



RURAL MOUNTAIN



HIGH DESERT

# MONO COUNTY PROTOTYPE ACCESSORY DWELLING UNIT - PLAN 3

MONO COUNTY, CA

## USER LICENSE AGREEMENT

BY USING THESE PERMIT READY ACCESSORY DWELLING UNIT CONSTRUCTION DOCUMENTS, THE USER AGREES TO RELEASE, HOLD HARMLESS, AND INDEMNIFY THE COUNTY OF MONO, ITS ELECTED OFFICIALS AND EMPLOYEES, RRM DESIGN GROUP, AND THE ARCHITECT OR ENGINEER WHO PREPARED THESE CONSTRUCTION DOCUMENTS FROM ANY AND ALL CLAIMS, LIABILITIES, SUITS AND DEMANDS ON ACCOUNT OF ANY INJURY, DAMAGE OR LOSS TO PERSONS OR PROPERTY, INCLUDING INJURY OR DEATH, OR ECONOMIC LOSSES, ARISING OUT OF THE USE OF THESE CONSTRUCTION DOCUMENTS.

THE PLANS ATTACHED HERE ARE APPROVED FOR ONLY USE IN MONO COUNTY. NO DEVIATIONS, ALTERATIONS, OR OPTIONS BEYOND THOSE SPECIFICALLY INDICATED IN THE PLANS ARE ALLOWED WITHOUT PRIOR APPROVAL BY THE ISSUING JURISDICTION AND CHIEF BUILDING OFFICIAL. ANY UNAPPROVED PLAN MODIFICATIONS MAY BE DEVELOPED THROUGH RRM DESIGN GROUP AND THE APPROVING JURISDICTION IF REQUIRED.

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

CONSULTANT

AGENCY

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Grand total: 42	

## PROJECT DIRECTORY

<b>APPLICANT</b>	(TO BE PROVIDED BY OWNER)
ADDRESS:	_____
CONTACT:	_____
EMAIL:	_____
PHONE:	_____
<b>ARCHITECT</b>	<b>RRM DESIGN GROUP</b>
ADDRESS:	3765 S HIGUERA ST, SUITE 102 SAN LUIS OBISPO, CA 93401
CONTACT:	_____
EMAIL:	_____
PHONE:	P:(805) 543-1794

## BUILDING AREAS

<b>AREAS - PLAN 3</b>	
CONDITIONED	
PLAN 3 FLOOR	692 SF
UNCONDITIONED	
PLAN 3 FRONT PORCH	71 SF
PLAN 3 SIDE PORCH	37 SF

## FIRE-RESISTANCE REQ.

SELECT THE APPROPRIATE BOX BELOW (ONLY 1):

NOTE: EXTERIOR WALLS SHALL HAVE A MINIMUM FIRE SEPARATION DISTANCE OF 4'-0" FROM PROPERTY LINE. ALL ROOF EAVES ARE 10" DEEP.

<b>NON-SPRINKLERED</b>	
<input type="checkbox"/>	<b>FIRE SEPARATION DISTANCE: 25'-0"</b> (EXTERIOR WALLS, PROJECTIONS, OPENINGS, AND PENETRATIONS)
<input type="checkbox"/>	<b>FIRE SEPARATION DISTANCE: 4'-0" - 5'-0"</b> (EXTERIOR WALLS, OPENINGS, AND PENETRATIONS) <b>PROJECTION SEPARATION DIST.: 23'-0"</b>
<input type="checkbox"/>	<b>EXTERIOR WALLS AND PROJECTIONS</b>
<b>SPRINKLERED</b>	
<input type="checkbox"/>	<b>FIRE SEPARATION DISTANCE: 24'-0"</b> (EXTERIOR WALLS, OPENINGS, AND PENETRATIONS)

## PROJECT INFORMATION

**PROJECT SCOPE:**

- CONSTRUCTION OF A NEW DETACHED 1 STORY 692 SF ACCESSORY OR PRIMARY DWELLING UNIT WITH 1 BEDROOMS AND 1 BATH(S).
- ALL SITE WORK WITHIN THE PROPERTY LINE.
- ALL THE WORK SHOWN IN THE DRAWINGS AND SPECIFICATIONS.

**SITE INFORMATION:**  
(TO BE PROVIDED BY COUNTY OF MONO OR TOWN OF MAMMOTH LAKES)

STREET ADDRESS:	_____
APN:	_____
ZONING:	_____
LOT SIZE:	_____
LAND USE:	_____
EXISTING USE:	_____
PROPOSED USE:	_____

**FLOOR AREA RATIO**  
(TO BE PROVIDED BY COUNTY OF MONO OR TOWN OF MAMMOTH LAKES)

MAXIMUM FAR:	_____
PROPOSED FAR:	_____

**LOT COVERAGE**  
(TO BE PROVIDED BY OWNER)

BUILDING:	_____
HARDSCAPE/PAVING:	_____
LANDSCAPE:	_____

**SETBACKS**  
(TO BE PROVIDED BY COUNTY OF MONO OR TOWN OF MAMMOTH LAKES)

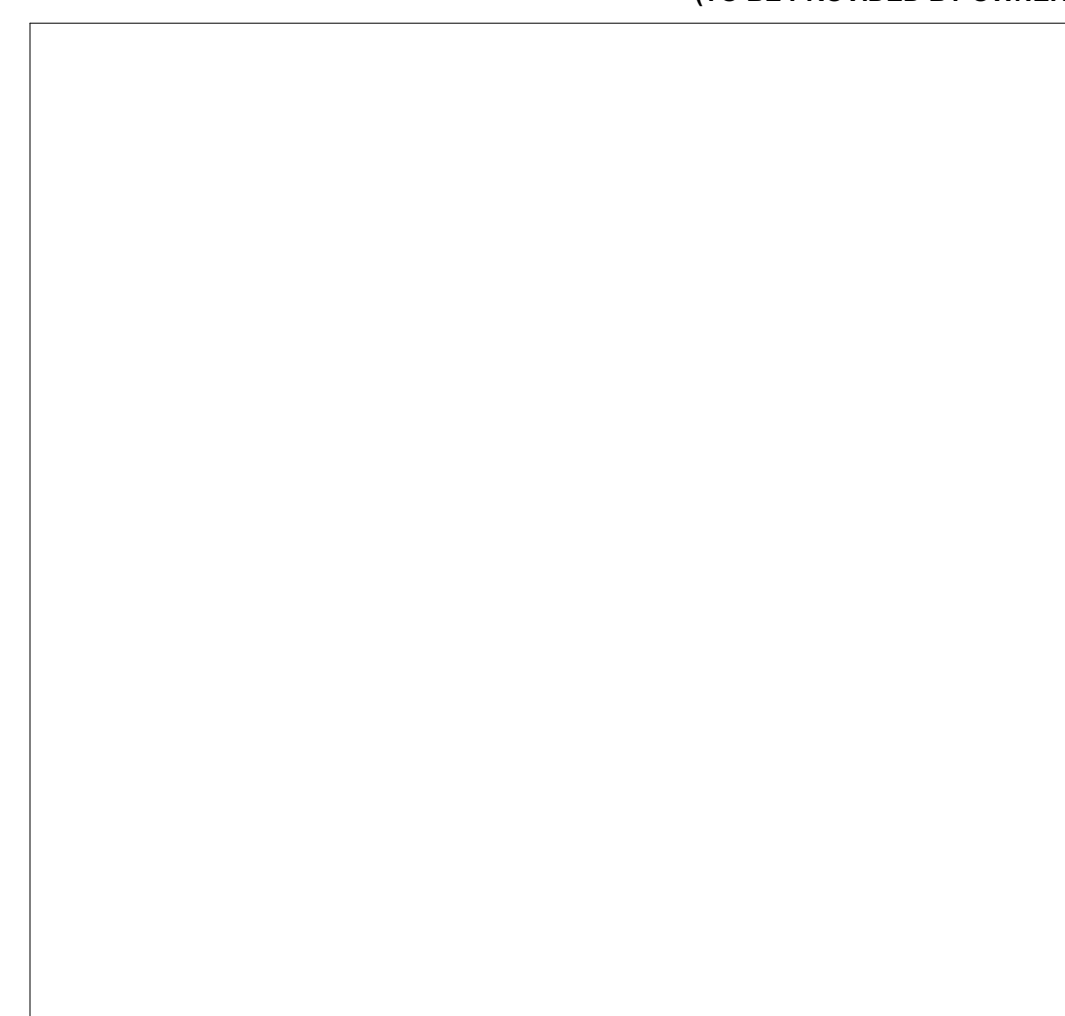
	REQUIRED	PROPOSED
FRONT:	_____	_____
REAR:	4' - 0" (A.B. NO. 68)	_____
SIDES:	4' - 0" (A.B. NO. 68)	_____

**BUILDING INFORMATION:**  
(TO BE PROVIDED BY COUNTY OF MONO OR TOWN OF MAMMOTH LAKES)

NUMBER OF STORIES:	1
OCCUPANCY GROUP:	R-3
CONSTRUCTION TYPE:	V-B
SPRINKLERED:	_____
MAX. HEIGHT ALLOWED (PER 2019 CBC TABLE 504.3) / (ASSEMBLY BILL 68)	40' / 16'
MAX. HEIGHT ALLOWED (PER COUNTY OF MONO)	_____
MAX. HEIGHT PROPOSED:	REFER TO ELEVATIONS. VARIES BY STYLE.
ROOF RATING:	CLASS A
HIGH FIRE ZONE:	REFER TO WILDLAND-URBAN INTERFACE FIRE AREA AND VERY-HIGH FIRE SEVERITY ZONE SECTIONS ON SHEET

## VICINITY MAP

(TO BE PROVIDED BY OWNER)



## PROJECT CHECKLIST

### FOUNDATION

NOTE: THIS PROJECT ASSUMES A SITE WITH STANDARD SOIL CONDITIONS. IF THE ADU IS TO BE LOCATED ON A SITE WITH EXPANSIVE OR OTHERWISE UNUSUAL SOIL, THE APPLICANT MUST PROCURE A GEOTECHNICAL REPORT AND MAY REQUIRE A NEW FOUNDATION DESIGN.

- SLAB ON GRADE
- RAISED FOUNDATION

### WASTE WATER

- SEWER
- SEPTIC (REQUIRES APPROVAL)

### FIRE SPRINKLERS

DOES THE PRIMARY RESIDENCE HAVE NFPA 13D SPRINKLERS?

- NO
- YES

REQUIRED AT PROPOSED ADU:

- NO (NOT REQUIRED IF THE PRIMARY RESIDENCE IS UNSPRINKLERED)
- YES (REQUIRED IF THE PRIMARY RESIDENCE IS SPRINKLERED)

### FIRE SPRINKLERS NOTES

- IF FIRE SPRINKLERS ARE REQUIRED AT PROPOSED ADU THEN THE FOLLOWING NOTES APPLY.
- AUTOMATIC FIRE SPRINKLER SYSTEM** - AN AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE INSTALLED AS PER NFPA 13D THE MOST CURRENT EDITION. DETAILED SPRINKLER PLANS SHALL BE SUBMITTED TO THE FIRE PREVENTION BUREAU AND APPROVED PRIOR TO INSTALLATION. PLANS AND INSTALLATION MUST BE BY A C16 LICENSED SPRINKLER CONTRACTOR.
- SECTION 903.2.1 GROUP R** AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3 SHALL BE PROVIDED THROUGHOUT ALL BUILDINGS WITH A GROUP R FIRE AREA. THIS INCLUDES SINGLE FAMILY DWELLINGS, MULTI-FAMILY DWELLINGS AND ALL RESIDENTIAL CARE FACILITIES REGARDLESS OF OCCUPANT LOAD.
- SECTION 903.2.1.1** ADDITIONS AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH 903.3 MAY BE REQUIRED TO BE INSTALLED THROUGHOUT STRUCTURES WHEN THE ADDITION IS MORE THAN 50% OF THE EXISTING BUILDING OR WHEN THE ALTERED BUILDING WILL EXCEED A FIRE FLOW OF 1,500 GALLONS PER MINUTE AS CALCULATED PER SECTION 507.3. THE FIRE CODE OFFICIAL MAY REQUIRE AN AUTOMATIC SPRINKLER SYSTEM BE INSTALLED IN BUILDINGS WHERE NO WATER MAIN EXISTS TO PROVIDE THE REQUIRED FIRE FLOW OR WHERE A SPECIAL HAZARD EXISTS SUCH AS: POOR ACCESS ROADS, GRADE, BLUFFS AND CANYON RIMS, HAZARDOUS BRUSH AND RESPONSE TIMES GREATER THAN 5 MINUTES BY A FIRE DEPARTMENT.
- SECTION 903.2.1.2** REMODELS OR RECONSTRUCTION AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3 MAY BE REQUIRED IF THE SCOPE OF WORK INCLUDES SIGNIFICANT MODIFICATION TO THE INTERIOR AND/OR ROOF OF THE BUILDING, AND THE COST OF THE INSTALLATION DOES NOT EXCEED 15 PERCENT OF THE CONSTRUCTION COSTS OF THE REMODEL.
- LOCATION AND SIZE OF WATER SERVICE UNDERGROUND SHALL BE INSTALLED AS SHOWN ON APPROVED FIRE SPRINKLER PLANS. A MINIMUM 1 INCH WATER SHALL BE INSTALLED.
- A FIRE UNDERGROUND FLUSH CERTIFICATION SHALL BE REQUIRED AT FINAL INSPECTION.
- A HYDRO INSPECTION OF THE FIRE SPRINKLER SYSTEM IS REQUIRED PRIOR TO FRAME INSPECTION. ONLY THE NEW PIPING SHALL BE TESTED.

### ONSITE PARKING REQUIRED

- NONE, EXCEPTION USED:
  - THE ADU IS LOCATED WITHIN 1/2 MILE OF PUBLIC TRANSIT.
  - OFF STREET PARKING PERMITS ARE REQUIRED BUT NOT OFFERED TO THE OCCUPANT OF THE ADU.
  - WHEN THERE IS A CAR SHARE VEHICLE LOCATED WITHIN ONE BLOCK OF THE ADU.
- ONE PARKING SPACE (STUDIO OR 1-BEDROOM ADU)
- TWO PARKING SPACES (2-BEDROOM ADU)

### WILDLAND-URBAN INTERFACE FIRE AREA

- PORTIONS OF THE COUNTY OF MONO ARE LOCATED IN WITHIN THE WILDLAND-URBAN INTERFACE FIRE AREA (AS DEFINED BY 2019 CRC R337.2).
  - AREA DEFINED BY STATE AS A "FIRE HAZARD SEVERITY ZONE"
  - AREA DESIGNATED BY ENFORCING AGENCY TO BE AT A SIGNIFICANT RISK FROM WILDFIRES.
- AN ADU WITHIN THE WILDLAND-URBAN INTERFACE FIRE AREA SHALL COMPLY WITH THE 2019 CRC SECTION R337.
- THIS PROTOTYPE PLAN IS DESIGNED TO COMPLY WITH THE PROVISIONS REQUIRED BY THE 2019 CRC SECTION R337, REGARDLESS IF LOCATED IN A WILDLAND-URBAN INTERFACE FIRE AREA.

### REQUIRED W.U.I. DETAILS

- REFER TO "W.U.I. REQUIREMENT NOTES" ON SHEET G-101.
  - ROOF DETAILS: SHEETS AD-902, AD-903, AD-904, AD-905, AND AD-906
  - VENTS: W.U.I. COMPLIANT ATTIC VENT, SEE LEGEND ON ROOF PLANS SHEET
  - EXTERIOR WALL COVERING DETAIL: SEE EXTERIOR ELEVATIONS LEGEND
  - EXTERIOR WINDOWS: "WINDOW GENERAL NOTE" #6 ON FLOOR PLANS SHEET
  - EXTERIOR DOORS: "DOOR GENERAL NOTE" #6 ON FLOOR PLANS SHEET

### VERY-HIGH FIRE SEVERITY ZONE

- NO  YES
- IN ACCORDANCE WITH THE 2019 CFC SECTION 4906, STRUCTURES LOCATED IN THE VERY HIGH FIRE HAZARD SEVERITY ZONE SHALL PROVIDE & MAINTAIN A FUEL MODIFICATION ZONE. FUEL MODIFICATION ZONES: THE APPLICANT SHALL PROVIDE & MAINTAIN FIRE/FUEL BREAKS TO THE SATISFACTION OF THE LOCAL FIRE DEPARTMENT. FIRE/FUEL BREAKS SHALL BE SHOWN ON THE GRADING, MAP, AND BUILDING PLANS.
  - HOMEOWNER TO PROVIDE COMPLIANT VENTS/ICC REPORT IF IN A HIGH FIRE ZONE

### EXTERIOR WALL MATERIAL

- CEMENT PLASTER STUCCO
- FIBER CEMENT - BOARD AND BATTEN SIDING
- FIBER CEMENT - LAP SIDING
- FIBER CEMENT - SHINGLE SIDING

### WINDOW MATERIAL ROOF MATERIAL

- VINYL  COMPOSITION SHINGLES
- FIBERGLASS  STANDING SEAM METAL ROOF
- WOOD  CLAY ROOF TILES
- ALUMINUM CLAD WOOD

### SNOW LOADING CATEGORIES

- < 65 PSF
- 66 PSF - 80 PSF
- 81 PSF - 120 PSF
- 220 PSF - 235 PSF

### STYLE SELECTION

NOTE: WHEN SELECTING ONE OF THE TWO ARCHITECTURAL STYLES, PLEASE SELECT THE OPTION THAT IS THE SAME OR A SIMILAR DESIGN TO THE PRINCIPAL RESIDENCE. THE ADU BUILDING COLORS AND MATERIALS SHALL BE THE SAME OR SIMILAR TO THE PRINCIPAL RESIDENCE.

- RURAL MOUNTAIN
- \*STRIKE THROUGH HIGH DESERT SHEETS: A1-122, A1-202, AD-904
- HIGH DESERT
- \*STRIKE THROUGH RURAL MOUNTAIN SHEETS: A1-121, A1-201, AD-903

## SUPPORTING DOCUMENTS

<b>ENERGY COMPLIANCE</b>	CARSTAIRS ENERGY INC.
PREPARED BY:	_____
DATE PREPARED:	08/04/2022
JOB NUMBER:	22-051011

## DEFERRED SUBMITTALS

- TRUSS DESIGN AND CALCULATIONS.
- PV SYSTEM DESIGN.
  - SLAB ON GRADE PROJECT REQUIRES A 1.67 kWdc PV SYSTEM.
  - RAISED FOUNDATION PROJECT REQUIRES A 1.73 kWdc PV SYSTEM.
  - SYSTEM SHALL BE COMPLETED PRIOR TO FINAL INSPECTION.

MONO COUNTY ADU  
PROTOTYPES  
MONO COUNTY

TITLE SHEET - PLAN 3

NO.	REVISION	DATE
△		
△		
△		
△		
△		

<b>PROJECT MANAGER</b>	
RR	
<b>DRAWN BY</b>	<b>CHECKED BY</b>
_____	_____
<b>DATE</b>	
6/30/2022	
<b>PROJECT NUMBER</b>	
2340-01-CU21	
<b>SHEET</b>	

G-003

## FLOOR PLAN NOTES

- STAIRS AND HANDRAILS
  - HANDRAIL: SHALL NOT BE LESS THAN 34" AND NOT MORE THAN 38" ABOVE THE SLOPED PLANE ADJOINING STAIR TREAD NOSING. (2019 CRC R311.7.8.1)
  - THE HAND GRIP PORTION OF THE HANDRAIL SHALL BE A MINIMUM DIAMETER OF 1-1/4" AND A MAXIMUM DIAMETER OF 1-3/4" IN CROSS SECTION (2019 CRC R311.7.8.5) AND SHALL HAVE A SPACE OF NOT LESS THAN 1-1/2" CLEAR FROM THE WALL. (2019 CRC R311.7.8.3)
  - ALL HANDRAILS SHALL RETURN OR TERMINATE IN A NEWEL OR SAFETY POST. (2019 CRC R311.7.8.4)
  - HEADROOM: PROVIDE A MINIMUM OF 6'-8" CLEAR ABOVE ALL PORTIONS OF THE STAIRS AND LANDINGS. THIS DIMENSION SHALL BE MEASURED FROM A PLANE TANGENT TO THE STAIRWAY TREAD NOSING. (2019 CRC R311.7.2)
  - GUARDS ON THE OPEN SIDES OF STAIRS ALSO SERVING AS A HANDRAIL SHALL BE NOT LESS THAN 34" OR MORE THAN 38". (2019 CRC R312.1.2 EXC #2)
  - USABLE SPACE UNDER STAIRS SHALL BE PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSUM BOARD. (2019 CRC R302.7)
  - GUARDS ON THE SIDE OF STAIRS SHALL BE SPACED SUCH THAT A SPHERE 4 3/8" DIA CANNOT PASS THROUGH. (2019 CRC R312.1.3 EXC #2)
  - MINIMUM TREAD DEPTH SHALL BE 10", 3/8" MAXIMUM VARIATION CRC (2019 CRC R311.7.5.2) THE MINIMUM WINDER DEPTH AT THE WALK LINE (MEASURED AT A RIGHT ANGLE TO THE TREAD'S LEADING EDGE AT A POINT 12" FROM WHERE THE TREAD ARE NARROWEST) SHALL BE 10", MINIMUM WINDER TREAD DEPTH SHALL BE 6". (2019 CRC R311.7.5.2.1)
  - MAXIMUM RISE SHALL BE 7.75", 3/8" MAXIMUM VARIATION (2019 CRC R311.7.5.1)
  - STAIRS SHALL BE NOT LESS THAN 36" CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT. MINIMUM CLEAR WIDTH OF THE STAIRWAY AT AND BELOW THE HANDRAIL HEIGHT IS 51-1-1/2" WHERE A HANDRAIL IS INSTALLED ON ONE SIDE, AND 27" WHERE HANDRAILS ARE INSTALLED ON BOTH SIDES. (2019 CRC R311.7.1)
  - RADIUS OF NOSING SHALL NOT BE LESS THAN 3/4" BUT NOT GREATER THAN 1 1/4". (2019 CRC R311.7.5.3)
  - SPACE BETWEEN HANDGRIP AND WALL SHALL BE NOT LESS THAN 1 1/2". (2019 CRC R311.7.5.3)
  - HANDRAILS ARE REQUIRED ON AT LEAST ONE SIDE OF EACH CONTINUOUS RUN OF TREADS WITH FOUR OR MORE RISERS. (2019 CRC R311.7.8)
- WATER HEATER (REFER TO BUILDING ANALYSIS REPORT)
  - HOT WATER INLET AND OUTLET PIPES INSULATED, EXTERNALLY WRAPPED WITH R-4 OR GREATER (FIRST 5 FEET IN UNCONDITIONED SPACES)
  - PROVIDE A TEMPERATURE AND PRESSURE RELIEF VALVE WITH A FULL SIZE DRAIN OF GALVANIZED STEEL OR HARD DRAWN COPPER TO THE OUTSIDE OF THE BUILDING WITH THE END OF THE PIPE PROTRUDING 6" MINIMUM @ 2" MAX. ABOVE GRADE POINTING DOWNWARD TO THE TERMINATION - UNTHREADED.
  - COMBUSTION AIR PER MANUFACTURE REQUIREMENTS.
  - CLEARANCES PER MANUFACTURE REQUIREMENTS.
  - THE BURNERS AND BURNER IGNITION DEVICES SHALL BE LOCATED 18" ABOVE THE GARAGE FLOOR UNLESS LISTED AS FLAMMABLE VAPOR IGNITION RESISTANT (NFPA54.9.1.10.2) CPC 508.14.
- WHEN INSTALLED IN A GARAGE THE WATER HEATER SHALL BE GUARDED AGAINST DAMAGE. (CPC 508.14)
- PROVIDE (2) LAYERS OF GRADE D PAPER OR EQUAL WHEN PLASTER IS INSTALLED OVER WOOD BASED SHEATHING. (2019 CRC R703.7.3)
- CLOTHES DRYER MOISTURE EXHAUST DUCTS SHALL TERMINATE OUTSIDE THE BUILDING AND HAVE A BACK-DRAFT DAMPER. EXHAUST DUCT IS LIMITED TO 14'-0" W/ TWO ELBOWS. THIS SHALL BE REDUCED 2'-0" FOR EVERY ELBOW IN EXCESS OF TWO. MIN. DIA. 4". SMOOTH, METAL DUCT. (CPC 504.3)
- ALL MANUFACTURED EQUIPMENT SHALL BE INSTALLED AS PER MANUFACTURER'S SPECIFICATION AND DIMENSIONS VERIFIED WITH INSTALLATION REQUIREMENTS.
- SHOWERS AND TUB-SHOWER COMBINATIONS: CONTROL VALVES MUST BE PRESSURE BALANCED OR THERMOSTATIC MIXING VALVES. (CPC 418.0.1)
- PROVIDE TEMPERED GLAZING IN DOORS AND ENCLOSURES FOR SHOWERS, BATHUBS, SAUNAS, STEAM ROOMS, HOT AND COLD SAUNAS WHERE THE BOTTOM EXPOSED EDGE IS LESS THAN 60-INCHES ABOVE A STANDING SURFACE. (2019 CRC R308.4.5)
- HEATING AND AIR-CONDITIONING SYSTEM DESIGN SHALL CONFORM TO CALGREEN SEC. 4.507, ENVIRONMENTAL COMFORT.
- FORCED AIR BUILDING ENERGY ANALYSIS REPORT.
- COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION SHALL BE REQUIRED PER CALGREEN SEC. 4.504.1. ALL DUCTS AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTED BY THE ENGINEERING AGENCY TO REDUCE THE QUANTITY OF DUST OR DEBRIS WHICH MAY COLLECT IN THE SYSTEM.
  - PROVIDE WORKING EQUIPMENT PLATFORM PER CMC 904.11.1.
  - NIGHT SETBACK THERMOSTAT REQUIRED (MINIMUM 2 PERIODS PER 24 HOURS)
  - CLEARANCES PER MANUFACTURER'S RECOMMENDATIONS.
  - THE BURNERS AND BURNER IGNITION DEVICES SHALL BE LOCATED 18" ABOVE THE GARAGE FLOOR UNLESS LISTED AS FLAMMABLE VAPOR IGNITION RESISTANT (NFPA54.9.1.10.2) CPC 508.14.
  - PROVIDE MIN. 30" DEEP AND 30" HIGH, UNOBSTRUCTED WORKING SPACE IN FRONT OF FAU.
  - FAU OR ALCOVE SHALL BE 12" WIDER ON ALL SIDES AND REAR THAN THE FURNACE BEING INSTALLED. CMC TABLE 3-1.1. REQUIRED CLEARANCES MAY BE REDUCED PER CMC TABLE 3-2.
  - USE MIN. 0.019-INCH THICK SHEET METAL DUCTS IN GARAGE AND DUCTS PENETRATING WALLS AND CEILINGS OF GARAGE. CBC EXCEPTIONS SEC 406.1.4 ITEM 2)
  - PASSAGEWAY TO THE ATTIC FURNACE SHALL BE UNOBSTRUCTED AND HAVE CONTINUOUS SOLID FLOORING NOT LESS THAN 24" WIDE, NOT MORE THAN 20" IN LENGTH. CMC, SEC. 904.11.2 & 904.11.3.
  - SOURCE OF COMBUSTION AIR TO FURNACE SHALL COME FROM OUTSIDE AIR.
  - WHEN INSTALLED IN A GARAGE THE APPLIANCE SHALL BE GUARDED AGAINST DAMAGE.
- PROVIDE 5/8" TYPE "X" GYPSUM BOARD AT GARAGE SIDE OF WALLS AND CEILINGS COMMON TO DWELLING AND COVER ALL BEAMS & POSTS, AS WELL AS SOFFITS & FURFS AT UNDERSIDE OF ACCESSIBLE UNDER STAIR AREAS. ONE HOUR CONSTRUCTION FOR ALL WALLS & SOFFITS.
- WATER CLOSETS.
  - CLEARANCES: 24" MIN. FRONT, 30" MIN COMPARTMENT WIDTH.
  - PROVIDE A MIN 3 SF WINDOW, 1/2 OF WHICH SHALL BE OPENABLE OR AN EXHAUST FAN 50 CFM FOR INTERMITTENT OR 20 CFM FOR CONTINUOUS, DIRECT VENT TO OUTSIDE WITH BACKDRAFT DAMPER. (2019 CRC R303.3)
  - NEW WATER CLOSETS AND ASSOCIATED FLOUSHMETER VALVES, IF ANY SHALL USE NO MORE THAN 1.28 GALLONS PER FLUSH AND SHALL MEET PERFORMANCE STANDARDS ESTABLISHED BY THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS STANDARD A112.19.2. H & S CODE, SECTION 17921.3(B).
- BATH ACCESSORIES: PROVIDE MINIMUM 1 TOILET PAPER HOLDER AND 1 TOWEL BAR PER BATHROOM. PROVIDE NECESSARY BLOCKING FOR TOILET PAPER HOLDER AND TOWEL BARS.
- WHOLE-BUILDING MECHANICAL VENTILATION SYSTEM PER ASHRAE STANDARD 62.2
  - PROVIDE THE COUNTY INSPECTOR THE FOLLOWING INFORMATION AT OR BEFORE THE TIME OF INSPECTION:
    - CALCULATIONS FOR REQUIRED VENTING RATES.
    - CALCULATION ADJUSTMENTS FOR INTERMITTENT SYSTEMS IF APPLICABLE.
    - DUCT DIAMETER AND MAXIMUM DUCT LENGTH PER ASHRAE 62.2 TABLE 7.1.
    - TYPE OF SYSTEM USED AND PROVIDE COMPLETED CF-6R-MECH-05 FORM.
    - FANS SHALL BE A MAXIMUM OF 1 SONE.
    - FANS SHALL BE PROVIDED A COVER OF R-4.2 WHEN OFF.
  - ATTIC ACCESS.
    - PROVIDE 30" MIN. HEADROOM IN THE ATTIC SPACE (2019 CRC R807.1)
    - IN ATTIC, PROVIDE LIGHT AND SWITCH, AND ALL NECESSARY ELECTRICAL PROVIDE UNOBSTRUCTED PASSAGEWAY 24" WIDE OF SOLID CONTINUOUS FLOORING FROM ACCESS TO EQUIPMENT AND IT'S CONTROLS. ALSO PROVIDE UNOBSTRUCTED WORK SPACE IN FRONT OF EQUIPMENT 30" DEPTH MINIMUM. PROVIDE COMBUSTION AIR AND CONDENSATE LINE TO OUTSIDE OR AN APPROVED DRAIN FOR OPTIONAL AIR CONDITIONING.
    - BUILDINGS WITH COMBUSTIBLE CEILING OR ROOF CONSTRUCTION SHALL HAVE AN ATTIC ACCESS OPENING TO ATTIC AREAS THAT EXCEED 30 SQUARE FEET AND HAVE A VERTICAL HEIGHT OF 30-INCHES OR GREATER. THE VERTICAL HEIGHT SHALL BE MEASURED FROM TOP OF THE CEILING FRAMING MEMBERS TO THE UNDERSIDE OF THE ROOF FRAMING MEMBERS.
    - THE ROUGH-FRAMED OPENING SHALL NOT BE LESS THAN 22" X 30" AND SHALL BE LOCATED NOT OVER 20 FEET FROM THE EQUIPMENT. (2019 CRC R807.1)
    - PROVIDE A 120V RECEPTACLE AND A LIGHT NEAR THE EQUIPMENT WITH LIGHT SWITCH LOCATED AT THE ATTIC ACCESS.

