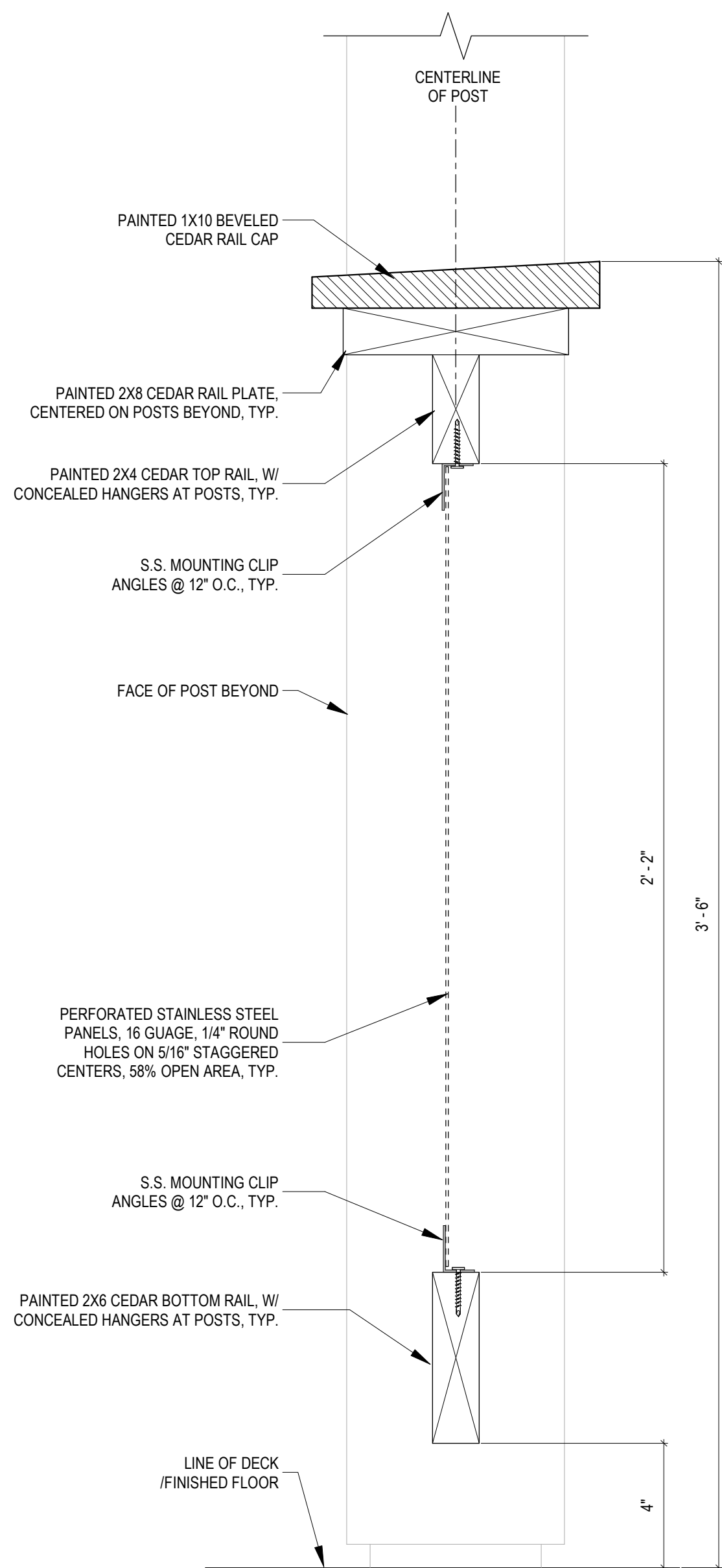
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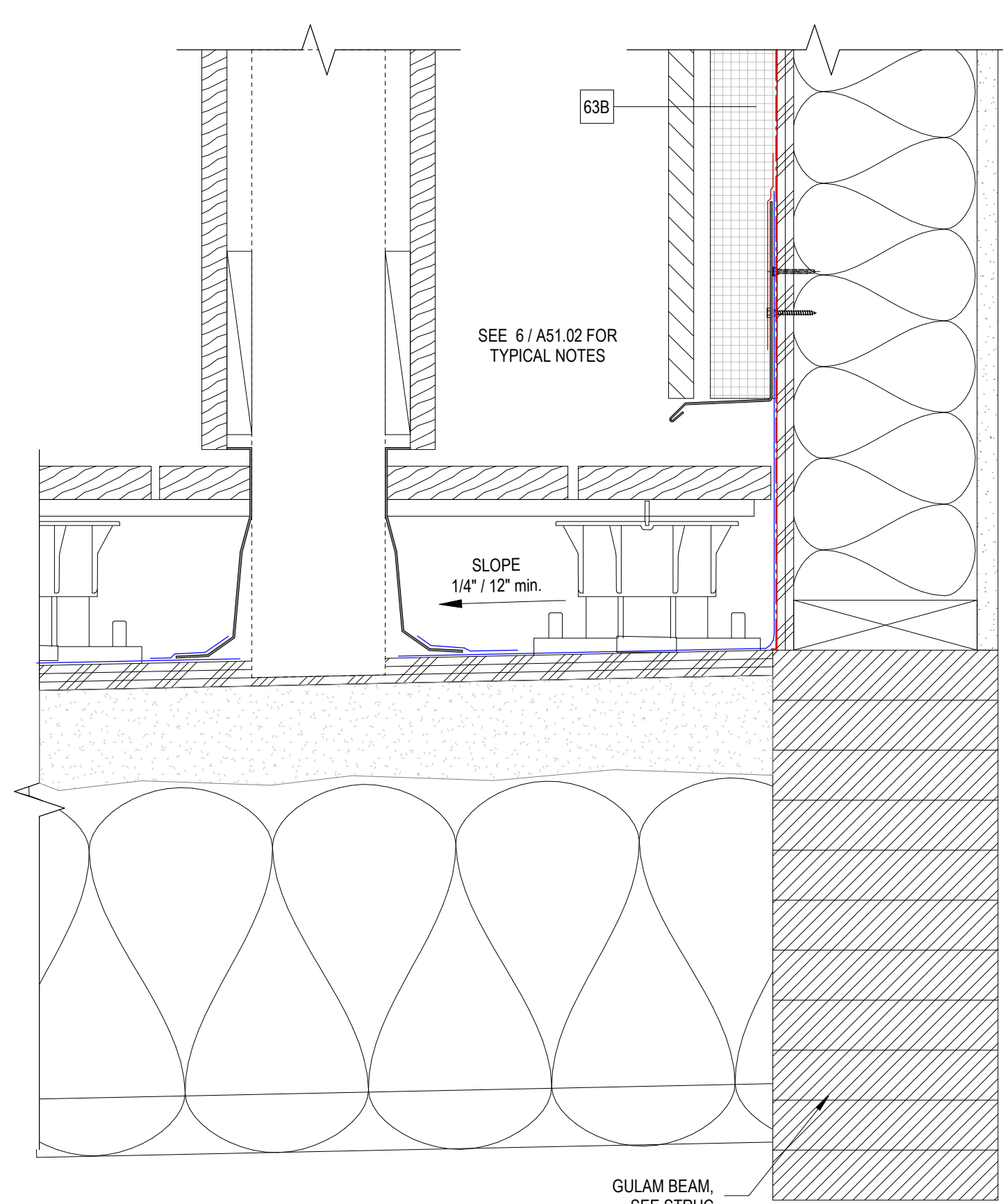
10 SECTION DETAIL AT LOW ROOF / MEZZANINE
3" = 1'-0"



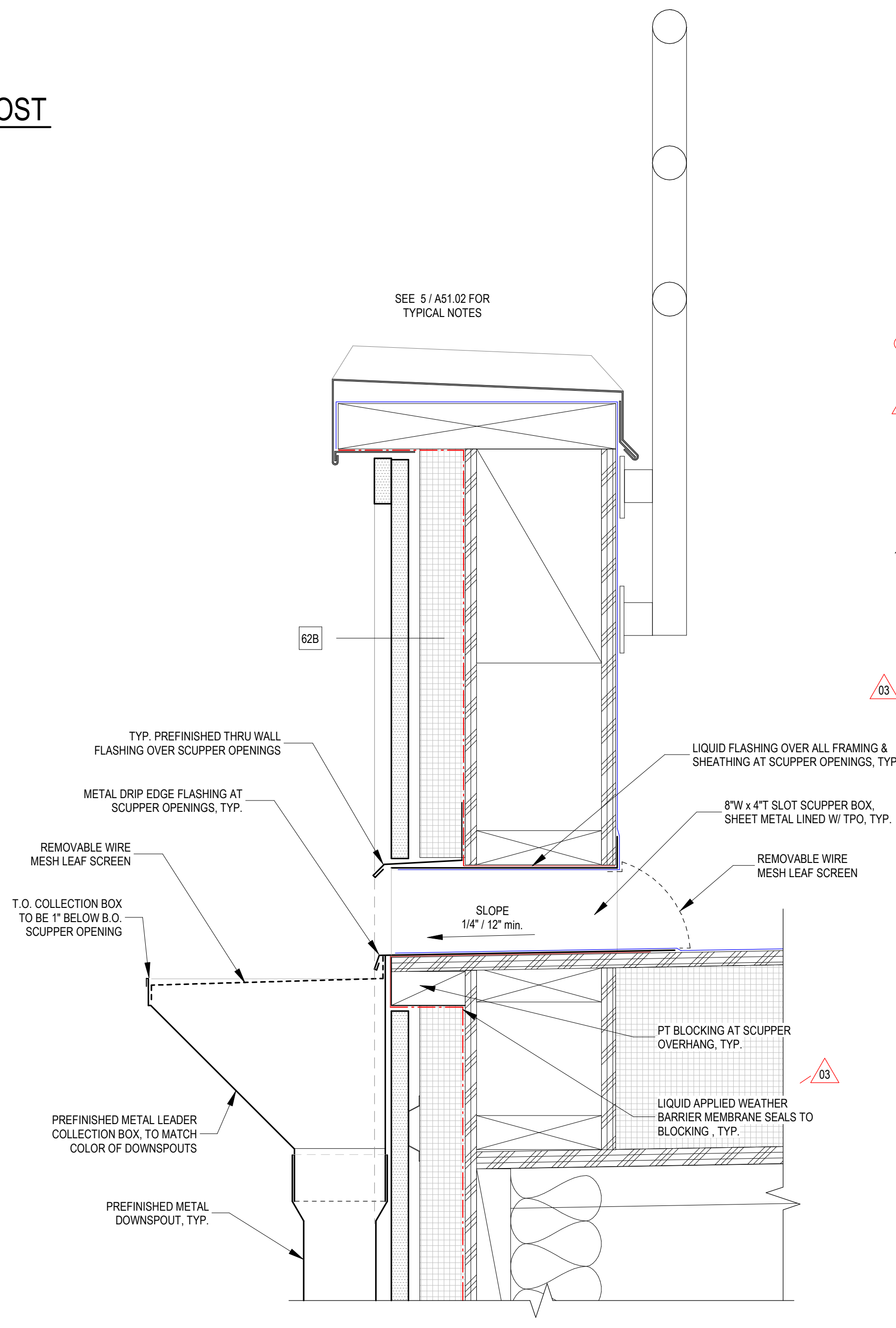
3 PLAN DETAIL @ TYP. BALCONY CANOPY POST
3" = 1'-0"



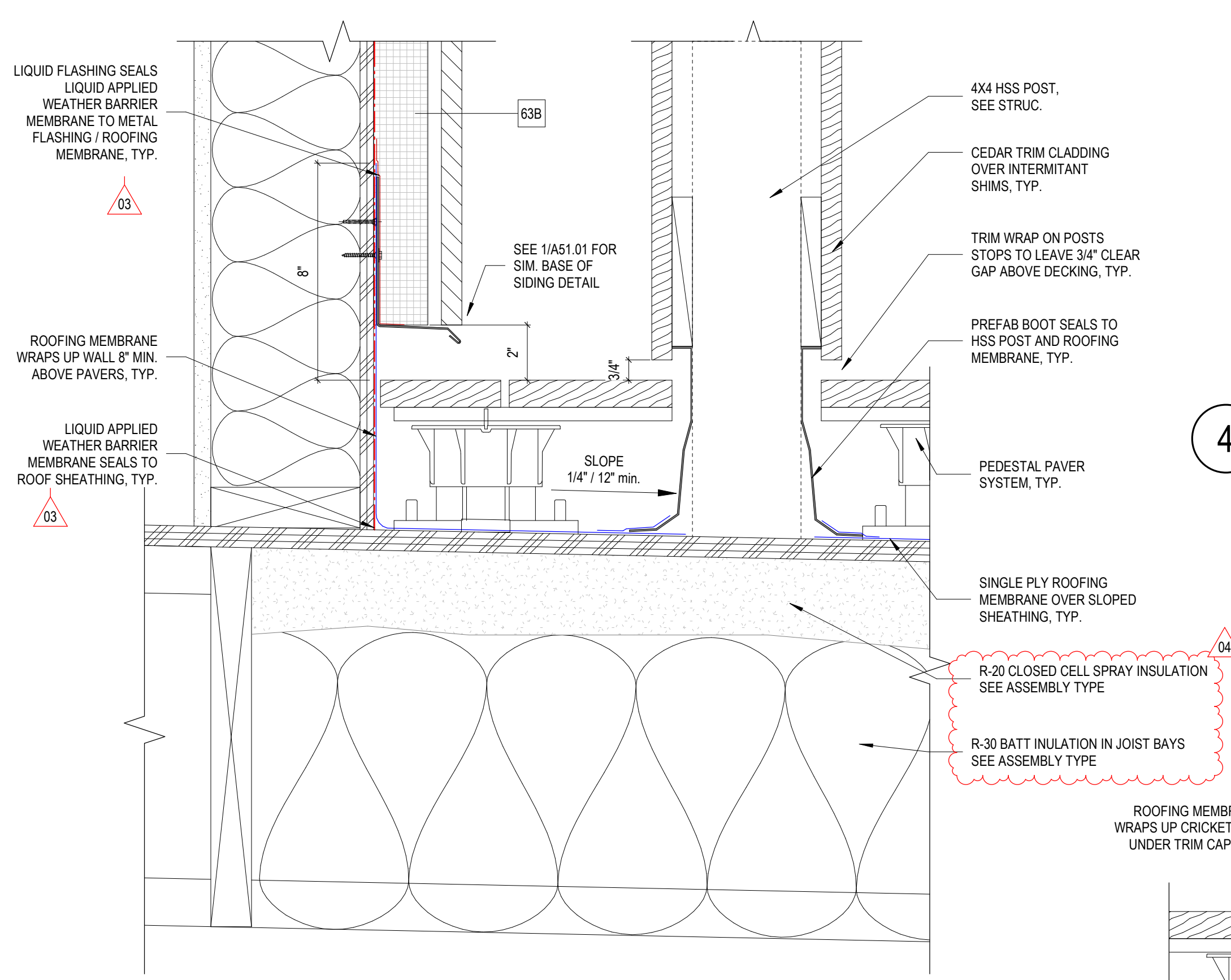
9 SECTION DETAIL AT TYP. BALCONY RAILING
3" = 1'-0"



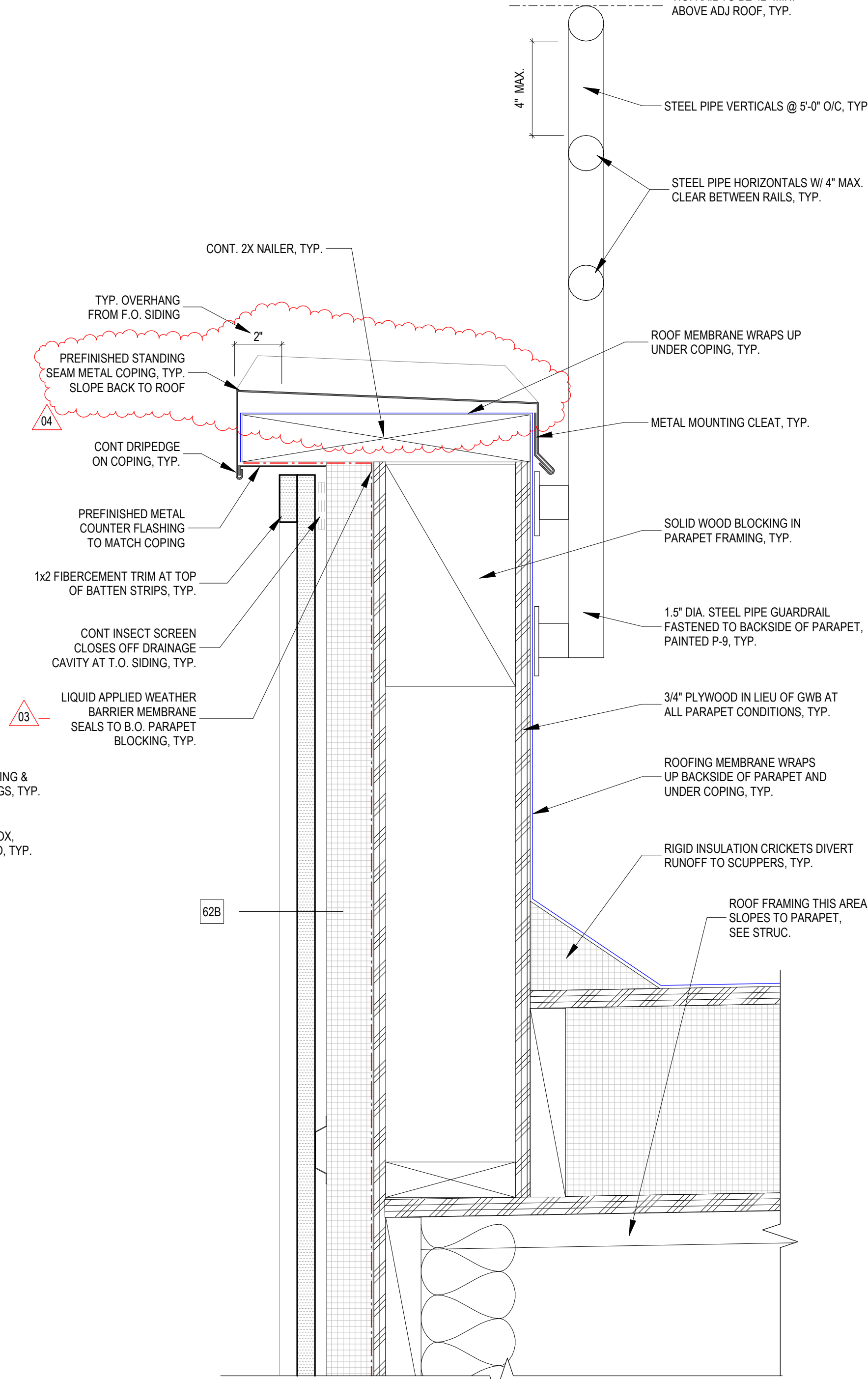
8 SECTION DETAIL AT WEST BALCONY BEAM
3" = 1'-0"