## ELECTRICAL NOTES

- CONFORM WITH CURRENT NEC, NFPA, MFR'S, AND LOCAL REQUIREMENTS.
- ELECTRICAL SYSTEM TO BE PROVIDED PER NEC ARTICLE 250-81.
- ALL MATERIALS TO BE U.L. LABELED.
- METER: "SQUARE D", 120 VOLT/7 240 VOLT, 1 AND 3 WIRE GROUND OR EQUAL.
- MAIN PANEL: FLUSH MOUNT, 30" CLEARANCE, 200 AMP SIZED TO PROVIDE FOUR FULL SIZE SPARE CIRCUIT SPACES FOR FUTURE EXPANSION.
- CONDUCTORS: TW, THW, COPPER, MINIMUM 14 AT LIGHTING, 12 AT OTHER CIRCUITS.
- LAMPS: FOR GENERAL LIGHTING IN KITCHENS AND BATH SHALL HAVE AN EFFICIENCY OF NOT LESS THAN 40 LUMENS/WATT. ALL SOCKETS FILLED WITH INCANDESCENT: SOFT-WHITE, 55 WATT FLUORESCENT: COOL WHITE, RS, SOUND RATING: 40 WATT (L.O.N.)
- ALL ELECTRICAL OUTLETS INSTALLED IN BATHROOMS, GARAGES, BASEMENTS, CRAWL SPACES, OUTDOORS, KITCHEN COUNTERS, AND AT WET BAR SINKS SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION IN COMPLIANCE WITH NEC AH 210-8, CONSISTING OF 125 VOLT, SINGLE-PHASE, 15- AND 20- AMPERE RECEPTACLES.
- ALL BATHROOM RECEPTACLE OUTLETS SHALL BE SUPPLIED BY A MINIMUM OF ONE 20-AMPERE BRANCH CIRCUIT. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS. THIS DEDICATED CIRCUIT MAY SERVE MORE THAN ONE BATHROOM. NEC ART. 210-52(d). RECEPTACLES SHALL BE ADJACENT TO AND WITHIN 36" OF THE OUTSIDE EDGE OF EACH BASIN.
- PROVIDE ELECTRIC OUTLET AND PUSH-BUTTON WIRE FOR GARAGE OPENER (INCLUDE OPENER).
- THERMOSTAT SHALL BE A PROGRAMMABLE TYPE, HONEYWELL TH8320 OR EQUAL.
- RECESSED LUMINAIRES INSTALLED IN AREAS TO RECEIVE INSULATION SHALL BE "IC" LUMINAIRES AND ARE CERTIFIED AND LABELED AS AIRTIGHT TO THE STANDARDS PRESCRIBED BY THE RESIDENTIAL ENERGY CODE.
- RECESSED LIGHT FIXTURES INSTALLED IN A FIRE RATED ASSEMBLY SHALL BE INSTALLED PER THE APPROVED LISTING OR PROTECTED BY AN APPROVED METHOD.
- BATHROOM RECEPTACLES MUST BE ON A 20 AMP. CIRCUIT (OR CIRCUITS) WITH NO OTHER OUTLETS. INSULATE THE BUILDING MIN 3" FROM OPENINGS.
- CEILING-SUSPENDED (PADDLER) FANS SHALL BE SUPPORTED INDEPENDENTLY OF AN OUTLET BOX OR BY LISTED OUTLET BOX OR OUTLET BOX SYSTEMS IDENTIFIED FOR THE USE AND INSTALLED IN ACCORDANCE WITH CEC 314-27(D), CEC 422-18.
- ALL LUMINAIRES AND LAMP HOLDERS SHALL BE LISTED CEC 410-6.
- ALL 120-VOLT, SINGLE-PHASE 15- AND 20- AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT KITCHENS, FAMILY ROOMS, LIVING ROOMS, DINING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION TO THE CIRCUIT AND LOCATED WITHIN 12 FEET OF THE CIRCUIT.
- ALL NON-LOCKING TYPE 125-VOLT, 15 AND 20 AMPERE RECEPTACLES IN A DWELLING UNIT SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES. EXCEPTIONS: (1) RECEPTACLES MORE THAN 56" ABOVE THE FLOOR, (2) RECEPTACLES PART OF A LUMINAIRE OR APPLIANCE, (3) A SINGLE RECEPTACLE OR A DUPLEX RECEPTACLE FOR TWO APPLIANCES THAT ARE NOT EASILY MOVED AND LOCATED WITHIN A DEDICATED SPACE AND ARE CHORD-AND-UG CONNECTED AS PER CEC 400.7, AND (4) NON-GROUNDING RECEPTACLES USED FOR REPLACEMENTS AS PERMITTED IN CEC 406.4(D)(2)(A).
- HIGH EFFICACY LUMINAIRES OTHER THAN OUTDOOR HID LIGHTING CONTAIN ONLY ONLY HIGH EFFICACY LAMPS AND OUTLETS TO BE INSTALLED TO THE RESIDENTIAL ENERGY CODE AND NOT CONTAIN A MEDIUM SCREW BASE SOCKET.
- BALLAST FOR LAMPS 13 WATTS OR GREATER SHALL BE ELECTRONIC AND HAVE AN OUTPUT FREQUENCY NO LESS THAN 20 khz.
- SMOKE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING AND PROVIDED WITH A BATTERY BACK-UP. ALL SMOKE DETECTORS SHALL BE INTERCONNECTED. ALL SMOKE DETECTORS SHALL MAINTAIN A MINIMUM 3 FOOT CLEARANCE TO HVAC SUPPLY OR RETURN AIR REGISTERS.
- CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING AND PROVIDED WITH A BATTERY BACK-UP. ALL CARBON MONOXIDE ALARMS SHALL BE INTERCONNECTED.
- OMITTED.
- LIGHTS IN OTHER THAN KITCHENS, BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS MUST BE CONTROLLED BY A DIMMER OR CONTROLLED BY A MANUAL-ON OCCUPANT SENSOR. SUCH SENSORS SHALL BE CAPABLE OF AUTOMATICALLY TURNING OFF THE LIGHTS NO MORE THAN 30 MINUTES AFTER THE AREA HAS BEEN VACATED.
- ALL OUTDOOR LIGHTING ATTACHED TO BUILDINGS MUST BE HIGH EFFICACY, CONTROLLED BY A MOTION SENSOR WITH PHOTO-CONTROL, OR PHOTO CONTROL AND AUTOMATIC TIME SWITCH CONTROL. PHOTO-CONTROL IS AN ELECTRIC DEVICE THAT DETECTS CHANGE IN ILLUMINATION AND THEN CONTROLS ITS ELECTRIC LOAD AT DETERMINED ILLUMINATION LEVELS.
- EXHAUST FANS WILL BE CONTROLLED BY A HUMIDISTAT PER THE GREEN BUILDING STANDARDS CODE SECTION 4.506.
- BRANCH SUPPLYING GARAGE RECEPTACLE(S) SHALL NOT SUPPLY OUTLETS OUTSIDE OF THE GARAGE.
- FOR EACH DWELLING UNIT, INSTALL A MINIMUM 1" INSIDE DIAMETER LISTED RACEWAY TO ACCOMMODATE A DEDICATED 208/240V BRANCH CIRCUIT. RACEWAY SHALL ORIGINATE AT MAIN OR SUB PANEL AND TERMINATE IN A LISTED BOX IN CLOSE PROXIMITY TO THE PROPOSED EV CHARGER LOCATION. RACEWAYS MUST BE CONTINUOUS AT ENCLOSED, INACCESSIBLE, OR CONCEALED SPACES. SERVICE PANEL SHALL PROVIDE CAPACITY TO INSTALL A MINIMUM DEDICATED BRANCH CIRCUIT AND SPACES RESERVED TO PERMIT INSTALLATION OF A BRANCH CIRCUIT OVERCURRENT DEVICE. IDENTIFY THE RESERVED SPACE AND RACEWAY TERMINATION FOR FUTURE EV AS "EV CAPABLE."
- OUTDOOR LIGHTING PERMANENTLY MOUNTED TO A SINGLE FAMILY DWELLING OR OTHER BUILDINGS IN THE SAME LOT SHALL BE HIGH EFFICACY AND MUST BE CONTROLLED BY AN ON/OFF SWITCH THAT DOES TO OVERRIDE TO ON THE ITEMS LISTED BELOW. ALSO, THE LIGHTING MUST BY ONE OF THE FOLLOWING METHODS:
  - ) CONTROLLED BY PHOTOCELL AND MOTION SENSOR. CONTROLS THAT OVERRIDE TO ON SHALL NOT BE ALLOWED UNLESS THE OVERRIDE AUTOMATICALLY RETURN THE PHOTOCONTROL AND AUTOMATIC TIME SWITCH CONTROL TO ITS NORMAL OPERATION WITHIN 6 HOURS, OR
  - ) CONTROLLED BY ANY OF THE FOLLOWING:
    - PHOTOCELL AND AUTOMATIC TIME SWITCH CONTROL. CONTROLS THAT OVERRIDE TO ON SHALL NOT BE ALLOWED UNLESS THE OVERRIDE AUTOMATICALLY RETURN THE PHOTOCONTROL AND AUTOMATIC TIME SWITCH CONTROL TO ITS NORMAL OPERATION WITHIN 6 HOURS, OR
    - ASTRONOMICAL TIME CLOCK. CONTROLS THAT OVERRIDE TO ON SHALL NOT BE ALLOWED UNLESS THE OVERRIDE AUTOMATICALLY RETURN THE ASTRONOMICAL CLOCK TO ITS NORMAL OPERATION WITHIN 6 HOURS AND WHICH IS PROGRAMMED TO AUTOMATICALLY TURN THE OUTDOOR LIGHTING OFF DURING DAYLIGHT HOURS, OR
    - ENERGY MANAGEMENT CONTROL SYSTEMS WHICH MEETS ALL OF THE FOLLOWING REQUIREMENTS: AT A MINIMUM PROVIDES THE FUNCTIONALITY OF AN ASTRONOMICAL CLOCK IN ACCORDANCE WITH SECTION 110.9 OF THE STANDARDS; MEETS THE INSTALLATION CERTIFICATION REQUIREMENTS IN SECTION 130.4 OF THE STANDARDS; MEETS THE REQUIREMENTS FOR AN ENERGY MANAGEMENT CONTROL SYSTEM WHICH DOES NOT HAVE AN OVERRIDE OR BYPASS SWITCH THAT ALLOWS THE LUMINAIRE TO BE ALWAYS ON; AND, IS PROGRAMMED TO AUTOMATICALLY TURN THE OUTDOOR LIGHTING OFF DURING THE DAYLIGHT HOURS.
- AT LEAST ONE LUMINAIRE EACH BATHROOM, GARAGE, LAUNDRY ROOM, AND UTILITY ROOM SHALL BE CONTROLLED BY A MANUAL ON/AUTO-MATIC-OFF VACANCY SENSOR.
- EXCEPT FOR CLOSETS LESS THAN 70 SQUARE FEET AND HALLWAYS, ALL LUMINAIRES THAT ARE INSTALLED WITH JAB-CERTIFIED LIGHT SOURCES ARE REQUIRED TO BE CONTROLLED BY EITHER A DIMMER, VACANCY SENSOR OR FAN SPEED CONTROL.
- THE NUMBER OF ELECTRICAL BOXES LOCATED MORE THAN 5 FEET ABOVE FINISHED FLOOR THAT DOES NOT CONTAIN A LUMINAIRE OR OTHER DEVICE SHALL NOT EXCEED THE NUMBER OF BEDROOMS. THESE BOXES MUST BE SERVED BY A DIMMER, VACANCY SENSOR, OR FAN SPEED CONTROL.

## MECHANICAL NOTES

- CONFORM WITH CURRENT ADOPTED CRC, CMC, SMACNA, NFPA AND LOCAL REQUIREMENTS.
- DUCTWORK: SMACNA "LOW VELOCITY DUCT CONSTRUCTION" NFPA STANDARD #90A. ALL TRANSVERSE DUCT PLENUM AND FITTING JOINTS SHALL BE SEALED WITH PRESSURE SENSITIVE NON-CLOTH TAPE MEETING THE REQUIREMENTS OF UL181, 181A, OR 181B, OR MASTIC TO PREVENT AIR LOSS. DUCTS SHALL BE INSULATED AS REQUIRED BY THE UMC. SEE FLOOR PLAN FOR FAN UL AND FIREPLACES. DUCTS PENETRATING A WALL OR FLOOR-CEILING BETWEEN GARAGE & DWELLING TO BE MINIMUM 26 GAUGE METAL WITHOUT OPENING IN GARAGE. FIRE DAMPER REQUIRED OTHERWISE.
- GRILLES AND REGISTERS, DIFFUSERS, ETC. SUBJECT TO OWNERS APPROVAL. "CARNES" OR EQUAL FANS: DIRECTLY VENTED TO OUTSIDE. BACK DRAFT DAMPERS ARE REQUIRED (PER TABLE 2-53V, TITLE 24 C.A.C.).
- THE RETURN AIR PLENUM SERVING THE MECHANICAL EQUIPMENT MUST BE FULLY DUCTED FROM THE EQUIPMENT TO THE CONDITIONED SPACE. DROP CEILINGS, WALL CAVITIES AND EQUIPMENT PLATFORMS MAY NOT BE USED AS PLENUMS.
- PROVIDE COMBUSTION AIR OPENINGS WITHIN 12" OF THE FLOOR AND CEILING FOR GAS BURNING EQUIPMENT, DIRECT TO OUTSIDE. HEIGHT TO COMBUSTIBLE MATERIAL ABOVE KITCHEN RANGES: 30" - UNPROTECTED, 24" - PROTECTED.
- SHALL NOT HAVE A MEDIUM SCREW BASED SOCKETS.
  - SHALL CONTAIN JAB-CERTIFIED LIGHT SOURCES AND
  - SHALL MEET PERFORMANCE REQUIREMENTS OF CEC SECTION 150.0(K)(C).
- BATHS: PROVIDE A MINIMUM OF 5 AIR CHANGES PER HOUR MASTER BATH: 2 SONES MAXIMUM OTHER BATHS & LAUNDRY: 3 SONES MAXIMUM.
- STANDARDS PRESCRIBED BY THE RESIDENTIAL ENERGY CODE.
  - UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL. A HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN RELATIVE HUMIDITY RANGE OF 50 TO 80 PERCENT. (2019 CEC SEC. 45506.1)
  - EXHAUST FANS SHALL PROVIDE 5 AIR CHANGES PER HOUR (50 CFM MIN.)
  - PER CGCB 4.506.1-B, BATHROOM EXHAUST FANS, EACH BATHROOM SHALL BE MECHANICALLY VENTILATED AND SHALL COMPLY WITH THE FOLLOWING: 1. FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING MIN 3" FROM OPENINGS.
  - UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDISTAT WHICH SHALL BE READILY ACCESSIBLE. CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN RELATIVE HUMIDITY RANGE OF 50 TO 80 PERCENT.
  - EXHAUST FANS SHALL PROVIDE 5 AIR CHANGES PER HOUR (50 CFM MIN.)
  - PER CGCB 4.506.1-B, BATHROOM EXHAUST FANS, EACH BATHROOM SHALL BE MECHANICALLY VENTILATED AND SHALL COMPLY WITH THE FOLLOWING: 1. FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING. 2. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL. A HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF <= 50 PERCENT TO A MAXIMUM OF 80 PERCENT. A HUMIDITY CONTROL MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT. B. A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL (I.E. BUILT IN).
  - PER CcNC 150(m) PORTIONS OF SUPPLY-AIR AND RETURN-AIR DUCTS AND PLENUMS SHALL BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R-4.3 FOR ANY LEVEL, HIGHER LEVEL REQUIRED BY CMC SECTION 605) OR BE ENCLOSED ENTIRELY IN CONDITIONED SPACE.

## PLUMBING NOTES

- CONFORM WITH CURRENT CPC AND LOCAL REQUIREMENTS.
- DOMESTIC WATER (WITHIN BUILDING): COPPER OR PEX PIPE OR APPROVED EQUAL.
  - GAS, EXPOSED TO WEATHER: GALVANIZED
  - AIR CHAMBERS: 12" LONG CAPPED NIPPLE AT END OF EACH BRANCH TO EACH FIXTURE
  - CONNECTIONS "F.P.C.O." REQUIREMENT AT ALL DISSIMILAR MATERIAL CONNECTIONS
  - WHEN "OPTIONAL" SOFT-WATER LOOP INSTALLED, PROVIDE WITH 2 GATE VALVES.
- WATER SERVICE PIPE SHALL BE PER CIVIL PLANS OR AS REQUIRED BY THE JURISDICTION.
- FAUCETS AND SHOWERHEADS: 1" U.O.N. (REFER SIZE W/IFR SPRINKLER PLANS)
- SHOWER HEADS AND FAUCETS: CEC CERTIFIED.
- PIPE INSULATION: REFER TO TITLE 24- MANDATORY MEASURES - "SPACE CONDITIONING, WATER HEATING & PLUMBING SYSTEM MEASURES"
- STRAPS AND HANGERS: PROVIDE AS NECESSARY TO INSURE A STABLE INSTALLATION.
- SEE TITLE 24 FOR WATER HEATER REQUIREMENTS.
- ALL HOSE BIBS AND LAWN SPRINKLER SYSTEMS SHALL HAVE APPROVED BACK FLOW PREVENTION DEVICES.
- PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL MEET THE STANDARDS REFERENCED IN CALGREEN TABLE 4.303.3.
- WATER HEATER SHALL BE PROVIDED WITH A TEMPERATURE AND PRESSURE RELIEF VALVE. PER [505.4.505.5 CPC] THE RELIEF VALVE SHALL BE PROVIDED WITH A DRAIN LINE WHICH EXTENDS FROM THE VALVES TO THE OUTSIDE OF THE BUILDING. PER [608.5 CPC]
- PER CPC 603.4.7 OUTLETS WITH HOSE ATTACHMENTS, POTABLE WATER OUTLETS WITH HOSE ATTACHMENTS, OTHER THAN WATER HEATER DRAINS, BOILER DRAINS, AND CLOTHES WASHER CONNECTIONS, SHALL BE PROTECTED BY A NONREMOVABLE HOSE BIBB TYPE BACKFLOW PREVENTER, A NONREMOVABLE HOSE BIBB TYPE VACUUM BREAKER, OR BY AN ATMOSPHERE VACUUM BREAKER INSTALLED NOT LESS THAN 6 INCHES ABOVE THE HIGHEST POINT OF USAGE LOCATED ON THE DISCHARGE SIDE OF THE LAST VALVE. IN CLIMATES WHERE FREEZING TEMPERATURES OCCUR, A LISTED SELF DRAINING FROST-PROOF HOSE BIBB WITH AN INTEGRAL BACKFLOW PREVENTER OR VACUUM BREAKER SHALL BE USED.

## SOLAR READY NOTES

SOLAR READY REQUIREMENTS PER CcNC 110.10(b) THROUGH 110.10(d)

- SOLAR ZONE:
- MINIMUM AREA. THE SOLAR ZONE SHALL HAVE A MINIMUM TOTAL AREA AS DESCRIBED BELOW. THE SOLAR ZONE SHALL COMPLY WITH ACCESS, PATHWAY, SMOKE VENTILATION, AND SPACING REQUIREMENTS AS SPECIFIED IN TITLE 24 PART 9 OR OTHER PARTS OF TITLE 24 OR IN ANY REQUIREMENTS ADOPTED BY A LOCAL JURISDICTION.
  - THE SOLAR ZONE TOTAL AREA SHALL BE COMPRISED OF AREAS THAT HAVE NO DIMENSION LESS THAN FIVE FEET AND ARE NO LESS THAN 80 SQUARE FEET EACH FOR BUILDINGS WITH ROOF AREAS LESS THAN OR EQUAL TO 10,000 SQUARE FEET OR NO LESS THAN 160 SQUARE FEET EACH FOR BUILDINGS WITH ROOF AREAS GREATER THAN 10,000 SQUARE FEET.
    - SINGLE FAMILY RESIDENCES. THE SOLAR ZONE SHALL BE LOCATED ON THE ROOF OR OVERHANG OF THE BUILDING AND HAVE A TOTAL AREA NO LESS THAN 250 SQUARE FEET.

EXCEPTION 1 TO SECTION 110.10(B)(1A): SINGLE FAMILY RESIDENCES WITH A PERMANENTLY INSTALLED DOMESTIC SOLAR WATER-HEATING SYSTEM MEETING THE INSTALLATION CRITERIA SPECIFIED IN THE REFERENCE RESIDENTIAL APPENDIX R44 AND WITH A MINIMUM SOLAR SAVINGS FRACTION OF 0.50.

EXCEPTION 3 TO SECTION 110.10(B)(1A): SINGLE FAMILY RESIDENCES LOCATED IN THE WILDLAND-URBAN INTERFACE FIRE AREA AS DEFINED IN TITLE 24, PART 2 AND HAVING A WHOLE HOUSE FAN AND HAVING A SOLAR ZONE TOTAL AREA NO LESS THAN 150 SQUARE FEET.

EXCEPTION 5 TO SECTION 110.10(B)(1A): SINGLE FAMILY RESIDENCES HAVING A SOLAR ZONE TOTAL AREA NO LESS THAN 150 SQUARE FEET AND WHERE ALL THERMOSTATS ARE DEMAND RESPONSIVE CONTROLS AND COMPLY WITH SECTION 110.12(A), AND ARE CAPABLE OF RECEIVING AND RESPONDING TO DEMAND RESPONSE SIGNALS PRIOR TO GRANTING OF AN OCCUPANCY PERMIT BY THE ENFORCING AGENCY.

## TITLE 24 COMPLIANCE

- ALL INTERIOR LIGHTING IS HIGH EFFICACY. PIN BASED LINEAR FLUORESCENT, PIN BASED COMPACT FLUORESCENT, PULSE-START METAL HALIDE, HIGH PRESSURE SODIUM, GU-24 (OTHER THAN LED'S), INSEPARABLE SOLID STATE LUMINAIRES (SSL'S) INSTALLED OUTDOORS OR INSEPARABLE SSL LUMINAIRES WITH COLORED LIGHT SOURCES FOR CONDUCTIVE LIGHTING PURPOSES.
- THE FOLLOWING LAMPS AND LIGHT SOURCES ARE HIGH EFFICACY IF THEY ARE JOINT APPENDIX JAB-CERTIFIED. JAB-C CERTIFIED LAMPS AND LIGHT SOURCES ARE MARKED AS "JAB-2016" OR "JAB-2016-E". THESE FIXTURES INCLUDE: LED LUMINAIRES WITH INTEGRAL SOURCES THAT ARE CERTIFIED TO THE ENERGY COMMISSION, SCREW-BASED LED LAMPS (ALAMPS, PAR LAMPS, ETC.), PIN BASED LED LAMPS (MR-16, AR-111, ETC.), GU-24 BASED LED LIGHT SOURCES AND OTHER LUMINAIRES.
- LISTING OF CA CERTIFIED FIXTURES IS LOCATED ON THE CALIFORNIA ENERGY COMMISSION WEBSITE AT: [HTTP://WWW.ENERGY.CA.GOV/ADVANCEDSEARCH/SPX](http://www.energy.ca.gov/ADVANCEDSEARCH/SPX)
- RECESSED LUMINAIRE INSTALLED IN AREAS TO RECEIVE INSULATION SHALL BE "IC" LUMINAIRE AND ARE CERTIFIED AND LABELED AS AIRTIGHT TO THE STANDARDS PRESCRIBED BY THE RESIDENTIAL ENERGY CODE.
- ADDITIONAL REQUIREMENTS FOR ANY RECESSED DOWNLIGHTS IN CEILINGS ARE AS FOLLOWS. THE:
  - SHALL NOT HAVE A MEDIUM SCREW BASED SOCKETS.
  - SHALL CONTAIN JAB-CERTIFIED LIGHT SOURCES AND
  - SHALL MEET PERFORMANCE REQUIREMENTS OF CEC SECTION 150.0(K)(C).
- THE NUMBER OF ELECTRICAL BOXES LOCATED MORE THAN 5 FEET ABOVE FINISHED FLOOR THAT DOES NOT CONTAIN A LUMINAIRE OR OTHER DEVICE SHALL NOT EXCEED THE NUMBER OF BEDROOMS. THESE BOXES MUST BE SERVED BY A DIMMER, VACANCY SENSOR OR FAN SPEED CONTROL. CEC'S 150(K)(B)
- UNDERCABINET LIGHTING MUST BE SWITCHED SEPARATE FROM ALL OTHER OUTLETS.
- ALL LIGHTING MUST HAVE READILY ACCESSIBLE MANUAL CONTROLS
- EXHAUST FANS MUST BE SWITCHED SEPARATE FROM LIGHTING OR UTILIZE A DEVICE WHERE LIGHTING CAN BE TURNED OFF WHILE THE FAN IS RUNNING.
- FOR ALL SPACE TYPES EXCEPT HALLWAYS AND CLOSETS THAT ARE 70 SF OR SMALLER, VACANCY SENSORS OR DIMMERS ARE REQUIRED WHEN USING A SOURCE REGULATED BY JAB
- IN KITCHENS, IF THE LUMINAIRE IS AN ENCLOSED OR RECESSED LUMINAIRE, YOU MUST USE A DIMMER OR VACANCY SENSOR.
- AT LEAST ONE LUMINAIRE IN THE BATHROOM, GARAGE, LAUNDRY ROOM OR UTILITY ROOM MUST BE CONTROLLED BY A VACANCY SENSOR.
- OMITTED.
- THE BUILDER MUST PROVIDE NEW HOMEOWNERS WITH A LUMINAIRE SCHEDULE THAT INCLUDES A LIST OF INSTALLED LAMPS AND LUMINAIRES.

## ENERGY CODE - UPDATE

- ALL JOINTS, PENETRATIONS AND OTHER OPENINGS IN THE BUILDING ENVELOPE THAT ARE POTENTIAL SOURCES OF AIR LEAKAGE SHALL BE CAULKED, GASKETED, WETHER-STRIPPED OR OTHERWISE SEALED TO LIMIT INFILTRATION AND EXFILTRATION CcNC 110.7
- ATTIC ACCESS DOORS SHALL HAVE PERMANENTLY ATTACHED INSULATION USING ADHESIVE OR MECHANICAL FASTENERS. THE ATTIC ACCESS SHALL BE GASKETED TO PREVENT AIR LEAKAGE CcNC 150.0(a)(2)
- PERMANENTLY INSTALLED NIGHT LIGHTS AND NIGHT LIGHTS INTEGRAL TO INSTALLED LUMINAIRE OR EXHAUST FANS SHALL BE RATED TO EXCEED THE NUMBER OF ELECTRICAL BOXES THAT ARE MORE THAN 5 FEET ABOVE THE FINISHED FLOOR AND DO NOT CONTAIN A LUMINAIRE OR OTHER DEVICE SHALL BE NO GREATER THAN THE NUMBER OF BEDROOMS. THESE ELECTRICAL BOXES MUST BE SERVED BY A DIMMER, VACANCY SENSOR CONTROL, OR FAN SPEED CONTROL. Ccnc 150(K)(B)

## W.U.I. REQUIREMENT NOTES

- ROOF COVERING SHALL COMPLY WITH 2019 CRC R337.5.2 UNDERLAYMENT SHALL BE ONE LAYER OF MINIMUM 72 POUND MINERAL-SURFACED NONPERFORATED CAP SHEET COMPLYING WITH ASTM D3909 INSTALLED OVER THE COMBUSTIBLE DECKING.
- ROOF VALLEYS SHALL COMPLY WITH 2019 CRC R337.5.3 VALLEY FLASHING SHALL BE NOT LESS THAN 26 GAGE GALVANIZED SHEET CORROSIVE RESISTANT METAL INCLUDING BUT NOT LESS THAN ONE LAYER OF MINIMUM 72 POUND MINERAL-SURFACED NONPERFORATED CAP SHEET COMPLYING WITH ASTM D3909. AT LEAST 36 INCHES WIDE RUNNING THE FULL LENGTH OF THE VALLEY.
- ROOF GUTTERS SHALL COMPLY WITH 2019 CRC R337.5.4 ROOF GUTTERS SHALL BE PROVIDED WITH THE MEANS TO PREVENT THE ACCUMULATION OF LEAVES AND DEBRIS IN THE GUTTER
- VENTILATION OPENINGS SHALL COMPLY WITH 2019 CRC R337.6 - VENTILATION OPENINGS FOR ENCLOSED ATTICS, ENCLOSED EAVE SOFFIT SPACES, ENCLOSED RAFTER SPACE VENTILATION (2019 CRC R337.7 EXTERIOR WALL COVERINGS OR WALL ASSEMBLIES SHALL COMPLY WITH ONE OF THE FOLLOWING REQUIREMENTS: BE OF NONCOMBUSTIBLE MATERIAL, IGNITION-RESISTANT MATERIAL, HEAVY TIMBER EXTERIOR WALL ASSEMBLY, LOG WALL CONSTRUCTION ASSEMBLY, OR WALL ASSEMBLIES THAT MEET THE PERFORMANCE CRITERIA IN ACCORDANCE WITH THE TEST PROCEDURES FOR A 10-MINUTE DIRECT FLAME CONTACT EXPOSURE TEST SET FORTH IN SFM STANDARD 12-7A-1. REFER TO SECTIONS R337.7.1 THROUGH R337.7.9 FOR ADDITIONAL INFORMATION.

## UNDER-FLOOR VENTING NOTES

- THE SPACE BETWEEN THE BOTTOM OF THE FLOOR JOISTS AND THE EARTH UNDER ANY BUILDING EXCEPT SPACES OCCUPIED BY BASEMENTS OR CRAWL SPACES SHALL BE PROVIDED WITH 2019 CRC R337.7 EXTERIOR WALL COVERINGS OR WALL ASSEMBLIES SHALL COMPLY WITH ONE OF THE FOLLOWING REQUIREMENTS: BE OF NONCOMBUSTIBLE MATERIAL, IGNITION-RESISTANT MATERIAL, HEAVY TIMBER EXTERIOR WALL ASSEMBLY, LOG WALL CONSTRUCTION ASSEMBLY, OR WALL ASSEMBLIES THAT MEET THE PERFORMANCE CRITERIA IN ACCORDANCE WITH THE TEST PROCEDURES FOR A 10-MINUTE DIRECT FLAME CONTACT EXPOSURE TEST SET FORTH IN SFM STANDARD 12-7A-1. REFER TO SECTIONS R337.7.1 THROUGH R337.7.9 FOR ADDITIONAL INFORMATION.
- PERFORATED SHEET METAL PLATES NOT LESS THAN 0.070 INCH THICK.
- CAST-IRON GRILL OR GRATING.
- EXTRUDED LOAD-BEARING VENTS.
- HARDWARE CLOTH OF 0.035 INCH WIRE OR HEAVIER.
- CORROSION-RESISTANT WIRE MESH, WITH THE LEAST DIMENSION NOT GREATER THAN 1/4 INCH.
- OPERABLE LOUVERS, WHERE VENTILATION IS PROVIDED IN ACCORDANCE WITH SECTION 1202.4.1.2.
- THE NET AREA OF VENTILATION OPENINGS FOR CRAWL SPACES WITH UNCOVERED EARTH FLOORS SHALL BE NOT LESS THAN 1 SQUARE FOOT FOR EACH 150 SQUARE FEET OF CRAWL SPACE AREA. (CBC 2019 1202.4.1) OR THE NET AREA OF VENTILATION OPENINGS FOR CRAWL SPACES WITH THE GROUND SURFACE COVERED WITH A CLASS I VAPOR RETARDER SHALL BE NOT LESS THAN 1 SQUARE FOOT FOR EACH 1,500 SQUARE FEET OF CRAWL SPACE AREA. (CBC 2019 1202.4.1.2)
- CRAWL SPACES SHALL BE PROVIDED WITH NOT LESS THAN ONE ACCESS OPENING THAT SHALL BE NOT LESS THAN 18 INCHES BY 24 INCHES. (CBC 2019 1208.1)

## PROJECT GENERAL NOTES

USE OF PLANS: THESE PLANS ARE THE PROPERTY OF RRM AND MAY NOT BE USED WITHOUT THE EXPRESS, WRITTEN CONSENT.

THESE NOTES APPLY TO ALL PORTIONS, PHASES AND SUBCONTRACTORS OF THIS PROJECT.

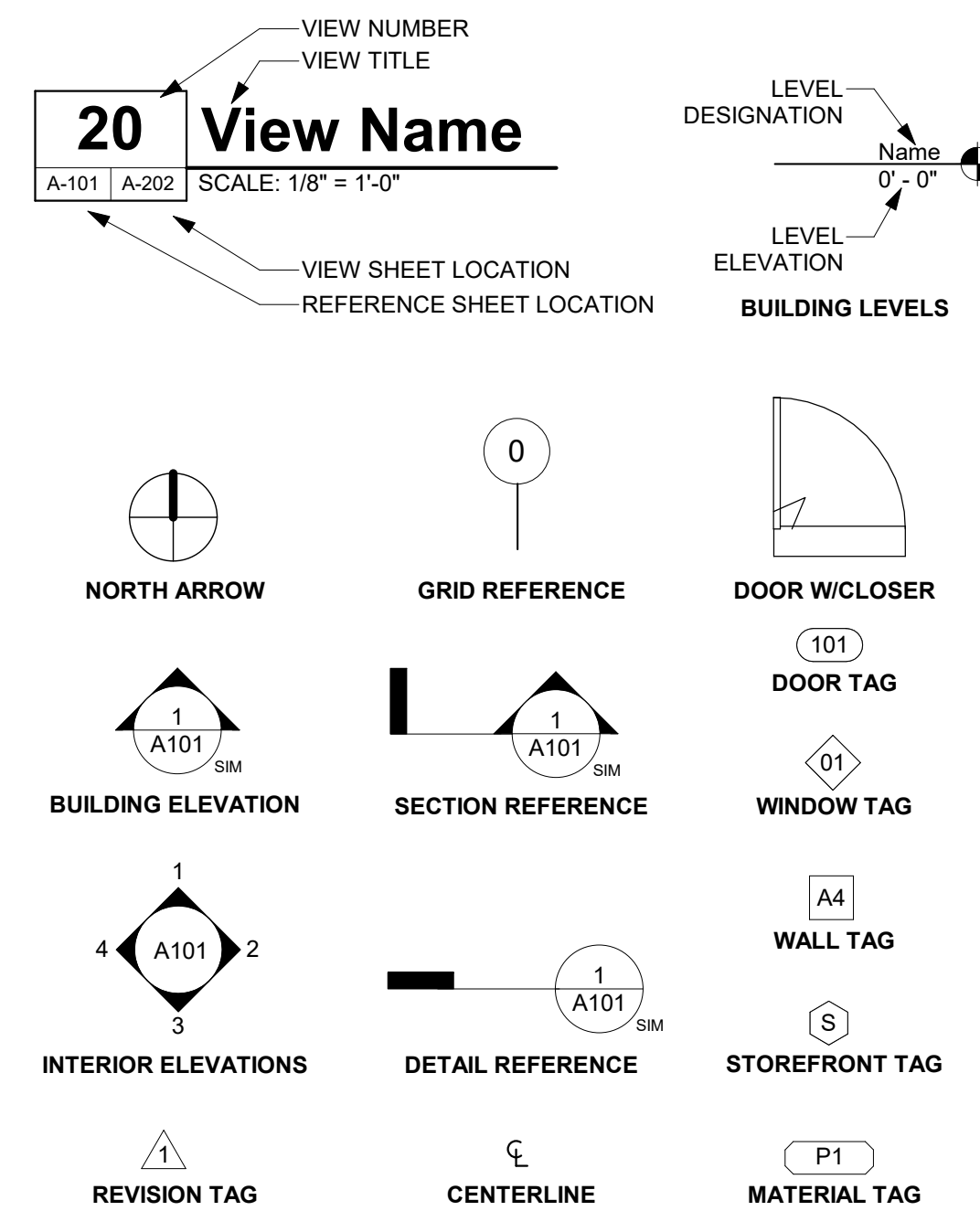
- APPLICABLE CODES AND STANDARDS:
- 2019 CALIFORNIA RESIDENTIAL CODE AND ITS APPENDICES AND STANDARDS.
  - 2019 CALIFORNIA BUILDING CODE AND ITS APPENDICES AND STANDARDS.
  - 2019 CALIFORNIA PLUMBING CODE AND ITS APPENDICES AND STANDARDS.
  - 2019 CALIFORNIA MECHANICAL CODE AND ITS APPENDICES AND STANDARDS.
  - 2019 CALIFORNIA FIRE CODE AND ITS APPENDICES AND STANDARDS.
  - 2019 CALIFORNIA ELECTRICAL CODE AND ITS APPENDICES AND STANDARDS.
  - 2019 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS.
  - 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE AND ITS APPENDICES AND STANDARDS.
  - CURRENT MONO COUNTY MUNICIPAL CODE.
  - CALIFORNIA ASSEMBLY BILL NO. 86 (ACCESSORY DWELLING UNITS).

- ALL WORK DESCRIBED IN THE DRAWINGS SHALL BE VERIFIED FOR DIMENSION, GRADE, EXTENT AND COMPATIBILITY WITH EXISTING SITE CONDITIONS. ANY DISCREPANCY AND UNEXPECTED CONDITIONS THAT AFFECT OR CHANGE THE WORK DESCRIBED IN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY. DO NOT PROCEED WITH THE WORK IN THE AREA OF DISCREPANCIES UNTIL ALL SUCH DISCREPANCIES ARE RESOLVED. IF THE CONTRACTOR CHOOSES TO DO SO, HE/SHE SHALL BE PRECEDING AT HIS/HER OWN RISK.
- DIMENSIONS SHOWN SHALL TAKE PRECEDENCE OVER DRAWING SCALE OR PROPORTION. LARGER SCALE DRAWINGS SHALL TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS. ALL DIMENSIONS ARE ROUGH AND TO FACE OF FRAMING.
- DRAINING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
- IN THE EVENT OF THE UNFORESEEN ENCOUNTER OF MATERIALS SUSPECTED TO BE OF AN ARCHAEOLOGICAL, OR PALEONTOLOGICAL, NATURE, ALL GRADING AND EXCAVATION SHALL CEASE IN THE IMMEDIATE AREA AND THE CONTRACTOR SHALL NOTIFY THE OWNER. THE FIND SHALL BE LEFT UNTOUCHED UNTIL AN EVALUATION BY A QUALIFIED ARCHAEOLOGIST OR PALEONTOLOGIST IS MADE.
- CONTRACTOR IS TO BE RESPONSIBLE FOR BEING FAMILIAR WITH THESE DOCUMENTS INCLUDING ALL CONTRACT REQUIREMENTS.
- CONTRACTOR TO REVIEW CALIFORNIA GREEN CODE REQUIREMENTS FOR CONTRACTOR REQUIREMENTS.
- TEMPORARY FACILITIES: CONTRACTOR SHALL PAY FOR, PROVIDE AND MAINTAIN TEMPORARY FACILITIES FOR PROJECT PROTECTION AND CONSTRUCTION, AND AS REQUIRED BY LOCAL REGULATION AND THESE DOCUMENTS. SUCH FACILITIES INCLUDE, BUT ARE NOT LIMITED TO: TOILETS, LIGHTS, HEATERS, POWER, GAS, FANS, WATER, PHONES, FENCES, SIGNS, SHEETS, ETC. REMOVE FROM SITE UPON COMPLETION OF WORK. OBTAIN BUILDING OFFICIAL OR FIRE MARITAL APPROVAL PRIOR TO USE OF ANY TEMPORARY HEATING DEVICE.
- CONTRACTOR SHALL PROVIDE FOR PROTECTION AND SAFETY: RESPONSIBLE FOR ALL ITEMS (SIGNS, LIGHTS, FENCES, BRACING, ANCHOR-AGE, FIRE-EXTINGUISHERS, ETC.) NECESSARY FOR THE PROTECTION OF THE PUBLIC, WORKERS, MATERIALS, CONSTRUCTION AND PROPERTY PER LOCAL TATE AND FEDERAL REQUIREMENTS (INCLUDING EARTHQUAKES, FIRES, SPILLS, ACCIDENTS, EROSION, MUD, DUST, ETC.)
- CONTRACTOR TO PROVIDE COMPLETE DETAILS OF ENGINEERED TEMPORARY SHORING OR SLOT CUTTING PROCEDURES ON PLANS. CALL FOR INSPECTION BEFORE EXCAVATION BEGINS.
- THE SOILS ENGINEER IS TO APPROVE THE KEY OR BOTTOM AND LEAVE A CERTIFICATE ON THE SITE FOR THE GRADING INSPECTOR. THE GRADING INSPECTOR IS TO BE NOTIFIED BEFORE ANY GRADING BEGINS, AND FOR BOTTOM INSPECTION, BEFORE FILL IS PLACED. FILL MAY NOT BE PLACED WITHOUT APPROVAL OF THE GRADING INSPECTOR.
- A SEPARATE OFFICER, ACCESS EASEMENT/AGREEMENT, AND/OR RECIPROCAL ACCESS EASEMENT/AGREEMENT MAY BE REQUIRED TO ENSURE THAT THE PROPOSED PRIVATE ACCESS ROADWAY WILL REMAIN OPEN TO THROUGH TRAFFIC AND EMERGENCY VEHICLES PRIOR TO FINAL OF BUILDING PERMIT.
- SHOP WELDS MUST BE PERFORMED BY A LICENSED FABRICATOR'S SHOP.
- OSHA PERMITS REQUIRED FOR VERTICAL CUTS 5' OR OVER.
- FIRE SPRINKLER SHOP DRAWINGS & CALCULATIONS SHALL BE SUBMITTED TO BUILDING DEPT. & APPROVED BY FIRE DEPT. PRIOR TO INSTALLATION.

### ABBREVIATIONS

A/C	AIR CONDITIONING	FOIC	FURNISHED BY OWNER INSTALLED BY CONTRACTOR	PV	PHOTO VOLTAIC
ABV	ABOVE	FOM	FACE OF MASONRY	PVC	POLYVINYL CHLORIDE
ACOUS	ACOUSTICAL	FOS	FACE OF STUD	PVMT	PAVEMENT
ACT	ACOUSTICAL CEILING TILE	FRP	FIBERGLASS REINFORCED PANELS	QTY	QUANTITY
ADA	AMERICANS WITH DISABILITIES ACT	FT	FOOT OR FEET	R	RADIUS, RISER
AFCI	ARC FAULT CIRCUIT INTERRUPTER	FTG	FOOTING	RB	RUBBER BASE
AFF	ABOVE FINISH FLOOR	GA	GAUGE, GAGE	RCP	REFLECTED CEILING PLAN
AL	ALUMINUM	GALV	GALVANIZED	RD	ROOF DRAIN
ALT	ALTERNATE	GB	GRAB BAR	REF	REFRIGERATOR
ARCH	ARCHITECT(URAL)	GC	GENERAL CONTRACTOR	REINF	REINFORCED
BD	BOARD	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	REQD	REQUIRED
BDRM	BEDROOM	GWB	GYPSON BOARD	RH	RIGHT HAND
BET	BETWEEN	GYP	GYPSON	RM	ROOM
BIT	BITUMINOUS	HB	HOSE BIBB	RO	ROUGH OPENING
BLDG	BUILDING	HC	HOLLOW CORE	RTU	ROOF TOP UNIT (MECH)
BLKG	BLOCKING	HDWD	HARDWOOD	S	SOUTH
BLW	BELOW	HDWR	HARDWARE	SAFB	SOUND ATTENUATION FIBER BATT
BM	BEAM	HGT	HEIGHT	SAWP	SELF ADHEREING WATERPROOFING
BOT	BOTTOM	HM	HOLLOW METAL	SC	SCUPPER/SOLID CORE
BUR	BUILT UP ROOF	HORIZ	HORIZONTAL	SCHED	SCHEDULE
CB	CATCH BASIN	HVAC	HEATING, VENTILATION, A/C	SEAL	SEALANT
CBC	CALIFORNIA BUILDING CODE	ID	INSIDE DIAMETER	SECT	SECTION
CBC	CALIFORNIA BUILDING CODE	IIC	IMPACT INSULATION CLASS	SF	SQUARE FOOT
CEM	CEMENT	IN	INCH	SHT	SHEET
CFM	CUBIC FEET PER MINUTE	INCAND	INCANDESCENT	SHTG	SHEATHING
CIP	CAST IN PLACE	INSUL	INSULATION, INSULATED	SIM	SIMILAR
CJ	CONTROL JOINT	INT	INTERIOR	SM	SHEET METAL
CL	CENTER LINE	JC	JANITORS CLOSET	SPEC	SPECIFICATION
CLG	CEILING	JT	JOINT	SQ	SQUIRE
CLO	CLOSET	LAM	LAMINATE	SS	SOLID SURFACE
CLR	CLEAR	LAV	LAVATORY	SSTL	STAINLESS STEEL
CMU	CONCRETE MASONRY UNIT	LBS	POUNDS	STC	SOUND TRANSMISSION CLASS
CO	CLEAN OUT	LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN	STD	STANDARD
COL	COLUMN	LF	LINEAR FEET	STL	STEEL
CONC	CONCRETE	LIN	LINEN CLOSET	STOR	STORAGE
CONST	CONSTRUCTION	LINO	LINOLEUM	STRUCT	STRUCTURAL
CONT	CONTINUOUS	LT(G)	LIGHTING	SUSP	SUSPENDED
CONTR	CONTRACTOR	LVL	LAMINATED VENEER LUMBER	SV	SHEET VINYL
CPT	CARPET	LVT	LUXURY VINYL TILE	SYM	SYMMETRICAL
CT	CERAMIC TILE	LW	LIGHTWEIGHT	T	TREAD
CTR	CENTER	MAX	MAXIMUM	T&G	TONGUE & GROOVE
DBL	DOUBLE	MDF	MEDIUM DENSITY FIBERBOARD	TEL	TELEPHONE
DF	DRINKING FOUNTAIN	MECH	MECHANICAL	TEMP	TEMPERED
DIA	DIAMETER, DIAPHRAGM	MEMB	MEMBRANE	TER	TERRAZZO
DIM	DIMENSION	MEP	MECHANICAL, ELECTRICAL, PLUMBING	THK	THICK
DN	DOWN	MFR	MANUFACTURER	THR	THRESHOLD
DR	DOOR	MIN	MINIMUM	TJ	TRUSS JOIST I-JOIST
DS	DOWN SPOUT	MISC	MISCELLANEOUS	TO	TOP OF
DTL	DETAIL	MO	MASONRY OPENING	TOS	TOP OF SLAB
DW	DISHWASHER	MTD	MOUNTED	TOW	TOP OF WALL
DWG	DRAWING	MTL	METAL	TRANS	TRANSFORMER
(E)	EXISTING	N	NORTH	TV	TELEVISION
E	EAST	NIC	NOT IN CONTRACT	TYP	TYPICAL
EA	EACH	NO	NUMBER	UFAS	UNIFORM FEDERAL ACCESSIBILITY STANDARDS
EJ	EXPANSION JOINT	NOM	NOMINAL	UG	UNDERGROUND
EL	ELEVATION	NTS	NOT TO SCALE	UNFIN	UNFINISHED
ELEV	ELEVATION	O.P.	OVERFLOW PIPE	UNO	UNLNESS NOTED OTHERWISE
ELEC	ELECTRIC	OC	ON CENTER	UV	ULTRAVIOLET
ENCL	ENCLOSURE	OD	OVERFLOW DRAIN	VCT	VINYL COMPOSITION TILE
EQ	EQUAL	OFF	OFFICE	VERT	VERTICAL
EQUIP	EQUIPMENT	OH	OPPOSITE HAND	VIF	VERIFY IN FIELD
EXH	EXHAUST	OPG	OPENING	VTR	VENT TERMINATION PIPE
EXP	EXPANSION	OPP	OPPOSITE	VWC	VINYL WALL COVERING
EXT	EXTERIOR	(P)	PROPOSED	W	WEST
FACP	FIRE ALARM CONTROL PANEL	PERM	PERIMETER	W/	WITH
FAU	FORCED AIR UNIT	PERP	PERPENDICULAR	W/D	WASHER DRYER
FAWP	FLUID APPLIED WATERPROOFING	PG	PAINT GRADE	W/O	WITHOUT
FD	FLOOR DRAIN	PL	PLATE, PROPERTY LINE	WC	WATERCLOSET
FDC	FIRE DEPARTMENT CONNECTION	PLAM	PLASTIC LAMINATE	WD	WOOD
FE	FIRE EXTINGUISHER	PLBG	PLUMBING	WDW	WINDOW
FEC	FIRE EXTINGUISHER CABINET	PLYWD	PLYWOOD	WH	WATER HEATER
FF	FINISHED FLOOR ELEVATION	PNL	PANEL	WI	WROUGHT IRON
FG	FINISHED GRADE	PP	POWER POLE	WIN	WINDOW
FH	FIRE HYDRANT	PR	PAIR	WP	WATERPROOF(ING)
FHC	FIRE HOSE CABINET	PRTN	PARTITION	WR	WEATHER RESISTIVE
FIN	FINISH	PSF	POUNDS PER SQUARE FOOT	WRB	WATER RESISTIVE BARRIER
FIXT	FIXTURE	PSI	POUNDS PER SQUARE INCH	WSCT	WAINSCOT
FLR	FLOOR	PSL	PARALLEL STRAND LUMBER	WT	WEIGHT
FLUOR	FLOURESCENT	PT	PRESSURE TREATED	WWF	WELDED WIRE FABRIC
FND	FOUNDATION	PTD	PAINTED	YD	YARD
FO	FACE OF				
FOC	FACE OF CONCRETE				
FOF	FACE OF FINISH				

### SYMBOLS



CONSULTANT

AGENCY

**MONO COUNTY ADU  
 PROTOTYPES**  
 MONO COUNTY  
**ABBREVIATIONS AND SYMBOLS**

NO.	REVISION	DATE

PROJECT MANAGER  
 RR  
 DRAWN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_  
 DATE  
 6/30/2022  
 PROJECT NUMBER  
 2340-01-CU21  
 SHEET

G-102

# 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

## RESIDENTIAL MANDATORY MEASURES (SHEET 1)



### CHAPTER 1 - ADMINISTRATION

#### SECTION 101 GENERAL

**101.1 TITLE.**  
THESE REGULATIONS SHALL BE KNOWN AS THE CALIFORNIA GREEN BUILDING STANDARDS CODE AND MAY BE CITED AS SUCH AND WILL BE REFERRED TO HEREIN AS "THIS CODE." IT IS INTENDED THAT IT SHALL ALSO BE KNOWN AS THE CALGREEN CODE. THE CALIFORNIA GREEN BUILDING STANDARDS CODE IS PART 11 OF THIRTEEN PARTS OF THE OFFICIAL COMPILATION AND PUBLICATION OF THE ADOPTION, AMENDMENT AND REPEAL OF BUILDING REGULATIONS TO THE CALIFORNIA CODE OF REGULATIONS, TITLE 24, ALSO REFERRED TO AS THE CALIFORNIA BUILDING STANDARDS CODE.

**101.2 PURPOSE.**  
THE PURPOSE OF THIS CODE IS TO IMPROVE PUBLIC HEALTH, SAFETY AND GENERAL WELFARE BY ENHANCING THE DESIGN AND CONSTRUCTION OF BUILDINGS THROUGH THE USE OF BUILDING CONCEPTS HAVING A REDUCED NEGATIVE IMPACT OR POSITIVE ENVIRONMENTAL IMPACT AND ENCOURAGING SUSTAINABLE CONSTRUCTION PRACTICES IN THE FOLLOWING CATEGORIES:

1. PLANNING AND DESIGN.
2. ENERGY EFFICIENCY AND CONSERVATION.
3. WATER EFFICIENCY AND CONSERVATION.
4. MATERIAL CONSERVATION AND RESOURCE EFFICIENCY.
5. ENVIRONMENTAL QUALITY.

**101.3 SCOPE.**  
THE PROVISIONS OF THIS CODE SHALL APPLY TO THE PLANNING, DESIGN, OPERATION, CONSTRUCTION, USE AND OCCUPANCY OF EVERY NEWLY CONSTRUCTED BUILDING OR STRUCTURE, UNLESS OTHERWISE INDICATED IN THIS CODE, THROUGHOUT THE STATE OF CALIFORNIA.

IT IS NOT THE INTENT THAT THIS CODE SUBSTITUTE OR BE IDENTIFIED AS MEETING THE CERTIFICATION REQUIREMENTS OF ANY GREEN BUILDING PROGRAM.

### SECTION 102 CONSTRUCTION DOCUMENTS AND INSTALLATION VERIFICATION

**102.1 SUBMITTAL DOCUMENTS.**  
CONSTRUCTION DOCUMENTS AND OTHER DATA SHALL BE SUBMITTED IN ONE OR MORE SETS WITH EACH APPLICATION FOR A PERMIT, WHERE SPECIAL CONDITIONS EXIST, THE ENFORCING AGENCY IS AUTHORIZED TO REQUIRE ADDITIONAL CONSTRUCTION DOCUMENTS TO BE PREPARED BY A LICENSED DESIGN PROFESSIONAL AND MAY BE SUBMITTED SEPARATELY.

**EXCEPTION:** THE ENFORCING AGENCY IS AUTHORIZED TO WAIVE THE SUBMISSION OF CONSTRUCTION DOCUMENTS AND OTHER DATA NOT REQUIRED TO BE PREPARED BY A LICENSED DESIGN PROFESSIONAL.

**102.2 INFORMATION ON CONSTRUCTION DOCUMENTS.**  
CONSTRUCTION DOCUMENTS SHALL BE OF SUFFICIENT CLARITY TO INDICATE THE LOCATION, NATURE AND SCOPE OF THE PROPOSED GREEN BUILDING FEATURE AND SHOW THAT IT WILL CONFORM TO THE PROVISIONS OF THIS CODE, THE CALIFORNIA BUILDING STANDARDS CODE AND OTHER RELEVANT LAWS, ORDINANCES, RULES AND REGULATIONS AS DETERMINED BY THE ENFORCING AGENCY.

**102.3 VERIFICATION.**  
DOCUMENTATION OF CONFORMANCE FOR APPLICABLE GREEN BUILDING MEASURES SHALL BE PROVIDED TO THE ENFORCING AGENCY. ALTERNATE METHODS OF DOCUMENTATION SHALL BE ACCEPTABLE WHEN THE ENFORCING AGENCY FINDS THAT THE PROPOSED ALTERNATE DOCUMENTATION IS SATISFACTORY TO DEMONSTRATE SUBSTANTIAL CONFORMANCE WITH THE INTENT OF THE PROPOSED GREEN BUILDING MEASURE.

### CHAPTER 3 - GREEN BUILDING

#### SECTION 301 GENERAL

**301.1 SCOPE.**  
BUILDINGS SHALL BE DESIGNED TO INCLUDE THE GREEN BUILDING MEASURES SPECIFIED AS MANDATORY IN THE APPLICABLE CHECKLISTS CONTAINED IN THIS CODE. VOLUNTARY GREEN BUILDING MEASURES ARE ALSO INCLUDED IN THE APPLICATION CHECKLISTS AND MAY BE INCLUDED IN THE DESIGN AND CONSTRUCTION OF STRUCTURES COVERED BY THIS CODE, BUT ARE NOT REQUIRED UNLESS ADOPTED BY A CITY, COUNTY, OR CITY AND COUNTY AS SPECIFIED IN SECTION 101.7.

**301.1.1 ADDITIONS AND ALTERATIONS. [HCD]** THE MANDATORY PROVISIONS OF CHAPTER 4 SHALL BE APPLIED TO ADDITIONS OR ALTERATIONS OF EXISTING RESIDENTIAL BUILDINGS WHERE THE ADDITION OR ALTERATION INCREASES THE BUILDING'S CONDITIONED AREA, VOLUME, OR SIZE. THE REQUIREMENTS SHALL APPLY ONLY TO AND/OR WITHIN THE SPECIFIC AREA OF THE ADDITION OR ALTERATION.

**NOTE:** ON AND AFTER JANUARY 1, 2014, RESIDENTIAL BUILDINGS UNDERGOING PERMITTED ALTERATIONS, ADDITIONS OR IMPROVEMENTS SHALL REPLACE NONCOMPLIANT PLUMBING FIXTURES WITH WATER-CONSERVING PLUMBING FIXTURES. PLUMBING FIXTURE REPLACEMENT IS REQUIRED PRIOR TO ISSUANCE OF A CERTIFICATE OF FINAL COMPLETION, CERTIFICATE OF OCCUPANCY OR FINAL PERMIT APPROVAL BY THE LOCAL BUILDING DEPARTMENT. SEE CIVIL CODE SECTION 1101.1, ET SEQ., FOR THE DEFINITION OF A NONCOMPLIANT PLUMBING FIXTURE. TYPES OF RESIDENTIAL BUILDINGS AFFECTED AND OTHER IMPORTANT ENACTMENT DATES.

**301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS [HCD]**  
THE PROVISIONS OF INDIVIDUAL SECTIONS OF CALGREEN MAY APPLY TO EITHER LOW-RISE RESIDENTIAL BUILDINGS, HIGH-RISE RESIDENTIAL BUILDINGS, OR BOTH. INDIVIDUAL SECTIONS WILL BE DESIGNATED BY BANNERS TO INDICATE WHERE THE SECTION APPLIES SPECIFICALLY TO LOW-RISE ONLY (LR) OR HIGH-RISE ONLY (HR). WHEN THE SECTION APPLIES TO BOTH LOW-RISE AND HIGH-RISE BUILDINGS, NO BANNER WILL BE USED.

### SECTION 302 MIXED OCCUPANCY BUILDINGS

**302.1 MIXED OCCUPANCY BUILDINGS.**  
IN MIXED OCCUPANCY BUILDINGS, EACH PORTION OF A BUILDING SHALL COMPLY WITH THE SPECIFIC GREEN BUILDING MEASURES APPLICABLE TO EACH SPECIFIC OCCUPANCY.

### CHAPTER 4 - RESIDENTIAL MANDATORY MEASURES

#### DIVISION 4.1 PLANNING AND DESIGN

**4.106 SITE DEVELOPMENT**

**4.106.1 GENERAL.**  
PRESERVATION AND USE OF AVAILABLE NATURAL RESOURCES SHALL BE ACCOMPLISHED THROUGH EVALUATION AND CAREFUL PLANNING TO MINIMIZE NEGATIVE EFFECTS ON THE SITE AND ADJACENT AREAS. PRESERVATION OF SLOPES, MANAGEMENT OF STORM WATER DRAINAGE AND EROSION CONTROLS SHALL COMPLY WITH THIS SECTION.

**4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION**  
PROJECTS WHICH DISTURB LESS THAN ONE ACRE OF SOIL AND ARE NOT PART OF A LARGER COMMON PLAN OF DEVELOPMENT WHICH IN TOTAL DISTURBS ONE ACRE OR MORE, SHALL MANAGE STORM WATER DRAINAGE DURING CONSTRUCTION. IN ORDER TO MANAGE STORM WATER DRAINAGE DURING CONSTRUCTION, ONE OR MORE OF THE FOLLOWING MEASURES SHALL BE IMPLEMENTED TO PREVENT FLOODING OF ADJACENT PROPERTY, PREVENT EROSION AND RETAIN SOIL RUNOFF ON THE SITE.

1. RETENTION BASIN OF SUFFICIENT SIZE SHALL BE UTILIZED TO RETAIN STORM WATER ON THE SITE.
2. WHERE STORM WATER IS CONVEYED TO A PUBLIC DRAINAGE SYSTEM, COLLECTION POINT, GUTTER OR SIMILAR DISPOSAL METHOD, WATER SHALL BE FILTERED BY USE OF A BARRIER SYSTEM, WALL OR OTHER METHOD APPROVED BY THE ENFORCING AGENCY.
3. COMPLIANCE WITH A LAWFULLY ENACTED STORM WATER MANAGEMENT ORDINANCE.

**4.106.3 GRADING AND PAVING**  
CONSTRUCTION PLANS SHALL INDICATE HOW THE SITE GRADING OR DRAINAGE SYSTEM WILL MANAGE ALL SURFACE WATER FLOWS TO KEEP WATER FROM ENTERING BUILDINGS. EXAMPLES OF METHODS TO MANAGE SURFACE WATER INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

1. SWALES.
2. WATER COLLECTION AND DISPOSAL SYSTEMS.
3. FRENCH DRAINS.
4. WATER RETENTION GARDENS.
5. OTHER WATER MEASURES WHICH KEEP SURFACE WATER AWAY FROM BUILDINGS AND AID IN GROUNDWATER RECHARGE.

**EXCEPTIONS:** ADDITIONS AND ALTERATIONS NOT ALTERING THE DRAINAGE PATH.

**4.106.4 ELECTRIC VEHICLE (EV) CHARGING FOR NEW CONSTRUCTION**  
NEW CONSTRUCTION SHALL COMPLY WITH SECTION 4.106.4.1, 4.106.4.2, OR 4.106.4.3, TO FACILITATE FUTURE INSTALLATION AND USE OF EV CHARGERS. ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE) SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE, ARTICLE 625.

**EXCEPTIONS:** ON A CASE-BY-CASE BASIS, WHERE THE LOCAL ENFORCING AGENCY HAS DETERMINED EV CHARGING AND INFRASTRUCTURE ARE NOT FEASIBLE BASED UPON ONE OR MORE OF THE FOLLOWING CONDITIONS:

1. WHERE THERE IS NO COMMERCIAL POWER SUPPLY.
2. WHERE THERE IS EVIDENCE SUBSTANTIATING THAT MEETING THE REQUIREMENTS WILL ALTER THE LOCAL UTILITY INFRASTRUCTURE DESIGN REQUIREMENTS ON THE UTILITY SIDE OF THE METER SO AS TO INCREASE THE UTILITY SIDE COST TO THE HOMEOWNER OR THE DEVELOPER BY MORE THAN \$400.00 PER DWELLING UNIT.