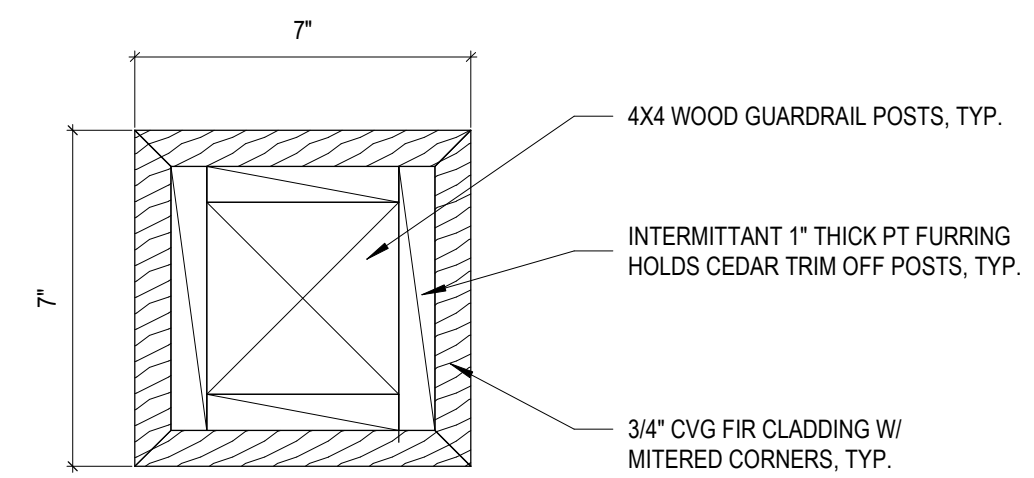
7 SECTION DETAIL AT MEZZANINE SCUPPER
3" = 1'-0"



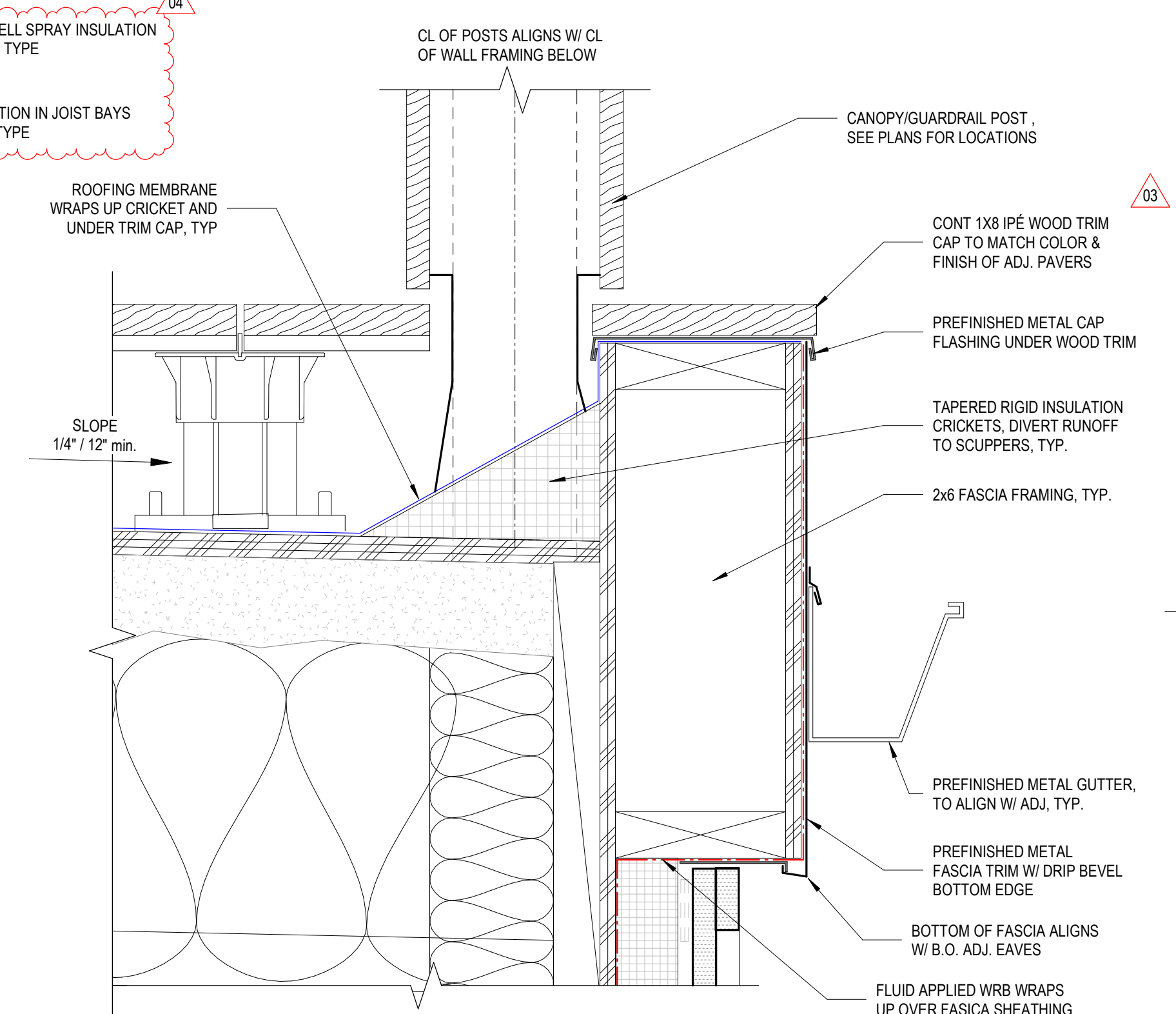
6 SECTION DETAIL AT EAST BALCONY SIDE WALL
3" = 1'-0"



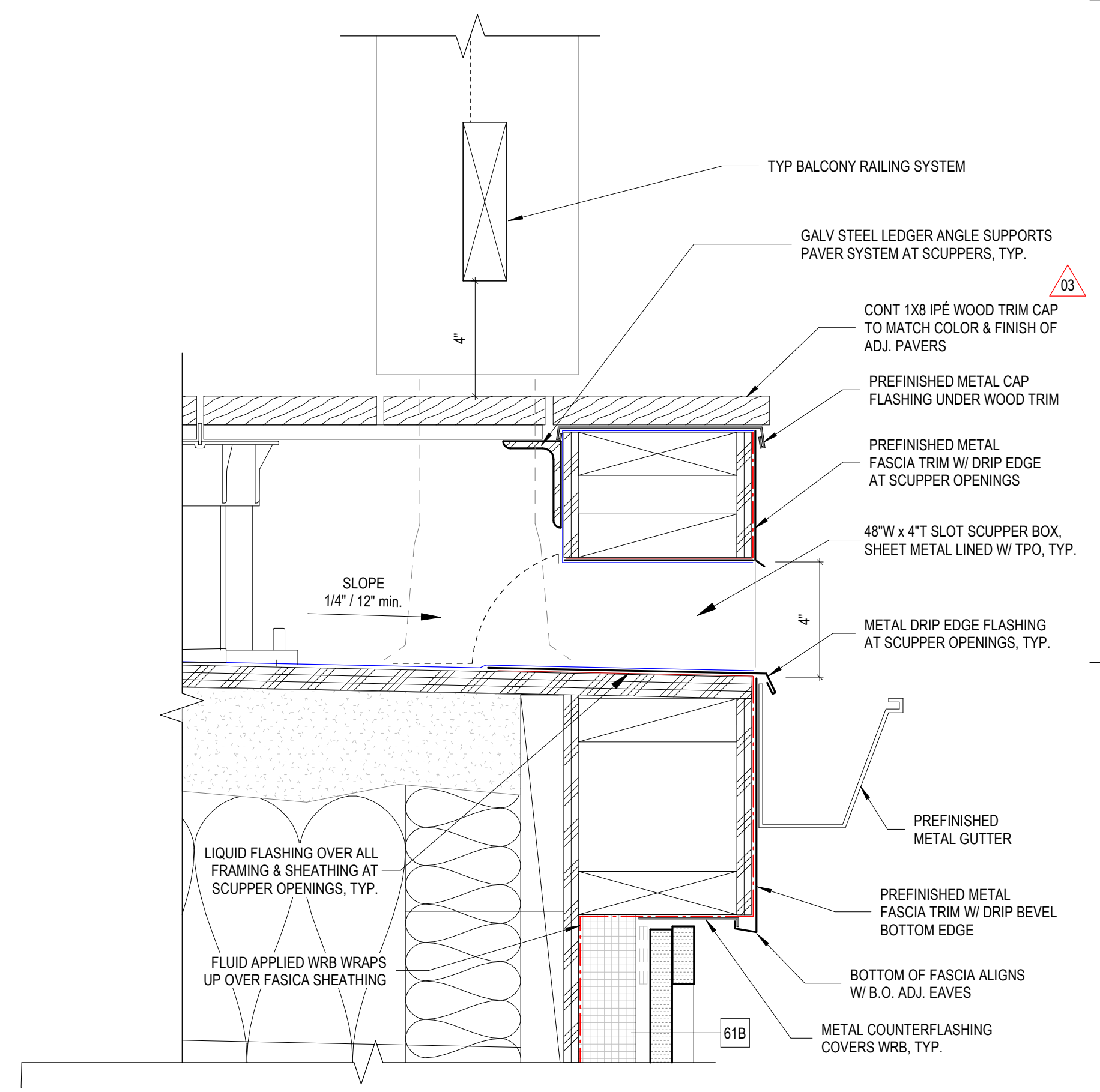
5 SECTION DETAIL AT MEZZANINE PARAPET
3" = 1'-0"



4 PLAN DETAIL @ TYP. BALCONY GUARDRAIL POST
3" = 1'-0"



2 SECTION DETAIL AT BALCONY POST
3" = 1'-0"



1 SECTION DETAIL AT SLOT SCUPPER
3" = 1'-0"

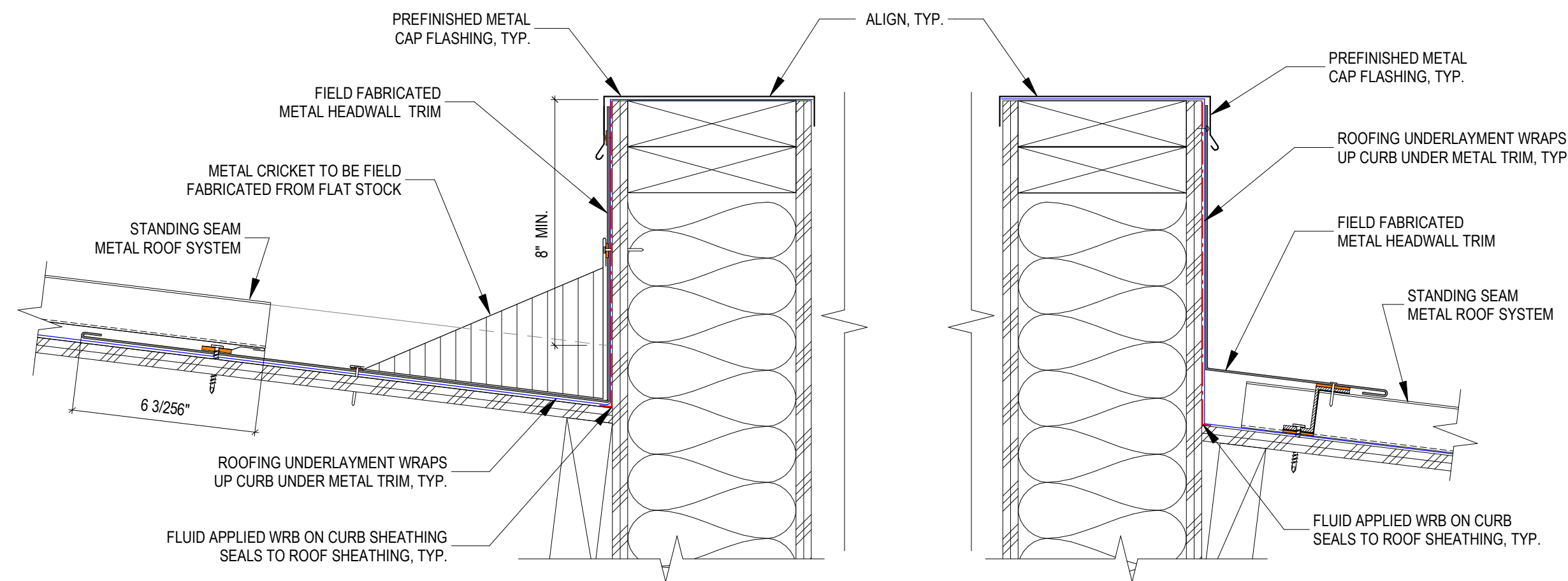
PROJECT #	2022011
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REVISION SCHEDULE	
03	ADDENDUM #03 9/19/2025
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AHJ APPROVAL STAMP

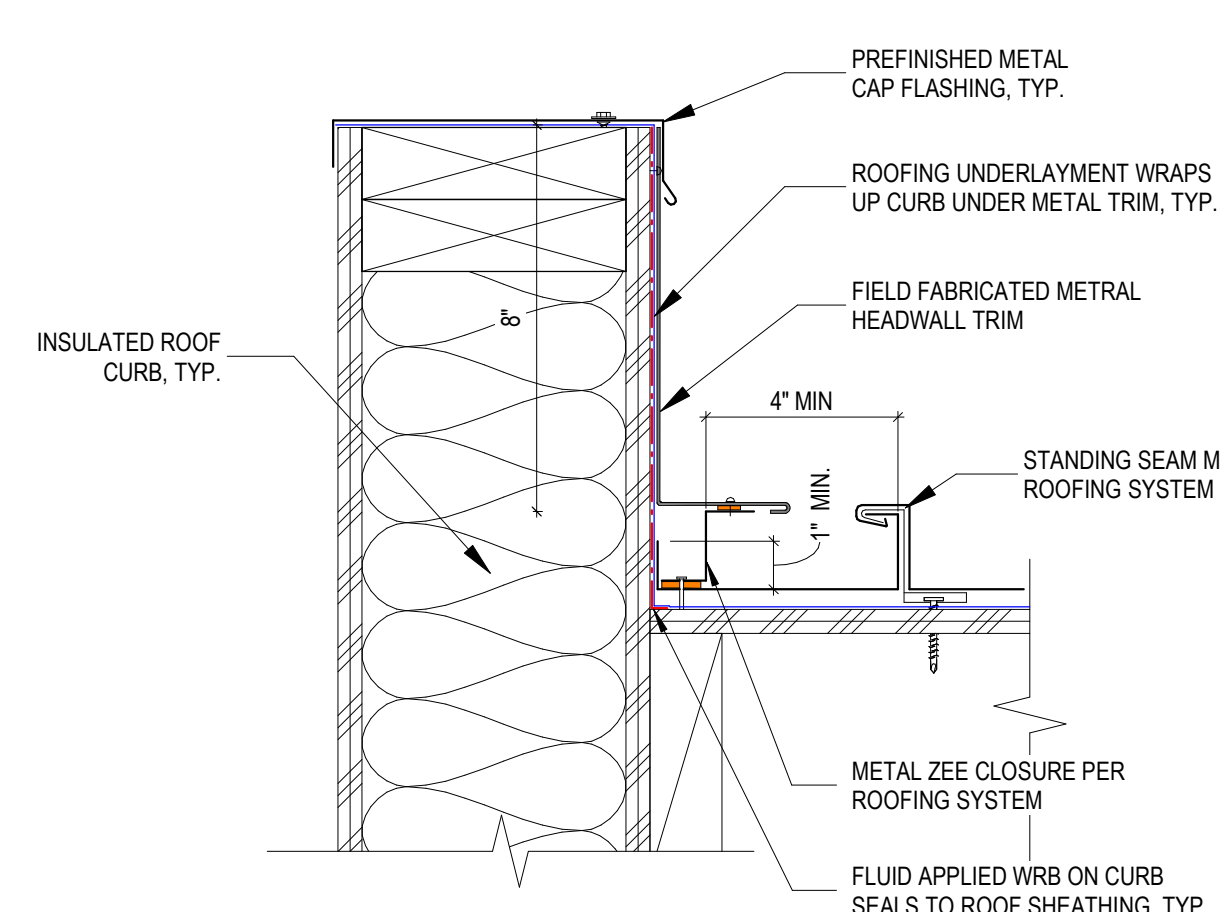
ROOF DETAILS

SHEET #

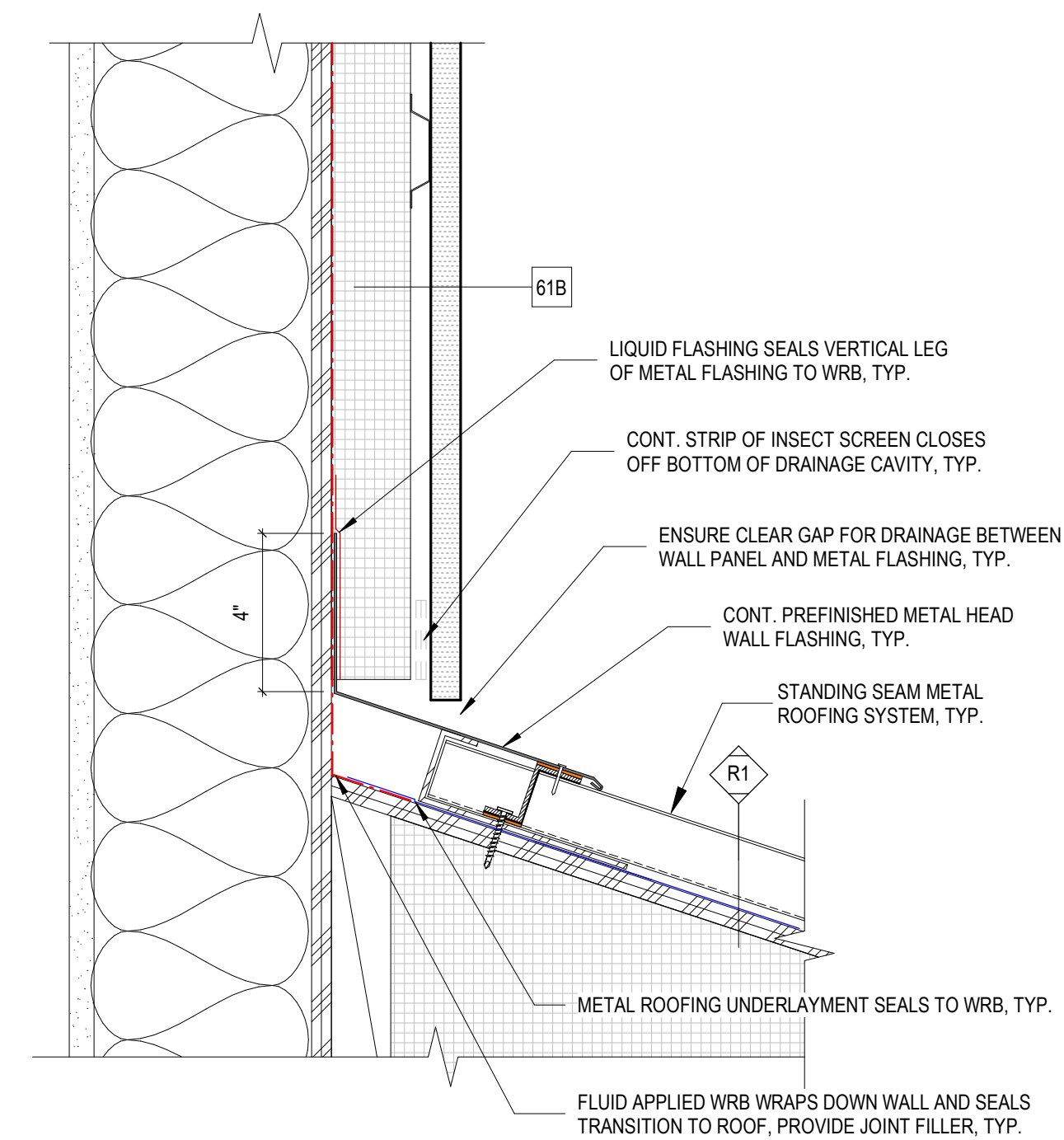
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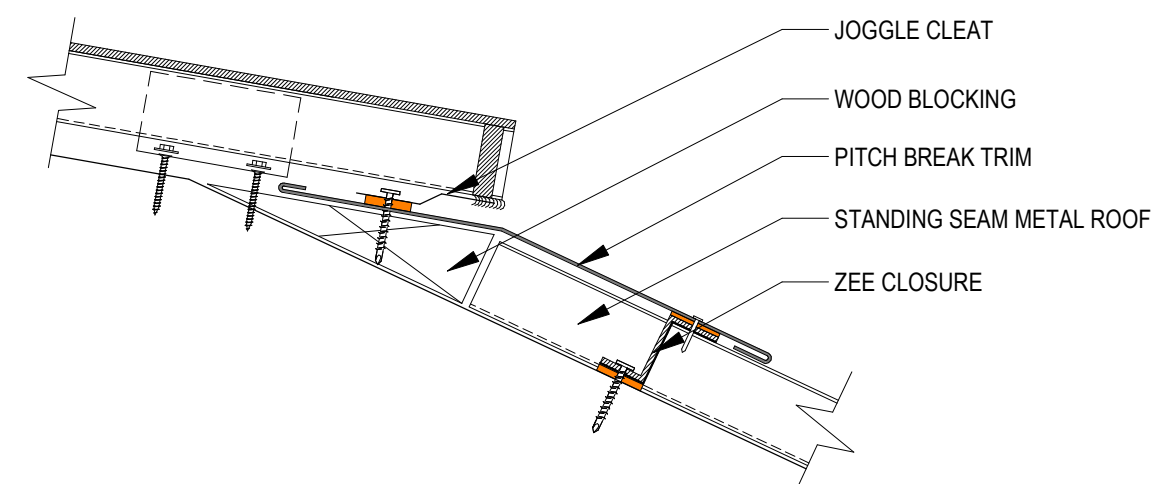
9 SECTION DETAIL - ROOF CURB
3" = 1'-0"



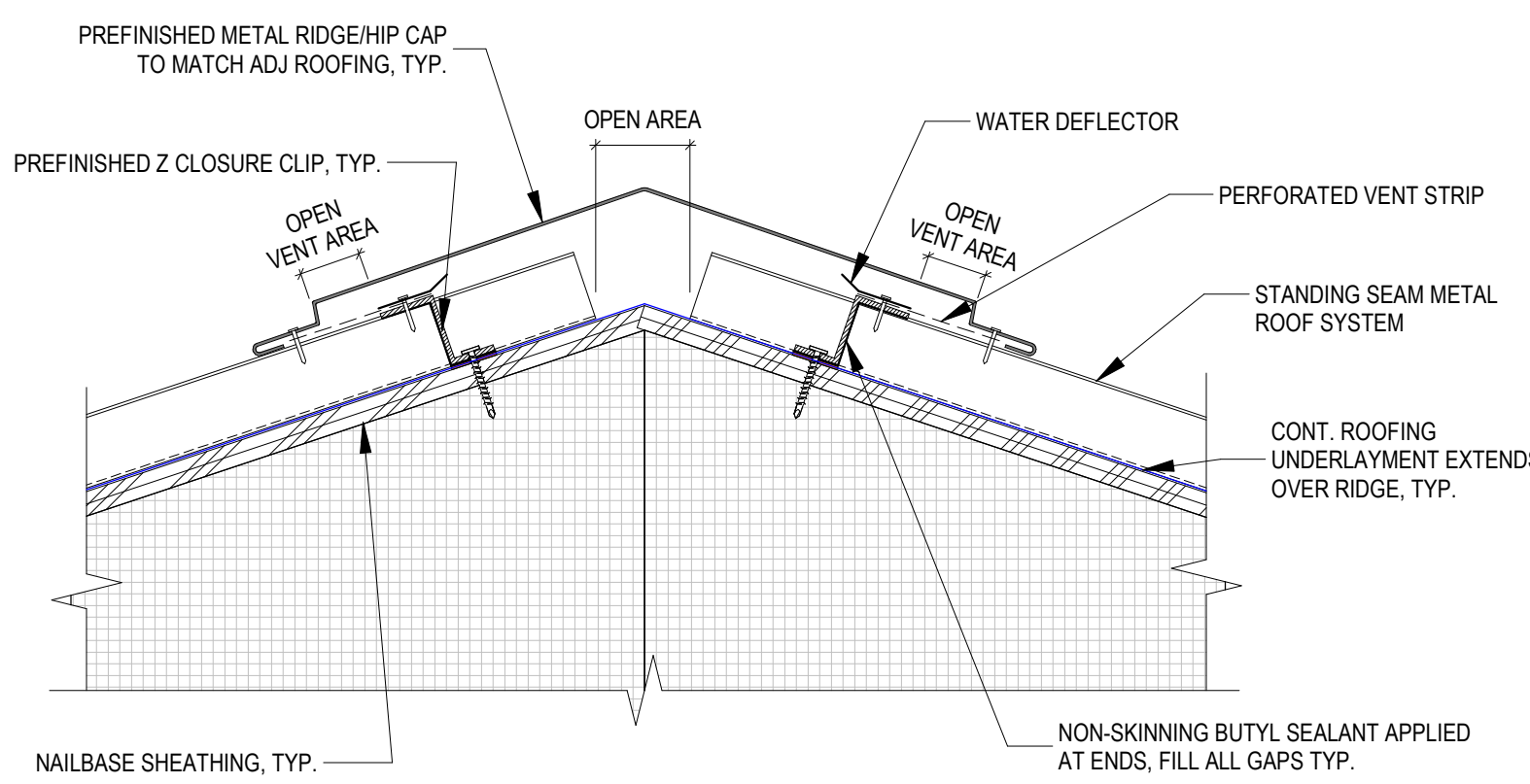
8 SECTION DETAIL - ROOF CURB RAKE
3" = 1'-0"



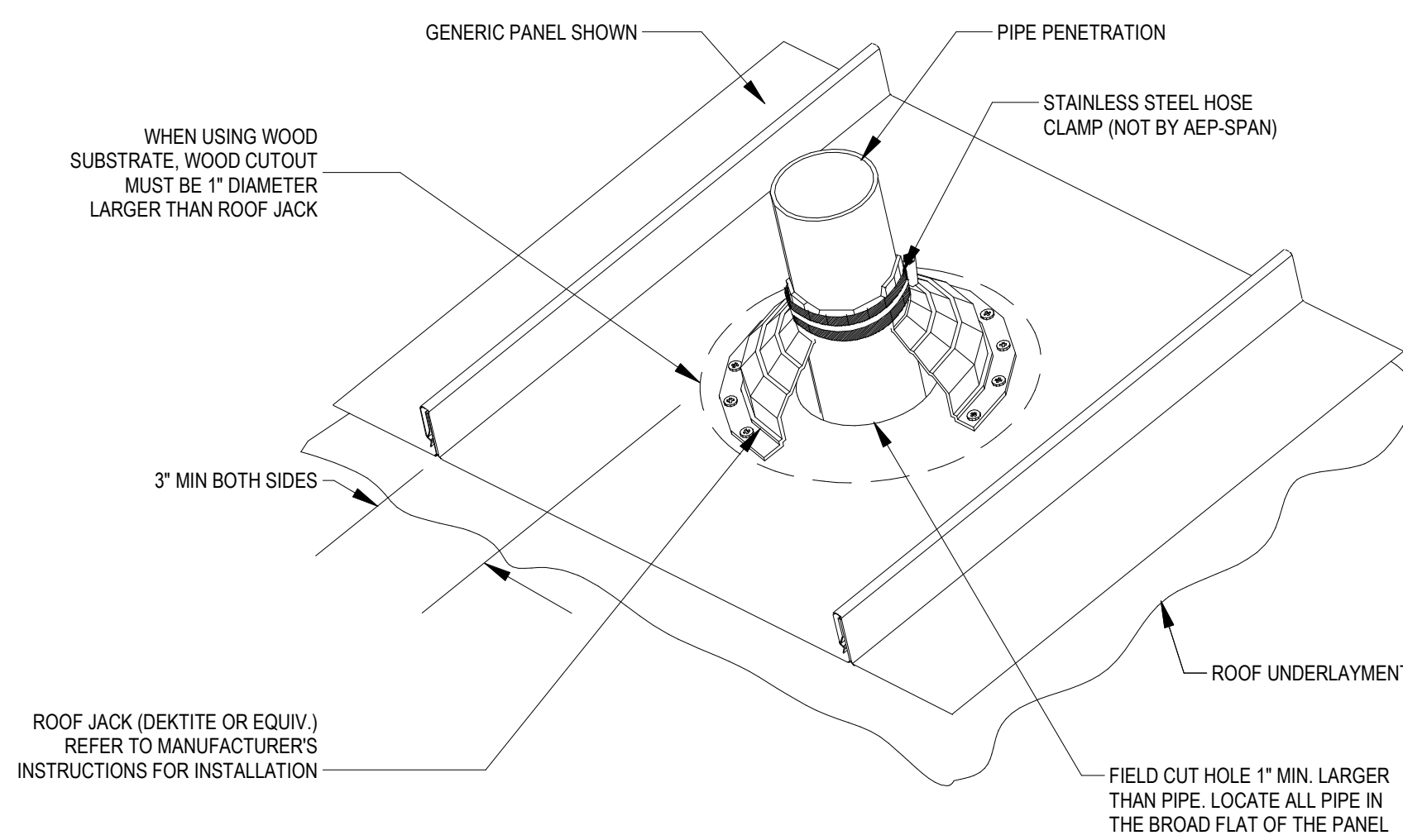
2 SECTION DETAIL - ROOF HEAD WALL
3" = 1'-0"



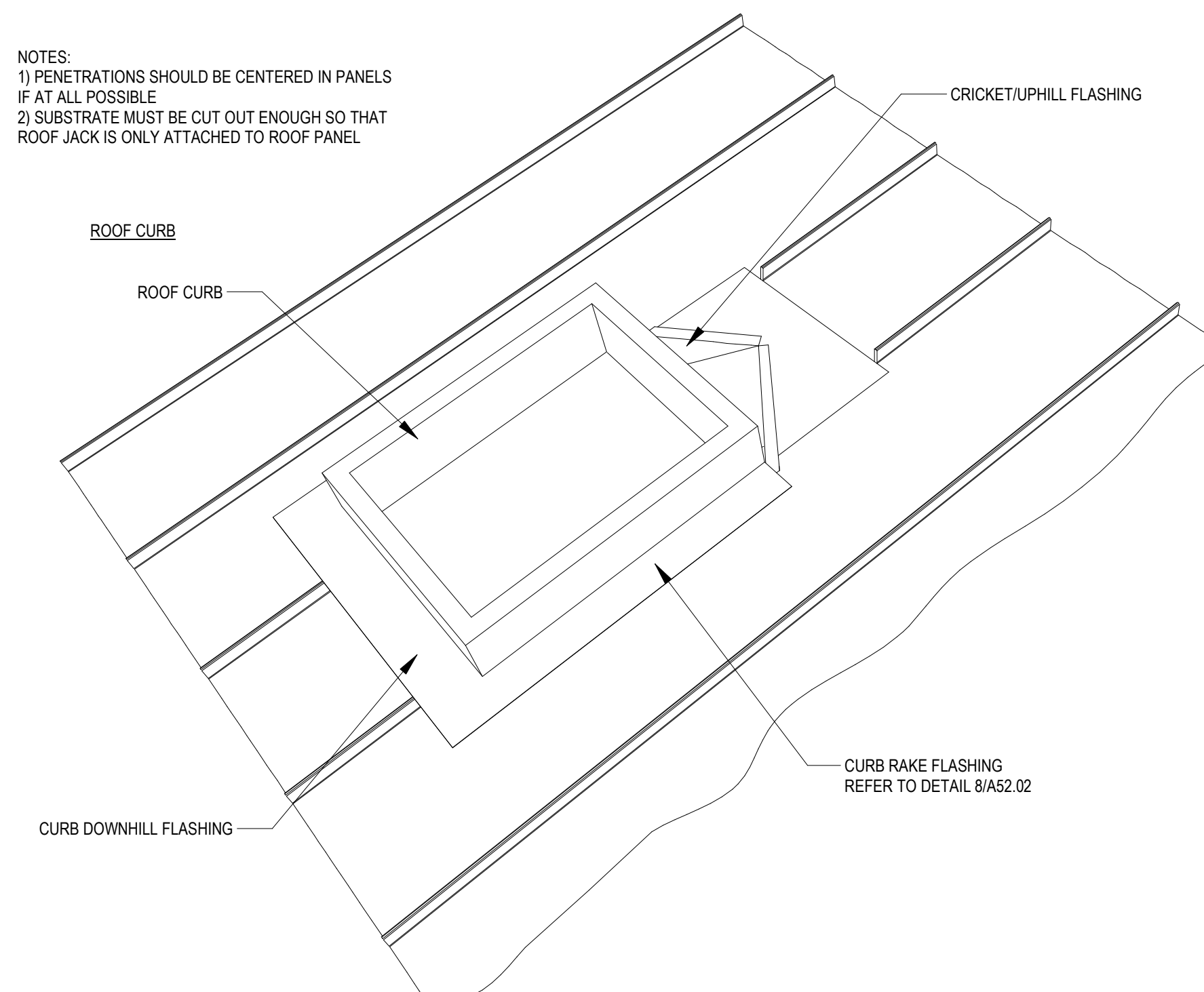
11 SECTION DETAIL - HI LO TRANSITION
3" = 1'-0"