**4.106.4.1 NEW ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES WITH ATTACHED PRIVATE GARAGES**  
FOR EACH DWELLING UNIT, INSTALL A LISTED RACEWAY TO ACCOMMODATE A DEDICATED 208/240-VOLT BRANCH CIRCUIT. THE RACEWAY SHALL NOT BE LESS THAN TRADE SIZE 1 (NOMINAL 1-INCH INSIDE DIAMETER). THE RACEWAY SHALL ORIGINATE AT THE MAIN SERVICE OR SUBPANEL AND SHALL TERMINATE INTO A LISTED CABINET, BOX OR OTHER ENCLOSURE IN CLOSE PROXIMITY TO THE PROPOSED LOCATION OF AN EV CHARGER. RACEWAYS ARE REQUIRED TO BE CONTINUOUS AT ENCLOSED, INACCESSIBLE OR CONCEALED AREAS AND SPACES. THE SERVICE PANEL AND/OR SUBPANEL SHALL PROVIDE CAPACITY TO INSTALL A 40-AMPERE MINIMUM DEDICATED BRANCH CIRCUIT AND SPACE(S) RESERVED TO PERMIT INSTALLATION OF A BRANCH CIRCUIT OVERCURRENT PROTECTION DEVICE.

**4.106.4.1.1 IDENTIFICATION**  
THE SERVICE PANEL OR SUBPANEL CIRCUIT DIRECTORY SHALL IDENTIFY THE OVERCURRENT PROTECTIVE DEVICE SPACE(S) RESERVED FOR FUTURE EV CHARGING AS "EV CAPABLE". THE RACEWAY TERMINATION LOCATION SHALL BE PERMANENTLY AND VISIBLY MARKED AS "EV CAPABLE".

**4.106.4.2 NEW MULTIFAMILY DWELLINGS**  
WHERE 17 OR MORE MULTIFAMILY DWELLING UNITS ARE CONSTRUCTED ON A BUILDING SITE, 3 PERCENT OF THE TOTAL NUMBER OF PARKING SPACES PROVIDED FOR ALL TYPES OF PARKING FACILITIES, BUT IN NO CASE LESS THAN ONE, SHALL BE ELECTRIC VEHICLE CHARGING SPACES (EV SPACES) CAPABLE OF SUPPORTING FUTURE EVSE. CALCULATIONS FOR THE NUMBER OF EV SPACES SHALL BE ROUNDED UP TO THE NEAREST WHOLE NUMBER.

**4.106.4.2.1 IDENTIFICATION**  
CONSTRUCTION DOCUMENTS ARE INTENDED TO DEMONSTRATE THE PROJECT'S CAPABILITY AND CAPACITY FOR FACILITATING FUTURE EV CHARGING. THERE IS NO REQUIREMENT FOR EV SPACES TO BE CONSTRUCTED OR AVAILABLE UNTIL EV CHARGERS ARE INSTALLED FOR USE.

**4.106.4.2.2 ELECTRIC VEHICLE CHARGING SPACE (EV SPACE) LOCATIONS.** CONSTRUCTION DOCUMENTS SHALL INDICATE THE LOCATION OF PROPOSED EV SPACES. AT LEAST ONE EV SPACE SHALL BE LOCATED IN COMMON USE AREAS AND AVAILABLE FOR USE BY ALL RESIDENTS.

WHEN EV CHARGERS ARE INSTALLED, EV SPACES REQUIRED BY SECTION 4.106.2.2, ITEM 3, SHALL COMPLY WITH AT LEAST ONE OF THE FOLLOWING OPTIONS:

1. THE EV SPACE SHALL BE LOCATED ADJACENT TO AN ACCESSIBLE PARKING SPACE MEETING THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE, CHAPTER 11A, TO ALLOW USE OF THE EV CHARGER FROM THE ACCESSIBLE PARKING SPACE.
2. THE EV SPACE SHALL BE LOCATED ON AN ACCESSIBLE ROUTE, AS DEFINED IN THE CALIFORNIA BUILDING CODE, CHAPTER 2, TO THE BUILDING.

**4.106.4.2.2 ELECTRIC VEHICLE CHARGING SPACE (EV SPACE) DIMENSIONS.** THE EV SPACES SHALL BE DESIGNED TO COMPLY WITH THE FOLLOWING:

1. THE MINIMUM LENGTH OF EACH EV SPACE SHALL BE 18 FEET.
2. THE MINIMUM WIDTH OF EACH EV SPACE SHALL BE 9 FEET.
3. ONE IN EVERY 25 EV SPACES, BUT NOT LESS THAN ONE, SHALL ALSO HAVE AN 8-FOOT WIDE MINIMUM AISLE. A 5-FOOT WIDE MINIMUM AISLE SHALL BE PERMITTED PROVIDED THE MINIMUM WIDTH OF THE EV SPACE IS 12 FEET.
  - A. SURFACE SLOPE FOR THIS EV SPACE AND THE AISLE SHALL NOT EXCEED 1 UNIT VERTICAL IN 48 UNITS HORIZONTAL (2.083 PERCENT SLOPE) IN ANY DIRECTION.

**4.106.4.3 SINGLE EV SPACE REQUIRED.**  
INSTALL A LISTED RACEWAY CAPABLE OF ACCOMMODATING A 208/240-VOLT DEDICATED BRANCH CIRCUIT. THE RACEWAY SHALL NOT BE LESS THAN TRADE SIZE 1 (NOMINAL 1-INCH INSIDE DIAMETER). THE RACEWAY SHALL ORIGINATE AT THE MAIN SERVICE OR SUBPANEL AND SHALL TERMINATE INTO A LISTED CABINET, BOX OR ENCLOSURE IN CLOSE PROXIMITY TO THE PROPOSED LOCATION OF THE EV SPACES. CONSTRUCTION DOCUMENTS SHALL IDENTIFY THE OVERCURRENT PROTECTIVE DEVICE SPACE(S) RESERVED FOR FUTURE EV CHARGING PURPOSES AS "EV CAPABLE" IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE.

**4.106.4.2.4 MULTIPLE EV SPACES REQUIRED.**  
CONSTRUCTION DOCUMENTS SHALL INDICATE THE RACEWAY TERMINATION POINT AND PROPOSED LOCATION OF FUTURE EV SPACES AND EV CHARGERS. CONSTRUCTION DOCUMENTS SHALL ALSO PROVIDE INFORMATION ON AMPERAGE OF FUTURE EVSE, RACEWAY METHOD(S), WIRING SCHEMATICS AND ELECTRICAL LOAD CALCULATIONS TO VERIFY THAT THE ELECTRICAL PANEL SERVICE CAPACITY AND ELECTRICAL SYSTEM, INCLUDING ANY ON-SITE DISTRIBUTION TRANSFORMER(S), HAVE SUFFICIENT CAPACITY TO SIMULTANEOUSLY CHARGE ALL EVS AT ALL REQUIRED EV SPACES AT THE FULL RATED AMPERAGE OF THE EVSE. PLAN DESIGN SHALL BE BASED UPON A 40-AMPERE MINIMUM BRANCH CIRCUIT, RACEWAYS AND RELATED COMPONENTS THAT ARE PLANNED TO BE INSTALLED UNDERGROUND, ENCLOSED, INACCESSIBLE OR IN CONCEALED AREAS AND SPACES SHALL BE INSTALLED AT THE TIME OF ORIGINAL CONSTRUCTION.

**4.106.4.2.5 IDENTIFICATION.** THE SERVICE PANEL OR SUBPANEL CIRCUIT DIRECTORY SHALL IDENTIFY THE OVERCURRENT PROTECTIVE DEVICE SPACE(S) RESERVED FOR FUTURE EV CHARGING PURPOSES AS "EV CAPABLE" IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE.

**NOTES:**

1. THE CALIFORNIA DEPARTMENT OF TRANSPORTATION ADOPTS AND PUBLISHES THE "CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CALIFORNIA MUTCD)" TO PROVIDE UNIFORM STANDARDS AND SPECIFICATIONS FOR ALL OFFICIAL TRAFFIC CONTROL DEVICES IN CALIFORNIA. ZERO EMISSION VEHICLE SIGNS AND PAVEMENT MARKINGS CAN BE FOUND IN THE NEW POLICIES & DIRECTIVES NUMBER 13-01. WEBSITE: [HTTP://WWW.DOT.CA.GOV/TRAFFICOPS/POLICY/13-01.PDF](http://www.dot.ca.gov/trafficops/policy/13-01.pdf)
2. SEE VEHICLE CODE SECTION 22511 FOR EV CHARGING SPACE SIGNAGE IN OFF-STREET PARKING FACILITIES AND FOR USE OF EV CHARGING SPACES.
3. THE GOVERNOR'S OFFICE OF PLANNING AND RESEARCH (OPR) PUBLISHED A "ZERO-EMISSION VEHICLE COMMUNITY READINESS GUIDEBOOK" WHICH PROVIDES HELPFUL INFORMATION FOR LOCAL GOVERNMENTS, RESIDENTS AND BUSINESSES. WEBSITE: [HTTP://OPR.CA.GOV/DOCS/ZEV\\_GUIDEBOOK.PDF](http://opr.ca.gov/docs/zev_guidebook.pdf).

**4.106.4.3 NEW HOTELS AND MOTELS**  
ALL NEWLY CONSTRUCTED HOTELS AND MOTELS SHALL PROVIDE EV SPACES CAPABLE OF SUPPORTING FUTURE INSTALLATION OF EVSE. THE CONSTRUCTION DOCUMENTS SHALL IDENTIFY THE LOCATION OF THE EV SPACES.

**NOTES:**

1. CONSTRUCTION DOCUMENTS ARE INTENDED TO DEMONSTRATE THE PROJECT'S CAPABILITY AND CAPACITY FOR FACILITATING FUTURE EV CHARGING.
2. THERE IS NO REQUIREMENT FOR EV SPACES TO BE CONSTRUCTED OR AVAILABLE UNTIL EV CHARGERS ARE INSTALLED FOR USE.

**4.106.4.3.1 NUMBER OF REQUIRED EV SPACES**  
THE NUMBER OF REQUIRED EV SPACES SHALL BE BASED ON THE TOTAL NUMBER OF PARKING SPACES PROVIDED FOR ALL TYPES OF PARKING FACILITIES IN ACCORDANCE WITH TABLE 4.106.4.3.1.

CALCULATIONS FOR THE REQUIRED NUMBER OF EV SPACES SHALL BE ROUNDED UP TO THE NEAREST WHOLE NUMBER.

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED EV SPACES
0-9	0
10-25	1
26-50	2
51-75	4
75-100	5
101-150	7
151-200	10
201 AND OVER	6% OF TOTAL

**4.106.4.3.2 ELECTRIC VEHICLE CHARGING SPACE (EV SPACE) DIMENSIONS** THE EV SPACES SHALL BE DESIGNED TO COMPLY WITH THE FOLLOWING:

1. THE MINIMUM LENGTH OF EACH EV SPACE SHALL BE 18 FEET.
2. THE MINIMUM WIDTH OF EACH EV SPACE SHALL BE 9 FEET.

**4.106.4.3.3 SINGLE EV SPACE REQUIRED**  
WHEN A SINGLE EV SPACE IS REQUIRED, THE EV SPACE SHALL BE DESIGNED IN ACCORDANCE WITH SECTION 4.106.4.2.3.

**4.106.4.3.4 MULTIPLE EV SPACES REQUIRED**  
WHEN MULTIPLE EV SPACES ARE REQUIRED, THE EV SPACES SHALL BE DESIGNED IN ACCORDANCE WITH SECTION 4.106.4.2.4

**4.106.4.3.5 IDENTIFICATION.** THE SERVICE PANELS OR SUB-PANELS SHALL BE IDENTIFIED IN ACCORDANCE WITH SECTION 4.106.4.2.5.

**4.106.4.3.6 ACCESSIBLE EV SPACES.**  
IN ADDITION TO THE REQUIREMENTS IN SECTION 4.106.4.3, EV SPACES FOR HOTELS/MOTELS AND ALL EVSE, WHEN INSTALLED, SHALL COMPLY WITH THE ACCESSIBILITY PROVISIONS FOR THE EV CHARGING STATIONS IN THE CALIFORNIA BUILDING CODE, CHAPTER 11B.

**NOTES:**

1. THE CALIFORNIA DEPARTMENT OF TRANSPORTATION ADOPTS AND PUBLISHES THE "CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CALIFORNIA MUTCD)" TO PROVIDE UNIFORM STANDARDS AND SPECIFICATIONS FOR ALL OFFICIAL TRAFFIC CONTROL DEVICES IN CALIFORNIA. ZERO EMISSION VEHICLE SIGNS AND PAVEMENT MARKINGS CAN BE FOUND IN THE NEW POLICIES & DIRECTIVES NUMBER 13-01. WEBSITE: [HTTP://WWW.DOT.CA.GOV/TRAFFICOPS/POLICY/HTML](http://www.dot.ca.gov/trafficops/policy/html).
2. SEE VEHICLE CODE SECTION 22511 FOR EV CHARGING SPACE SIGNAGE IN OFF-STREET PARKING FACILITIES AND FOR USE OF EV CHARGING SPACES.
3. THE GOVERNOR'S OFFICE OF PLANNING AND RESEARCH (OPR) PUBLISHED A "ZERO-EMISSION VEHICLE COMMUNITY READINESS GUIDEBOOK" WHICH PROVIDES HELPFUL INFORMATION FOR LOCAL GOVERNMENTS, RESIDENTS AND BUSINESSES. WEBSITE: [HTTPS://OPR.CA.GOV/DOCS/ZEV\\_GUIDEBOOK.PDF](https://opr.ca.gov/docs/zev_guidebook.pdf)
4. THE GOVERNOR'S INTERAGENCY WORKING GROUP ON ZERO-EMISSION VEHICLES. 2016. "2016 ZEV ACTION PLAN, AN UPDATED ROADMAP TOWARD 1.5 MILLION ZERO-EMISSION VEHICLES ON CALIFORNIA ROADWAYS BY 2025." [HTTPS://WWW.GOV.CA.GOV/DOCS/2016\\_ZEV\\_ACTION\\_PLAN.PDF](https://www.gov.ca.gov/docs/2016_zev_action_plan.pdf).

#### DIVISION 4.2 ENERGY EFFICIENCY

**4.201 GENERAL**

**4.201.1 SCOPE.**  
FOR THE PURPOSES OF MANDATORY ENERGY EFFICIENCY STANDARDS IN THIS CODE, THE CALIFORNIA ENERGY COMMISSION WILL CONTINUE TO ADOPT MANDATORY STANDARDS.

#### DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION

**4.303 INDOOR WATER USE**

**4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS**  
PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL COMPLY WITH THE FOLLOWING:

**4.303.1.1 WATER CLOSETS**  
THE EFFECTIVE FLUSH VOLUME OF ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH. TANK-TYPE WATER CLOSETS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENE SPECIFICATION FOR TANK TYPE TOILET.

**NOTE:** THE EFFECTIVE FLUSH VOLUME OF DUAL FLUSH TOILETS IS DEFINED AS THE COMPOSITE AVERAGE FLUSH VOLUME OF TWO REDUCED FLUSHES AND ONE FULL FLUSH.

**4.303.1.2 URINALS**  
THE EFFECTIVE FLUSH VOLUME OF WALL-MOUNTED URINALS SHALL NOT EXCEED 0.125 GALLONS PER FLUSH. THE EFFECTIVE FLUSH VOLUME OF ALL OTHER URINALS SHALL NOT EXCEED 0.5 GALLONS PER FLUSH.

**4.303.1.3 SHOWERHEADS**

**4.303.1.3.1 SINGLE SHOWERHEAD**  
SHOWERHEADS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 2.0 GALLONS PER MINUTE AT 80M PSI. SHOWERHEADS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENE SPECIFICATION FOR SHOWERHEADS.

**4.303.1.3.2 MULTIPLE SHOWERHEADS SERVING ONE SHOWER**  
WHEN A SHOWER IS SERVED BY MORE THAN ONE SHOWERHEAD, THE COMBINED FLOW RATE OF ALL SHOWERHEADS AND/OR OTHER SHOWER OUTLETS CONTROLLED BY A SINGLE VALVE SHALL NOT EXCEED 2.0 GALLONS PER MINUTE AT 80 PSI, OR THE SHOWER SHALL BE DESIGNED TO ALLOW ONLY ONE SHOWER OUTLET TO BE IN OPERATION AT A TIME.

**NOTE:** A HAND HELD SHOWER SHALL BE CONSIDERED A SHOWERHEAD.

**4.303.1.4 FAUCETS**

**4.303.1.4.1 RESIDENTIAL LAVATORY FAUCETS**  
THE MAXIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT EXCEED 1.2 GALLONS PER MINUTE AT 80 PSI. THE MINIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT BE LESS THAN 0.8 GALLONS PER MINUTE AT 20 PSI.

**4.303.1.4.2 LAVATORY FAUCETS IN COMMON AND PUBLIC USE AREAS**  
THE MAXIMUM FLOW RATE OF LAVATORY FAUCETS INSTALLED IN COMMON AND PUBLIC USE AREAS (OUTSIDE OF DWELLINGS OR SLEEPING UNITS) IN RESIDENTIAL BUILDINGS SHALL NOT EXCEED 0.5 GALLONS PER MINUTE AT 60 PSI.

**4.303.1.4.3 METERING FAUCETS**  
METERING FAUCETS WHEN INSTALLED IN RESIDENTIAL BUILDINGS SHALL NOT DELIVER MORE THAN 0.25 GALLONS PER CYCLE.

**4.303.1.4.4 KITCHEN FAUCETS**  
THE MAXIMUM FLOW RATE OF KITCHEN FAUCETS SHALL NOT EXCEED 1.8 GALLONS PER MINUTE AT 80 PSI. KITCHEN FAUCETS MAY TEMPORARILY INCREASE THE FLOW ABOVE THE MAXIMUM RATE, BUT NOT TO EXCEED 2.2 GALLONS PER MINUTE AT 60 PSI, AND MUST DEFAULT TO A MAXIMUM FLOW RATE OF 1.8 GALLONS PER MINUTE AT 60 PSI.

**NOTE:** WHERE COMPLYING FAUCETS ARE UNAVAILABLE, AERATORS OR OTHER MEANS MAY BE USED TO ACHIEVE REDUCTION.

**4.303.2 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS**  
PLUMBING FIXTURES AND FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE, AND SHALL MEET THE APPLICABLE STANDARDS REFERENCED IN TABLE 1701.1 OF THE CALIFORNIA PLUMBING CODE.

**NOTE:** THIS TABLE COMPILES THE DATA IN SECTION 4.303.1 AND IS INCLUDED AS A CONVENIENCE FOR THE USER.

FIXTURE TYPE	FLOW RATE
SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI
LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI
LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI
KITCHEN FAUCETS	1.8 GPM @ 60 PSI
METERING FAUCETS	0.25 GAL/CYCLE
WATER CLOSET	1.28 GAL/FLUSH
URINALS	0.125 GAL/FLUSH

**4.304 OUTDOOR WATER USE**

**4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS**  
AFTER DECEMBER 1, 2015, NEW RESIDENTIAL DEVELOPMENTS WITH AN AGGREGATE LANDSCAPE AREA EQUAL TO OR GREATER THAN 500 SQUARE FEET SHALL COMPLY WITH ONE OF THE FOLLOWING OPTIONS:

1. A LOCAL WATER EFFICIENT LANDSCAPE ORDINANCE OR THE CURRENT CALIFORNIA DEPARTMENT OF WATER RESOURCES' MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWLEO) WHICH EVER IS MORE STRINGENT; OR
2. PROJECTS WITH AGGREGATE LANDSCAPE AREAS LESS THAN 2,500 SQUARE FEET MAY COMPLY WITH THE MWLEO'S APPENDIX D PRESCRIPTIVE COMPLIANCE OPTION.

**NOTES:**

1. THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWLEO) AND SUPPORTING DOCUMENTS ARE AVAILABLE AT: [HTTP://WWW.WATER.CA.GOV/WATERUSEEFFICIENCY/LANDSCAPEORD/](http://www.water.ca.gov/wateruseefficiency/landscapeord/)
2. A WATER BUDGETY CALCULATOR IS AVAILABLE AT: [HTTP://WWW.WATER.CA.GOV/WATERUSEEFFICIENCY/LANDSCAPEORD/DINACE/](http://www.water.ca.gov/wateruseefficiency/landscapeord/dinace/)

#### DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

**4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE**

**4.406.1 ROBED PROOFING**  
ANNUAL SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS OR OTHER OPENINGS IN SOLE/BOTTOM PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY LOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR A SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY.

**4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING**

**4.408.1 CONSTRUCTION WASTE MANAGEMENT**  
RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 65 PERCENT OF THE NONHAZARDOUS CONSTRUCTION AND DEMOLITION WASTE IN ACCORDANCE WITH EITHER SECTION 4.408.2, 4.408.3, OR 4.408.4, OR MEET A MORE STRINGENT LOCAL CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT ORDINANCE.

**EXCEPTIONS:**

1. EXCAVATED SOIL AND LAND-CLEARING DEBRIS.
2. TERRESTRIAL WASTE REDUCTION METHODS DEVELOPED BY WORKING WITH LOCAL AGENCIES IF DIVERSION OR RECYCLE FACILITIES CAPABLE OF COMPLIANCE WITH THIS ITEM DO NOT EXIST OR ARE NOT LOCATED REASONABLY CLOSE TO THE JOBSITE.
3. THE ENFORCING AGENCY MAY MAKE EXCEPTIONS TO THE REQUIREMENTS OF THIS SECTION WHEN ISOLATED JOBSITES ARE LOCATED IN AREAS BEYOND THE HAUL BOUNDARIES OF THE DIVERSION FACILITY.

**4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN**  
A CONSTRUCTION WASTE MANAGEMENT PLAN IN CONFORMANCE WITH ITEMS 1 THROUGH 5, THE CONSTRUCTION WASTE MANAGEMENT PLAN SHALL BE UPDATED AS NECESSARY AND SHALL BE AVAILABLE DURING CONSTRUCTION FOR EXAMINATION BY THE ENFORCING AGENCY.

1. IDENTIFY THE CONSTRUCTION AND DEMOLITION WASTE MATERIALS TO BE DIVERTED FROM CONSTRUCTION AND RECYCLING, REUSE ON THE PROJECT OR SALVAGE FOR FUTURE USE OR SALE.
2. SPECIFY IF CONSTRUCTION AND DEMOLITION WASTE MATERIALS WILL BE SORTED ON-SITE (SOURCE-SEPARATED) OR BULK MIXED (SINGLE STREAM).
3. IDENTIFY DIVERSION FACILITIES WHERE THE CONSTRUCTION AND DEMOLITION WASTE MATERIAL WILL BE TAKEN.
4. IDENTIFY CONSTRUCTION METHODS EMPLOYED TO REDUCE THE AMOUNT OF CONSTRUCTION AND DEMOLITION WASTE GENERATED.
5. SPECIFY THAT THE AMOUNT OF CONSTRUCTION AND DEMOLITION WASTE MATERIAL DIVERTED SHALL BE CALCULATED BY WEIGHT OR VOLUME, BUT NOT BY BOTH.

**4.408.3 WASTE MANAGEMENT COMPANY.**  
UTILIZE A WASTE MANAGEMENT COMPANY, APPROVED BY THE ENFORCING AGENCY, WHICH CAN PROVIDE VERIFIABLE DOCUMENTATION THAT THE PERCENTAGE OF CONSTRUCTION AND DEMOLITION WASTE MATERIAL DIVERTED FROM THE LANDFILL COMPLIES WITH SECTION 4.408.1.

**NOTE:** THE OWNER OR CONTRACTOR MAY MAKE THE DETERMINATION IF THE CONSTRUCTION AND DEMOLITION WASTE MATERIALS WILL BE DIVERTED BY A WASTE MANAGEMENT COMPANY.

**4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]**  
PROJECTS THAT GENERATE A TOTAL COMBINED WEIGHT OF CONSTRUCTION AND DEMOLITION WASTE DISPOSED OF IN LANDFILLS, WHICH DO NOT EXCEED 3.4 POUNDS PER SQUARE FOOT OF THE BUILDING AREA SHALL MEET THE MINIMUM 65 PERCENT CONSTRUCTION WASTE REDUCTION REQUIREMENT IN SECTION 4.408.1.

**4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE**  
PROJECTS THAT GENERATE A TOTAL COMBINED WEIGHT OF CONSTRUCTION AND DEMOLITION WASTE DISPOSED OF IN LANDFILLS, WHICH DO NOT EXCEED 2 POUNDS PER SQUARE FOOT OF THE BUILDING AREA, SHALL MEET THE MINIMUM 65-PERCENT CONSTRUCTION WASTE REDUCTION REQUIREMENT IN SECTION 4.408.1.

**4.408.5 DOCUMENTATION**  
DOCUMENTATION SHALL BE PROVIDED TO THE ENFORCING AGENCY WHICH DEMONSTRATES COMPLIANCE WITH SECTION 4.408.2, ITEMS 1 THROUGH 5, SECTION 4.408.3 OR SECTION 4.408.4

**NOTES:**

1. SAMPLE FORMS FOUND IN "A GUIDE TO THE CALIFORNIA GREEN BUILDING STANDARDS CODE (RESIDENTIAL)" LOCATED AT [WWW.HCD.CA.GOV/CALGREEN.HTML](http://www.hcd.ca.gov/calgreen.html) MAY BE USED TO ASSIST IN DOCUMENTING COMPLIANCE WITH THIS SECTION.
2. MIXED CONSTRUCTION AND DEMOLITION DEBRIS (C&D) PROCESSORS CAN BE LOCATED AT THE CALIFORNIA DEPARTMENT OF RESOURCES RECYCLING AND RECOVERY (CALRECYCLE).

**4.410 BUILDING MAINTENANCE AND OPERATION**

**4.410.1 OPERATION AND MAINTENANCE MANUAL**  
AT THE TIME OF FINAL INSPECTION, A MANUAL, COMPACT DISC, WEB-BASED REFERENCE OR OTHER MEDIA ACCEPTABLE TO THE ENFORCING AGENCY WHICH INCLUDES ALL OF THE FOLLOWING SHALL BE PLACED IN THE BUILDING:

1. DIRECTIONS TO THE OWNER OR OCCUPANT THAT THE MANUAL SHALL REMAIN WITH THE BUILDING THROUGHOUT THE LIFE CYCLE OF THE STRUCTURE.
2. OPERATION AND MAINTENANCE INSTRUCTIONS FOR THE FOLLOWING:
  - a. EQUIPMENT AND APPLIANCES, INCLUDING WATER-SAVING DEVICES AND SYSTEMS, HVAC SYSTEMS, PHOTOVOLTAIC SYSTEMS, ELECTRIC VEHICLE CHARGERS, WATER-HEATING SYSTEMS AND OTHER MAJOR APPLIANCES AND EQUIPMENT.
  - b. ROOF AND DRAINAGE, INCLUDING GUTTERS AND DOWNSPOUTS.
  - c. SPACE CONDITIONING SYSTEMS, INCLUDING CONDENSERS AND AIR FILTERS.
  - d. LANDSCAPE IRRIGATION SYSTEMS.
  - e. WATER REUSE SYSTEMS.
3. INFORMATION FROM LOCAL UTILITY, WATER AND WASTE RECOVERY PROVIDERS ON METHODS TO FURTHER REDUCE RESOURCE CONSUMPTION, INCLUDING RECYCLE PROGRAMS AND LOCATIONS.
4. PUBLIC TRANSPORTATION AND/OR CARPOOL OPTIONS AVAILABLE IN THE AREA.
5. EDUCATIONAL MATERIAL ON THE POSITIVE IMPACTS OF AN INTERIOR RELATIVE HUMIDITY BETWEEN 30-60 PERCENT AND WHAT METHODS AN OCCUPANT MAY USE TO MAINTAIN THE RELATIVE HUMIDITY LEVEL IN THAT RANGE.
6. INFORMATION ON REQUIRED WATER-CONSERVING LANDSCAPE AND IRRIGATION DESIGN AND CONTROLLERS WHICH CONSERVE WATER.
7. INSTRUCTIONS FOR MAINTAINING GUTTERS AND DOWNSPOUTS AND THE IMPORTANCE OF DIVERTING WATER AT LEAST 5 FEET AWAY FROM THE FOUNDATION.
8. INFORMATION ON REQUIRED ROUTINE MAINTENANCE MEASURES, INCLUDING, BUT NOT LIMITED TO, CAULKING, PAINTING, GRADING AROUND THE BUILDING, ETC.
9. INFORMATION ABOUT STATE SOLAR ENERGY AND INCENTIVE PROGRAMS AVAILABLE.
10. A COPY OF ALL SPECIAL INSPECTION VERIFICATIONS REQUIRED BY THE ENFORCING AGENCY OR THIS CODE.

CONSULTANT
AGENCY

<b>MONO COUNTY ADU PROTOTYPES MONO COUNTY CAL GREEN RESIDENTIAL REQUIREMENTS</b>		
NO.	REVISION	DATE
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<b>PROJECT MANAGER</b> RR	
<b>DRAWN BY</b>	<b>CHECKED BY</b>
<b>DATE</b> 6/30/2022	
<b>PROJECT NUMBER</b> 2340-01-CU21	
<b>SHEET</b>	

# 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

## RESIDENTIAL MANDATORY MEASURES (SHEET 2)



### CHAPTER 7 - INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS 702 QUALIFICATIONS

**702.1 INSTALLER TRAINING**  
HVAC SYSTEM INSTALLERS SHALL BE TRAINED AND CERTIFIED IN THE PROPER INSTALLATION OF HVAC SYSTEMS INCLUDING DUCTS AND EQUIPMENT BY A NATIONALLY OR REGIONALLY RECOGNIZED TRAINING OR CERTIFICATION PROGRAM. UNCERTIFIED PERSONS MAY PERFORM HVAC INSTALLATIONS WHEN UNDER THE DIRECT SUPERVISION AND RESPONSIBILITY OF A PERSON TRAINED AND CERTIFIED TO INSTALL HVAC SYSTEMS OR CONTRACTOR LICENSED TO INSTALL HVAC SYSTEMS. EXAMPLES OF ACCEPTABLE HVAC TRAINING AND CERTIFICATION PROGRAMS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

- STATE CERTIFIED APPRENTICESHIP PROGRAMS.
- PUBLIC UTILITY TRAINING PROGRAMS.
- TRAINING PROGRAMS SPONSORED BY TRADE, LABOR OR STATEWIDE ENERGY CONSULTING OR VERIFICATION ORGANIZATIONS.
- PROGRAMS SPONSORED BY MANUFACTURING ORGANIZATIONS.
- OTHER PROGRAMS ACCEPTABLE TO THE ENFORCING AGENCY.

**702.2 SPECIAL INSPECTION [HCD]**  
WHEN REQUIRED BY THE ENFORCING AGENCY, THE OWNER OR THE RESPONSIBLE ENTITY ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTION OR OTHER DUTIES NECESSARY TO SUBSTANTIATE COMPLIANCE WITH THIS CODE. SPECIAL INSPECTORS SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE ENFORCING AGENCY FOR THE PARTICULAR TYPE OF INSPECTION OR TASK TO BE PERFORMED. IN ADDITION TO OTHER CERTIFICATIONS OR QUALIFICATIONS ACCEPTABLE TO THE ENFORCING AGENCY, THE FOLLOWING CERTIFICATIONS OR EDUCATION MAY BE CONSIDERED BY THE ENFORCING AGENCY WHEN EVALUATING THE QUALIFICATIONS OF A SPECIAL INSPECTOR:

- CERTIFICATION BY A NATIONAL OR REGIONAL GREEN BUILDING PROGRAM OR STANDARD PUBLISHER.
- CERTIFICATION BY A STATEWIDE ENERGY CONSULTING OR VERIFICATION ORGANIZATION, SUCH AS HERS RATERS, BUILDING PERFORMANCE CONTRACTORS, AND HOME ENERGY AUDITORS.
- SUCCESSFUL COMPLETION OF A THIRD PARTY APPRENTICE TRAINING PROGRAM IN THE APPROPRIATE TRADE.
- OTHER PROGRAMS ACCEPTABLE TO THE ENFORCING AGENCY.