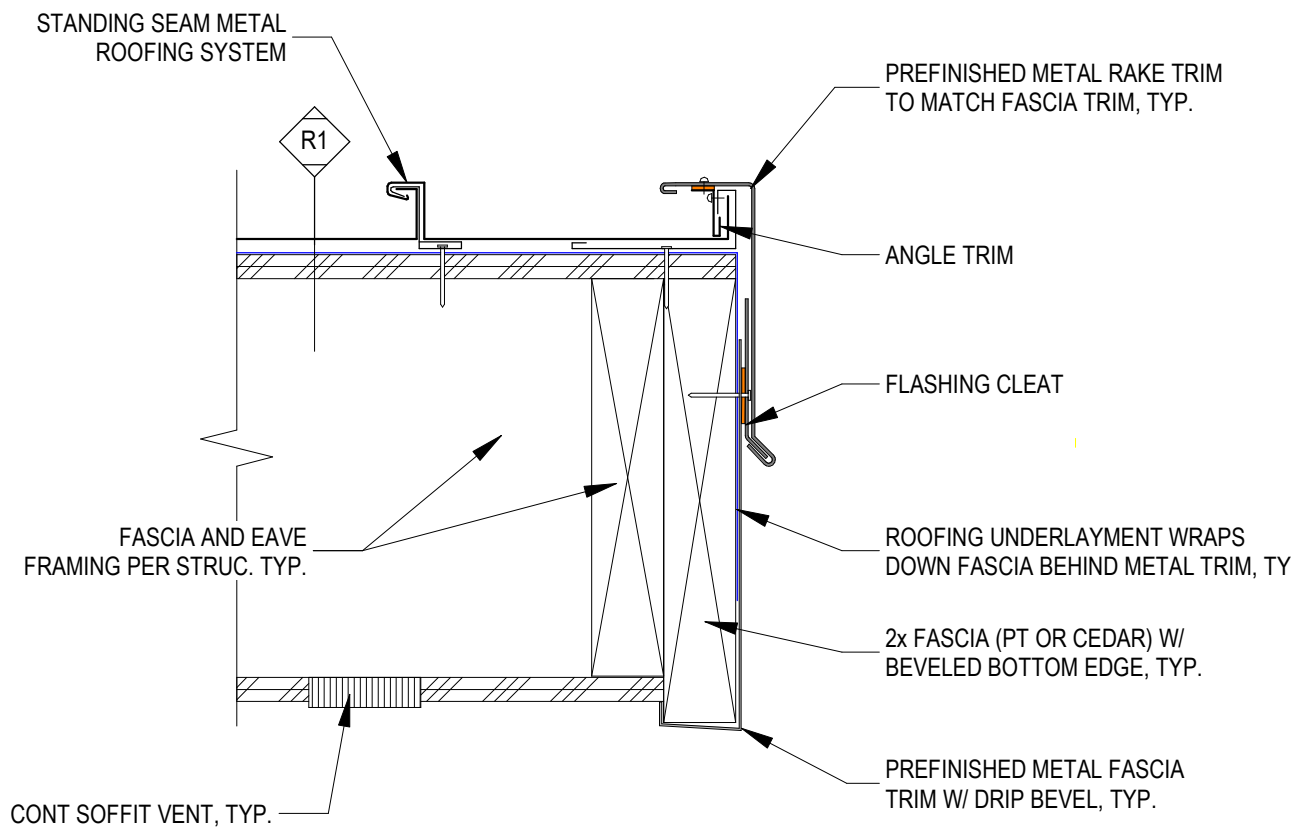
6 SECTION DETAIL- VENTED RIDGE
3" = 1'-0"



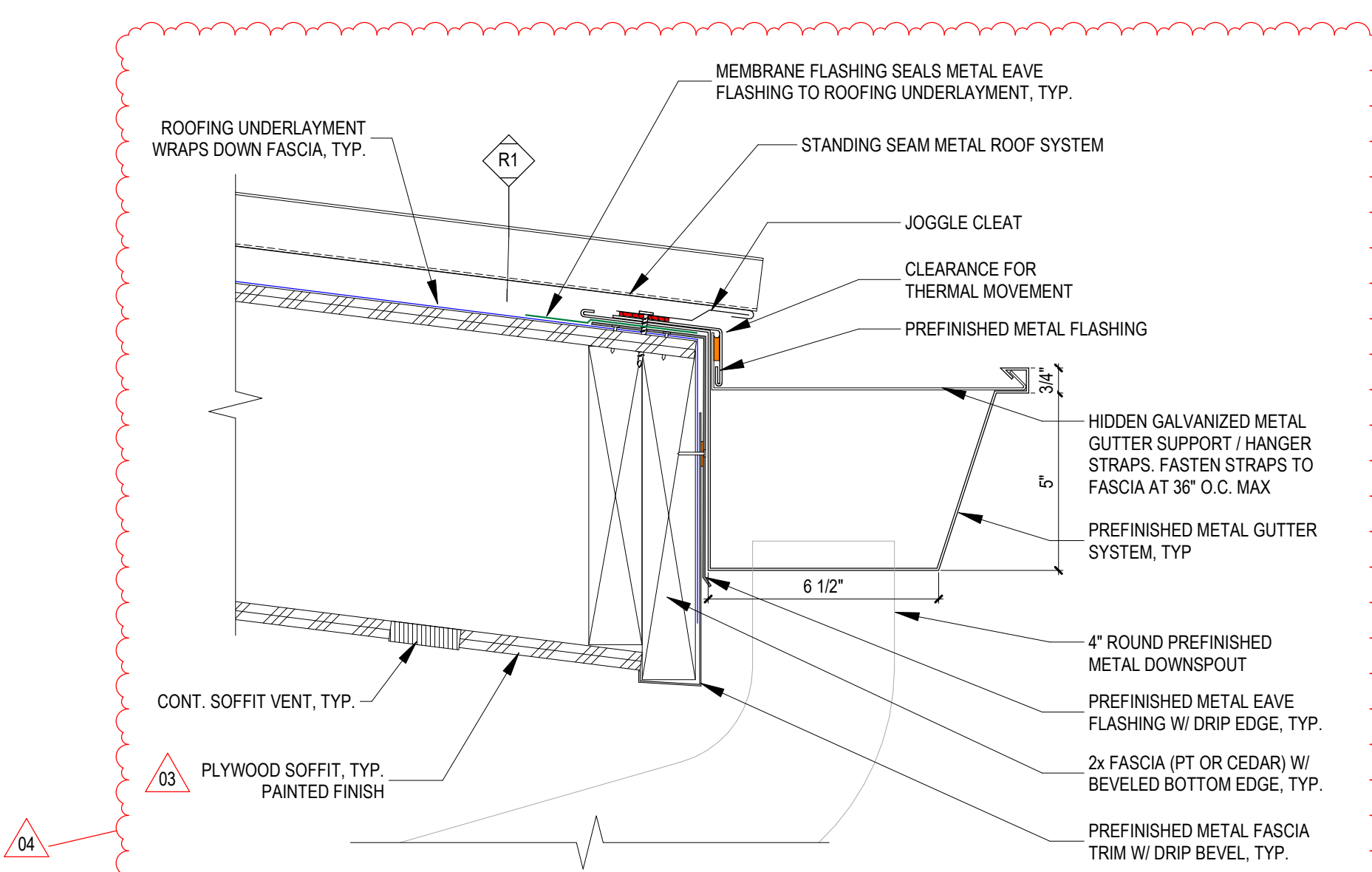
NOTES:
1) PENETRATIONS SHOULD BE CENTERED IN PANELS IF AT ALL POSSIBLE
2) SUBSTRATE MUST BE CUT OUT ENOUGH SO THAT ROOF JACK IS ONLY ATTACHED TO ROOF PANEL



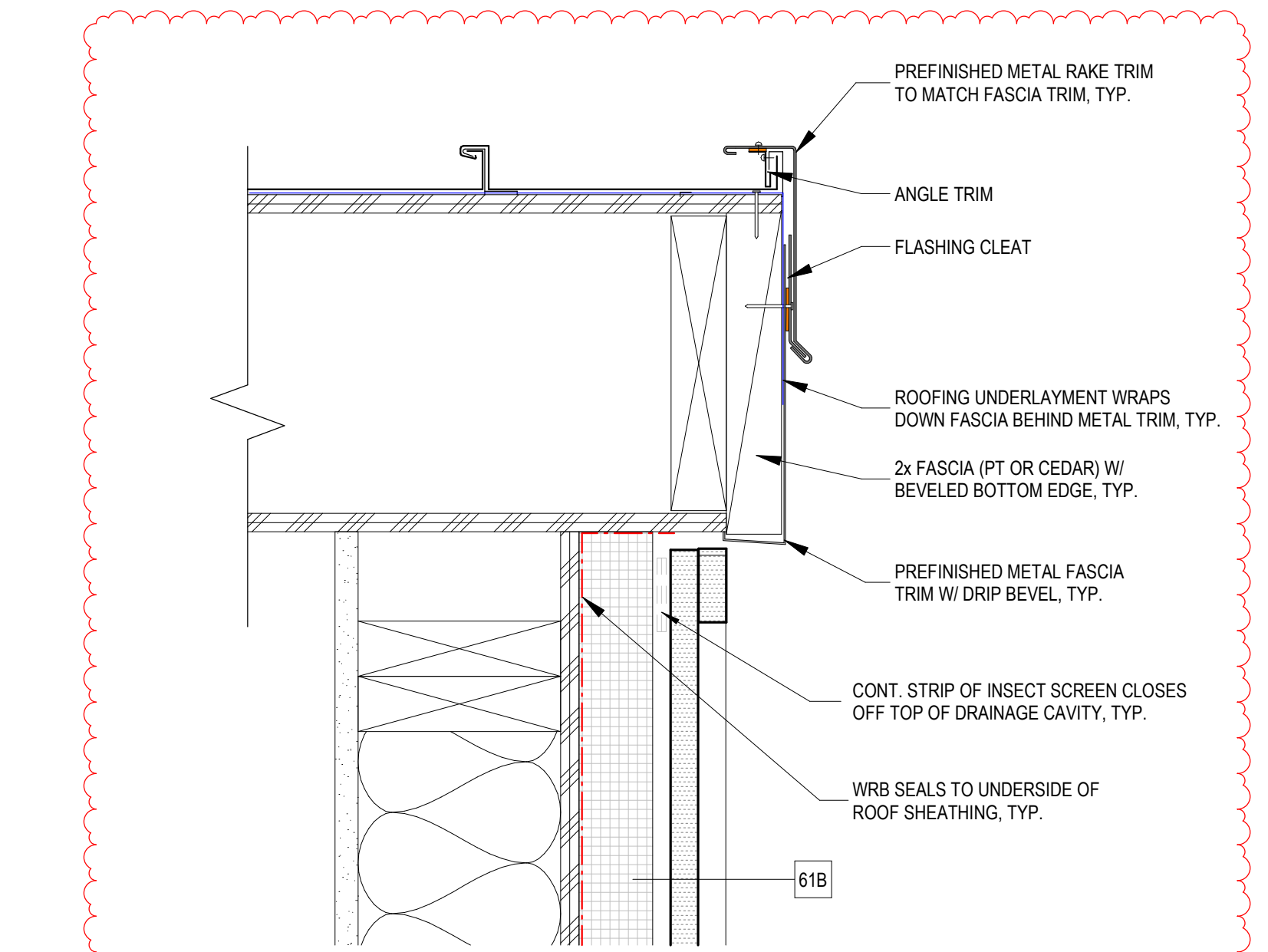
10 ISOMETRIC - ROOF PENETRATIONS
3" = 1'-0"



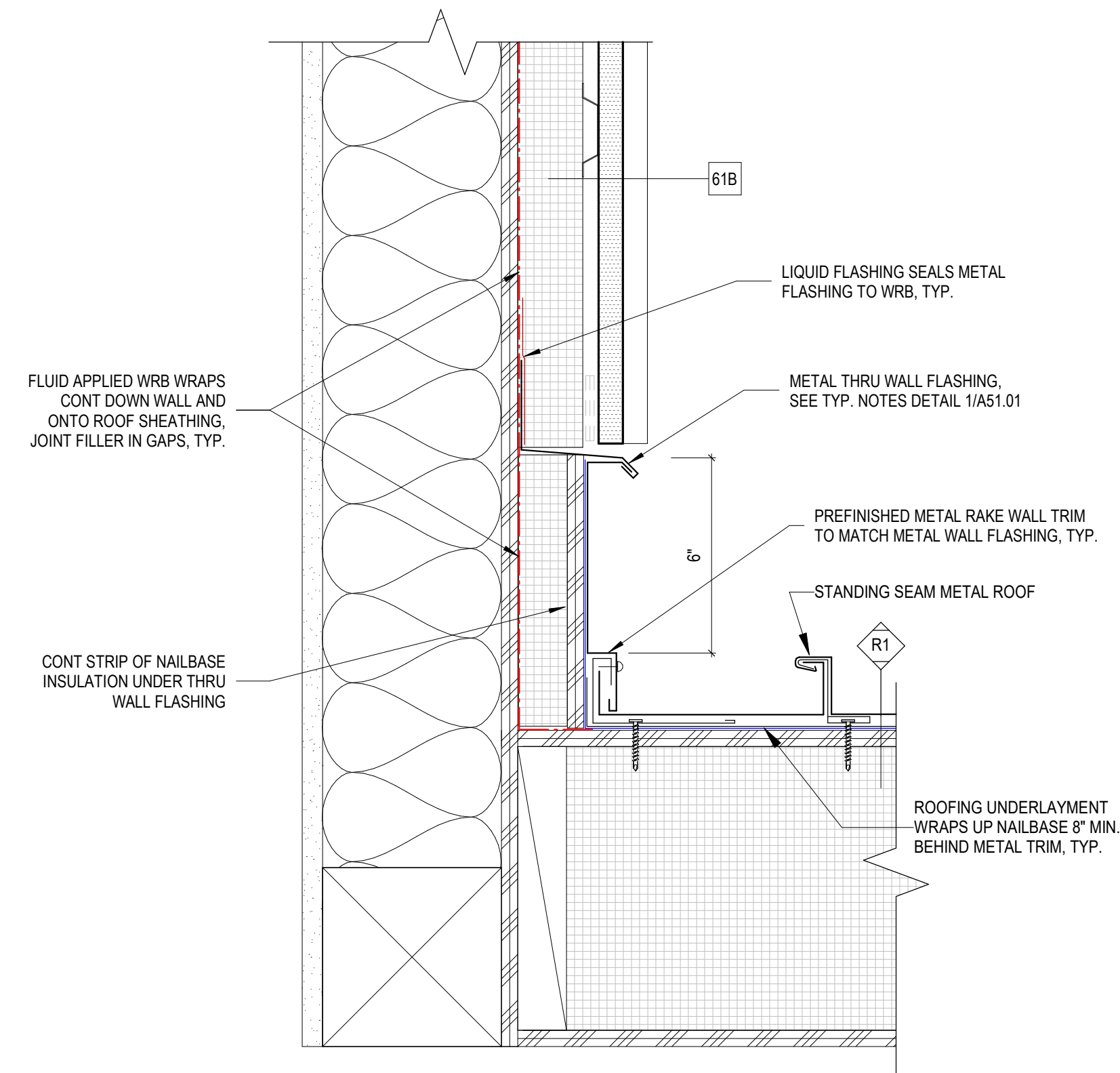
4 SECTION DETAIL - RAKE EDGE
3" = 1'-0"



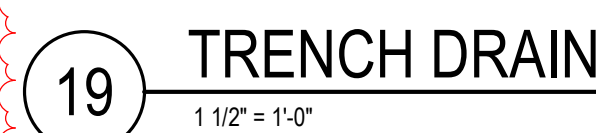
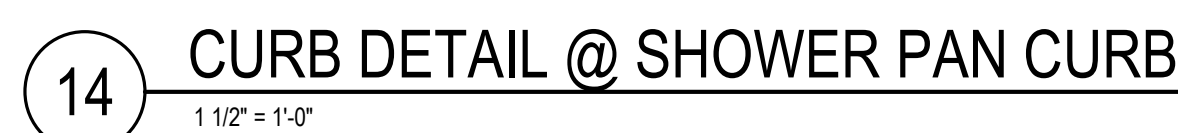
3 SECTION DETAIL - TYPICAL GUTTER @ EAVE
3" = 1'-0"

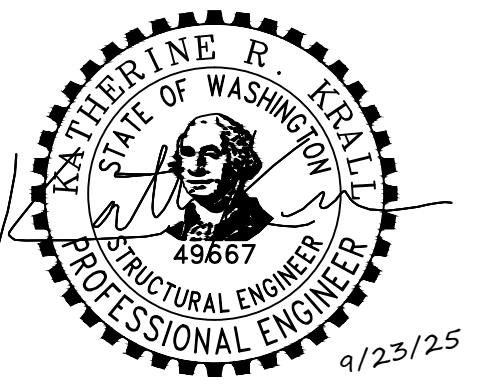


1A SECTION DETAIL RAKE ROOF EDGE
3" = 1'-0"



1 SECTION DETAIL - RAKE AT ROOF/WALL
3" = 1'-0"





FOUNDATION AND FIRST FLOOR FRAMING PLAN NOTES:

- APPARATUS BAY SLAB-ON-GRADE SHALL BE 8" THICK CONCRETE REINFORCED WITH #5 @ 12" EACH WAY AT MID-DEPTH OF THE SLAB. PROVIDE VAPOR BARRIER PER SPECIFICATIONS BELOW SLAB OVER FREE DRAINING FILL PER THE GEOTECHNICAL REPORT.
- SLAB-ON-GRADE SHALL BE 4" THICK CONCRETE REINFORCED WITH #4 @ 16" EACH WAY AT MID-DEPTH OF SLAB. VAPOR BARRIER SHALL BE PLACED PER SPECIFICATIONS BELOW SLAB OVER FREE DRAINING FILL. PROVIDE CONTROL JOINTS EVERY 144 SF MAX. LAP REINFORCING PER 20/S50.01. SLOPE SLABS AS REQUIRED PER ARCHITECT.
- PROVIDE CONSTRUCTION / CONTROL JOINTS IN SLABS ON GRADE TO DIVIDE SLAB INTO RECTANGULAR AREAS 144 SQUARE FEET OR LESS. AREAS SHALL BE APPROXIMATELY SQUARE AND HAVE NO ACUTE ANGLES. JOINT LOCATIONS MUST BE APPROVED BY THE ARCHITECT. SEE 10/S50.02.
- TOP OF ALL FOOTINGS SHOWN IN THIS PLAN SHALL BE AT ELEVATION -1'-0", UNLESS NOTED OTHERWISE. OVER EXCAVATE PER THE OWNER-APPOINTED GEOTECHNICAL ENGINEER WHERE REQUIRED AND PLACE SUITABLE COMPACTED FILL AS DIRECTED BY OWNER-APPOINTED GEOTECHNICAL ENGINEER. CONTRACTOR SHALL COORDINATE WITH FINAL SITE GRADES AND MAINTAIN MINIMUM DEPTH OF FOOTINGS SHOWN ON THE DRAWINGS.
- SEE 20/S50.40 FOR SHEAR WALL SCHEDULE AND SHEAR WALL FRAMING REQUIREMENTS. SHEAR WALL CORNERS AND INTERSECTIONS SHALL BE FRAMED AND NAILED PER 10/S50.40, UNLESS NOTED OTHERWISE. SEE S50.40 AND S50.41 FOR HOLD-DOWN SCHEDULE AND FRAMING REQUIREMENTS. ALL EXTERIOR WALLS ARE SW4 PER SHEAR WALL SCHEDULE. UNO.
- SEE S50.01 AND S50.02 FOR CONCRETE TYPICAL DETAILS.
- SEE ARCHITECTURAL DRAWINGS FOR SLAB DEPRESSION AND SLOPE REQUIREMENTS. SEE 4/S50.02.
- EXTERIOR STUD WALLS AND INTERIOR SHEAR WALLS SHALL BE 2x6 LVL @ 16" OC UNLESS NOTED OTHERWISE ON PLAN. INTERIOR STUD WALLS SHALL BE 2x STUDS @ 16" OC (WALLS OVER 16'-0" NEED TO BE LVL STUDS), UNLESS NOTED OTHERWISE ON PLAN. SEE ARCHITECTURAL FOR WALL TYPES. SEE 20/S50.40 FOR SPECIAL STUD REQUIREMENTS AT HEAVILY NAILED SHEAR WALLS. SEE S50.42 FOR TYPICAL WALL FRAMING DETAILS AND ALLOWABLE PENETRATIONS THRU WALL STUDS AND PLATES.
- POSTS OR JAMB STUDS SUPPORTING BEAMS ABOVE SHALL BE (2) STUDS, UNO.
- AT PLYWOOD SHEATHED SHEAR WALLS, CONTRACTOR SHALL EXTEND SHEATHING TO ACHIEVE FULL COVERAGE OF ENTIRE WALL TO AVOID CONFLICTS BETWEEN VARYING PLYWOOD AND GWB THICKNESS.
- SEE ARCHITECTURAL / MECHANICAL / ELECTRICAL / CIVIL / UTILITIES DRAWINGS FOR UNDER SLAB PIPING. COORDINATE FOUNDATION DEPTHS AND PIPING IN ACCORDANCE WITH 18/S50.01.
- BOLLARDS PER ARCHITECT NOT SHOWN. SEE ARCHITECTURAL AND CIVIL FOR ADDITIONAL INFORMATION.
- FRAME OPENINGS IN STRUCTURAL WALLS PER 3/S50.42, UNLESS NOTED OTHERWISE. HEADERS IN EXTERIOR WALLS SHALL BE 5.25 x 7.25 LVL AND SPACED TO MATCH WIDTH OF WALL PER 3/S50.42, UNLESS NOTED OTHERWISE. HEADERS IN INTERIOR WALLS SHALL BE (3) 2x8 AND DROPPED BELOW STUD WALL TOP PLATE, UNLESS NOTED OTHERWISE. STRAP ALL SHEAR WALL OPENINGS PER 5/S50.40.
- PROVIDE (4) #5 REBAR DOWELS AT EACH CONCRETE WALL. EMBED DOWELS INTO CONC WALL PER DETAIL 2/S50.03. EXTEND DOWELS INTO THE APP BAY SLAB A MIN OF 12'-0". LOCATE DOWELS 12" FROM WALL ENDS & SHALL BE EQUALLY SPACED.
- SEE DETAIL 17/S50.02 FOR CONCRETE CURB UNDER NON-STRUCTURAL INTERIOR PARTITION WALLS PER ARCHITECT. CONTRACTOR TO COORDINATE WITH ARCHITECTURAL DWGS FOR INTERIOR CONCRETE CURB LOCATIONS.

LEGEND	
<FX>	FOOTING MARK PER FOOTING SCHEDULE THIS SHEET
(x-x'")	TOP OF FOOTING ELEVATION. SEE NOTE 4 UNO
□	POST OR COLUMN THIS LEVEL. SEE NOTE 9 UNO
—	CONCRETE WALL THIS LEVEL
SWX	SHEAR WALL THIS LEVEL PER SCHEDULE 20/S50.40 AND NOTES 5, 8, & 13
—	STRUCTURAL WOOD WALL THIS LEVEL. SEE NOTE 8 & 13
HDA	HOLD-DOWN PER SCHEDULE 20/S50.41
⬢	MULTI-STUD POST WITH "X" STUDS
■	8" THICK SLAB ON GRADE, PER PLAN NOTE #1

FOOTING SCHEDULE						
MARK	WIDTH	LENGTH	DEPTH	TOP REINFORCING	BOTTOM REINFORCING	REMARKS
<F2>	2'-0"	2'-0"	1'-0"	-	(3) #5 EACH WAY	-
<F2.5>	2'-6"	2'-6"	1'-0"	-	(3) #5 EACH WAY	-
<F3>	3'-0"	3'-0"	1'-6"	(3) #5 EACH WAY	(3) #5 EACH WAY	-
<F3.5>	3'-6"	3'-6"	1'-6"	(4) #5 EACH WAY	(4) #5 EACH WAY	-
<F4>	4'-0"	4'-0"	2'-0"	(4) #5 EACH WAY	(4) #5 EACH WAY	CENTER ON SIMPSON STRONGWALL
<F4.5>	4'-6"	4'-6"	1'-6"	(5) #5 EACH WAY	(5) #5 EACH WAY	-
<FA>	5'-6"	8'-0"	2'-0"	(6) #6 LONGIT #5 @ 12" TRANS	(6) #6 LONGIT #5 @ 12" TRANS	CENTER CONC WALL ON FTG
<FB>	5'-0"	PER PLAN	1'-0"	-	(5) #5 LONGIT & #5 @ 12" TRANS	CENTER BTWN COLS

PROJ# 262023.049

T# ADDENDUM 04

ISSUE SEPTEMBER 24, 2024

DATE	REVISION	SCHEDULE	2024
1	PERMIT RESUBMITTAL	04/02/25	
2	ADDENDUM	09/12/25	
3	PERMIT REVISIONS	05/30/25	
4	PERMIT REVISIONS	08/01/25	
5	ADDENDUM 04	09/24/25	

AHJ APPROVAL
STAMP

FOUNDATION AND
LEVEL 1 FRAMING
PLAN

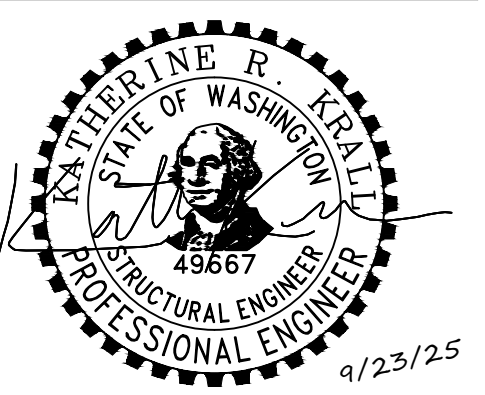
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S22.01

FOUNDATION AND LEVEL 1 FRAMING PLAN

1/8" = 1'-0"





LEVEL 2 FRAMING PLAN NOTES:

- ALL FLOORS SHALL BE BLOCKED DIAPHRAGMS, SEE NOTE 2 FOR BLOCKING & NAILING REQUIREMENTS, IN ACCORDANCE WITH APA.
- FLOOR SHEATHING SHALL BE 3/4" T&G PLYWOOD (PANEL SPAN RATING 48/24) PROVIDE 2x FLAT BLOCKING AT ALL UNFRAMED PANEL EDGES (BLOCKED DIAPHRAGMS), NAIL SHEATHING AT ALL PANEL EDGES, DIAPHRAGM BOUNDARIES, STRUTS, BLOCKING, AND SHEAR WALLS BELOW WITH 10d @ 4" OC, NAIL SHEATHING TO ALL INTERMEDIATE FRAMING WITH 10d @ 12" OC. GLUE SHEATHING AT ALL SUPPORTS WITH ADHESIVE CONFORMING TO A.P.A. SPECIFICATION AFG-01. SEE 7/550.42 FOR STAGGERED SHEATHING LAYOUT. PROVIDE GYPCRETE TOPPING SLAB OVER PLYWOOD SHEATHING OVER 2ND FLOOR FRAMING ONLY, SEE ARCH DRAWINGS. MAX GYPCRETE THICKNESS NOT TO EXCEED 2".
- MEZZANINE FLOOR BEAMS SHALL BE FLUSH FRAMED, UNO.
- EXTERIOR STUD WALLS SHALL BE AND INTERIOR SHEAR WALLS 2x6 LVL @ 16" OC UNLESS NOTED OTHERWISE ON PLAN. INTERIOR STUD WALLS SHALL BE 2x STUDS @ 16" OC, UNLESS NOTED OTHERWISE ON PLAN. SEE ARCHITECTURAL FOR WALL TYPES. SEE 20/550.40 FOR SPECIAL STUD REQUIREMENTS AT HEAVILY NAILED SHEAR WALLS. SEE 550.42 FOR TYPICAL WALL FRAMING DETAILS AND ALLOWABLE PENETRATIONS THRU WALL STUDS AND PLATES.
- SEE 20/550.40 FOR SHEAR WALL SCHEDULE AND SHEAR WALL FRAMING REQUIREMENTS. SHEAR WALL CORNERS AND INTERSECTIONS SHALL BE FRAMED AND NAILED PER 10/550.40, UNLESS NOTED OTHERWISE. SEE 20/550.41 FOR HOLDOWN SCHEDULE, AND FRAMING REQUIREMENTS. ALL EXTERIOR WALLS ARE SW6 PER SHEAR WALL SCHEDULE, UNO.

LOW ROOF FRAMING PLAN NOTES:

- ALL ROOFS SHALL BE BLOCKED DIAPHRAGMS, SEE NOTE 7 FOR BLOCKING & NAILING REQUIREMENTS.
- ROOF SHEATHING SHALL BE 5/8" PLYWOOD (PANEL SPAN RATING 40/20). PROVIDE 2x FLAT BLOCKING AT ALL UNFRAMED PANEL EDGES, 3x FLAT BLOCKING WHERE ROOF FRAMING IS EXPOSED TO VIEW (BLOCKED DIAPHRAGMS), NAIL SHEATHING AT ALL PANEL EDGES, DIAPHRAGM BOUNDARIES, AND EXTERIOR SHEAR WALLS BELOW WITH 10d @ 6" OC. NAIL SHEATHING TO ALL STRUTS, BLOCKING, STRUT BLOCKING AND INTERIOR SHEAR WALLS BELOW WITH 10d @ 3" OC STAGGERED. NAIL SHEATHING TO ALL INTERMEDIATE FRAMING WITH 10d @ 12" OC. SEE 7/550.42 FOR STAGGERED SHEATHING LAYOUT.
- FRAME OPENINGS IN STRUCTURAL WALLS PER 3/550.42, UNLESS NOTED OTHERWISE. HEADERS IN EXTERIOR WALLS SHALL BE 5.25x7.25 LVL AND SPACED TO MATCH WIDTH OF WALL PER 3/550.42, UNLESS NOTED OTHERWISE. HEADERS IN INTERIOR WALLS SHALL BE 5.14x7.14 LVL AND DROPPED BELOW STUD WALL TOP PLATE, UNLESS NOTED OTHERWISE.
- STRUCTURAL DRAWINGS DO NOT SHOW ALL LOCATIONS OF MECHANICAL UNITS, PIPING, OR OTHER EQUIPMENT (REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, AND FIRE PROTECTION DRAWINGS). THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE FINAL WEIGHTS AND LOCATIONS OF THE UNITS AND PIPE RUNS (INCLUDING SPECIFIC SUPPORT LOADS AND SUPPORT CONFIGURATION) WITH THE WOOD JOIST MANUFACTURER, MECHANICAL / ELECTRICAL / PLUMBING / FIRE PROTECTION CONTRACTORS AND STRUCTURAL ENGINEER PRIOR TO JOIST FABRICATION. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
- SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION NOT SHOWN.

LEGEND

- POST OR COLUMN THIS LEVEL
- POST OR COLUMN BELOW THIS LEVEL
- SWX SHEAR WALL THIS LEVEL PER SCHEDULE 20/550.40
- HOLDOWN PER SCHEDULE 20/550.41, TYPICAL
HOLDOWN BY SIMPSON STRONG-TIE WITH
THREADED ROD EMBEDDED TO FRAMING BELOW PER
5/550.41 OR 13/550.41
- STRUCTURAL WOOD WALL THIS LEVEL
TYPICAL EXTERIOR WALLS 2x6 STUDS @ 16" OC,
LVL 2x6 @ 16" OC WHERE INTERIOR STUDS > 16'-0" ARE REQUIRED
- STRUCTURAL WALL BELOW THIS LEVEL
- SPAN DIRECTION OF FRAMING MEMBERS
- CONCRETE WALL THIS LEVEL
- IN ADDITION TO LEVEL 2 FRAMING PLAN NOTE REQUIREMENTS
ADDITIONAL DIAPHRAGM NAILING AT THIS AREA TO BE 10d @ 3" OC AT
PANEL EDGES AND 10d @ 4" OC AT INTERMEDIATE FRAMING MEMBERS
- LOW ROOF SHEATHING PER PLAN NOTES #6 & #7

BEAM SCHEDULE

BEAM REFERENCE	BEAM SIZE
GLB 306	GLB 3 1/2 x 6
GLB 312	GLB 3 1/2 x 12
GLB 314	GLB 3 1/2 x 13 1/2
GLB 412	GLB 3 1/2 x 12
GLB 416	GLB 3 1/2 x 16
GLB 514	GLB 5 1/2 x 13 1/2
GLB 515	GLB 5 1/2 x 15
GLB 715	GLB 6 3/4 x 15
GLB 716	GLB 6 3/4 x 16 1/2
GLB 718	GLB 6 3/4 x 18
GLB 720	GLB 6 3/4 x 19 1/2
GLB 723	GLB 6 3/4 x 22 1/2
GLB 724	GLB 6 3/4 x 24
GLB 732	GLB 6 3/4 x 31 1/2
GLB 929	GLB 8 3/4 x 28 1/2
LVL 1	LVL 2.5 x 14
LVL 2	LVL 5.25 x 14
LVL 3	LVL 3.5 x 14
LVL 4	LVL 5.25 x 16
LVL 5	LVL 3.5 x 16

NOTE:

- MAX SPACING OF GLB 416 SHALL NOT EXCEED 8'-0" OC.
- BEAMS LISTED ABOVE APPLY TO FRAMING ON THIS SHEET ONLY.