- NOTES:**
- SPECIAL INSPECTORS SHALL BE INDEPENDENT ENTITIES WITH NO FINANCIAL INTEREST IN THE MATERIALS OR THE PROJECT THEY ARE INSPECTING FOR COMPLIANCE WITH THIS CODE.
  - HERS RATERS ARE SPECIAL INSPECTORS CERTIFIED BY THE CALIFORNIA ENERGY COMMISSION (CEC) TO RATE HOMES IN CALIFORNIA ACCORDING TO THE HOME ENERGY RATING SYSTEM (HERS).

[BSC] WHEN REQUIRED BY THE ENFORCING AGENCY, THE OWNER OR THE RESPONSIBLE ENTITY ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTION OR OTHER DUTIES NECESSARY TO SUBSTANTIATE COMPLIANCE WITH THIS CODE. SPECIAL INSPECTORS SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE ENFORCING AGENCY FOR THE PARTICULAR TYPE OF INSPECTION OR TASK TO BE PERFORMED. IN ADDITION, THE SPECIAL INSPECTOR SHALL HAVE A CERTIFICATION FROM RECOGNIZED STATE, NATIONAL OR INTERNATIONAL ASSOCIATION, AS DETERMINED BY THE LOCAL AGENCY. THE AREA OF CERTIFICATION SHALL BE CLOSELY RELATED TO THE PRIMARY JOB FUNCTION, AS DETERMINED BY THE LOCAL AGENCY.

- NOTE:**  
SPECIAL INSPECTORS SHALL BE INDEPENDENT ENTITIES WITH NO FINANCIAL INTEREST IN THE MATERIALS OR THE PROJECT THEY ARE INSPECTING FOR COMPLIANCE WITH THIS CODE.

### 703 VERIFICATIONS

**703.1 DOCUMENTATION.**  
DOCUMENTATION USED TO SHOW COMPLIANCE WITH THIS CODE SHALL INCLUDE BUT IS NOT LIMITED TO, CONSTRUCTION DOCUMENTS, PLANS, SPECIFICATIONS, BUILDER OR INSTALLER CERTIFICATION, INSPECTION REPORTS, OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY WHICH DEMONSTRATE SUBSTANTIAL CONFORMANCE. WHEN SPECIFIC DOCUMENTATION OR SPECIAL INSPECTION IS NECESSARY TO VERIFY COMPLIANCE, THAT METHOD OF COMPLIANCE WILL BE SPECIFIED IN THE APPROPRIATE SECTION OR IDENTIFIED APPLICABLE CHECKLIST.

CONSULTANT
AGENCY

**MONO COUNTY ADU PROTOTYPES**  
 MONO COUNTY  
**CAL GREEN RESIDENTIAL REQUIREMENTS**

NO.	REVISION	DATE

<b>PROJECT MANAGER</b> RR	
<b>DRAWN BY</b>	<b>CHECKED BY</b>
<b>DATE</b> 6/30/2022	
<b>PROJECT NUMBER</b> 2340-01-CU21	
<b>SHEET</b>	

G-202

### 4.503.3 MOISTURE CONTENT OF A BUILDING

BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHALL NOT BE INSTALLED. WALL AND FLOOR FRAMING SHALL NOT BE ENCLOSED WHEN THE FRAMING MEMBERS EXCEED 19-PERCENT MOISTURE CONTENT. MOISTURE CONTENT SHALL BE VERIFIED IN COMPLIANCE WITH THE FOLLOWING:

- MOISTURE CONTENT SHALL BE DETERMINED WITH EITHER A PROBE-TYPE OR CONTACT-TYPE MOISTURE METER. EQUIVALENT MOISTURE VERIFICATION METHODS MAY BE APPROVED BY THE ENFORCING AGENCY AND SHALL SATISFY REQUIREMENTS FOUND IN SECTION 101.8 OF THIS CODE.
- MOISTURE READINGS SHALL BE TAKEN AT A POINT 2 FEET (610 MM) TO 4 FEET (1219 MM) FROM THE GRADE STAMPED END OF EACH PIECE TO BE VERIFIED.
- AT LEAST THREE RANDOM MOISTURE READINGS SHALL BE PERFORMED ON WALL AND FLOOR FRAMING WITH DOCUMENTATION ACCEPTABLE TO THE ENFORCING AGENCY PROVIDED AT THE TIME OF APPROVAL TO ENCLOSE THE WALL AND FLOOR FRAMING.

INSULATION PRODUCTS WHICH ARE VISIBLY WET OR HAVE A HIGH MOISTURE CONTENT SHALL BE REPLACED OR ALLOWED TO DRY PRIOR TO ENCLOSURE IN WALL OR FLOOR CAVITIES. WET-APPLIED INSULATION PRODUCTS SHALL FOLLOW THE MANUFACTURERS' DRYING RECOMMENDATIONS PRIOR TO ENCLOSURE.

### 4.506 INDOOR AIR QUALITY AND EXHAUST

**4.506.1 BATHROOM EXHAUST FANS**  
EACH BATHROOM SHALL BE MECHANICALLY VENTILATED AND SHALL COMPLY WITH THE FOLLOWING:

- FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING.
- UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL.
  - HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF  $\pm 50$  PERCENT TO A MAXIMUM OF 80 PERCENT. A HUMIDITY CONTROL MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT.
  - A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO THE EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL (I.E., BUILT-IN).

- NOTES:**
- FOR THE PURPOSES OF THIS SECTION, A BATHROOM IS A ROOM WHICH CONTAINS A BATHTUB, SHOWER, OR TUB/ SHOWER COMBINATION.
  - LIGHTING INTEGRAL TO BATHROOM EXHAUST FANS SHALL COMPLY WITH THE CALIFORNIA ENERGY CODE.

### 4.507 ENVIRONMENTAL COMFORT

**4.507.1 RESERVED**

**4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN**  
HEATING AND AIR-CONDITIONING SYSTEMS SHALL BE SIZED, DESIGNED AND HAVE THEIR EQUIPMENT SELECTED USING THE FOLLOWING METHODS:

- THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANSI/ACCA 2 MANUAL J-2011 (RESIDENTIAL LOAD CALCULATION), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
- DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI/ACCA 1 MANUAL D-2014 (RESIDENTIAL DUCT SYSTEMS), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
- SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ACCA 3 MANUAL S-2014 (RESIDENTIAL EQUIPMENT SELECTION) OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

**EXCEPTION:** USE OF ALTERNATE DESIGN TEMPERATURES NECESSARY TO ENSURE THE SYSTEMS FUNCTION ARE ACCEPTABLE.

**TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS<sup>1,3</sup>**  
(GRAMS OF VOC PER LITER OF COATING, LESS WATER AND LESS EXEMPT COMPOUNDS)

COATING CATEGORY	CURRENT VOC LIMIT
FLAT COATINGS	50
NONFLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	CURRENT VOC LIMIT
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS <sup>1</sup>	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC LUMENED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, AND UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	350
SHELLACS	730
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS AND UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB AND TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

- GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER AND INCLUDING EXEMPT COMPOUNDS.
- THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.
- VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEBRUARY 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

**TABLE 4.504.5 - FORMALDEHYDE LIMITS<sup>1</sup>**  
(MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION)

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLEBOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD <sup>2</sup>	0.13

- VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E1333. FOR ADDITIONAL INFORMATION, SEE CALIFORNIA CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.
- THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16 INCH (8MM).

### DIVISION 4.5 ENVIORNMENTAL QUALITY CONTINUED

#### 4.505 INTERIOR MOISTURE CONTROL

**4.505.1 SCOPE**  
THE PROVISIONS OF THIS CHAPTER SHALL OUTLINE MEANS OF REDUCING THE QUANTITY OF AIR CONTAMINANTS THAT ARE ODOROUS, IRRITATING AND/OR HARMFUL TO THE COMFORT AND WELL-BEING OF A BUILDING'S INSTALLERS, OCCUPANTS AND NEIGHBORS.

**4.505.2 CONCRETE SLAB FOUNDATIONS**  
CONCRETE SLAB FOUNDATIONS REQUIRED TO HAVE A VAPOR RETARDER BY THE CALIFORNIA BUILDING CODE CHAPTER 19 OR CONCRETE SLAB-ON-GROUND FLOORS REQUIRED TO HAVE A VAPOR RETARDER BY THE CALIFORNIA RESIDENTIAL CODE, CHAPTER 5, SHALL ALSO COMPLY WITH THIS SECTION.

**4.505.2.1 CAPILLARY BREAK**  
A CAPILLARY BREAK SHALL BE INSTALLED IN COMPLIANCE WITH AT LEAST ONE OF THE FOLLOWING:

- A 4-INCH-THICK (101.6 MM) BASE OF 1/2 INCH (12.7 MM) OR LARGER CLEAN AGGREGATE SHALL BE PROVIDED WITH A VAPOR RETARDER IN DIRECT CONTACT WITH CONCRETE AND A CONCRETE MIX DESIGN, WHICH WILL ADDRESS BLEEDING, SHRINKAGE, AND CURLING, SHALL BE USED. FOR ADDITIONAL INFORMATION, SEE AMERICAN CONCRETE INSTITUTE, ACI 302.2R-06.
- OTHER EQUIVALENT METHODS APPROVED BY THE ENFORCING AGENCY.
- A SLAB DESIGN SPECIFIED BY A LICENSED DESIGN PROFESSIONAL.

### 4.504.4 RESILIENT FLOORING SYSTEMS

WHERE RESILIENT FLOORING IS INSTALLED, AT LEAST 80 PERCENT OF FLOOR AREA RECEIVING RESILIENT FLOORING SHALL COMPLY WITH ONE OR MORE OF THE FOLLOWING:

- PRODUCTS COMPLIANT WITH THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.1, FEBRUARY 2010 (ALSO KNOWN AS SPECIFICATION 01350), CERTIFIED AS A CHPS LOW-EMITTING MATERIAL IN THE COLLABORATIVE FOR HIGH PERFORMANCE SCHOOLS (CHPS) HIGH PERFORMANCE PRODUCTS DATABASE.
- PRODUCTS CERTIFIED UNDER UL GREENGUARD GOLD (FORMERLY THE GREENGUARD CHILDREN & SCHOOLS PROGRAM).
- CERTIFICATION UNDER THE RESILIENT FLOOR COVERING INSTITUTE (RFCI) FLOORSCORE PROGRAM.
- MEET THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.1, FEBRUARY 2010 (ALSO KNOWN AS SPECIFICATION 01350).

**4.504.5 COMPOSITE WOOD PRODUCTS**  
HARDWOOD PLYWOOD, PARTICLEBOARD AND MEDIUM DENSITY FIBERBOARD COMPOSITE WOOD PRODUCTS USED ON THE INTERIOR OR EXTERIOR OF THE BUILDING SHALL MEET THE REQUIREMENTS FOR FORMALDEHYDE AS SPECIFIED IN ARB'S AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD (17 COR 93120 ET SEQ.), BY OR BEFORE THE DATES SPECIFIED IN THOSE SECTIONS, AS SHOWN IN TABLE 4.504.5.

**4.504.5.1 DOCUMENTATION**  
VERIFICATION OF COMPLIANCE WITH THIS SECTION SHALL BE PROVIDED AS REQUESTED BY THE ENFORCING AGENCY. DOCUMENTATION SHALL INCLUDE AT LEAST ONE OF THE FOLLOWING:

- PRODUCT CERTIFICATIONS AND SPECIFICATIONS.
- CHAIN OF CUSTODY CERTIFICATIONS.
- PRODUCT LABELED AND INVOICED AS MEETING THE COMPOSITE WOOD PRODUCTS REGULATION (SEE CCR, TITLE 17, SECTION 93120, ET SEQ.).
- EXTERIOR GRADE PRODUCTS MARKED AS MEETING THE PS-1 OR PS-2 STANDARDS OF THE ENGINEERED WOOD ASSOCIATION, THE AUSTRALIAN AS/NZS 2268, EUROPEAN EN 338, AND CANADIAN CSA O121, CSA O151, CSA O153 AND CSA O325 STANDARDS.
- OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY.

**TABLE 4.504.1 - ADHESIVE VOC LIMIT**  
(LESS WATER AND LESS EXEMPT COMPOUNDS IN GRAMS PER LITER)

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOORING ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT AND ASPHALT TILE ADHESIVES	50
DRYWALL AND PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVES	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT SPECIFICALLY LISTED	50

SPECIALTY APPLICATIONS	CURRENT VOC LIMIT
PVC WELDING	510
CPVC WELDING	490
ABD WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP AND TRIM ADHESIVES	250

SUBSTRATE SPECIFIC APPLICATIONS	CURRENT VOC LIMIT
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

**TABLE 4.504.1 - SEALANT VOC LIMIT**  
(LESS WATER AND LESS EXEMPT COMPOUNDS IN GRAMS PER LITER)

SEALANTS	CURRENT VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	CURRENT VOC LIMIT
ARCHITECTURAL	
NONPOROUS	250
POROUS	250
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

**4.504.2.1 ADHESIVES, SEALANTS AND CAULKS**  
ADHESIVES, SEALANTS AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF THE FOLLOWING STANDARDS UNLESS MORE STRINGENT LOCAL OR REGIONAL AIR POLLUTION OR AIR QUALITY MANAGEMENT DISTRICT RULES APPLY:

- ADHESIVES, ADHESIVE BONDING PRIMERS, ADHESIVE PRIMERS, SEALANTS, SEALANT PRIMERS, AND CAULKS SHALL COMPLY WITH LOCAL OR REGIONAL AIR POLLUTION CONTROL OR AIR QUALITY MANAGEMENT DISTRICT RULES WHERE APPLICABLE OR SCAQMD RULE 1168 VOC LIMITS, AS SHOWN IN TABLE 4.504.1 OR 4.504.2, AS APPLICABLE. SUCH PRODUCTS ALSO SHALL COMPLY WITH THE RULE 1168 PROHIBITION ON THE USE OF CERTAIN TOXIC COMPOUNDS (CHLOROFORM, ETHYLENE DICHLORIDE, METHYLENE CHLORIDE, PERCHLOROETHYLENE AND TRICHLOROETHYLENE), EXCEPT FOR AEROSOL PRODUCTS, AS SPECIFIED IN SUBSECTION 2 BELOW.
- AEROSOL ADHESIVES, AND SMALLER UNIT SIZES OF ADHESIVES, AND SEALANT OR CAULKING COMPOUNDS (IN UNITS OF PRODUCT, LESS PACKAGING, WHICH DO NOT WEIGH MORE THAN 1 POUND AND DO NOT CONSIST OF MORE THAN 16 FLUID OUNCES) SHALL COMPLY WITH STATEWIDE VOC STANDARDS AND OTHER REQUIREMENTS INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS, OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94507.

**4.504.2.2 PAINTS AND COATINGS**  
ARCHITECTURAL PAINTS AND COATINGS SHALL COMPLY WITH VOC LIMITS IN TABLE 1 OF THE ARB ARCHITECTURAL SUGGESTED CONTROL MEASURE, AS SHOWN IN TABLE 4.504.3, UNLESS MORE STRINGENT LOCAL LIMITS APPLY. THE VOC CONTENT LIMIT FOR COATINGS THAT DO NOT MEET THE DEFINITIONS FOR THE SPECIALTY COATINGS CATEGORIES LISTED IN TABLE 4.504.3 SHALL BE DETERMINED BY CLASSIFYING THE COATING AS A FLAT, NONFLAT OR NONFLAT-HIGH GLOSS COATING, BASED ON ITS GLOSS, AS DEFINED IN SUBSECTIONS 4.21, 4.36, AND 4.37 OF THE 2007 CALIFORNIA AIR RESOURCES BOARD, SUGGESTED CONTROL MEASURE, AND THE CORRESPONDING FLAT, NONFLAT OR NONFLAT-HIGH GLOSS VOC LIMIT IN TABLE 4.504.3 SHALL APPLY.

**4.504.2.3 AEROSOL PAINTS AND COATINGS**  
AEROSOL PAINTS AND COATINGS SHALL MEET THE PRODUCT-WEIGHTED MIR LIMITS FOR ROC IN SECTION 94522(A)(2) AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS AND OZONE DEPLETING SUBSTANCES, IN SECTIONS 94522(E)(1) AND (F)(1) OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94520; AND IN AREAS UNDER THE JURISDICTION OF THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT ADDITIONALLY COMPLY WITH THE PERCENT VOC BY WEIGHT OF PRODUCT LIMITS OF REGULATION 8, RULE 49.

**4.504.2.4 VERIFICATION**  
VERIFICATION OF COMPLIANCE WITH THIS SECTION SHALL BE PROVIDED AT THE REQUEST OF THE ENFORCING AGENCY. DOCUMENTATION MAY INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING:

- MANUFACTURER'S PRODUCT SPECIFICATION.
- FIELD VERIFICATION OF ON-SITE PRODUCT CONTAINERS.

**4.504.3 CARPET SYSTEMS**  
ALL CARPET INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE TESTING AND PRODUCT REQUIREMENTS OF ONE OF THE FOLLOWING:

- CARPET AND RUG INSTITUTE'S GREEN LABEL PLUS PROGRAM.
- CALIFORNIA DEPARTMENT OF PUBLIC HEALTH "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.1, FEBRUARY 2010 (ALSO KNOWN AS SPECIFICATION 01350).
- NSF/ANSI 140 AT THE GOLD LEVEL.
- SCIENTIFIC CERTIFICATIONS SYSTEMS INDOOR ADVANTAGE™ GOLD.

**4.504.3.1 CARPET CUSHION**  
ALL CARPET CUSHION INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF THE CARPET AND RUG INSTITUTE'S GREEN LABEL PROGRAM, UNDEFINED

**4.504.3.2 CARPET ADHESIVE**  
ALL CARPET ADHESIVE SHALL MEET THE REQUIREMENTS OF TABLE 4.504.1.

**4.410.2 RECYCLING BY OCCUPANTS.**  
WHERE 5 OR MORE MULTIFAMILY DWELLING UNITS ARE CONSTRUCTED ON A BUILDING SITE, PROVIDE READILY ACCESSIBLE AREA(S) THAT SERVES ALL BUILDINGS ON THE SITE AND IS IDENTIFIED FOR THE DEPOSITING, STORAGE AND COLLECTION OF NON-HAZARDOUS MATERIALS FOR RECYCLING, INCLUDING (AT A MINIMUM) PAPER, CORRUGATED CARDBOARD, GLASS, PLASTICS, ORGANIC WASTE, AND METALS, OR MEET A LAWFULLY ENACTED LOCAL RECYCLING ORDINANCE, IF MORE RESTRICTIVE.

**EXCEPTION:**  
RURAL JURISDICTIONS THAT MEET AND APPLY FOR THE EXEMPTION IN PUBLIC RESOURCES CODE SECTION 42649.82 (A)(2)(A) ET SEQ. ARE NOT REQUIRED TO COMPLY WITH THE ORGANIC WASTE PORTION OF THIS SECTION.

### DIVISION 4.5 ENVIORNMENTAL QUALITY

#### 4.501 GENERAL

**4.501.1 SCOPE**  
THE PROVISIONS OF THIS CHAPTER SHALL OUTLINE MEANS OF REDUCING THE QUANTITY OF AIR CONTAMINANTS THAT ARE ODOROUS, IRRITATING AND/OR HARMFUL TO THE COMFORT AND WELL-BEING OF A BUILDING'S INSTALLERS, OCCUPANTS AND NEIGHBORS.

#### 4.503 FIREPLACES

**4.503.1 GENERAL**  
ANY INSTALLED GAS FIREPLACE SHALL BE A DIRECT-VENT SEALED-COMBUSTION TYPE. ANY INSTALLED WOODSTOVE OR PELLET STOVE SHALL COMPLY WITH U.S. EPA NEW SOURCE PERFORMANCE STANDARDS (NSPS) EMISSION LIMITS AS APPLICABLE, AND SHALL HAVE A PERMANENT LABEL INDICATING THEY ARE CERTIFIED TO MEET THE EMISSION LIMITS. WOODSTOVES, PELLET STOVES AND FIREPLACES SHALL ALSO COMPLY WITH APPLICABLE LOCAL ORDINANCES.

#### 4.504 POLLUTANT CONTROL

**4.504.1 COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION**  
AT THE TIME OF ROUGH INSTALLATION, DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF WATER, DUST AND DEBRIS, WHICH MAY ENTER THE SYSTEM.

**4.504.2 FINISH MATERIAL POLLUTANT CONTROL**  
FINISH MATERIALS SHALL COMPLY WITH THIS SECTION.

**4.504.2.1 ADHESIVES, SEALANTS AND CAULKS**  
ADHESIVES, SEALANTS AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF THE FOLLOWING STANDARDS UNLESS MORE STRINGENT LOCAL OR REGIONAL AIR POLLUTION OR AIR QUALITY MANAGEMENT DISTRICT RULES APPLY:

- ADHESIVES, ADHESIVE BONDING PRIMERS, ADHESIVE PRIMERS, SEALANTS, SEALANT PRIMERS, AND CAULKS SHALL COMPLY WITH LOCAL OR REGIONAL AIR POLLUTION CONTROL OR AIR QUALITY MANAGEMENT DISTRICT RULES WHERE APPLICABLE OR SCAQMD RULE 1168 VOC LIMITS, AS SHOWN IN TABLE 4.504.1 OR 4.504.2, AS APPLICABLE. SUCH PRODUCTS ALSO SHALL COMPLY WITH THE RULE 1168 PROHIBITION ON THE USE OF CERTAIN TOXIC COMPOUNDS (CHLOROFORM, ETHYLENE DICHLORIDE, METHYLENE CHLORIDE, PERCHLOROETHYLENE AND TRICHLOROETHYLENE), EXCEPT FOR AEROSOL PRODUCTS, AS SPECIFIED IN SUBSECTION 2 BELOW.
- AEROSOL ADHESIVES, AND SMALLER UNIT SIZES OF ADHESIVES, AND SEALANT OR CAULKING COMPOUNDS (IN UNITS OF PRODUCT, LESS PACKAGING, WHICH DO NOT WEIGH MORE THAN 1 POUND AND DO NOT CONSIST OF MORE THAN 16 FLUID OUNCES) SHALL COMPLY WITH STATEWIDE VOC STANDARDS AND OTHER REQUIREMENTS INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS, OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94507.

**4.504.2.2 PAINTS AND COATINGS**  
ARCHITECTURAL PAINTS AND COATINGS SHALL COMPLY WITH VOC LIMITS IN TABLE 1 OF THE ARB ARCHITECTURAL SUGGESTED CONTROL MEASURE, AS SHOWN IN TABLE 4.504.3, UNLESS MORE STRINGENT LOCAL LIMITS APPLY. THE VOC CONTENT LIMIT FOR COATINGS THAT DO NOT MEET THE DEFINITIONS FOR THE SPECIALTY COATINGS CATEGORIES LISTED IN TABLE 4.504.3 SHALL BE DETERMINED BY CLASSIFYING THE COATING AS A FLAT, NONFLAT OR NONFLAT-HIGH GLOSS COATING, BASED ON ITS GLOSS, AS DEFINED IN SUBSECTIONS 4.21, 4.36, AND 4.37 OF THE 2007 CALIFORNIA AIR RESOURCES BOARD, SUGGESTED CONTROL MEASURE, AND THE CORRESPONDING FLAT, NONFLAT OR NONFLAT-HIGH GLOSS VOC LIMIT IN TABLE 4.504.3 SHALL APPLY.

**4.504.2.3 AEROSOL PAINTS AND COATINGS**  
AEROSOL PAINTS AND COATINGS SHALL MEET THE PRODUCT-WEIGHTED MIR LIMITS FOR ROC IN SECTION 94522(A)(2) AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS AND OZONE DEPLETING SUBSTANCES, IN SECTIONS 94522(E)(1) AND (F)(1) OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94520; AND IN AREAS UNDER THE JURISDICTION OF THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT ADDITIONALLY COMPLY WITH THE PERCENT VOC BY WEIGHT OF PRODUCT LIMITS OF REGULATION 8, RULE 49.

**4.504.2.4 VERIFICATION**  
VERIFICATION OF COMPLIANCE WITH THIS SECTION SHALL BE PROVIDED AT THE REQUEST OF THE ENFORCING AGENCY. DOCUMENTATION MAY INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING:

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TECHNICAL BULLETIN

ALL O'HAGIN'S ATTIC VENTILATION PRODUCTS ARE IN FULL COMPLIANCE WITH THE 2019 CBC WILDLAND-URBAN INTERFACE (WUI) CHAPTER 7A

This Technical Bulletin is set forth to advise Architects, Builders, Contractors, and all state/local officials that all O'Hagin's Attic Ventilation Products comply with the 2019 California Building Code, Chapter 7A Materials and Construction Methods for Exterior Wildfire Exposure, Section - 706A Vents when fitted with 1/8-inch wire mesh.

BACKGROUND:

Effective January 1, 2017, all new buildings located in any Fire Hazard Severity (State), Very-High Fire Hazard Severity Zone (Local), or Wildland-Urban Interface Fire Area shall comply with all sections of 2019 CBC, Chapter 7A, which states, in pertinent part, as follows:

"706A2. Requirements. Ventilation openings for enclosed attics, enclosed eave soffit spaces, enclosed rafter spaces formed where ceilings are applied directly to the underside of the roof rafters, and underfloor ventilation openings shall be fully covered with metal wire mesh, vents, other materials or other devices that meet the following requirements:

- 1. Vents shall be listed to ASTM E2886 and comply with all of the following:
1.1. There shall be no flaming ignition of the cotton material during the Ember Intrusion Test.
1.2. There shall be no flaming ignition during the Integrity Test portion of the Flame Intrusion Test.
1.3. The maximum temperature of the unexposed side of the vent shall not exceed 662°F (350°C).
2. Vents shall comply with all of the following:
2.1. The dimensions of the openings therein shall be a minimum of 1/16-inch (1.6 mm) and shall not exceed 1/8-inch (3.2 mm).
2.2. The materials used shall be noncombustible.

Exception: Vents located under the roof covering, along the ridge of roofs, with the exposed surface of the vent covered by noncombustible wire mesh, may be of combustible materials.

(2019 California Building Code, California Code of Regulations, Title 24, Part 2, Volume 1 of 2, Section 706A.2, p.299)

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With regard to attic ventilation products that utilize wire mesh in either 1/8-inch or 1/16-inch dimensions, the ICC-ES, Acceptance Criteria for Attic Vents, AC132, effective March 1, 2010, states, in pertinent part, as follows:

3.0 TEST AND PERFORMANCE REQUIREMENTS

3.1 Ventilation openings in the attic shall be protected by mesh, by a vent incorporating an opening cover other than mesh, or by a fibrous-mesh-type vent as defined in Section 1.4.1, 1.4.2 or 1.4.3. The attic vent shall be corrosion-resistant and shall prevent the entry of vermin into the attic.

3.2 Net Free Ventilation Area (NFVA): NFVA shall be determined in accordance with Section 4.1. Openings shall be covered with mesh, except as noted in Sections 3.2.1 and 3.2.2.

3.2.1 2009 IBC and 2009 IRC: For vents incorporating a corrosion-resistant metal mesh with mesh openings having a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum in one dimension, the ventilation area reported in the evaluation report shall be the NFVA determined in accordance with Section 4.1, reduced by 10 percent to address the effects of clogging.

3.2.2 2006 IBC and 2006 IRC: For vents incorporating a corrosion-resistant metal mesh with mesh openings less than 1/4 inch (6.4 mm) but no less than 1/8 inch (3.2 mm) in one dimension, the ventilation area reported in the evaluation report shall be the NFVA determined in accordance with Section 4.1, reduced by 10 percent to address the effects of clogging."

(Acceptance Criteria For Attic Vents, AC132, effective March 1, 2010, ICC-ES)

COMPLIANCE ISSUES:

Generally, the California Building Code serves as a minimum requirement for best building practices. As such, please contact your local building authority to see what requirements there are for that specific jurisdiction. For example, some may allow O'Hagin's attic vents with 1/8-inch wire mesh. For attic vents using 1/8-inch wire mesh, the NFVA rating of that vent, per AC132, above, is reduced by 10 percent. However, some jurisdictions may have other requirements including the use of O'Hagin's FIRE & ICE attic ventilation products. In any event, as explained more fully below, O'Hagin's attic ventilation products can help meet the requirements of most jurisdictions.

O'HAGIN'S VENTILATION PRODUCTS ARE IN FULL COMPLIANCE WITH THE 2019 CBC, CHAPTER 7A:

- All O'Hagin's FIRE & ICE attic ventilation products were accepted for use by the Office of the State Fire Marshal (OSFM) for plan and construction review projects under OSFM jurisdiction under the OSFM's prior program. (CBC Ch7A Compliance Policy 809-06, Effective 07-05-09).
Many local jurisdictions have approved for use all O'Hagin's FIRE & ICE attic ventilation products.
All O'Hagin's FIRE & ICE attic ventilation products may be protected by corrosion-resistant 23-27 gauge galvanized or stainless steel non-combustible wire mesh with 1/4-inch (6 mm) openings.
For O'Hagin's FIRE & ICE attic ventilation products with 1/4-inch wire mesh, the Net Free Ventilation Area (NFVA) of those products, as calculated by an independent third-party, are, as follows:

O'Hagin's FIRE & ICE Attic Vents for Clay and Concrete Tile:

- All Model Flat (Low-Profile) NFVA: 98.75 sq. in. per vent
All Model "M" (Medium-Profile) NFVA: 86.25 sq. in. per vent
All Model "S" (High-Profile) NFVA: 97.50 sq. in. per vent

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O'Hagin's FIRE & ICE Tapered Low-Profile Vents for Slate, Shake and Composition Roofs:

Tapered Low-Profile 72" NFVA: 72 sq. in. per vent

- All O'Hagin's FIRE & ICE attic ventilation products are available with corrosion-resistant, non-combustible 1/8-inch (3.2 mm) mesh upon request.
For those O'Hagin's attic ventilation products that use 1/8-inch wire mesh, the Net Free Ventilation Area (NFVA) of those products, as calculated by an independent third-party, is reduced by 10 percent. As such, the NFVA of those products is, as follows:

O'Hagin's Attic Vents for Clay and Concrete Tile:

- All Model Flat (Low-Profile) with 1/8-inch mesh NFVA: 88.875 sq. in. per vent
All Model "M" (Medium-Profile) with 1/8-inch mesh NFVA: 77.625 sq. in. per vent
All Model "S" (High-Profile) with 1/8-inch mesh NFVA: 87.75 sq. in. per vent

O'Hagin Mfg.'s Tapered Low-Profile Vents for Slate Shake and Composition Roofs:

Tapered Low-Profile 72" with 1/8-inch mesh NFVA: 64.80 sq. in. per vent

- All O'Hagin's FIRE & ICE and O'Hagin's standard attic ventilation products carry a Class 'A' fire rating in accordance with the test standard ANSI/UL 790, "Tests for Fire Resistance of Roof covering Materials," (ASTM E-108 and NFPA 256).
All O'Hagin's FIRE & ICE and O'Hagin's standard attic vents for clay and concrete tile feature our patented two-piece design that utilizes two or more separate sections of the non-combustible wire mesh (or, flame and ember-resistant material in O'Hagin's FIRE & ICE attic ventilation products), which provides additional resistance regarding the intrusion of flame and embers into the attic area of the structure.