GIG HARBOR STATION 51 GIG HARBOR FIRE & MEDIC ONE

6711 KIMBALL DRIVE
GIG HARBOR, WA 98335

PROJEC 262023.049

T# ADDENDUM 04

ISSUE SEPTEMBER 24,

DATE REVISION SCHEDULE 2024

1 PERMIT RESUBMITTAL 04/02/25

3 PERMIT REVISIONS 05/30/25

4 PERMIT REVISIONS 08/01/25

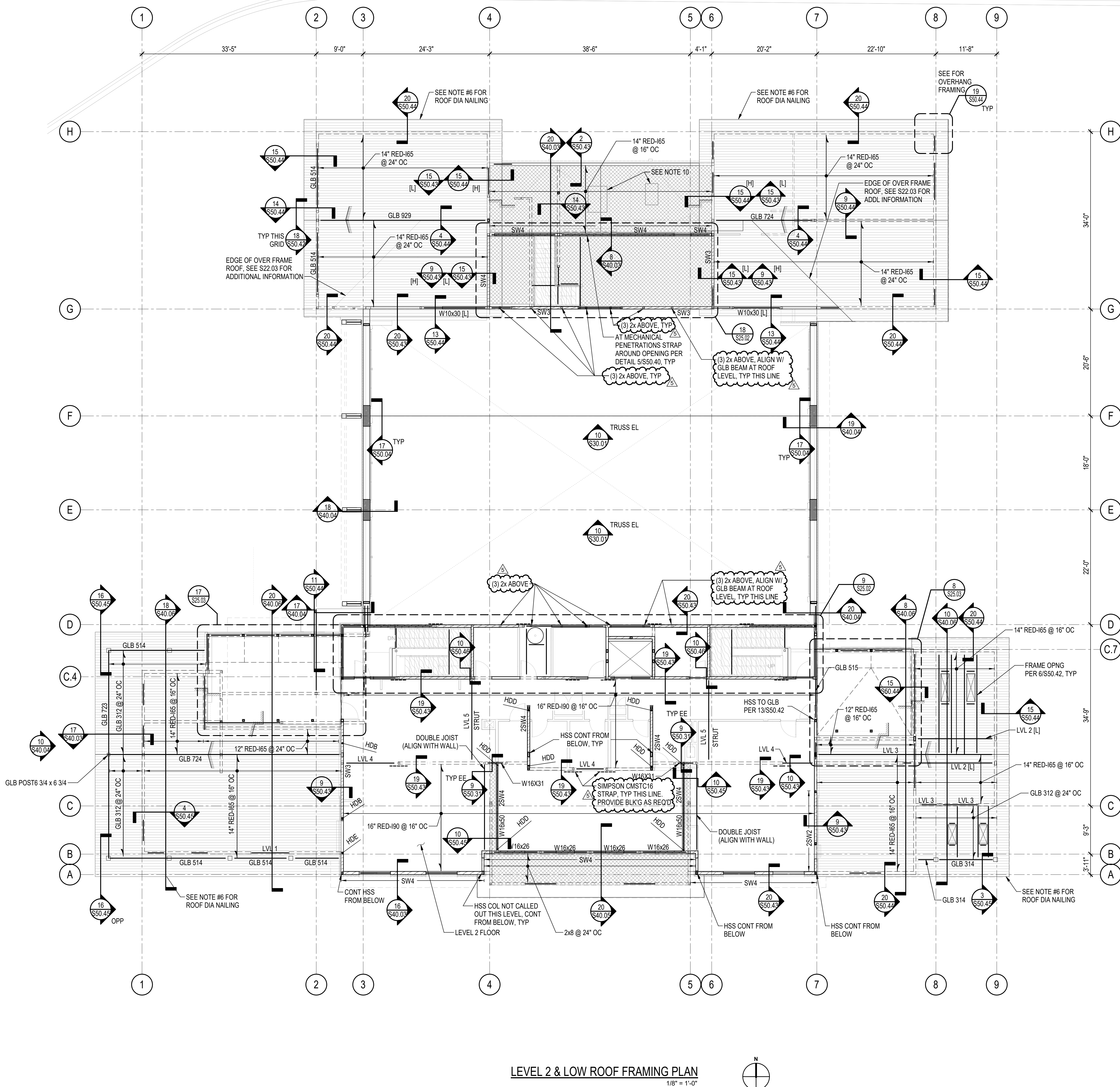
5 ADDENDUM 04 09/24/25

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LEVEL 2 & LOW ROOF FRAMING PLAN

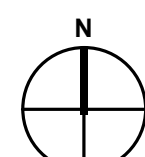
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S22.02



LEVEL 2 & LOW ROOF FRAMING PLAN

1/8" = 1'-0"



HIGH ROOF FRAMING PLAN NOTES:

- ALL ROOFS SHALL BE BLOCKED DIAPHRAGMS IN ACCORDANCE WITH APA.
- ROOF SHEATHING SHALL BE 5/8" PLYWOOD (PANEL SPAN RATING 40/20) PROVIDE 2x FLAT BLOCKING AT ALL UNFRAMED PANEL EDGES, 3x FLAT BLOCKING WHERE ROOF FRAMING IS EXPOSED TO VIEW (BLOCKED DIAPHRAGMS). NAIL SHEATHING AT ALL PANEL EDGES, DIAPHRAGM BOUNDARIES, AND EXTERIOR SHEAR WALLS BELOW WITH 10d @ 4" OC. NAIL SHEATHING AT ALL STRUTS, BLOCKING, STRUT BLOCKING AND INTERIOR SHEAR WALLS BELOW WITH 10d @ 4" OC STAGGERED. NAIL SHEATHING TO ALL INTERMEDIATE FRAMING WITH 10d @ 12" OC. SEE 7/S50.42 FOR STAGGERED SHEATHING LAYOUT.
- STRUCTURAL DRAWINGS DO NOT SHOW ALL LOCATIONS OF MECHANICAL UNITS, PIPING, OR OTHER EQUIPMENT (REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, AND FIRE PROTECTION DRAWINGS). THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE FINAL WEIGHTS AND LOCATIONS OF THE UNITS AND PIPE RUNS (INCLUDING SPECIFIC SUPPORT LOADS AND SUPPORT CONFIGURATION) WITH THE WOOD JOIST MANUFACTURER, MECHANICAL / ELECTRICAL / PLUMBING / FIRE PROTECTION CONTRACTORS AND STRUCTURAL ENGINEER PRIOR TO JOIST FABRICATION. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.
- FRAME OPENINGS IN STRUCTURAL WALLS PER 3/S50.42, UNLESS NOTED OTHERWISE. HEADERS IN EXTERIOR WALLS SHALL BE 5 1/4 x 7 1/4 LVL AND SPACED TO MATCH WIDTH OF WALL PER 3/S50.42, UNLESS NOTED OTHERWISE. HEADERS IN INTERIOR WALLS SHALL BE 5.25 x 7.25 LVL AND DROPPED BELOW STUD WALL TOP PLATE, UNLESS NOTED OTHERWISE. STRAP ALL SHEAR WALL OPENING PER 5/S50.40.
- OVER APPARATUS BAY (BTWN GRIDLINES D & G) - ROOF SYSTEM SHALL BE 3x FLAT T&G DECKING WITH 5/8" PLYWOOD SHEATHING. NAIL SHEATHING TO 3x DECKING WITH 10d NAILS @ 4" OC AT ALL PANEL EDGES. ATTACH SHEATHING AT ALL DIAPHRAGM BOUNDARIES, BLOCKING AND EXTERIOR SHEAR WALLS BELOW W/ SIMPSON 1/4" X 6" FLAT HEAD SCREWS @ 4" OC STAGGERED. ATTACH SHEATHING IN PANEL FIELD TO ALL STRUTS, STRUT BLOCKING, AND INTERIOR SHEAR WALLS BELOW W/ SIMPSON 1/4" X 6" FLAT HEAD SCREWS @ 4" OC, STAGGERED. AT INTERMEDIATE LOCATIONS NAIL SHEATHING WITH 10d X 3" NAILS @ 12" OC EACH WAY. GLUE SHEATHING AT ALL SUPPORTS WITH ADHESIVE CONFORMING TO APA SPECIFICATIONS AFG-01. VERIFY THAT NAILING WILL NOT PENETRATE UNDERSIDE OF DECKING. NAILING SHALL NOT BE VISIBLE FROM THE INTERIOR. 3x T&G DECKING SHALL BE TOE NAILED AT EACH SUPPORT WITH ONE 40d NAIL AND FACE NAILED WITH ONE 60d NAIL. 3x DECKING SHALL BE SPIKED TO EACH OTHER WITH 8 INCH SPIKES @ 3'-0" OC MAX THRU PREDRILLED HOLES AND WITH ONE SPIKE NUT EXCEEDING 10" FROM THE END OF EACH PIECE. WHERE HOLES ON 3x DECKING IS REQUIRED, HOLES IN ROOF SHALL BE 2-1/2" DIAMETER MAXIMUM. LOCATE HOLES AT CENTER OF 3x DECKING. HOLES SHALL BE 1'-0" FROM FRAMING AND SPACED A MINIMUM OF 4'-0" APART. AT LARGE OPENINGS INSTALL 3x6 SLEEPER SPANNING BETWEEN GLULAM NAILED W/ 10d @ 12" OC.
- SEE MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION NOT SHOWN.
- SEE 10/S25.03 (SKYLIGHT ENLARGED PLAN) FOR STAPPING & FRAMING INFORMATION AT SKYLIGHT CORNERS.
- SEE DETAIL 13/S50.32 WHERE ELEVATOR HOIST BEAM IS OFFSET FROM HSS GUIDELINE POSTS

LEGEND

- OVERFRAMING PER 3/S50.44
- POST OR COLUMN BELOW
- SPAN DIRECTION OF FRAMING MEMBERS
- STRUCTURAL WALL BELOW THIS LEVEL
- ROOF SLOPE PER ARCHITECTURAL

BEAM SCHEDULE

BEAM REFERENCE	BEAM SIZE
GLB 306	GLB 3 1/2 x 6
GLB 312	GLB 3 1/2 x 12
GLB 314	GLB 3 1/2 x 13 1/2
GLB 416	GLB 3 1/2 x 16
GLB 512	GLB 5 1/2 x 12
GLB 514	GLB 5 1/2 x 13 1/2
GLB 515	GLB 5 1/2 x 15
GLB 715	GLB 6 3/4 x 15
GLB 716	GLB 6 3/4 x 16 1/2
GLB 720	GLB 6 3/4 x 19 1/2
GLB 721	GLB 6 3/4 x 21
GLB 732	GLB 6 3/4 x 31 1/2
LVL 1	LVL 2 1/2 x 14
LVL 2	LVL 5 1/4 x 14
LVL 3	LVL 3 1/2 x 14
LVL 4	LVL 1 3/4 x 14

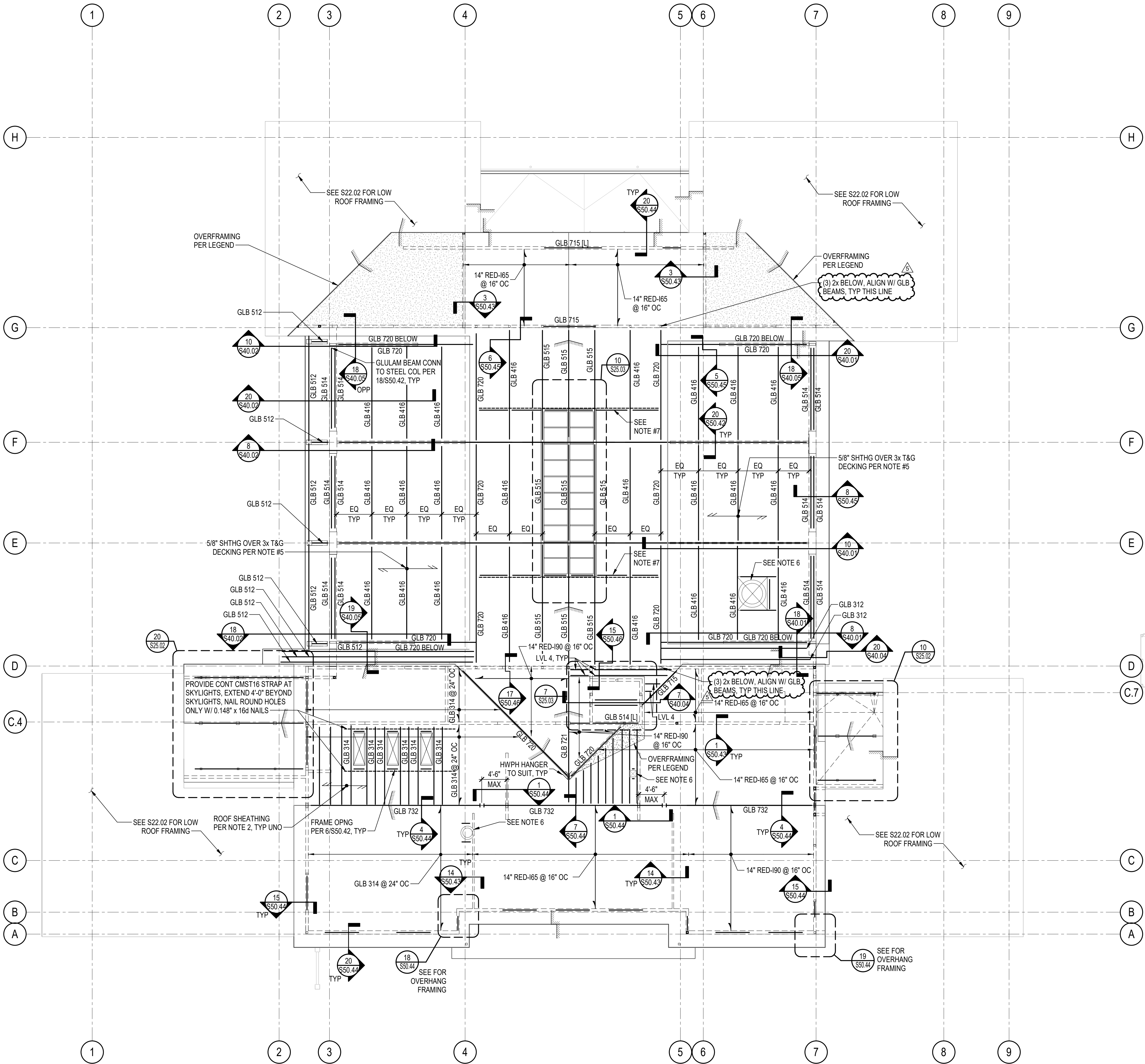
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T #	ADDENDUM 04
ISSUE	SEPTEMBER 24, 2024
DATE	REVISION SCHEDULE
1	PERMIT RESUBMITTAL 04/02/25
3	PERMIT REVISIONS 05/30/25
4	PERMIT REVISIONS 08/01/25
5	ADDENDUM 04 09/24/25

AHJ APPROVAL
STAMP

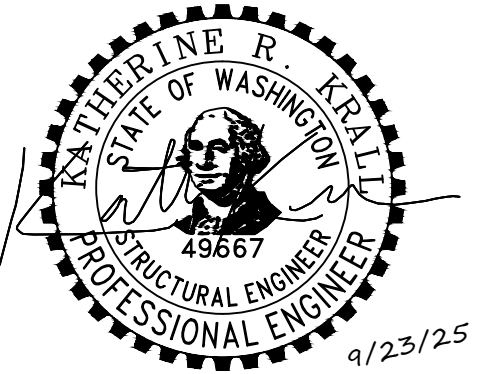
ROOF FRAMING
PLAN

SHEET
#

S22.03



ROOF FRAMING PLAN
1/8" = 1'-0"



GIG HARBOR STATION 51
GIG HARBOR FIRE & MEDIC ONE
6711 KIMBALL DRIVE
GIG HARBOR, WA 98335

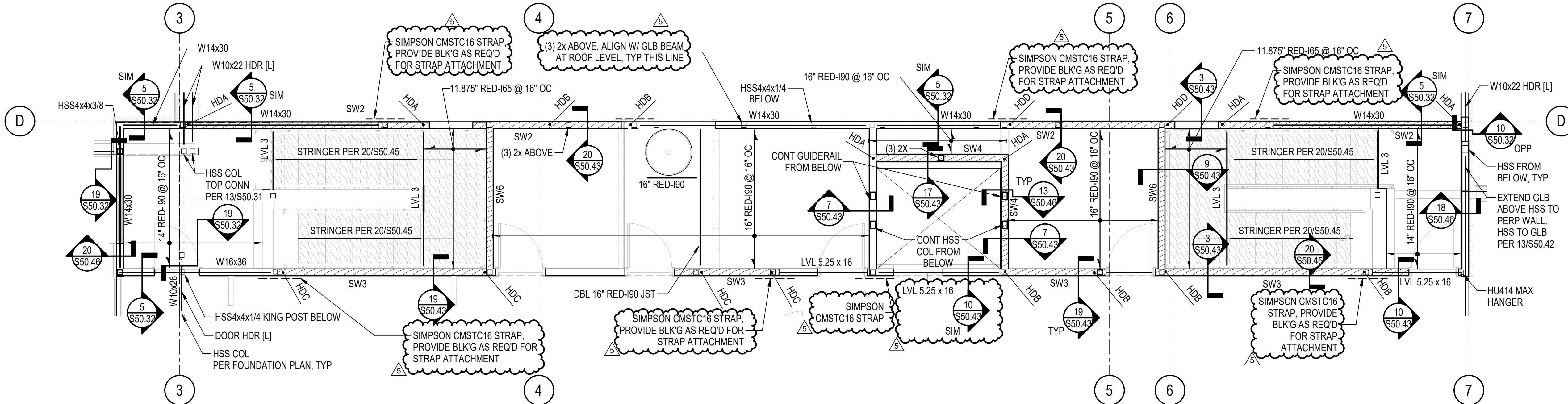
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DATE	2025
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5	ADDENDUM 04 09/24/25

AHJ APPROVAL
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PARTIAL PLANS

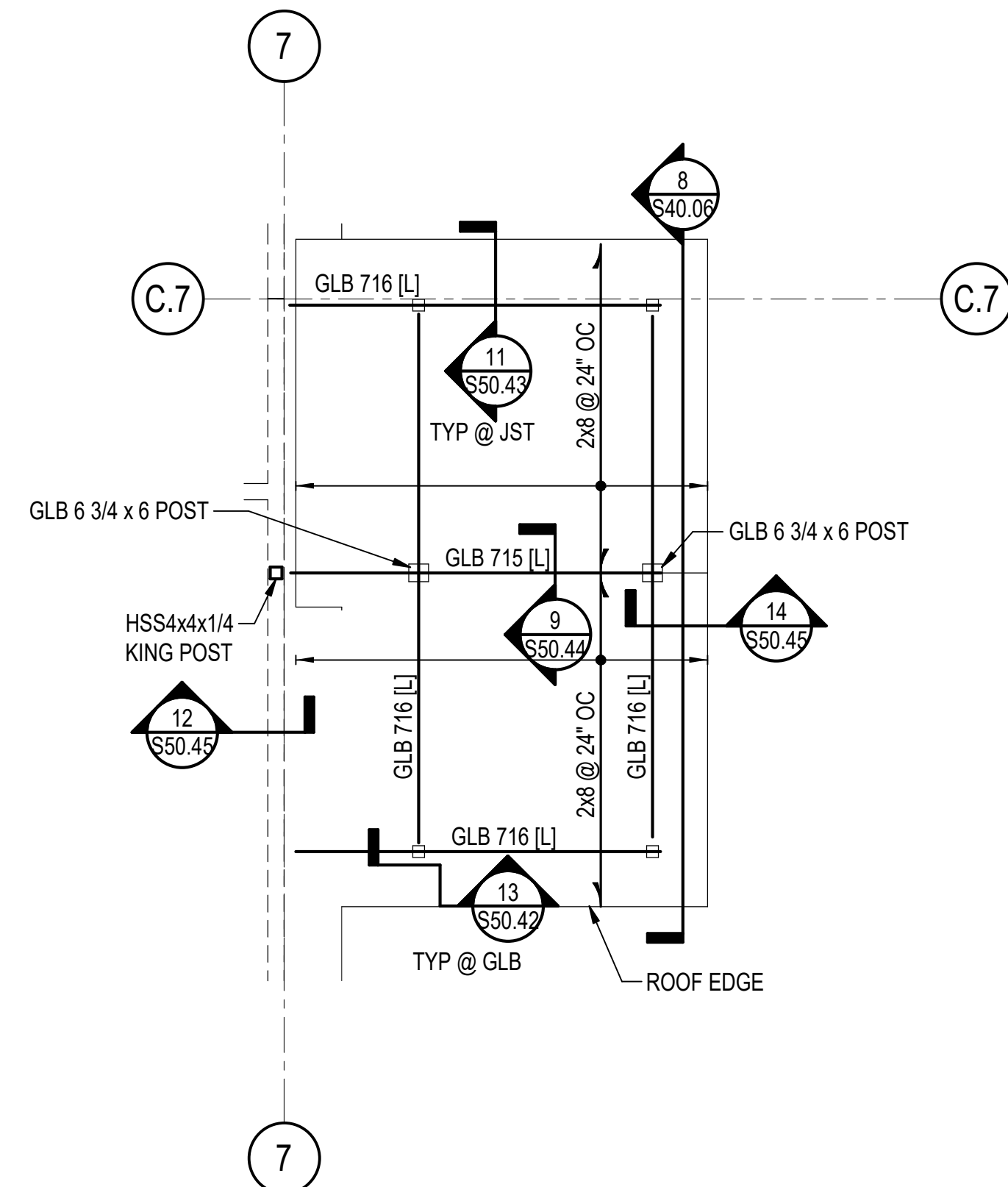
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S25.02



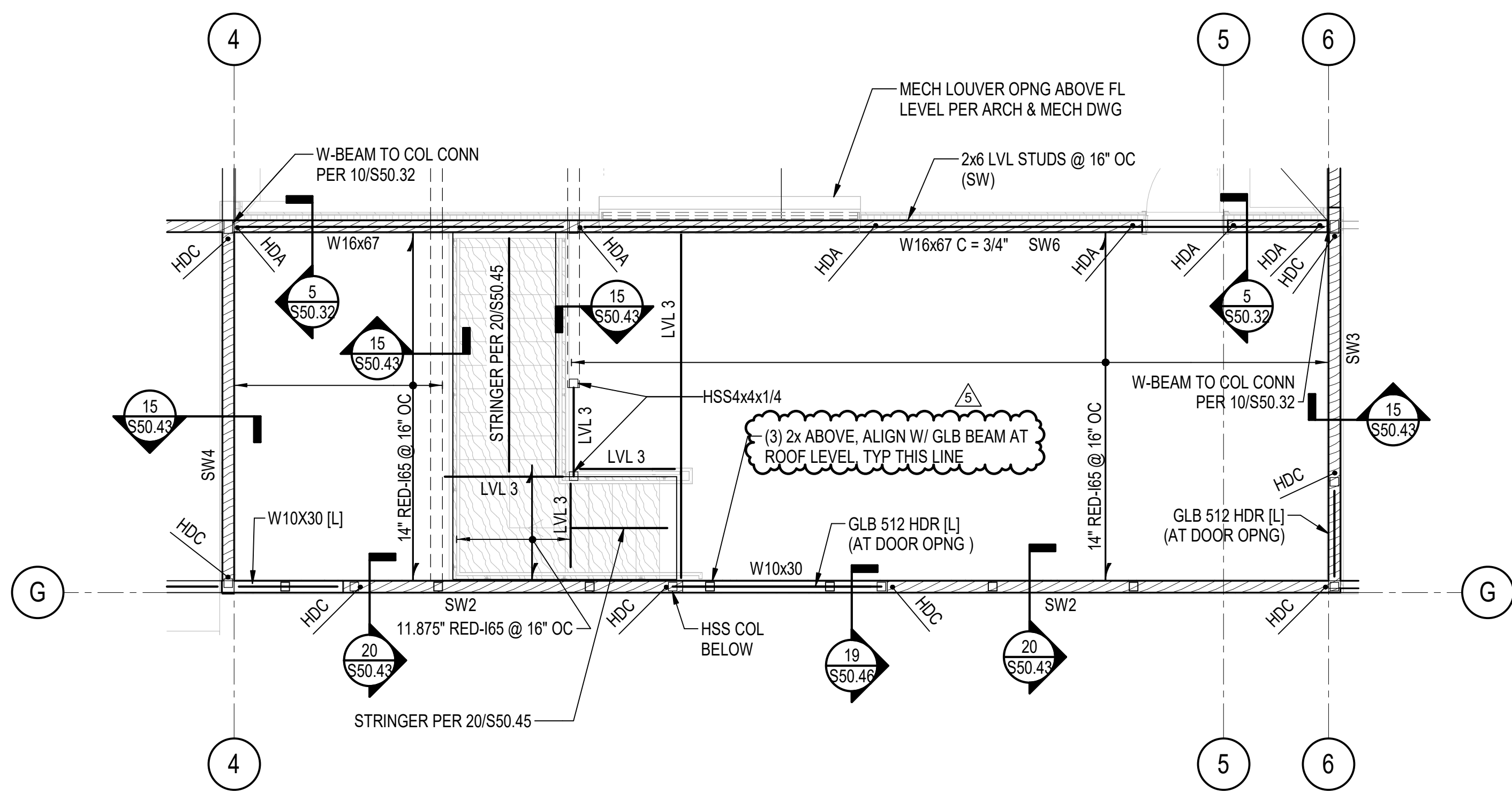
NOTE:
1. SEE S22.02 FOR ADDITIONAL INFORMATION NOT SHOWN.

LEVEL 2 PARTIAL FRAMING PLAN 9
1/4" = 1'-0"



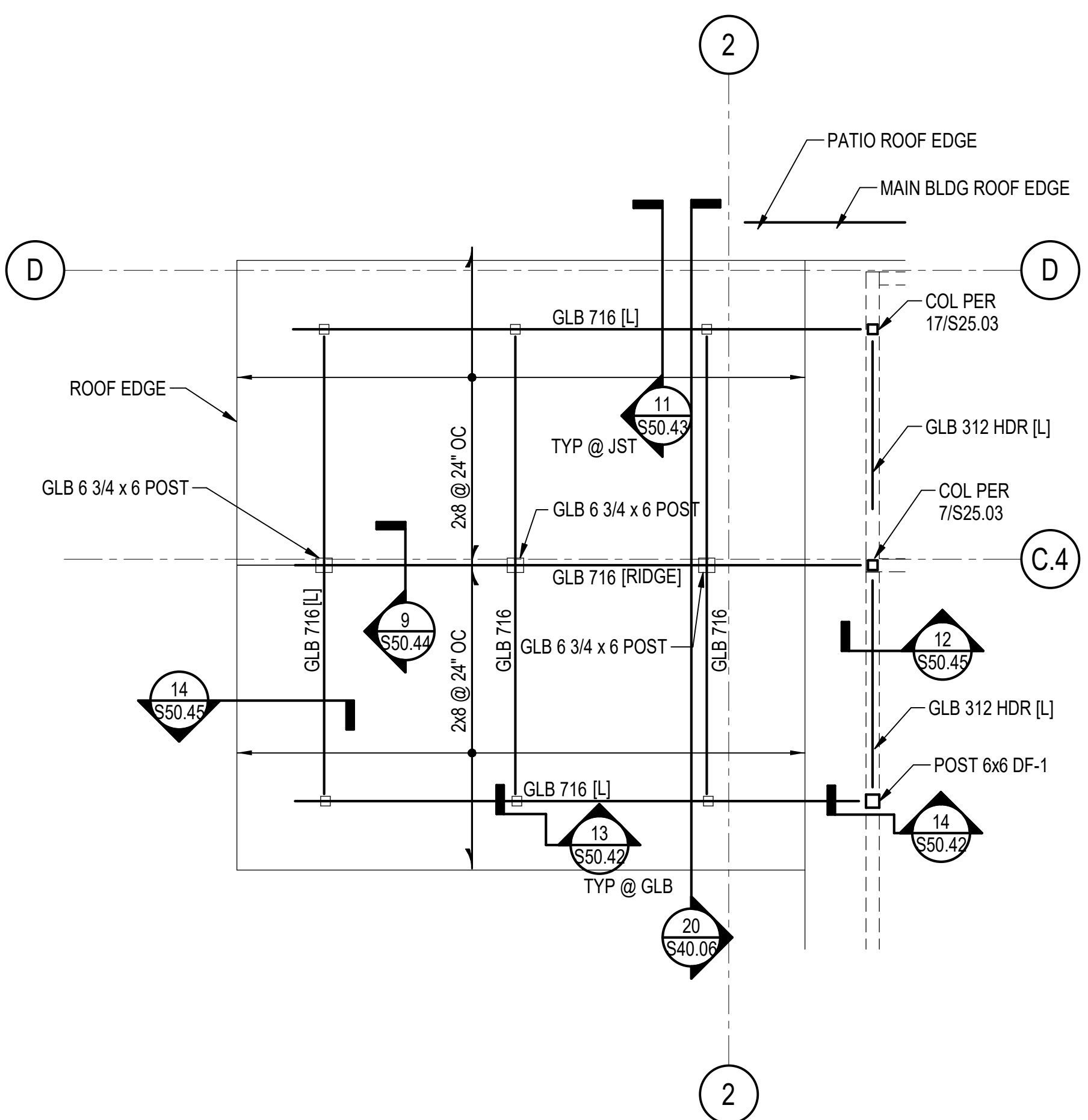
NOTE:
1. SEE S22.03 AND 8/S40.06 FOR PLAN NOTES & ADDITIONAL INFORMATION NOT SHOWN.

EAST ROOF PATIO ENLARGED PLAN 10
1/4" = 1'-0"



NOTE:
1. SEE S22.03 FOR ADDITIONAL INFORMATION NOT SHOWN.

LEVEL 2 PARTIAL FRAMING PLAN 18
1/4" = 1'-0"



NOTE:
1. SEE S22.03 AND 20/S40.06 FOR ADDITIONAL INFORMATION NOT SHOWN.

WEST ROOF PATIO ENLARGED PLAN 20
1/4" = 1'-0"

GENERAL NOTES

- MOUNT ALL RECEPTACLES AT +30" AFF IN THE APPARATUS BAY 138 AND 139.
- ROUTE CONDUITS ACROSS APPARATUS BAY CONCEALED ABOVE TONGUE & GROOVE DECK AND BELOW ROOF WITHIN RIGID INSULATION SPACE (SEE ARCHITECTURAL ROOF DETAILS). COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN TO CONFIRM EXACT ROUTE AND CONDUIT TRANSITION LOCATIONS. SEE SHEET E51.01 FOR MORE INFORMATION.

CONSTRUCTION NOTES

- DOOR OPERATOR FOR APPARATUS BAY DOORS. MOUNT AT +42" AFF ON BOLLARD. PROVIDE CONNECTION TO DOOR MOTOR ABOVE AND MAIN CONTROL PANEL.
- MOTOR FOR APPARATUS BAY DOORS. PROVIDE CONNECTION TO DOOR OPERATOR AND CONTROL PANEL. SEE BIFOLD DOOR WIRING DIAGRAM DETAIL 1 ON SHEET E71.06.
- SURFACE MOUNT RECEPTACLE ON CONCRETE WALL. INSTALL SURFACE MOUNTED CONDUIT FOR RECEPTACLES ON CONCRETE WALLS.
- APPARATUS BAY BIFOLD DOOR MAIN CONTROL PANELS & FUSED DISCONNECT. SEE DETAIL 1 ON SHEET E71.06.
- MOUNT RECEPTACLE AT +96" AFF FOR DISPATCH MONITOR. COORDINATE WITH THE ARCHITECT FOR EXACT HEIGHT AND OUTLET LOCATION PRIOR TO ROUGH-IN.
- MOUNT RECEPTACLE FOR MONITOR AT +72" COORDINATE WITH THE ARCHITECT FOR EXACT HEIGHT AND OUTLET LOCATION PRIOR TO ROUGH-IN.
- MOUNT RECEPTACLES AT +3'-10" AFF.
- DOOR CONTROLLER AND MOTOR FOR ROLL-UP DOOR IN FITNESS 131. COORDINATE EXACT LOCATION WITH DOOR INSTALLER PRIOR TO ROUGH-IN.
- POWER CONNECTION TO THE GEAR DRYER. PROVIDE WEATHERPROOF DEVICES AND CONNECTIONS.
- POWER CONNECTION TO THE EXTRACTOR. PROVIDE WEATHERPROOF DEVICES AND CONNECTIONS.
- POWER FOR SCBA FILL STATION. PROVIDE NEMA 15-60R RECEPTACLES. COORDINATE EXACT LOCATION AND POWER CONNECTION REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
- DEDICATED RECEPTACLE FOR THE AIR DRYER. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- POWER FOR IRRIGATION CONTROLLER. MOUNT AT +48" AFF. COORDINATE EXACT LOCATION WITH LANDSCAPE CONTRACTOR PRIOR TO ROUGH-IN.
- MOUNT IN ELEVATOR PIT.
- RECEPTACLE FOR THE COFFEE MAKER.
- POWER FOR EXTERIOR PIPING HEAT TRACE. COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR PRIOR TO ROUGH-IN.
- VEHICLE EXHAUST SYSTEM CONTROL PANEL. PROVIDE POWER CONNECTION TO THE VEHICLE EXHAUST SYSTEM FAN. COORDINATE ALL WORK WITH VEHICLE EXHAUST SYSTEM INSTALLER PRIOR TO ROUGH-IN.
- WALL MOUNTED FAN FOR THE VEHICLE EXHAUST SYSTEM CONNECTED TO THE VEHICLE EXHAUST SYSTEM CONTROL PANEL IN APP BAY. COORDINATE ALL WORK WITH VEHICLE EXHAUST SYSTEM INSTALLER PRIOR TO ROUGH-IN.
- MECHANICAL EQUIPMENT TRANSFORMER FOR 24 VOLT CONTROL POWER.
- CEILING FAN CONTROLLERS AND SWITCHES. PROVIDE CONNECTION TO THE CEILING FANS IN APP BAY.
- MECHANICAL EQUIPMENT TRANSFORMER FOR 24 VOLT CONTROL POWER.
- GENERATOR REMOTE ANNUNCIATOR. MOUNT AT +60" AFF.
- PROVIDE 1-1/2" C. TO GENERATOR.
- DROP CORD WITH GROUND FAULT DETECTION DEVICE (GFPD). SEE SPEC SECTION 2627.26.
- FUTURE EV FIRE TRUCK CHARGER. PROVIDE 3" C.O. TO MDB IN ELECTRICAL ROOM 150. STUB CONDUIT UP 12" AFF IN APP BAY 138 AND CAP IT.
- AIR COMPRESSOR FOR THE DRY FIRE RISER. COORDINATE EXACT LOCATION AND POWER REQUIREMENTS WITH THE FIRE PROTECTION CONTRACTOR PRIOR TO ROUGH-IN.
- POWER FOR ACCESS CONTROL PANEL.
- POWER FOR FUTURE GEAR DRYER.
- POWER CONNECTION FOR CEILING FAN. COORDINATE CEILING FAN EXACT LOCATION PRIOR TO ROUGH-IN.
- CEILING FAN CONTROL SWITCH. PROVIDE CONNECTION TO THE CEILING FAN.
- GAS SOLENOID VALVE FOR KITCHEN RANGE AND BBQ. ROUTE CIRCUIT THROUGH CONTACTOR FOR SHUT-DOWN BY THE ALERTING SYSTEM.
- PROVIDE MANUAL BY-PASS SWITCH, NEMA 3R AND RECEPTACLE IN WEATHERPROOF ENCLOSURE.
- SUMP PUMP CONTROL PANEL. PROVIDE CONNECTIONS TO ELEVATOR SUMP PUMP IN ELEVATOR PIT. SEE DETAIL 1 ON SHEET P30.05. COORDINATE WORK WITH PLUMBING CONTRACTOR.