TESTING STANDARDS INFORMATION:

Currently, there is no test for resistance of ember and flame intrusion for ridge, or off-ridge, attic vents that is recognized by the American Society for Testing and Materials (ASTM) or the California Department of Forestry and Fire Protection (Cal Fire). However, there is a proposed test standard for such vents currently under consideration, at the sub-committee level, with ASTM.

IMPLEMENTATION:

Check: http://www.fire.ca.gov/fire\_prevention/fire\_prevention\_wildland\_zones.php or, call O'Hagin's Architectural Services Team at (877) 324-0444 to determine whether, or not, your specific project is within an effected zone or region.

OTHER FACTORS:

There remain many factors in addition to the specification of O'Hagin's attic ventilation products that should be considered when designing to minimize risk due to wildfire danger, including, but not limited to, the following: the use of appropriate construction materials for exterior walls, non-combustible valley flashings/gutters/downspouts, tempered windows (window walls and skylights), debris-resistant gutters, Class A roof coverings, non-combustible exterior doors, no under-eave or soffit venting, fire-resistant landscaping and appropriate vegetation setbacks. Always check local ordinance and building practice.

Effective: January 1, 2011

Rev. October, 2017

Rev. January 1, 2020

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WILDLAND URBAN INTERFACE
PRODUCTS

Table with 3 columns: NO., REVISION, DATE. Contains 5 rows of empty revision entries.

PROJECT MANAGER: RR
DRAWN BY: CHECKED BY:
DATE: 6/30/2022
PROJECT NUMBER: 2340-01-CU21
SHEET: G-203

GENERAL INFORMATION			
01	Project Name	Mono County ADU (Plan 3)	
02	Run Title	Title 24 Analysis	
03	Project Location		
04	City	Mono County	05 Standards Version
06	Zip code		07 Software Version
08	Climate Zone	16	09 Front Orientation (deg/ Cardinal)
10	Building Type	Single family	11 Number of Dwelling Units
12	Project Scope	New Construction	13 Number of Bedrooms
14	Addition Cond. Floor Area (ft <sup>2</sup> )	0	15 Number of Stories
16	Existing Cond. Floor Area (ft <sup>2</sup> )	n/a	17 Fenestration Average U-factor
18	Total Cond. Floor Area (ft <sup>2</sup> )	692	19 Glazing Percentage (%)
20	ADU Bedroom Count	n/a	21 ADU Conditioned Floor Area
22	Is Natural Gas Available?	No	

COMPLIANCE RESULTS	
01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below

Registration Number: 222-P010154872A-000-000-0000000-0000  
 CA Building Energy Efficiency Standards - 2019 Residential Compliance  
 Registration Date/Time: 2022-08-05 09:49:48  
 Report Version: 2019.2.000  
 Schema Version: rev 20200901  
 HERS Provider: CalCERTS Inc.  
 Report Generated: 2022-08-04 09:47:05

REQUIRED PV SYSTEMS - SIMPLIFIED											
01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
1.67	NA	Standard	Fixed	none	true	150-270	n/a	n/a	<=7:12	96	98

REQUIRED SPECIAL FEATURES	
The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.	
<ul style="list-style-type: none"> <li>Indoor air quality, balanced fan</li> <li>IAQ Ventilation System: as low as 0.575 W/CFM</li> <li>IAQ Ventilation System: Heat Recovery: minimum 80 SRE and 80 ASRE</li> <li>IAQ Ventilation System: supply outside air: inlet, Filter, and H/ERV cores accessible per RACM Reference Manual</li> <li>Variable capacity heat pump compliance option (verification details from VCHP Staff report, Appendix B, and RA3)</li> <li>Northwest Energy Efficiency Alliance (NEEA) rated heat pump/water heater: specific brand/model, or equivalent, must be installed</li> </ul>	

HERS FEATURE SUMMARY	
The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CPEs and CFSRs are required to be completed in the HERS Registry.	
<b>Building-level Verifications:</b> <ul style="list-style-type: none"> <li>Indoor air quality ventilation</li> <li>Kitchen range hood</li> <li>Cooling System Verifications:                             <ul style="list-style-type: none"> <li>Verified Refrigerant Charge</li> <li>Airflow in habitable rooms (SC3.1.4.1.7)</li> </ul> </li> <li>Heating System Verifications:                             <ul style="list-style-type: none"> <li>Verified heat pump rated heating capacity</li> <li>Wall-mounted thermostat in zones greater than 150 ft<sup>2</sup> (SC3.4.5)</li> <li>Ductless indoor units located entirely in conditioned space (SC3.1.4.1.B)</li> </ul> </li> <li>HVAC Distribution System Verifications:                             <ul style="list-style-type: none"> <li>None</li> <li>Domestic Hot Water System Verifications:                                     <ul style="list-style-type: none"> <li>None</li> </ul> </li> </ul> </li> </ul>	

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OPAQUE SURFACE CONSTRUCTIONS							
01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-21 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O.C.	R-21	None / None	0.069	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Exterior Finish: 3 Coat Stucco
Attic Roof/Living Area	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O.C.	R-0	None / None	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
R-38 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O.C.	R-38	None / None	0.025	Over Ceiling Joists: R-28.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION			
01	02	03	04
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50
Not Required	Not Required	Not Required	n/a

WATER HEATING SYSTEMS						
01	02	03	04	05	06	07
Name	System Type	Distribution Type	Water Heater Name (#)	Solar Heating System	Compact Distribution	HERS Verification
DHW Sys 1	Domestic Hot Water (DHW)	Standard Distribution System	DHW Heater 1 (1)	n/a	None	n/a

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ENERGY DESIGN RATING				
	Energy Design Ratings		Efficiency' (EDR)	
	Efficiency' (EDR)	Total' (EDR)	Efficiency' (EDR)	Total' (EDR)
Standard Design	64.9	43.8		
Proposed Designs				
North Facing	62.4	41.2	2.5	2.6
East Facing	61.2	40	3.7	3.8
South Facing	61.9	40.7	3	3.1
West Facing	62.6	41.3	2.3	2.5

RESULT: **COMPLIES**

<sup>1</sup> Efficiency EDR includes improvements to the building envelope and more efficient equipment.  
<sup>2</sup> Total EDR includes efficiency and demand response measures such as photovoltaic (PV) systems and batteries.  
<sup>3</sup> Building complies when efficiency and total compliance margins are greater than or equal to zero.

- Standard Design PV Capacity: 1.67 kWdc
- Proposed PV Capacity Scaling: North (1.67 kWdc) East (1.67 kWdc) South (1.67 kWdc) West (1.67 kWdc)

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BUILDING - FEATURES INFORMATION						
01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft <sup>2</sup> )	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Mono County ADU (Plan 3)	692	1	1	1	0	1

ZONE INFORMATION						
01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft <sup>2</sup> )	Avg. Ceiling Height	Water Heating System 1	Water Heating System 2
Living Area	Conditioned	HVAC System1	692	8	DHW Sys 1	N/A

OPAQUE SURFACES							
01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft <sup>2</sup> )	Window and Door Area (ft <sup>2</sup> )	Tilt (deg)
Front Wall	Living Area	R-21 Wall	0	Front	288	36	90
Left Wall	Living Area	R-21 Wall	90	Left	288	72.02	90
Rear Wall	Living Area	R-21 Wall	180	Back	160	6	90
Right Wall	Living Area	R-21 Wall	270	Right	288	9	90
Roof	Living Area	R-38 Roof Attic	n/a	n/a	692	n/a	n/a

ATTIC							
01	02	03	04	05	06	07	08
Name	Construction	Type	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof
Attic Living Area	Attic Roof/Living Area	Ventilated	8	0.1	0.85	No	No

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WATER HEATERS											
01	02	03	04	05	06	07	08	09	10	11	12
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Energy Factor or Efficiency	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	NEEA Heat Pump Brand or Model	Tank Location or Ambient Condition
DHW Heater 1	Heat Pump	n/a	1	50	NEEA Rated	<= 12 kW	n/a	n/a	n/a	Rheem/VE50T10H2 2U0 (50 gal)	Conditioned

WATER HEATING - HERS VERIFICATION							
01	02	03	04	05	06	07	08
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Central DHW Distribution	Shower Drain Water Heat Recovery
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required	Not Required

SPACE CONDITIONING SYSTEMS										
01	02	03	04	05	06	07	08	09	10	11
Name	System Type	Heating Unit Name	Cooling Unit Name	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Existing Condition	Heating Equipment Count	Cooling Equipment Count
HVAC System1	Heat pump heating/cooling	Heat Pump System 1	Heat Pump System 1	n/a	n/a	Setback	New	NA	1	1

HVAC - HEAT PUMPS										
01	02	03	04	05	06	07	08	09	10	11
Heat Pump System 1	VCHP-ductless	1	8.2	12000	8000	14	11.7	Not Zonal	Single Speed	Heat Pump System 1-Hers-Npump

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ENERGY USE SUMMARY				
Energy Use (kTDU/ft <sup>2</sup> -yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	100.83	93.45	7.38	7.3
Space Cooling	2.41	1.57	0.84	34.9
IAQ Ventilation	9.74	8.92	0.82	8.4
Water Heating	26.91	25.37	1.54	5.7
Self Utilization Credit	n/a	0	0	n/a
<b>North Facing Compliance Total</b>	<b>139.89</b>	<b>129.31</b>	<b>10.58</b>	<b>7.6</b>
Space Heating	100.83	88.86	11.97	11.9
Space Cooling	2.41	0.95	1.46	60.6
IAQ Ventilation	9.74	8.92	0.82	8.4
Water Heating	26.91	25.4	1.51	5.6
Self Utilization Credit	n/a	0	0	n/a
<b>East Facing Compliance Total</b>	<b>139.89</b>	<b>124.13</b>	<b>15.76</b>	<b>11.3</b>
Space Heating	100.83	90.81	10.02	10.4
Space Cooling	2.41	2.41	0.01	0.4
IAQ Ventilation	9.74	8.92	0.82	8.4
Water Heating	26.91	25.35	1.56	5.8
Self Utilization Credit	n/a	0	0	n/a
<b>South Facing Compliance Total</b>	<b>139.89</b>	<b>126.98</b>	<b>12.91</b>	<b>9.2</b>
Space Heating	100.83	95.17	5.66	5.6
Space Cooling	2.41	0.52	1.89	78.4
IAQ Ventilation	9.74	8.92	0.82	8.4
Water Heating	26.91	25.48	1.43	5.3
Self Utilization Credit	n/a	0	0	n/a
<b>West Facing Compliance Total</b>	<b>139.89</b>	<b>130.09</b>	<b>9.8</b>	<b>7</b>

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FENESTRATION / GLAZING													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft <sup>2</sup> )	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
A	Window	Front Wall	Front	0			1	8	0.3	NFRC	0.23	NFRC	Bug Screen
A.2	Window	Front Wall	Front	0			1	8	0.3	NFRC	0.23	NFRC	Bug Screen
B	Window	Left Wall	Left	90			1	16	0.3	NFRC	0.23	NFRC	Bug Screen
B.2	Window	Left Wall	Left	90			1	16	0.3	NFRC	0.23	NFRC	Bug Screen
Door C	Window	Left Wall	Left	90			1	40.02	0.3	NFRC	0.23	NFRC	Bug Screen
B.2	Window	Rear Wall	Back	180			1	6	0.3	NFRC	0.23	NFRC	Bug Screen
B.1	Window	Right Wall	Right	270			1	9	0.3	NFRC	0.23	NFRC	Bug Screen

OPAQUE DOORS			
01	02	03	04
Name	Side of Building	Area (ft<	

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 I, I certify that this certificate of compliance documentation is accurate and complete.

Documentation Author Name: **Timothy Carstairs**  
 Documentation Author Signature: *Timothy Carstairs*

Company: **Carstairs Energy Inc.**  
 Signature Date: **2022-08-04 09:25:28**  
 CA/MEPC Certification Identification (if applicable):  
**1160610042**

Address: **2238 Bayview Heights Drive, Suite E**  
 City/State/Zip: **Los Osos, CA 93402**  
 Phone: **805-904-9048**

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
 I certify the following under penalty of perjury under the laws of the State of California:  
 1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.  
 2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
 The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided or other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name: **Randy Russon**  
 Responsible Designer Signature: *Randy Russon*

Company: **RRM Design Group**  
 Date Signed: **2022-08-05 09:49:48**  
 License: **C24410**

Address: **3765 S. Higuera Street, Suite 102**  
 License: **C24410**  
 Phone: **805-543-1794**

City/State/Zip: **San Luis Obispo, CA 93401**



Digitally signed by CaCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

Registration Number: **222-P0101548724-000-000-000000-0000** Registration Date/Time: **2022-08-05 09:49:48** HERS Provider: **CaCERTS Inc.**  
 CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: **2019.2.000** Report Generated: **2022-08-04 09:47:05**  
 Schema Version: **rev: 20200901**

RESIDENTIAL MEASURES SUMMARY										RMS-1
Project Name: Mono County ADU (Plan 3)										08/2022
Project Address: Mono County										# of Units: 692
<b>INSULATION</b>										
Construction Type	Cavity	Area (ft <sup>2</sup> )	Special Features	Status						
Wall	Wood Framed	R 21	R01	New						
Door	Chewbacca Door	R 6.0	R0	New						
Roof	Wood Framed Attic	R 38	R02	New						
Slab	Unheated Slab-on-Grade	- no insulation	R02	Perim = 100'						
<b>FENESTRATION</b>										
Location	Area(ft <sup>2</sup> )	U-Fac	SHGC	Overhang	Sidelights	Exterior Shades	Status			
Front (F)	66.0	0.300	0.23	none	none	N/A	New			
Left (L)	72.0	0.300	0.23	none	none	N/A	New			
Rear (R)	6.0	0.300	0.23	none	none	N/A	New			
Right (R)	9.0	0.300	0.23	none	none	N/A	New			
<b>HVAC SYSTEMS</b>										
Qty.	Heating	Min. Eff.	Cooling	Min. Eff.	Thermostat	Status				
1	Split Heat Pump	8.0(100%)	Split Heat Pump	14.0(92%)	Setback	New				
<b>HVAC DISTRIBUTION</b>										
Location	Heating	Cooling	Duct Location	Duct R-Value	Status					
HVAC System	Ductless with Fan	Ductless	in	in	New					
<b>WATER HEATING</b>										
Qty.	Type	Gallons	Min. Eff.	Distribution	Status					
1	Heat Pump	60	3.20	Standard	New					
EnergyPro 8.3 by EnergySoft User Number: 4242 ID: 22-081011 Page 13 of 14										

**2019 Low-Rise Residential Mandatory Measures Summary**

§ 150.00(3A)	<b>Clearances.</b> Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.00(3B)	<b>Liquid Line Drain.</b> Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.00(1)	<b>Storage Tank Installation.</b> Unless for water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum R-12 thermal insulation or R-10 thermal insulation where the thermal insulation R-value is indicated on the label of the tank.
§ 150.00(3A)	<b>Water Piping, Solar Water-Heating System Piping, and Space Conditioning System Line Insulation.</b> All domestic hot water piping must be insulated as specified in Section 0811.1 of the California Building Code. The following piping conditions must have a minimum insulation with thickness of one inch or a minimum insulation R-value of 7.7: the first five feet of cold water piping from the storage tank, all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch, all hot water piping with a nominal diameter less than 3/4 inch that is associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.
§ 150.00(3)	<b>Insulation Protection.</b> Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 100.300. Insulation exposed to weather must be water resistant and protected from UV light (see above) piping. Insulation covering chilled-water piping and refrigerant piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-combustible casing or sleeve.
§ 150.00(1)	<b>Gas or Propane Water Heating Systems.</b> Systems using gas or propane water heaters to serve individual building units must include all of the following: A dedicated 120-volt, 20-amp electrical receptacle connected to the electric panel with a 1000V-rated 10-AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the circuit breaker must be labeled with the word "gas" and be electrically isolated. There is a separate single-pole circuit breaker, separate in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Furnace 240V Gas," a Category III or IV vent, or a Type B vent with straight piping between the combustion chamber and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200 CFH per hour.
§ 150.00(2)	<b>Recirculation.</b> Recirculating loop serving multiple dwelling units must meet the requirements of § 150.00(2).
§ 150.00(3)	<b>Solar Water-Heating Systems.</b> Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or a listing agency that is approved by the Executive Director.
<b>Ducts and Fans Measures:</b>	
§ 110.00(3)	<b>Leakage.</b> Insulation installed on an existing space-conditioning duct must comply with § 804.7 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.00(1)	<b>CMC Compliance.</b> All air-distribution system ducts and plenums must meet the requirements of the CMC §§ 601.1, 602.0, 603.0, 604.0, 606.0 and 608.0(B)(4)(b)(1)-(3) (2008 HVAC Duct Construction Standards Metal and Flexible) Section. Portions of supply air and return air ducts and plenums must be insulated to a minimum installed level of R-6.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RACI 4.3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. Connections of metal ducts and their cores of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct closure system that meets the applicable requirements of UL 181, UL 8, or UL 181B or approved equivalent that meets the requirements of 4.7.72. If mastic or tape is used to seal openings greater than 1/4 inch, the combination of mastic and other mesh or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed metal duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area.
§ 150.00(2)	<b>Factory-Fabricated Duct Systems.</b> Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must be sealed with cloth back rubber adhesive duct tapes unless such tapes are used in combination with mastic and metal duct tapes.
§ 150.00(3)	<b>Field-Fabricated Duct Systems.</b> Field-fabricated duct systems must comply with applicable requirements for: pressure-sealant tapes; mastic; sealants; and other requirements specified for duct construction.
§ 150.00(3)	<b>Backdraft Damper.</b> Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.00(2)	<b>Gravity Ventilation Dampers.</b> Gravity-ventilation systems serving conditioned spaces must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outdoor opening and elevator shaft walls.
§ 150.00(3)	<b>Protection of Insulation.</b> Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protection by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water resistant and provides shielding from solar radiation.
§ 150.00(1)	<b>Plenums Above Ceilings and Below Ducts.</b> Plenums must have fire ducts that have a non-positive fire between the inner core and outer vapor barrier.
§ 150.00(1)	<b>Duct System Sealing and Leakage Test.</b> When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.00(1) and Reference Residential Appendix RA3.
§ 150.00(2)	<b>Air Filtration.</b> Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems that have a face height that can be made into a face height per Equation 190.2.4A. Pressure drops and leakage must meet the requirements of § 150.00(12). Filters must be accessible for regular service.
§ 150.00(1)	<b>Space Conditioning System Airflow Rate and Fan Efficiency.</b> Space conditioning systems that use ducts to supply cooling must have a note for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum, before must be 150 CFM per ton of cooling capacity and, or an air handling unit fan efficiency $\leq 0.4$ watts per CFM for gas furnace air handlers and $\leq 0.5$ watts per CFM for all others. Small duct high velocity systems must provide an airflow $\geq 250$ CFM per ton of nominal cooling capacity, and an air handling unit fan efficiency $\leq 0.62$ watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.

ROOM LOAD SUMMARY										
From: Mono County ADU (Plan 3)										
Date: 8/4/2022										
System Name: HVAC System										
Floor Area: 692										
ROOM LOAD SUMMARY										
Zone Name	Room Name	Multi.	ROOM COOLING PEAK		COIL COOLING PEAK		COIL HTG. PEAK		Sensible	
			Sensible	Latent	CFM	Sensible	Latent	CFM		
Living Area	1st Floor ADU	1	332	6.61	-70	332	6.61	-70	464	14.619
			332	6.61	-70	332	6.61	-70	464	14.619
<b>PAGE TOTAL</b>			332	6.61	-70	464	14.619			
<b>TOTAL</b>			332	6.61	-70	464	14.619			

\* Total includes ventilation load for zone systems.

**2019 Low-Rise Residential Mandatory Measures Summary**

<b>Requirements for Ventilation and Indoor Air Quality:</b>	
§ 150.00(1)	<b>Requirements for Ventilation and Indoor Air Quality.</b> All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings, as amended in § 150.00(1).
§ 150.00(1C)	<b>Single Family Detached Dwelling Units.</b> Single family detached dwelling units, and attached dwelling units not sharing ceiling or floor with other dwelling units, occupiable spaces, outdoor garages, or enclosed spaces must have mechanical exhaust airflow provided at rates determined by ASHRAE 62.2 Sections 4.1 and 4.1.2, and as specified in § 150.00(1).
§ 150.00(1E)	<b>Multifamily Attached Dwelling Units.</b> Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with ASHRAE 62.2 Sections 4.1 and 4.1.2, and as specified in § 150.00(1).
§ 150.00(1F)	<b>Multifamily Building Central Ventilation Systems.</b> Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow to each dwelling unit served at a rate equal to or greater than the rate specified in Equation 150.00(8). All unit airflow must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit minimum required airflow rate needed for compliance.
§ 150.00(1G)	<b>Kitchen Range Hoods.</b> Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.
§ 150.00(2)	<b>Field Verification and Diagnostic Testing.</b> Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated to 100 CFM for the kitchen area and sound requirements as specified in Section 6.1.2 of ASHRAE 62.2.
<b>Pool and Spa Systems and Equipment Measures:</b>	
§ 110.40(1)	<b>Certification by Manufacturers.</b> Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Equipment Efficiency Regulations; an on/off switch mounted outside of the heater; and a shut-off of the heater without adjusting the thermostat setting; a permanent waterproof panel or card with operating instructions; and must not use electric control panels.
§ 110.40(1)	<b>Piping.</b> Any pool or spa heating system or equipment must be installed with at least 30 inches of pipe between the filter and the heater, or installed under and around them, in ducts or duct-like enclosures that allow for future service.
§ 110.40(2)	<b>Covers.</b> Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.40(3)	<b>Directional Valves and Time Switches for Pools.</b> Pools must have directional valves that automatically shut the pool water, and a time switch that will allow all pumps to be programmed to run only during off-peak electrical demand periods.
§ 110.50(1)	<b>Pool Light.</b> Natural gas pool and spa heaters must not have a continuously burning pool light.
§ 110.50(2)	<b>Pool System and Equipment Installation.</b> Residential pool systems or equipment must meet the specified requirements for pump sizing, low static pressure, and venting.
<b>Lighting Measures:</b>	
§ 110.50(1)	<b>Lighting Controls and Components.</b> All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.50.
§ 150.00(1A)	<b>Luminaire Efficiency.</b> All installed luminaires must meet the requirements in Table 150.0-A.
§ 150.00(1B)	<b>Blank Electrical Boxes.</b> The number of electrical boxes that are more than five feet above the finished floor and do not contain luminaires or other devices must not be greater than the number of fixtures. These electrical boxes must be sealed by a dimmer, vacancy sensor control, or fan speed control.
§ 150.00(1C)	<b>Recessed Overhead Luminaire Installations.</b> Luminaires recessed into ceilings must meet all of the requirements for insulation contact (IC) labeling, an integral, sealing, ventilation, and socket and light source as described in § 150.00(1C).
§ 150.00(1D)	<b>Electrical Ballasts for Fluorescent Lamps.</b> Ballasts for fluorescent lamps rated 15 watts or greater must be electronic and must have an output frequency no less than 20 kHz.
§ 150.00(1E)	<b>Night Lights, Step Lights, and Path Lights.</b> Night lights, step lights, and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and are no more than 150 lumens.
§ 150.00(1F)	<b>Lighting Integral to Exhaust Fans.</b> Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet applicable requirements of § 150.00(1).
§ 150.00(1G)	<b>Screen based luminaires.</b> Screen based luminaires must comply with Reference Joint Appendix RA3.
§ 150.00(1H)	<b>Light Sources in Enclosed or Recessed Luminaires.</b> Lamps and other replaceable light sources that are not compliant with the JAB tested temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.00(1)	<b>Light Sources in Drawers, Cabinets, and Liner Closets.</b> Light sources internal to drawers, cabinets or liner closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 3 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or liner closet is closed.
§ 150.00(2)	<b>Interior Switches and Controls.</b> All forward phase out dimmer switches with LED light sources must comply with NEMA SSL 7A.
§ 150.00(2B)	<b>Interior Switches and Controls.</b> Contact fans must be controlled separately from lighting systems.
§ 150.00(2C)	<b>Interior Switches and Controls.</b> Lighting must have readily accessible well-mounted controls that allow the lighting to be manually turned ON or OFF.
§ 150.00(2D)	<b>Interior Switches and Controls.</b> Controls and equipment must be installed in accordance with manufacturer's instructions.
§ 150.00(2E)	<b>Interior Switches and Controls.</b> Controls must be bypassed a dimmer, occupant sensor, or vacancy sensor when the control is installed to comply with § 150.00(2).
§ 150.00(2F)	<b>Interior Switches and Controls.</b> Controls must comply with the applicable requirements of § 110.50.

**2019 Low-Rise Residential Mandatory Measures Summary**

NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. Exceptions may apply (02/2020).

<b>Building Envelope Measures:</b>	
§ 110.00(1)	<b>Air Leakage.</b> Manufactured fenestration, exterior doors, and exterior door doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283 or AMMOMMCA-501.15-2009-2011.
§ 110.00(2)	<b>Labeling.</b> Fenestration products and exterior doors must have a label meeting the requirements of § 10.110(1).
§ 110.00(3)	<b>Field-Installed exterior doors and fenestration products.</b> Must use U-Factors and solar heat gain coefficient (SHGC) values from Tables 110.0-A, 110.0-B, or 110.0-C for exterior doors. They must be caulked and/or weatherstripped.
§ 110.7	<b>Air Leakage.</b> Attics, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weatherstripped.
§ 110.8(A)	<b>Insulation Certification by Manufacturers.</b> Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (CHGS).
§ 110.8(B)	<b>Insulation Requirements for Heated Slab Floors.</b> Heated slab floors must be installed per the requirements of § 110.8(B).
§ 110.8(C)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(C) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(D)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(D) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(E)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(E) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(F)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(F) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(G)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(G) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(H)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(H) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(I)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(I) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(J)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(J) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(K)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(K) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(L)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(L) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(M)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(M) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(N)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(N) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(O)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(O) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(P)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(P) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(Q)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(Q) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(R)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(R) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(S)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(S) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(T)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(T) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(U)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(U) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(V)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(V) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(W)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(W) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(X)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(X) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(Y)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(Y) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.8(Z)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(Z) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.9(A)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.9(A) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.9(B)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.9(B) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.9(C)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.9(C) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.9(D)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.9(D) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.9(E)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.9(E) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.9(F)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.9(F) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.9(G)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.9(G) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.9(H)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.9(H) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.9(I)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.9(I) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.9(J)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.9(J) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.9(K)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.9(K) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.9(L)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.9(L) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.
§ 110.9(M)	<b>Roofing Products Solar Reflectance and Thermal Emittance.</b> The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.9(M) and be labeled per § 110.11 when the installation of a roof roof



GENERAL INFORMATION	
01	Project Name Mono County ADU (Plan 3)
02	Run Title Title 24 Analysis
03	Project Location
04	City Mono County
05	Standards Version 2019
06	Zip code
07	Software Version EnergyPro 8.3
08	Climate Zone 16
09	Front Orientation (deg/ Cardinal) AllOrientations
10	Building Type Single family
11	Number of Dwelling Units 1
12	Project Scope NewConstruction
13	Number of Bedrooms 1
14	Number of Stories 1
15	Addition Cond. Floor Area (ft²) 0
16	Existing Cond. Floor Area (ft²) n/a
17	Fenestration Average U-factor 0.3
18	Total Cond. Floor Area (ft²) 692
19	Glazing Percentage [%] 14.89%
20	ADU Bedroom Count n/a
21	ADU Conditioned Floor Area n/a
22	Is Natural Gas Available? No

COMPLIANCE RESULTS	
01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below

Registration Number: 222-P010154873A-000-000-0000000-0000  
 CA Building Energy Efficiency Standards - 2019 Residential Compliance  
 Registration Date/Time: 2022-08-05 09:50:11  
 Report Version: 2019.2.000  
 Schema Version: rev 20200901  
 HERS Provider: CalCERTS inc.  
 Report Generated: 2022-08-04 09:49:01

REQUIRED PV SYSTEMS - SIMPLIFIED											
01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
1.73	NA	Standard	Fixed	none	true	150-270	n/a	n/a	<=7:12	96	98

- REQUIRED SPECIAL FEATURES**
- The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.
- Indoor air quality, balanced fan
  - IAQ Ventilation System: as low as 0.575 W/CFM
  - IAQ Ventilation System: Heat Recovery: minimum 80 ASRE and 80 ASRE
  - IAQ Ventilation System: supply outside air: inlet, Filter, and H/ERV cores accessible per RACM Reference Manual
  - Variable capacity heat pump compliance option (verification details from VCHP Staff report, Appendix B, and RA3)
  - Northwest Energy Efficiency Alliance (NEEA) rated heat pump/water heater: specific brand/model, or equivalent, must be installed

- HERS FEATURE SUMMARY**
- The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CPERs and CFSRs are required to be completed in the HERS Registry.
- Building-level Verifications:**
- Indoor air quality ventilation
  - Kitchen range hood
  - Cooling System Verifications:
  - Verified Refrigerant Charge
  - Airflow in habitable rooms (SC3.1.4.1.7)
- Heating System Verifications:**
- Verified heat pump rated heating capacity
  - Wall-mounted thermostat in zones greater than 150 ft² (SC3.4.5)
  - Ductless indoor units located entirely in conditioned space (SC3.1.4.1.B)
- HVAC Distribution System Verifications:**
- None
  - Domestic Hot Water System Verifications:
  - None

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OPAQUE SURFACE CONSTRUCTIONS							
01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-19 Floor Crawspace	Floors Over Crawspace	Wood Framed Floor	2x10 @ 16 in. O. C.	R-19	None / None	0.046	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x10
R-38 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-38	None / None	0.025	Over Ceiling Joists: R-28.9 Insul. Cavity / Frame: R-8.1 / 2x4 Inside Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION			
01	02	03	04
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50
Not Required	Not Required	Not Required	n/a

WATER HEATING SYSTEMS						
01	02	03	04	05	06	07
Name	System Type	Distribution Type	Water Heater Name (#)	Solar Heating System	Compact Distribution	HERS Verification
DHW Sys 1	Domestic Hot Water (DHW)	Standard Distribution System	DHW Heater 1 (1)	n/a	None	n/a

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ENERGY USE SUMMARY				
Energy Use (kTDU/ft²-yr)	Standard Design		Proposed Design	
	Compliance Margin	Percent Improvement	Compliance Margin	Percent Improvement
Space Heating	89.4	79.09	10.31	11.5
Space Cooling	9.53	5.88	3.65	38.3
IAQ Ventilation	9.74	8.92	0.82	8.4
Water Heating	26.74	25.18	1.56	5.8
Self Utilization Credit	n/a	0	0	n/a
<b>North Facing Compliance Total</b>	<b>135.41</b>	<b>119.07</b>	<b>16.34</b>	<b>12.1</b>
Space Heating	89.4	74.51	14.89	16.7
Space Cooling	9.53	5.32	4.21	44.2
IAQ Ventilation	9.74	8.92	0.82	8.4
Water Heating	26.74	25.21	1.53	5.7
Self Utilization Credit	n/a	0	0	n/a
<b>East Facing Compliance Total</b>	<b>135.41</b>	<b>113.96</b>	<b>21.45</b>	<b>15.8</b>
Space Heating	89.4	75.88	13.52	15.1
Space Cooling	9.53	7.51	2.02	21.2
IAQ Ventilation	9.74	8.92	0.82	8.4
Water Heating	26.74	25.17	1.57	5.9
Self Utilization Credit	n/a	0	0	n/a
<b>South Facing Compliance Total</b>	<b>135.41</b>	<b>117.48</b>	<b>17.93</b>	<b>13.2</b>
Space Heating	89.4	80.56	8.84	9.9
Space Cooling	9.53	4.14	5.39	56.6
IAQ Ventilation	9.74	8.92	0.82	8.4
Water Heating	26.74	25.29	1.45	5.4
Self Utilization Credit	n/a	0	0	n/a
<b>West Facing Compliance Total</b>	<b>135.41</b>	<b>118.91</b>	<b>16.5</b>	<b>12.2</b>

**RESULT: COMPLIES**

<sup>1</sup> Efficiency EDR includes improvements to the building envelope and more efficient equipment.  
<sup>2</sup> Total EDR includes efficiency and demand response measures such as photovoltaic (PV) systems and batteries.  
<sup>3</sup> Building complies when efficiency and total compliance margins are greater than or equal to zero.