GIG HARBOR FIRE STATION 51
GIG HARBOR FIRE & MEDIC ONE
6711 KIMBALL DRIVE
GIG HARBOR, WA 98336

PROJECT # 2022011

BID SET

ISSUE DATE AUGUST 15, 2025

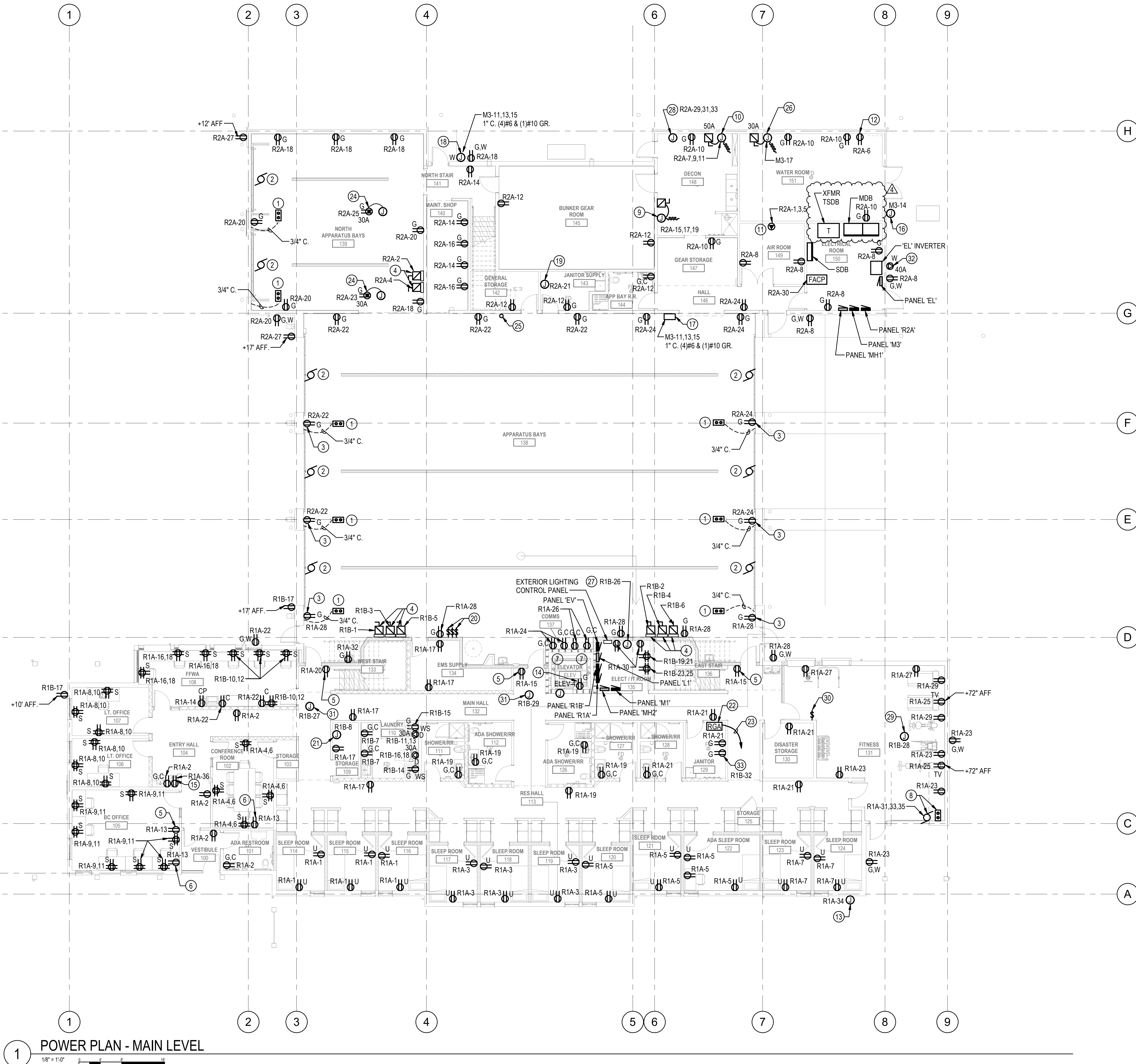
REVISION SCHEDULE

4 ADD #4 09/24/25

POWER PLAN - MAIN LEVEL

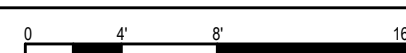
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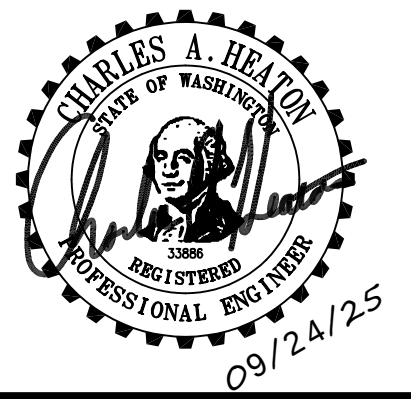
E31.01



POWER PLAN - MAIN LEVEL

1/8" = 1'-0"

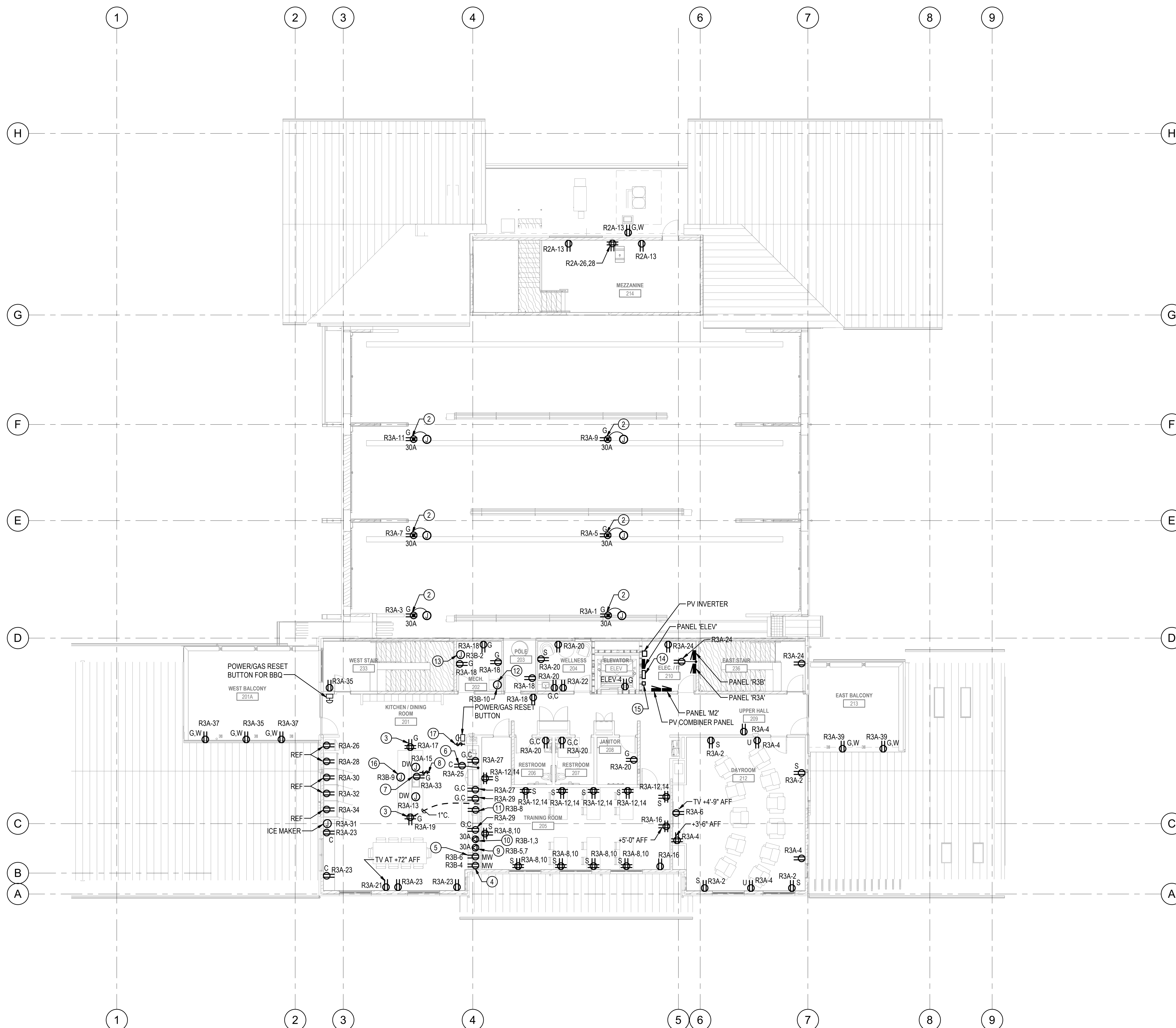




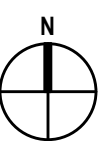
GIG HARBOR FIRE STATION 51
GIG HARBOR FIRE & MEDIC ONE
6711 KIMBALL DRIVE
GIG HARBOR, WA 98335

1. ROUTE CONDUITS ACROSS APPARATUS BAY CONCEALED ABOVE TONGUE & GROOVE DECK AND BELOW ROOF WITHIN RIGID INSULATION SPACE (SEE ARCHITECTURAL ROOF DETAILS). COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN TO CONFIRM EXACT ROUTE AND CONDUIT TRANSITION LOCATIONS. SEE SHET E51.01 FOR MORE INFORMATION

- ① MOUNT RECEPTACLE AT +72" AFF FOR DISPATCH MONITOR. COORDINATE WITH THE ARCHITECT FOR EXACT HEIGHT AND OUTLET LOCATION PRIOR TO ROUGH-IN.
- ② DROP CORD WITH GROUND FAULT DETECTION DEVICE (GFPD). SEE SPEC SECTION 262726.
- ③ MOUNT RECEPTACLE AT +24" AFF.
- ④ MOUNT MICROWAVE RECEPTACLE AT +42" AFF.
- ⑤ MOUNT MICROWAVE RECEPTACLE AT +64" AFF.
- ⑥ RECEPTACLE FOR THE COFFEE MAKER.
- ⑦ RECEPTACLE FOR GARBAGE DISPOSAL.
- ⑧ SWITCH FOR THE GARBAGE DISPOSAL. LOCATE THE SWITCH INSIDE THE CABINET.
- ⑨ MOUNT RECEPTACLE FOR THE OVEN AT -30" AFF. ROUTE CIRCUIT FOR OVEN THROUGH CONTACTOR FOR SHUT-OFF UPON STATION ALERT.
- ⑩ MOUNT RECEPTACLE FOR THE OVEN AT -60" AFF. ROUTE CIRCUIT FOR OVEN THROUGH CONTACTOR FOR SHUT-OFF UPON STATION ALERT.
- ⑪ RECEPTACLE FOR THE RANG/COOKTOP.
- ⑫ MECHANICAL EQUIPMENT TRANSFORMER FOR 24 VOLT CONTROL POWER.
- ⑬ DDC CONTROL POWER. COORDINATE WITH THE MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- ⑭ ELEVATOR SHUNT TRIP.
- ⑮ INSTALL LOCKABLE OCPD DEVICE FOR THE ELEVATOR CAB LIGHTS FROM ELEV PANEL CIRCUIT 3. ROUTE CIRCUIT TO ELEVATOR CONTROL PANEL IN SHAFT. PROVIDE LABEL ON OCPD DEVICE STATING: "ELEVATOR CAB LIGHTS".
- ⑯ POWER CONNECTION FOR CEILING FAN. COORDINATE CEILING FAN EXACT LOCATION PRIOR TO ROUGH-IN.
- ⑰ CEILING FAN CONTROL SWITCH. PROVIDE CONNECTION TO THE CEILING FAN.



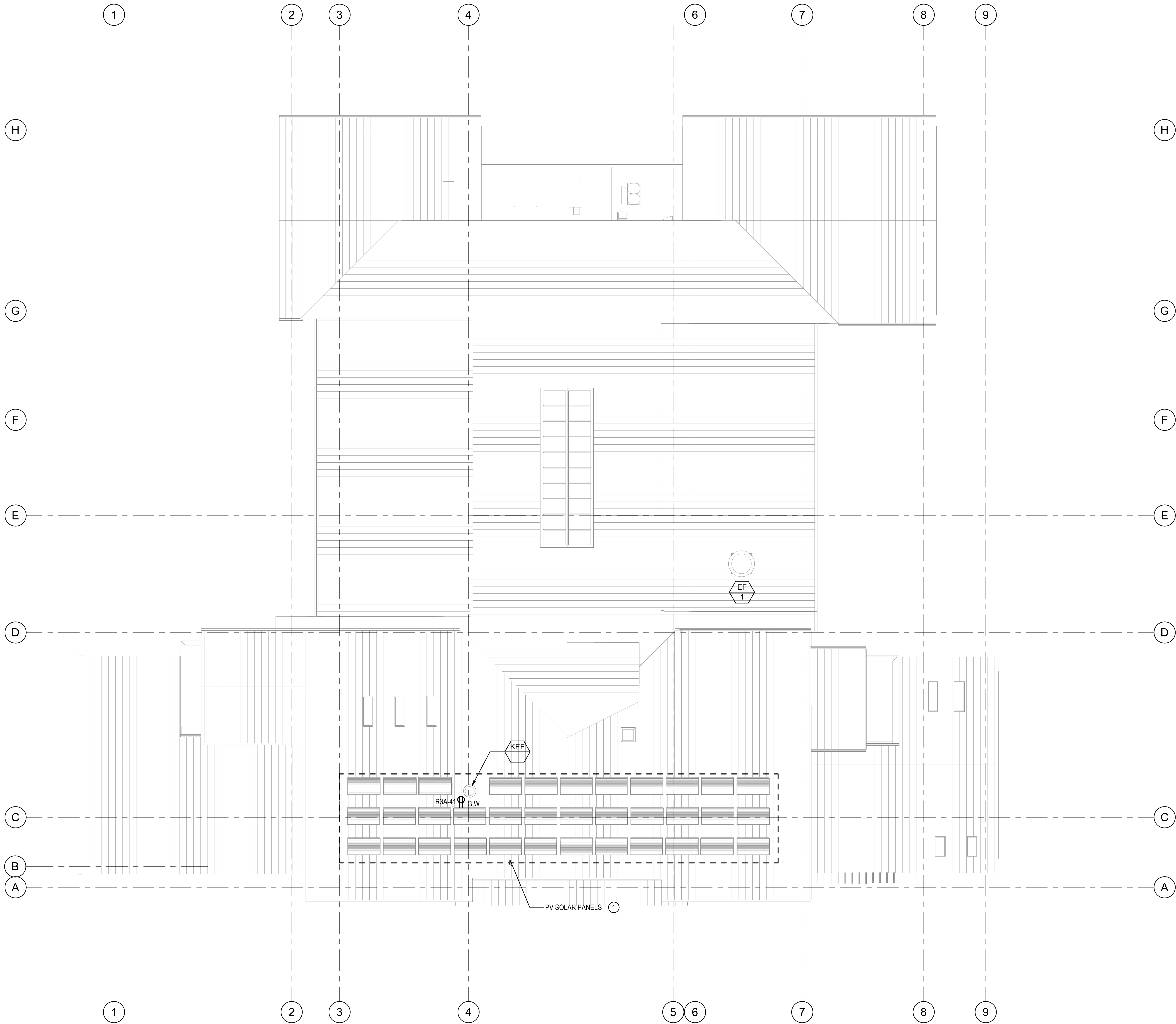
POWER PLAN - UPPER LEVEL

$$1/8^{\circ} = 1^{\circ}-0^{\circ}$$


SHEET #

E31.02

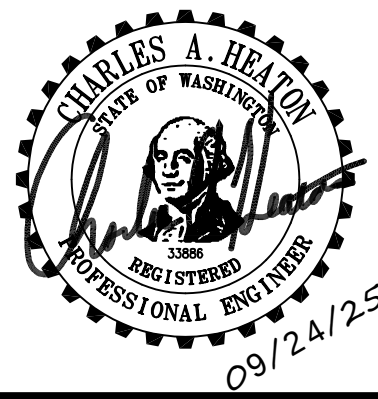
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CONSTRUCTION NOTES

① PROVIDE A COMPLETE 14,000W (AC) BIDDER DESIGNED PHOTOVOLTAIC (PV) SYSTEM TO COMPLY WITH THE 2021 WASHINGTON STATE ENERGY CODE C406.2.5 ON-SITE RENEWABLE ENERGY FOR A MINIMUM OF 17-POINTS. PROPOSED PV SYSTEM WILL CONSIST OF APPROXIMATELY (33) 430W (DC) PV PANELS. SEE SPEC SECTION 263100.

1 ROOF - POWER PLAN
1/8" = 1'-0"



GIG HARBOR FIRE STATION 51
GIG HARBOR FIRE & MEDIC ONE
6711 KIMBALL DRIVE
GIG HARBOR, WA 98336

PROJECT #		2022011
BID SET		
ISSUE DATE		AUGUST 15, 2025
REVISION SCHEDULE		
4	ADD #4	09/24/25



ROOF - POWER PLAN	

012500-A - SUBSTITUTION REQUEST FORM

To: Architect: Rice Fergus Miller, Inc.
275 5th Street, Suite 100
Bremerton, Washington 98337

Contractor: Neeley Corporation

We hereby submit for consideration the following product instead of specified item for above project:

Section No. 113013 Paragraph 2.1-E Specified Item GPV3-486GD-N

Proposed Substitution: KITCHENAID KCGC558JSS 48" 6 burner Natural Gas Rangetop w/Chrome Infused Griddle

Attachments: (If not applicable, write N/A left of item number.)

- No. 1: Complete product data.
- No. 2: Drawings showing dimensional changes and other change to drawings.
- No. 3: Complete description of all changes to specifications.
- No. 4: Description of effect on other trades, other contracts, and contract completion date.
- No. 5: List of differences between proposed and specified items.
- No. 6: List of names and addresses of three similar projects on which product was used, date of installation and Architect's name and address.
- No. 7: Cost impact.

Undersigned attests function and quality equivalent or superior to specified item.

Submitted by: (Person and Firm) James A Freedman

Date 09/18/2025 Phone 206-623-8811 Signature 

Acceptance by Architect:

By: Howard Struve

Date: 9/22/25

Remarks: Accepted if range top is able to operate/
function with the station design voltage, per
the bid documents. With no cost to the owner/project
if any field revisions are necessary during construction.

Accepted

~~Accepted as Noted~~

Not Accepted

END OF SECTION 012500-A

012500-A - SUBSTITUTION REQUEST FORM

To: Architect: Rice Fergus Miller, Inc.
275 5th Street, Suite 100
Bremerton, Washington 98337

Contractor: Neeley Corporation

We hereby submit for consideration the following product instead of specified item for above project:

Section No. 113013 Paragraph 2.1-F Specified Item WOSV3-30

Proposed Substitution: KITCHENAID KOES630SPS SINGLE WALL OVEN W/KNOB CONTROLS

Attachments: (If not applicable, write N/A left of item number.)

- No. 1: Complete product data.
- No. 2: Drawings showing dimensional changes and other change to drawings.
- No. 3: Complete description of all changes to specifications.
- No. 4: Description of effect on other trades, other contracts, and contract completion date.
- No. 5: List of differences between proposed and specified items.
- No. 6: List of names and addresses of three similar projects on which product was used, date of installation and Architect's name and address.
- No. 7: Cost impact.

Undersigned attests function and quality equivalent or superior to specified item.

Submitted by: (Person and Firm) James Freedman-Metropolitan Appliance

Date 09/18/2025 Phone 206-623-8811 Signature 

Acceptance by Architect:

By: Howard Struve

Date: 9/22/25

Remarks:

Accepted

Accepted as Noted

Not Accepted

END OF SECTION 012500-A