- Standard Design PV Capacity: 1.73 kWdc
- Proposed PV Capacity Scaling: North (1.73 kWdc) East (1.73 kWdc) South (1.73 kWdc) West (1.73 kWdc)

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BUILDING - FEATURES INFORMATION						
01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Mono County ADU (Plan 3)	692	1	1	1	0	1

ZONE INFORMATION						
01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Water Heating System 2
Living Area	Conditioned	HVAC System1	692	8	DHW Sys 1	N/A

OPAQUE SURFACES							
01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft²)	Window and Door Area (ft²)	Tilt (deg)
Front Wall	Living Area	R-21 Wall	0	Front	288	36	90
Left Wall	Living Area	R-21 Wall	90	Left	288	72.02	90
Rear Wall	Living Area	R-21 Wall	180	Back	160	6	90
Right Wall	Living Area	R-21 Wall	270	Right	288	9	90
Roof	Living Area	R-38 Roof Attic	n/a	n/a	692	n/a	n/a
Raised Floor	Living Area	R-19 Floor Crawspace	n/a	n/a	692	n/a	n/a

ATTIC							
01	02	03	04	05	06	07	08
Name	Construction	Type	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof
Attic Living Area	Attic Roof/Living Area	Ventilated	8	0.1	0.85	No	No

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 CA Building Energy Efficiency Standards - 2019 Residential Compliance  
 Registration Date/Time: 2022-08-05 09:50:11  
 Report Version: 2019.2.000  
 Schema Version: rev 20200901  
 HERS Provider: CalCERTS inc.  
 Report Generated: 2022-08-04 09:49:01

WATER HEATERS - HERS VERIFICATION											
01	02	03	04	05	06	07	08	09	10	11	12
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Energy Factor or Efficiency	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	NEEA Heat Pump Brand or Model	Tank Location or Ambient Condition
DHW Heater 1	Heat Pump	n/a	1	50	NEEA Rated	<= 12 kW	n/a	n/a	n/a	Rheem/VE50T10H2 2U0 (50 gal)	Conditioned

WATER HEATING - HERS VERIFICATION							
01	02	03	04	05	06	07	08
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Central DHW Distribution	Shower Drain Water Heat Recovery
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required	Not Required

SPACE CONDITIONING SYSTEMS										
01	02	03	04	05	06	07	08	09	10	11
Name	System Type	Heating Unit Name	Cooling Unit Name	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Existing Condition	Heating Equipment Count	Cooling Equipment Count
HVAC System1	Heat pump heating/cooling	Heat Pump System 1	Heat Pump System 1	n/a	n/a	Setback	New	NA	1	1

HVAC - HEAT PUMPS										
Name	System Type	Number of Units	Heating			Cooling		Zonally Controlled	Compressor Type	HERS Verification
			HSPF/COP	Cap 47	Cap 17	SEER	EER/CEER			
Heat Pump System 1	VCHP-ductless	1	8.2	12000	8000	14	11.7	Not Zonal	Single Speed	Heat Pump System 1-Hers-HPump

Registration Number: 222-P010154873A-000-000-0000000-0000  
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ENERGY USE SUMMARY				
Energy Use (kTDU/ft²-yr)	Standard Design		Proposed Design	
	Compliance Margin	Percent Improvement	Compliance Margin	Percent Improvement
Space Heating	89.4	79.09	10.31	11.5
Space Cooling	9.53	5.88	3.65	38.3
IAQ Ventilation	9.74	8.92	0.82	8.4
Water Heating	26.74	25.18	1.56	5.8
Self Utilization Credit	n/a	0	0	n/a
<b>North Facing Compliance Total</b>	<b>135.41</b>	<b>119.07</b>	<b>16.34</b>	<b>12.1</b>
Space Heating	89.4	74.51	14.89	16.7
Space Cooling	9.53	5.32	4.21	44.2
IAQ Ventilation	9.74	8.92	0.82	8.4
Water Heating	26.74	25.21	1.53	5.7
Self Utilization Credit	n/a	0	0	n/a
<b>East Facing Compliance Total</b>	<b>135.41</b>	<b>113.96</b>	<b>21.45</b>	<b>15.8</b>
Space Heating	89.4	75.88	13.52	15.1
Space Cooling	9.53	7.51	2.02	21.2
IAQ Ventilation	9.74	8.92	0.82	8.4
Water Heating	26.74	25.17	1.57	5.9
Self Utilization Credit	n/a	0	0	n/a
<b>South Facing Compliance Total</b>	<b>135.41</b>	<b>117.48</b>	<b>17.93</b>	<b>13.2</b>
Space Heating	89.4	80.56	8.84	9.9
Space Cooling	9.53	4.14	5.39	56.6
IAQ Ventilation	9.74	8.92	0.82	8.4
Water Heating	26.74	25.29	1.45	5.4
Self Utilization Credit	n/a	0	0	n/a
<b>West Facing Compliance Total</b>	<b>135.41</b>	<b>118.91</b>	<b>16.5</b>	<b>12.2</b>

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FENESTRATION / GLAZING													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
A	Window												

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 I, I certify that this certificate of compliance documentation is accurate and complete.

Documentation Author Name: Timothy Carstairs  
 Documentation Author Signature: *Timothy Carstairs*  
 Signature Date: 2022-08-04 09:25:28  
 CA/MEPC Certification Identification (if applicable): 1160610042  
 Phone: 805-904-9048

Company: Carstairs Energy Inc.  
 Address: 2238 Bayview Heights Drive, Suite E  
 Chatsworth, CA 91301, CA 93402

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
 I certify the following under penalty of perjury under the laws of the State of California:  
 1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.  
 2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
 3. The building design features and performance specifications identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name: Randy Russum  
 Responsible Designer Signature: *Randy Russum*  
 Signature Date: 2022-08-05 09:50:11  
 License: C24410  
 Address: 3765 S. Higuera Street, Suite 102  
 Phone: 805-543-1794

Digitally signed by CaCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies registration provider responsibility for the accuracy of the information.



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 Registration Date/Time: 2022-08-05 09:50:11  
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 Report Version: 2019.2.000  
 Schema Version: rev 20200501

RESIDENTIAL MEASURES SUMMARY										RMS-1
Project Name: Mono County ADU (Plan 3)		Building Type: Single Family	ADU Addition/Alteration	Issue Date: 8/4/2022						
Project Address: Mono County		California Energy Climate Zone: CA Climate Zone 16	Total Cost: 692	Adoption: n/a						
INSULATION		Area		Special Features		Status				
Construction Type	Cavity (ft <sup>2</sup> )									
Wall	Wood Framed	# 21	601					New		
Door	Chewbacca Door	# 6	20					New		
Roof	Wood Framed Attic	# 28	692					New		
Floor	Wood Framed w/Gravel Space	# 19	692					New		
FENESTRATION		Total Area: 14.9 ft <sup>2</sup>		New/Added Average U-Factor: 0.30						
Location	Orientation	Area (ft <sup>2</sup> )	U-Factor	SHGC	Overhang	Sideline	Exterior Shades	Status		
Front (N)	0.0	0.300	0.23	none	none	N/A		New		
Left (E)	72.0	0.300	0.23	none	none	N/A		New		
Rear (S)	6.0	0.300	0.23	none	none	N/A		New		
Right (W)	9.0	0.300	0.23	none	none	N/A		New		
HVAC SYSTEMS		Min. Eff		Cooling		Min. Eff		Thermostat		Status
1	Split Heat Pump	8.0	100%	Split Heat Pump	14.0	SEER	Setback			New
HVAC DISTRIBUTION		Heating		Cooling		Duct Location		Duct R-Value		Status
HVAC System	Ductwork with Pan	Ductwork	n/a					n/a		New
WATER HEATING		Type		Gallons		Min. Eff		Distribution		Status
1	Heat Pump	50	3.20	Standard						New
EnergyStar 3 by EnergyStar		Label Number: 4242	ID: 22-081011		Page: 13 of 14					

**2019 Low-Rise Residential Mandatory Measures Summary**

§ 150.00(a). Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.00(b). Liquid Line Drain. Air conditioners and heat pump systems must be equipped with liquid line filter driers as specified by the manufacturer's instructions.
§ 150.00(c). Storage Tank Installation. Unvented hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum R-12 external insulation or R-10 internal insulation where the external insulation R-value is indicated on the label of the tank.
§ 150.00(d). Water Piping, Solar Water-Heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping must be insulated as specified in Section 0811.1 of the California Building Code. The following piping conditions must have a minimum insulation with thickness of one inch or a minimum insulation R-value of 7.7: the first five feet of cold water piping from the storage tank, all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is associated with a domestic hot water recirculation system; from the heating source to storage tank or between tanks, buried below grade; and from the heating source to kitchen fixtures.
§ 150.00(e). Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 100.30. Insulation exposed to weather must be water resistant and protected from UV light (see above table). Insulation covering outdoor water piping and refrigerant piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-combustible casing or sleeve.
§ 150.00(f). Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: A dedicated 120-volt, 20-amp electrical receptacle connected to the electric panel with a 1000-ft-vol conductor, 10-AMV copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be capped with the word "open" and be electrically isolated. There is a separate single-pole circuit breaker, spaced in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Fuses 240V Gas," a Category III or IV wire, or a Type E wire with straight piping between the combustion and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200 cfm per hour.
§ 150.00(g). Recirculation. Recirculating loop serving multiple dwelling units must meet the requirements of § 150.00(i).
§ 150.00(h). Solar Water-Heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or a listing agency that is approved by the Executive Director.
<b>Ducts and Fans Measures:</b>
§ 110.80(a). Ducts. Insulation installed on an existing space-conditioning duct must comply with § 804.7 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.00(i). CMC Compliance. All air-distribution system ducts and plenums must meet the requirements of the CMC, §§ 601.1, 602.2, 603.3, 604.3, 606.0 and 608.0(B)(2)(4)(5)(6)(7)(8)(9)(10)(11)(12). Duct Construction Standards Metal and Flexible. Seals. Portions of supply air and return air ducts and plenums must be insulated to a minimum installed level of R-4.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned spaces as outlined through field verification and diagnostic testing (FACI 4.2.8). Portions of the duct system completely exposed and surrounded by directly conditioned spaces are not required to be insulated. Connections of metal ducts and their cores of flexible ducts must be mechanically sealed. Openings must be sealed with mastic, tape, or other duct closure system that meets the applicable requirements of UL 181, UL 184, or UL 188 or an approved equivalent that meets the requirements of 4.7.72. If mastic or tape is used to seal openings greater than 1/4 inch, the combination of mastic and either mastic or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area.
§ 150.00(j). Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must be sealed with cloth back rubber adhesive duct tape unless the manufacturer specifies otherwise. Connections of metal ducts and their cores of flexible ducts must be mechanically sealed. Openings must be sealed with mastic, tape, or other duct closure system that meets the applicable requirements of UL 181, UL 184, or UL 188 or an approved equivalent that meets the requirements of 4.7.72. If mastic or tape is used to seal openings greater than 1/4 inch, the combination of mastic and either mastic or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area.
§ 150.00(k). Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sealing tapes; mastic; sealants; and other requirements specified for duct construction.
§ 150.00(l). Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.00(m). Gravity Ventilation Dampers. Gravity ventilation systems serving conditioned spaces must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outdoor opening and elevator shaft walls.
§ 150.00(n). Protection of Insulation. Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protection by aluminum, sheet metal, painted canvas, or plastic cover. Cabinet fan insulation must be protected an above or painted with a coating that is water resistant and provides shielding from solar radiation.
§ 150.00(o). Pans and Cover Pan Dets. Pans, cover pan det ducts must have a non-positive slope between the inner cover and outer vapor barrier.
§ 150.00(p). Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.00(i)(1) and Reference Residential Appendix RA3.
§ 150.00(q). Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems that have a less than 10 feet can be less than 10 feet per Equation 190.2.4. Pressure drops and leakage must meet the requirements of § 150.00(i)(2). Filters must be accessible for regular service.*
§ 150.00(r). Space Conditioning System Airflow Rate and Fan Efficiency. Space conditioning systems that use ducts to supply cooling must have a note for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply ductwork, before must be 1200 CFM per fan or net cooling capacity, and an air handling unit fan efficiency < 0.45 watts per CFM for gas furnace air handlers and < 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow < 250 CFM per fan or net cooling capacity, and an air handling unit fan efficiency < 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.

ROOM LOAD SUMMARY									
Project Name: Mono County ADU (Plan 3)		Date: 8/4/2022							
System Name: HVAC System		Floor Area:							
ROOM LOAD SUMMARY									
Zone Name		Room Name		ROOM COOLING PEAK		COIL COOLING PEAK		COIL HTG. PEAK	
Living Area	1st Floor ADU	Multi	1	CFM	Sensible	Latent	CFM	Sensible	Latent
		1	340	5,787	-70	376	11,848		
				340	5,787	-70	376	11,848	
PAGE TOTAL				340	5,787	-70	376	11,848	
TOTAL *				340	5,787	-70	376	11,848	

\* Total includes ventilation load for zone systems.

**2019 Low-Rise Residential Mandatory Measures Summary**

<b>Requirements for Ventilation and Indoor Air Quality:</b>	
§ 150.00(i). Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings, as amended in § 150.00(j).	
§ 150.00(j). Single Family Detached Dwelling Units. Single family detached dwelling units, and attached dwelling units not sharing ceiling or floor with other dwelling units, occupiable spaces, outdoor garages, or covered porches must have mechanical exhaust airflow provided at rates determined by ASHRAE 62.2, Sections 4.1 and 4.2, and as specified in § 150.00(k).	
§ 150.00(k). Multifamily Attached Dwelling Units. Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with ASHRAE 62.2, Sections 4.1 and 4.2, and as specified in § 150.00(l).	
§ 150.00(l). Multifamily Building Central Ventilation Systems. Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit equal to or greater than the rate specified in Equation 150.00. All unit airflow must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit minimum required airflow rate needed for compliance.	
§ 150.00(m). Kitchen Range Hoods. Kitchen range hoods must be tested for sound in accordance with Section 7.2 of ASHRAE 62.2.	
§ 150.00(n). Field Verification and Diagnostic Testing. Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is listed to comply with the field test and sound requirements as specified in Section 7.2 of ASHRAE 62.2.	
<b>Pool and Spa Systems and Equipment Measures:</b>	
§ 110.40(i). Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Equipment Efficiency Regulations; an on/off switch mounted outside of the heater; and a shut-off of the heater without adjusting the thermostat setting; a permanent waterproof plate or card with operating instructions; and must not use electric control panels.	
§ 110.40(j). Piping. Any pool or spa heating system or equipment must be installed with at least 30 inches of pipe between the filter and the heater, or installed under and around them, in ducts or duct-like enclosures to protect the filter and heater.	
§ 110.40(k). Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.	
§ 110.40(l). Directional Brakes and Time Switches for Pools. Pools must have directional brakes that automatically raise the pool water, and a time switch that will allow all pumps to be off or programmed for no more than 15 minutes of peak electrical demand periods.	
§ 110.40(m). Pool Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.	
§ 110.40(n). Lighting Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, low-voltage wiring, and other measures.	
<b>Lighting Measures:</b>	
§ 110.5. Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.5.	
§ 150.00(a). Luminaire Efficiency. All installed luminaires must meet the requirements in Table 150.0-A.	
§ 150.00(b). Blank Electrical Boxes. The number of electrical boxes that are more than five feet above the finished floor and do not contain luminaires or other devices must not be greater than the number of load centers. These electrical boxes must be sealed by a dimmer, vacancy sensor control, or fan speed control.	
§ 150.00(c). Recycled Overlight Luminaires in Ceilings. Luminaires recessed into ceilings must meet all of the requirements for insulation contact (IC) labeling, an imbalance, sealing, maintenance, and socket and light sources as described in § 150.00(c).	
§ 150.00(d). Electronic Ballasts for Fluorescent Lamps. Ballasts for fluorescent lamps rated 15 watts or greater must be electronic and must have an output frequency no less than 20 kHz.	
§ 150.00(e). Night Lights, Step Lights, and Path Lights. Night lights, step lights, and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and are no more than 150 lumens.	
§ 150.00(f). Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet applicable requirements of § 150.00(i).	
§ 150.00(g). Screw-based luminaires. Screw-based luminaires must comply with Reference Joint Appendix RA3.	
§ 150.00(h). Light Sources in Enclosed or Recycled Luminaires. Lamps and other replaceable light sources that are not compliant with the JAB tested temperature requirements, including marking requirements, must not be installed in enclosed or recycled luminaires.	
§ 150.00(i). Light Sources in Downers, Cabinets, and Liner Closets. Light sources internal to downers, cabinets, or liner closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the downer, cabinet or liner closet is closed.	
§ 150.00(j). Interior Switches and Controls. All forward-phase on dimmers used with LED light sources must comply with NEMA SSL 7A.	
§ 150.00(k). Interior Switches and Controls. Contact fans must be controlled separately from lighting systems.	
§ 150.00(l). Interior Switches and Controls. Lighting must have readily accessible well-marked controls that allow the lighting to be manually turned ON or OFF.	
§ 150.00(m). Interior Switches and Controls. Controls and equipment must be installed in accordance with manufacturer's instructions.	
§ 150.00(n). Interior Switches and Controls. Controls must be bypassed a dimmer, occupant sensor, or vacancy sensor. If the control is installed to comply with § 150.00.	
§ 150.00(o). Interior Switches and Controls. Controls must comply with the applicable requirements of § 150.5.	

**2019 Low-Rise Residential Mandatory Measures Summary**

NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. Exceptions may apply.

<b>Building Envelope Measures:</b>	
§ 110.80(a). Air Leakage. Manufactured fenestration, exterior doors, and exterior door doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283 or AMMOMMCA-501.5-2009-2011.	
§ 110.80(b). Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10.110-11.	
§ 110.80(c). Field-Installed Fenestration. Fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.8-A, 110.8-B, or 110.8-C for exterior doors. They must be caulked and/or weatherstripped.	
§ 110.7. Air Leakage. All doors, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weatherstripped.	
§ 110.80(d). Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (DHCS).	
§ 110.80(e). Insulation Requirements for Heated Slab Floors. Heated slab floors must be installed per the requirements of § 110.80(g).	
§ 110.80(f). Roofing Products Solar Reflectance Index and Thermal Emittance. The thermal emittance and solar reflectance index of the roofing material must meet the requirements of § 110.80(i) and be labeled per § 110.11 when the installation of a roof roof is specified on the CF-15.	
§ 110.80(g). Radiant Barriers. When required, radiant barriers must be installed at a minimum of 0.10 inch or less and be certified by the Department of Consumer Affairs.	
§ 110.80(h). Ceiling and Other Roof Insulation. Minimum R-2 insulation in wood frame ceilings, or the weighted average R-factor must not exceed 0.45. Minimum R-19 or weighted average U-factor of 0.04 or less in a rafter roof insulation. All access doors must have permanently attached insulation. Insulation must be installed in direct contact with a continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation over a continuous roof or ceiling.	
§ 150.00(a). Loose-Fill Insulation. Loose-fill insulation must meet the manufacturer's required density for the labeled R-value.	
§ 150.00(b). Wall Insulation. Minimum R-13 insulation in 2x4 stud wall framing or have a U-factor of 0.102 or less, or R-20 in 2x6 stud wood framing or have a U-factor of 0.071 or less. Double non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B.	
§ 150.00(c). Rafted Roof Insulation. Minimum R-10 insulation in rafted wood framed floor or 0.07 maximum U-factor.	
§ 150.00(d). Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, or greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light requirements and, when installed as part of a heated floor, meet the requirements of § 110.80(g).	
§ 150.00(e). Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented crawl spaces must be covered with a Class I or Class II vapor retarder. The retarder also applies to conditioned ventilation areas in buildings complying with the exception in § 150.00(f).	
§ 150.00(f). Vapor Retarder. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all masonry or masonry walls, windows, and concrete slabs with permeable insulation.	
§ 150.00(g). Fenestration Products. Fenestration, including skylights, requiring conditioned space from unconditioned spaces or outdoors must have a maximum U-factor of 0.35, or the weighted average U-factor of all fenestration must not exceed 0.38.	
<b>Fenestration, Decorative Gas Appliances, and Gas Log Measures:</b>	
§ 110.50(a). Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor appliances.	
§ 150.00(i). Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.	
§ 150.00(j). Combustion Intake. Masonry or factory-built fireplaces must have a combustion intake air intake, which at least an square inches in area and is equipped with a readily accessible, operable, and lockable damper or combustion air control device.	
§ 150.00(k). Fire Damper. Masonry or factory-built fireplaces must have a fire damper with a readily accessible control.	
<b>Space Conditioning, Water Heating, and Plumbing System Measures:</b>	
§ 110.50. Certification. Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showrooms, faucets, and all other regulated equipment must be certified by the manufacturer to the California Energy Commission.	
§ 110.50(a). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(b). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(c). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(d). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(e). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(f). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(g). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(h). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(i). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(j). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(k). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(l). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(m). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(n). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(o). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(p). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(q). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(r). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(s). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(t). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(u). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(v). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(w). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(x). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(y). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	
§ 110.50(z). Controls for Heat Pumps with Supplementary Electric Resistance Heating. Heat pumps with supplementary electric resistance heaters must have controls that meet the requirements of Table 110.5-D and Table 110.5-A.	

**2019 Low-Rise Residential Mandatory Measures Summary**

§ 150.00(a). Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it provides functionality of the specified control requirements of § 110.5. EMCS requirements are specified in Table 110.5-D and Table 110.5-A.
§ 150.00(b). Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it provides functionality of the specified control requirements of § 110.5. EMCS requirements are specified in Table 110.5-D and Table 110.5-A.
§ 150.00(c). Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it provides functionality of the specified control requirements of § 110.5. EMCS requirements are specified in Table 110.5-D and Table 110.5-A.
§ 150.00(d). Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it provides functionality of the specified control requirements of § 110.5. EMCS requirements are specified in Table 110.5-D and Table 110.5-A.
§ 150.00(e). Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it provides functionality of the specified control requirements of § 110.5. EMCS requirements are specified in Table 110.5-D and Table 110.5-A.
§ 150.00(f). Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it provides functionality of the specified control requirements of § 110.5. EMCS requirements are specified in Table 110.5-D and Table 110.5-A.
§ 150.00(g). Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it provides functionality of the specified control requirements of § 110.5. EMCS requirements are specified in Table 110.5-D and Table 110.5-A.
§ 150.00(h). Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it provides functionality of the specified control requirements of § 110.5. EMCS requirements are specified in Table 110.5-D and Table 110.5-A.
§ 150.00(i). Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it provides functionality of the specified control requirements of § 110.5. EMCS requirements are specified in Table 110.5-D and Table 110.5-A.
§ 150.00(j). Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it provides functionality of the specified control requirements of § 110.5. EMCS requirements are specified in Table 110.5-D and Table 110.5-A.
§ 150.00(k). Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it provides functionality of the specified control requirements of § 110.5. EMCS requirements are specified in Table 110.5-D and Table 110.5-A.
§ 150.00(l). Interior Switches and Controls. An energy management control

### SITE PLAN GENERAL NOTES

- REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS
- REFER TO STRUCTURAL PLANS FOR FURTHER INFORMATION.
- CONTRACTOR TO REVIEW PLANS TO AVOID CONFLICTS WITH UTILITIES, I.E. METER LOCATIONS, ELECTRIC TRANSFORMER, BACKFLOW PREVENTERS, SEWER LINES AND ELECTRIC CONDUIT (POLE LIGHTING AT DRIVEWAY), ETC.
- CONTRACTOR TO VERIFY ALL CONDITIONS AND UTILITY LOCATIONS AND IS RESPONSIBLE FOR LOCATING UTILITIES NOT SHOWN ON THE DRAWINGS.
- CONTRACTOR TO AVOID DISTURBING OR DAMAGING EXISTING UTILITIES.
- CALL BEFORE YOU DIG OR CAUSE ANY GROUND DISTURBANCES.
- LIMIT CONSTRUCTION AREA TO THAT INDICATED ON THE PLANS.
- CONTRACTOR WILL BE RESPONSIBLE FOR DAMAGE TO AREAS OUTSIDE OF DESIGNATED CONSTRUCTION AREA.
- COORDINATE ELECTRICAL REQUIREMENTS WITH PG&E.
- FOR PROJECT INFORMATION DATA, SEE TITLE SHEET
- ENCROACHMENT PERMIT IS REQ. FOR ANY WORK DONE WITHIN THE RIGHT OF WAYS.
- PER CRC R311.3 FLOORS OR LANDINGS AT EXTERIOR DOORS SHALL BE AT LEAST AS WIDE AS DOOR SERVED AND SHALL PROVIDE A LENGTH IN THE DIRECTION OF TRAVEL EQUAL TO 36 INCHES MINIMUM. SLOPE OF EXTERIOR LANDINGS SHALL NOT EXCEED 1/4" PER FOOT (2% SLOPE).

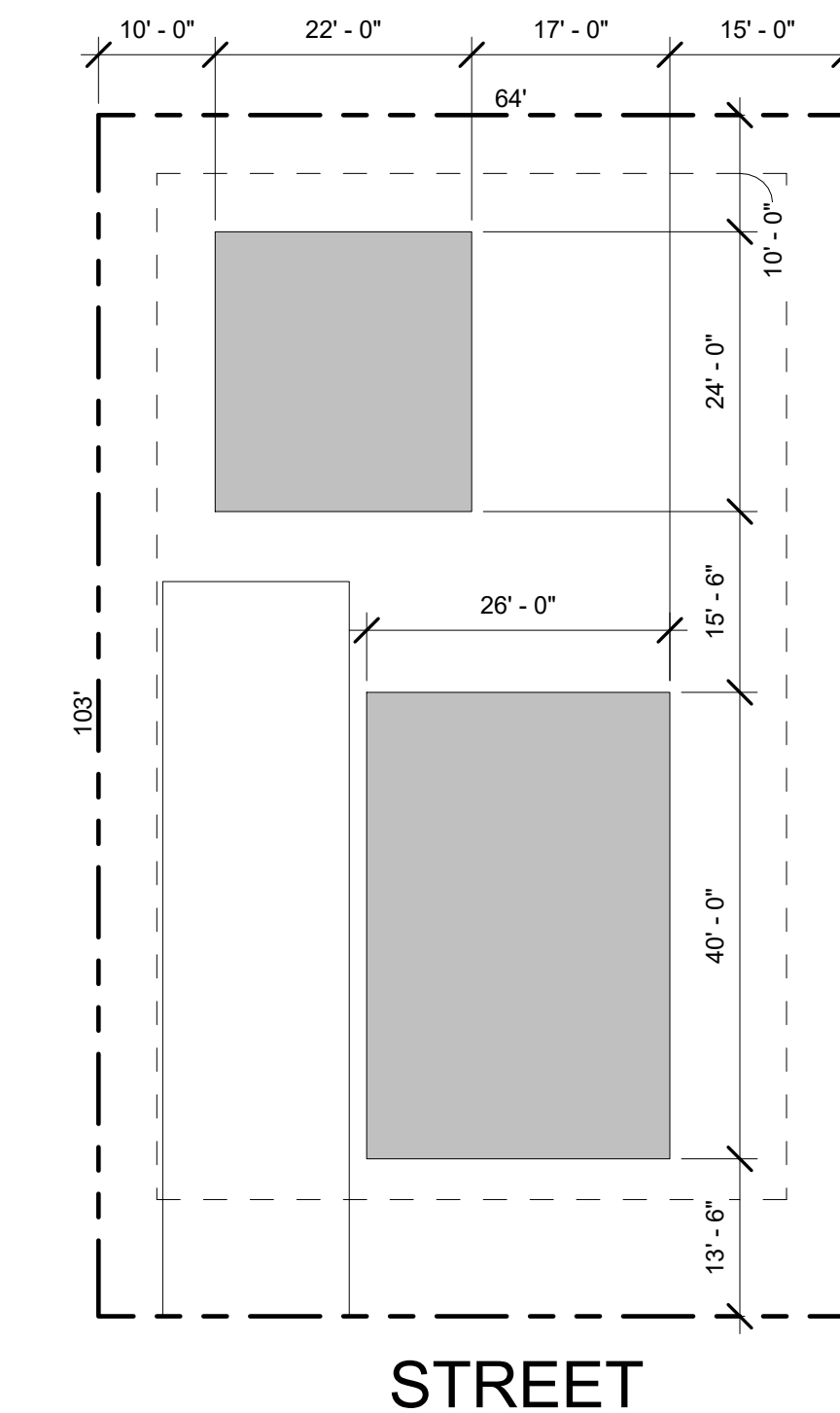
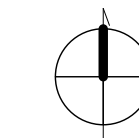
### SITE PLAN CHECKLIST

- DRAWING SCALE**   
SITE PLAN SHOULD BE DRAWN TO A MEASURABLE SCALE.
- PROPERTY LINES**   
SHOW OUTLINE OF PROPERTY USING DASHED LINE IN LEGEND
- LABEL YARDS**   
LABEL FRONT, REAR, SIDE YARDS, AS WELL AS DRIVEWAYS, PATHWAYS AND ANY OTHER HARDSCAPE.
- SETBACKS**   
DIMENSION THE DISTANCE BETWEEN BUILDINGS AND PROPOERTY LINES, AS WELL AS BUILDINGS TO OTHER STRUCTURES, (SETBACKS TO PROPERTY LINE OR OTHER STRUCTURES SHALL BE 4' MINIMUM)
- EASEMENTS (IF APPLICABLE)**   
REFER TO LEGEND. MAY INCLUDE UTILITY R.O.W.
- LOCATION OF EXISTING UTILITIES**   
UTILITIES, POLES, SWERE DRAINS, ELECTRICAL, GAS METERS AND LINES AND ANY PHOTOVOLTATIC.
- LABEL STREETS & SIDEWALKS**
- LABEL ADU AND ADDRESS LOCATION**   
ADU WILL HAVE SAME ADDRESS AS THE PRIMARY RESIDENCE, AND THE LETTER SHALL BE VISIBLE FROM THE STREET.
- FOOTPRINT OF EXISTING BUILDING**   
THIS INCLUDES ALL STRUCUTRES/PORCHES/GAZEBOS
- FOOTPRINT OF PROPOSED ADU**   
REFER TO LEGEND FOR FOOTPRINT AT 10'=1" SCALE
- DIMENSION BUILDING SEPARATION**   
DIMENSION THE DISTANCE BETWEEN THE PROPOSED ADU AND ANY EXISTING STRUCTURES

CONSULTANT

AGENCY

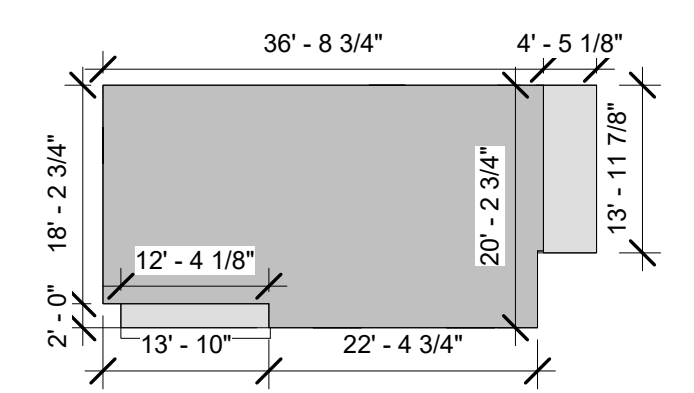
SITE PLAN (TO BE PROVIDED BY APPLICANT)



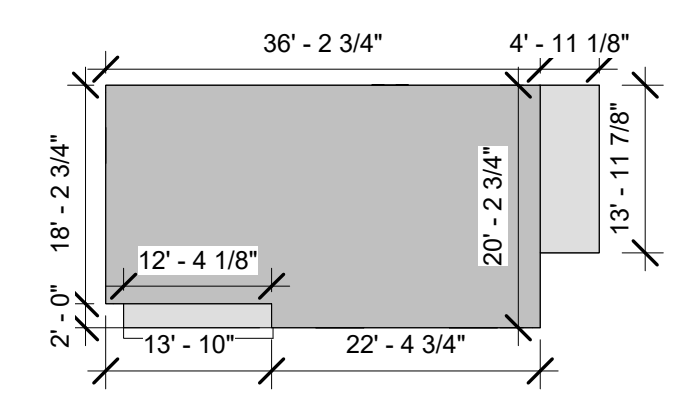
**1 EXAMPLE SITE PLAN**  
A1-201 | AS-103 | SCALE: 1/16" = 1'-0"

### SITE PLAN LEGEND

- PROPERTY LINE
- SETBACK
- EASTMENT
- ACCESSIBLE PATH OF TRAVEL  
(SHALL BE 48" MIN. CBC 11B-403.5)
- CONCRETE PAVING
- LANDSCAPE AREA. REFER TO LANDSCAPE DRAWINGS.



**3 PLAN 3 - HIGH DESERT**  
A1-201 | AS-103 | SCALE: 1/16" = 1'-0"



**2 PLAN 3 - RURAL MOUNTAIN**  
A1-201 | AS-103 | SCALE: 1/16" = 1'-0"

**MONO COUNTY ADU  
PROTOTYPES**  
MONO COUNTY  
ARCHITECTURAL SITE PLAN -  
PLAN 3

NO.	REVISION	DATE
△		
△		
△		
△		
△		

**PROJECT MANAGER**  
RR

**DRAWN BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_

**DATE**  
6/30/2022

**PROJECT NUMBER**  
2340-01-CU21

**SHEET**

**AS-103**

**FLOOR PLAN GENERAL NOTES**

- REFER TO GENERAL NOTES SHEET G-101 AND G-102 FOR ADDITIONAL REQUIREMENTS.
- REFER TO STRUCTURAL PLANS FOR FURTHER INFORMATION.
- REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION IF PROVIDED.
- REFER TO MECHANICAL PLANS, DRAWINGS OR REPORTS FOR FURTHER INFORMATION.
- ALL FURNITURE AND EQUIPMENT IS BY OWNER AND IS SHOWN FOR COORDINATION PURPOSES ONLY.
- DIMENSIONS ARE TO FACE OF FRAMING UNLESS SPECIFICALLY NOTED OTHERWISE.
- PROVIDE ADEQUATE BLOCKING IN WALLS FOR CABINETS AND OTHER WALL MOUNTED ACCESSORIES INCLUDING BUT NOT LIMITED TO HANDRAILS, SHELVING AND BATHROOM FIXTURES.
- PROVIDE FIREBLOCKING FOR WALL CAVITIES THAT EXCEED 2019 CBC HEIGHT LIMITATIONS.
- DOOR AND WINDOW DIMENSIONS ARE CENTERED AT OPENINGS.
- WHERE DOOR IS LOCATED WITHOUT DIMENSION AT THE CORNER OF A ROOM IT SHALL BE 4" FROM FACE OF FRAMING OF ADJACENT WALL TO ROUGH DOOR OPENING.
- WHERE RECESSED FIXTURES OCCUR IN WALLS OR HORIZONTAL ASSEMBLIES, THE FIRE RATING OF THOSE ASSEMBLIES SHALL BE MAINTAINED.
- AT ALL PENETRATIONS AND INTERSECTIONS OF FIRE-RATED PARTITIONS, PROVIDE FIRE SEALANT AND/OR FIRE STOPPING TO MAINTAIN CONTINUITY OF PARTITION RATING.

**LEGEND**

- EXTERIOR** - 5/8" WOOD STUD W/ PLYWOOD SHEATHING AND EXTERIOR FINISH (REFER TO ELEVATIONS), ONE LAYER 5/8" TYPE X GYPSUM WALL BOARD INTERIOR.
- INTERIOR** - 3/4" WOOD STUD W/ ONE LAYER 5/8" TYPE X GYPSUM WALL BOARD EACH SIDE.

**DOOR GENERAL NOTES**

- REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS
- REFER TO PLANS FOR LOCATION OF DOORS.
- VERIFY ROUGH OPENING SIZE WITH DOOR MANUFACTURER SPECIFICATIONS PRIOR TO CONSTRUCTION.
- CONTRACTOR TO VERIFY ACTUAL DOOR SIZE TO FIT FINISH OPENING PRIOR TO FABRICATION OF DOOR AND FINISH OPENING.
- INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.
- EXTERIOR DOORS SHALL EITHER HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 20-MINUTES OR SHALL BE CONSTRUCTED OF SOLID CORE WOOD THAT COMPLES WITH THE FOLLOWING REQUIREMENTS:
  - A. STILES AND RAILS SHALL NOT BE LESS THAN 1-3/8" THICK.
  - B. PANELS SHALL NOT BE LESS THAN 1-1/4" THICK, EXCEPT FOR THE EXTERIOR PERIMETER OF THE PANEL SHALL BE PERMITTED TO TAPER TO A TONGUE OF NOT LESS THAN 3/8" THICK.
- REFER TO DOOR TYPES LEGEND FOR GLAZING.
- REFER TO T24 REPORT FOR GLAZING ENERGY REQUIREMENTS.
- GLAZING IN DOORS SHALL BE TEMPERED PER SECTION R308.4.1.

**DOOR REMARKS**

- FIRE RATED DOOR. REFER TO GENERAL DOOR NOTE #5
- GLAZING PER DOOR TYPES. TEMPERED.
- PROVIDE 100 SQ INCHES OF VENTING IN DOOR OR BY OTHER APPROVED MEANS.
- OPTIONAL DOOR.
- OPTIONAL GLAZING IN DOOR. TEMPERED (BOTH PANES).

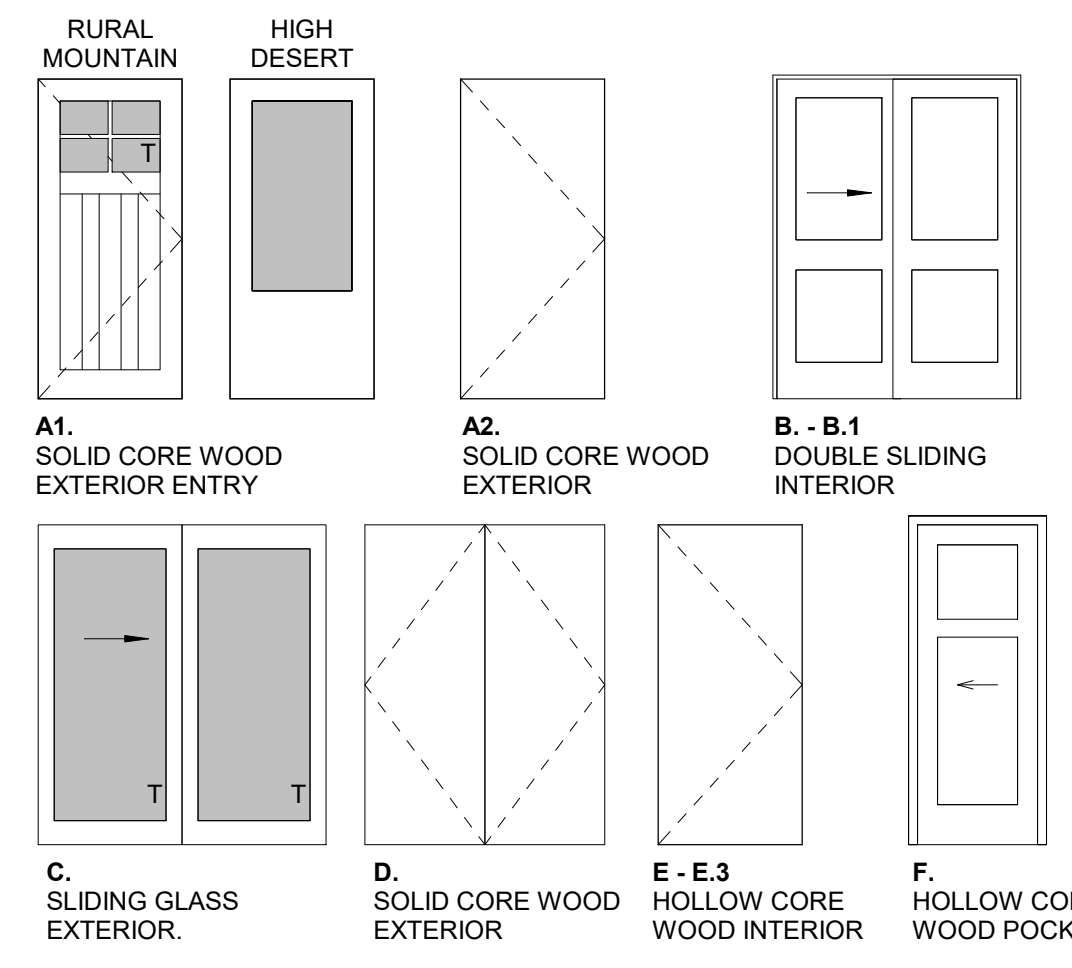
**DOOR SCHEDULE**

SCHEDULE-DOOR PLAN 3			
TYPE	DOOR		REMARKS
	WIDTH	HEIGHT	
A1	3'-0"	6'-8"	
B	4'-0"	6'-8"	
C	6'-0"	6'-8"	
E.1	2'-8"	6'-8"	
E.2	2'-6"	6'-8"	

SCHEDULE-DOOR PLAN 3 ADA			
TYPE	DOOR		REMARKS
	WIDTH	HEIGHT	
A1	3'-0"	6'-8"	
B	4'-0"	6'-8"	
C	6'-0"	6'-8"	
E	3'-0"	6'-8"	
E.2	2'-6"	6'-8"	

**DOOR LEGEND**



**KEYNOTES**

- A05 REFRIGERATOR LOCATION PER OWNER. PROVIDE ROUGH PLUMBING FOR ICE MAKER (RECESS IN WALL).
- A06 STACKED WASHER/DRYER MACHINE LOCATION. PROVIDE WASTE AND WATER IN RECESSED WALL BOX. PROVIDE DRYER VENT. VENT TO OUTSIDE AIR.
- A12 24" WIDE FREE STANDING ELECTRIC RANGE OVEN. PROVIDE VENT HOOD. VENT TO EXTERIOR, STAINLESS STEEL.
- A15 FRONT LOADING WASHER. PROVIDE WASTE AND WATER IN RECESSED WALL BOX.
- A16 MICROWAVE OVER RANGE.
- A19 FRONT LOADING DRYER W/ RECESSED DRYER VENT BOX. PROVIDE DRYER VENT. VENT TO OUTSIDE AIR.
- B01 30" SINGLE COMPARTMENT UNDER-MOUNT KITCHEN SINK W/ GARBAGE DISPOSAL. REFER TO WATER EFFICIENCY REQUIREMENTS ON CALGREEN CODE NOTES SHEET.
- B04 LAVATORY SINK. REFER TO WATER EFFICIENCY REQUIREMENTS ON CALGREEN CODE NOTES SHEETS.
- B05 WATER CLOSET. REFER TO WATER EFFICIENCY REQUIREMENTS ON CALGREEN CODE NOTES SHEETS.
- B06 30" x 60" x 72" TUB AND SHOWER COMBINATION. MODEL BY BUILDER. PROVIDE SHOWER ROD.
- B14 50 GALLON TANK TYPE ELECTRIC WATER HEATER. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION.
- B18 EXTERIOR RATED ELECTRIC SUB PANEL 80 AMP 120/240 VOLT. CONTRACTOR TO VERIFY MAIN PANEL.
- B38 WALL-MOUNTED MULTI-ZONE HEAT PUMP CONDENSING UNIT. REFER TO PLANS FOR LOCATION OF INDOOR FAN COIL UNITS. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION.
- B41 FAN COIL. REFER TO PLANS FOR LOCATION OF OUTDOOR CONDENSING UNIT. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION. PROVIDE OUTLET.
- B43 ACCESSIBLE WALL MOUNTED LAVATORY SINK. MAX HEIGHT 34". REFER TO WATER EFFICIENCY REQUIREMENTS ON CALGREEN CODE NOTES SHEETS.
- C01 SINGLE WOOD SHELF AND POLE.
- C04 LINEN CABINET AT 36" ABOVE FINISH FLOOR.
- C08 12" DEEP UPPER CABINET.
- C10 24" DEEP UPPER CABINET.
- C12 34 1/2" HIGH BASE CABINET AND COUNTERTOP.
- C13 30" HIGH BASE CABINET AND COUNTERTOP.
- G02 AT [SLAB ON GRADE] CONCRETE FLATWORK. 1/4"/FT SLOPE AWAY FROM BUILDING. AT [RAISED FOUNDATION] 2X COMPOSITE IGNITION RESISTANT DECKING, TREX OR EQUAL, OVER 4X6 PT WOOD JOISTS @ 16" O.C. REFER TO DETAILS 41, 51, 52, 54 SHEET AD-902.

**WINDOW GENERAL NOTES**

- REFER TO GENERAL NOTES ON SHEET G-101 FOR ADDITIONAL REQUIREMENTS.
- REFER TO FLOOR PLANS FOR WINDOW LOCATIONS.
- CONTRACTOR TO VERIFY EXACT ROUGH OPENING SIZES PRIOR TO FABRICATION OF ROUGH OPENINGS.
- INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.
- REFER TO ENERGY COMPLIANCE REPORTS FOR U-FACTOR, SHGC AND ADDITIONAL WINDOW REQUIREMENTS.
- ALL GLAZING IS DOUBLE PANE WITH A MINIMUM OF ONE TEMPERED PANE UNLESS OTHERWISE NOTED.
- EGRESS WINDOWS SHALL HAVE A CLEAR OPENING WITH A MAX. SILL HEIGHT OF 44" AFF. MIN NET CLEAR OPENING FOR EMERGENCY ESCAPE SHALL BE 5.7 S.F. EXCEPTION: MIN 5 S.F. AT GROUND FLOOR, MINIMUM NET CLEAR OPENING DIMENSIONS: HEIGHT: 24", WIDTH: 20".

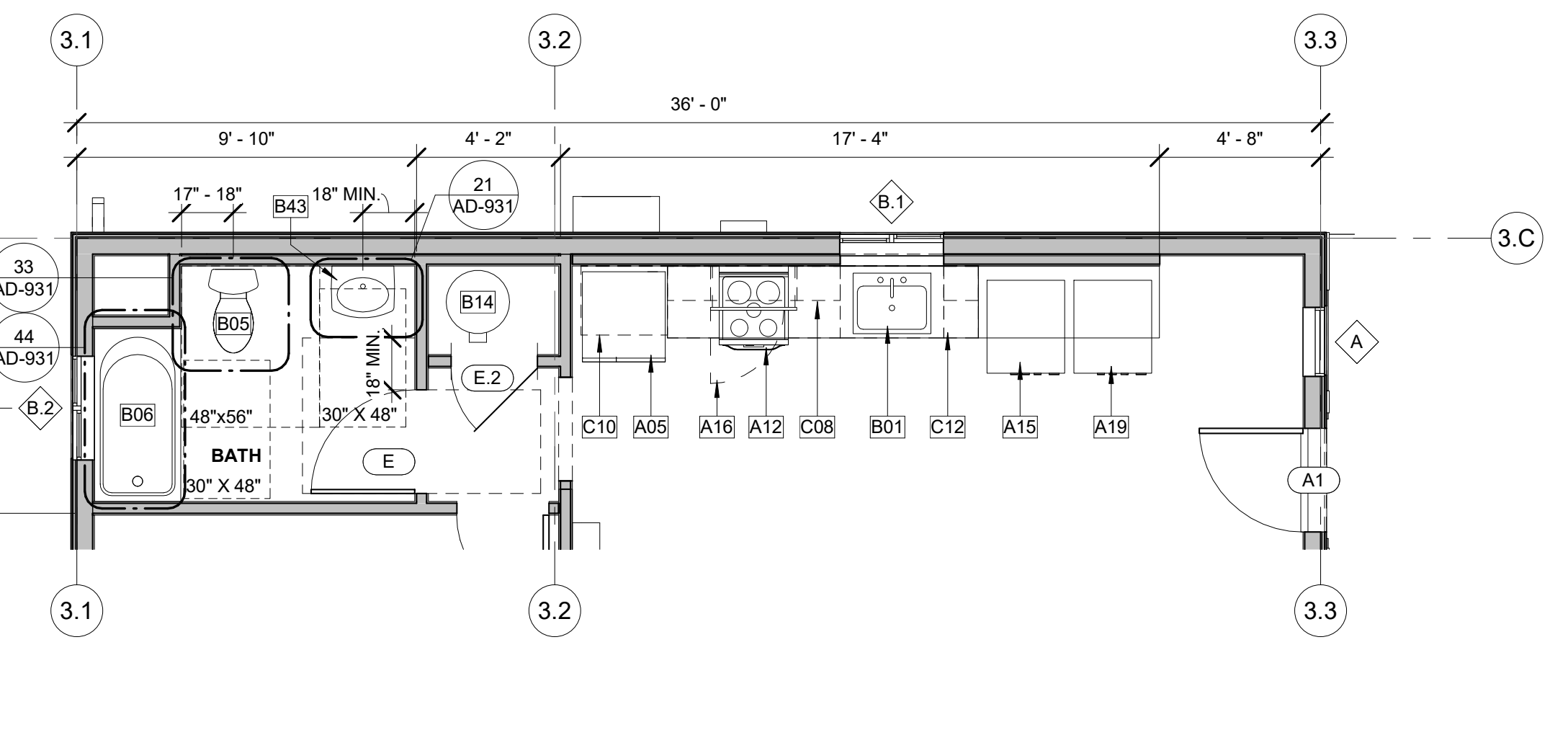
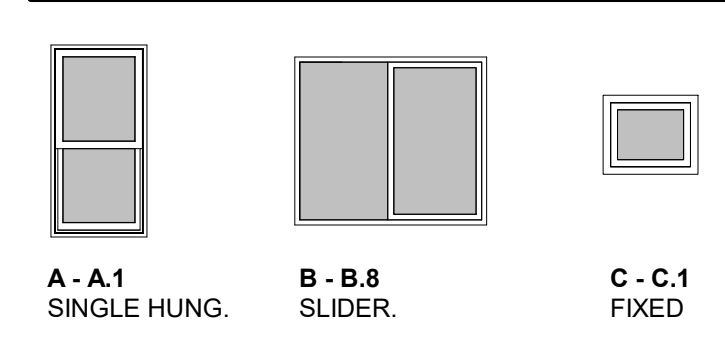
**WINDOW REMARKS**

- REQUIRED EGRESS WINDOW. REFER TO GENERAL NOTE #7 FOR ADDITIONAL INFORMATION.
- HAZARDOUS LOCATION. WINDOW INCLUDES BOTH PANES TEMPERED GLAZING.
- HIGH WINDOW. REFER TO ELEVATIONS FOR LOCATION.

**WINDOW SCHEDULE**

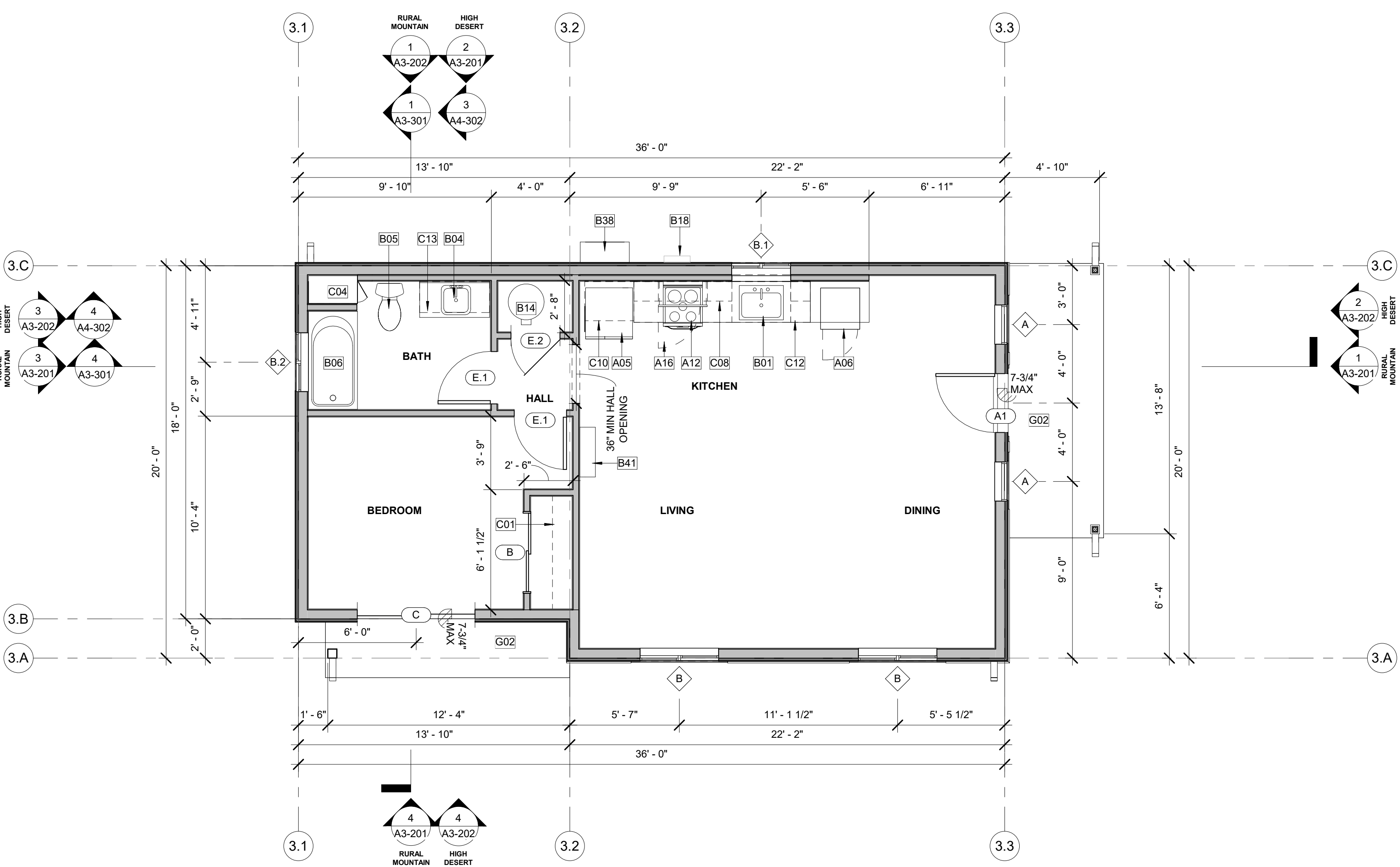
SCHEDULE-WINDOW PLAN 3 (HIGH DESERT & RURAL MOUNTAIN)						
NO.	TYPE	COUNT	SIZE		HEAD HEIGHT	REMARKS
			WIDTH	HEIGHT		
PLAN 3	A	2	2'-0"	4'-0"	6'-8"	2
PLAN 3	B	2	4'-0"	4'-0"	6'-8"	
PLAN 3	B.1	1	3'-0"	3'-0"	6'-8"	
PLAN 3	B.2	1	3'-0"	2'-0"	6'-8"	2

**WINDOW LEGEND**



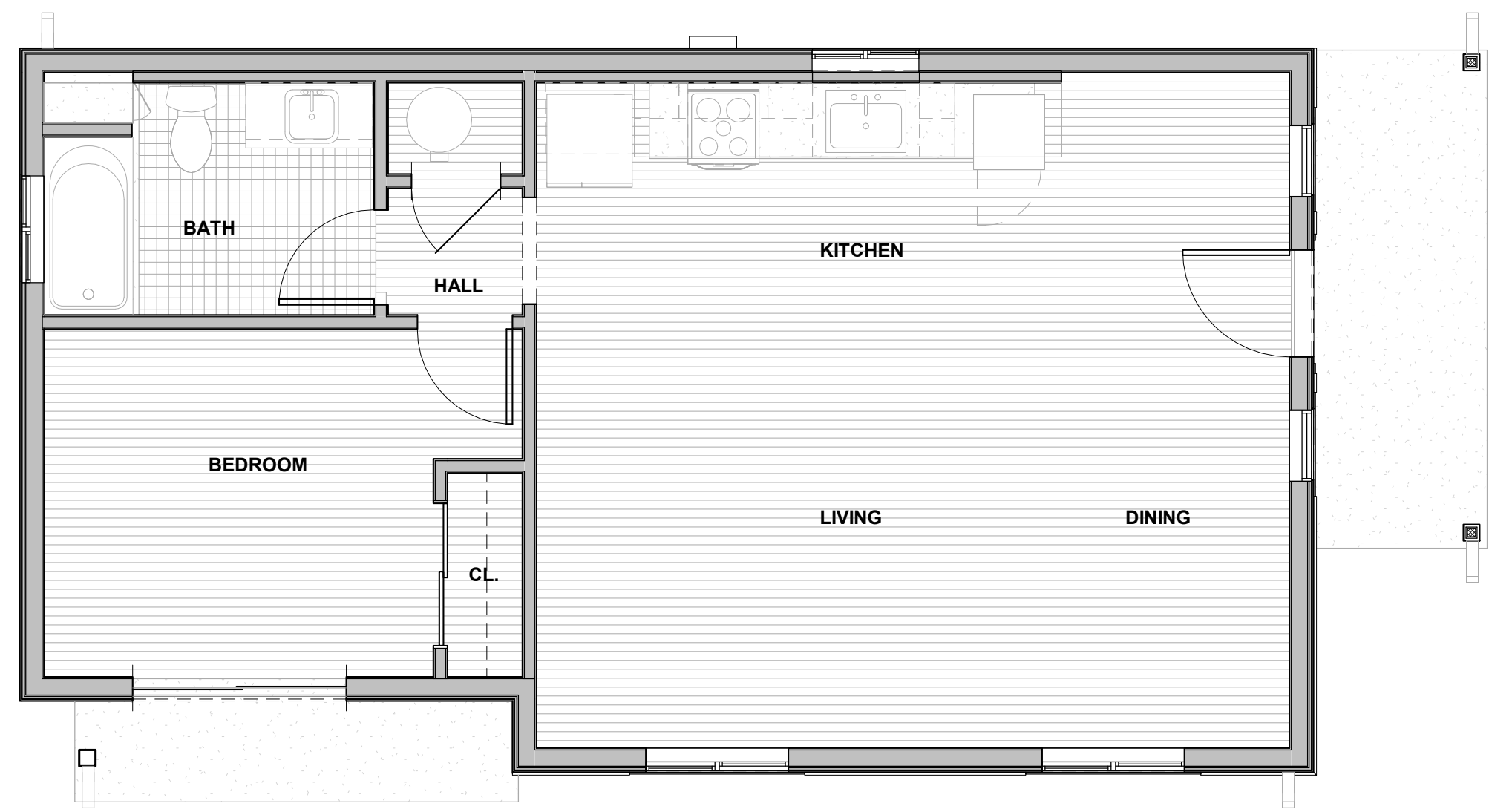
**3 OPT. ADAPTABLE BATH**

A1-201 | A3-101 SCALE: 1/4" = 1'-0"



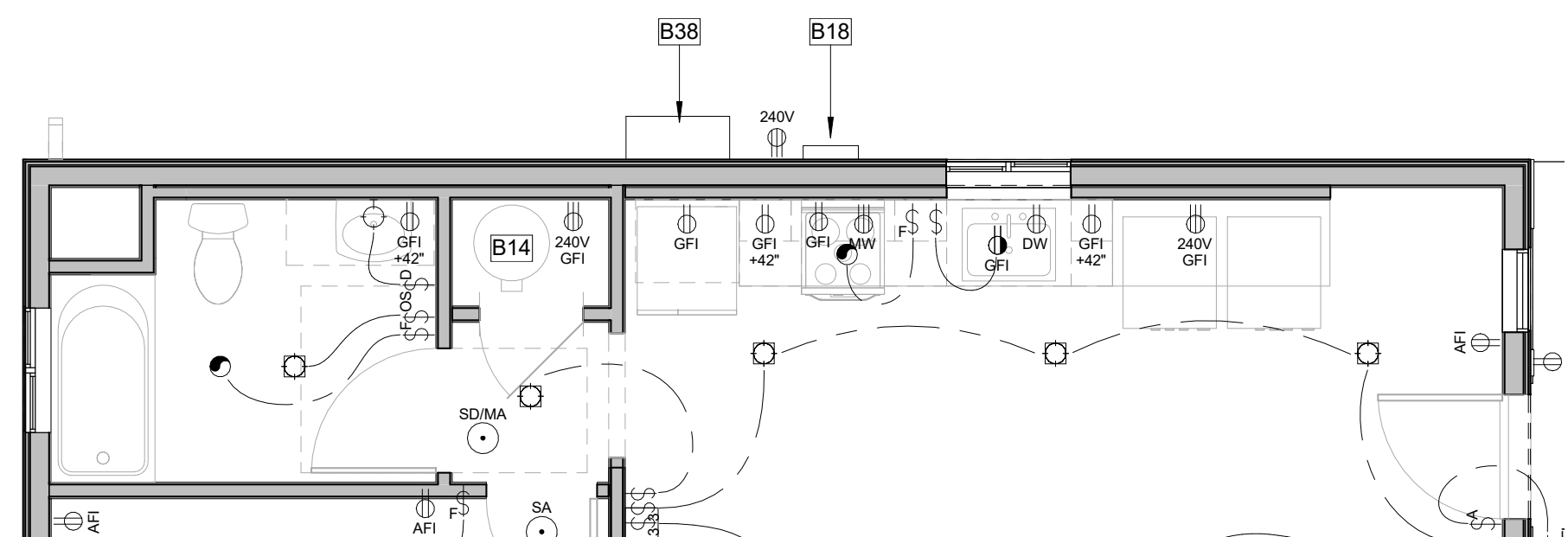
**2 PLAN 3 - GROUND FLOOR PLAN**

A1-201 | A3-101 1/4" = 1'-0"



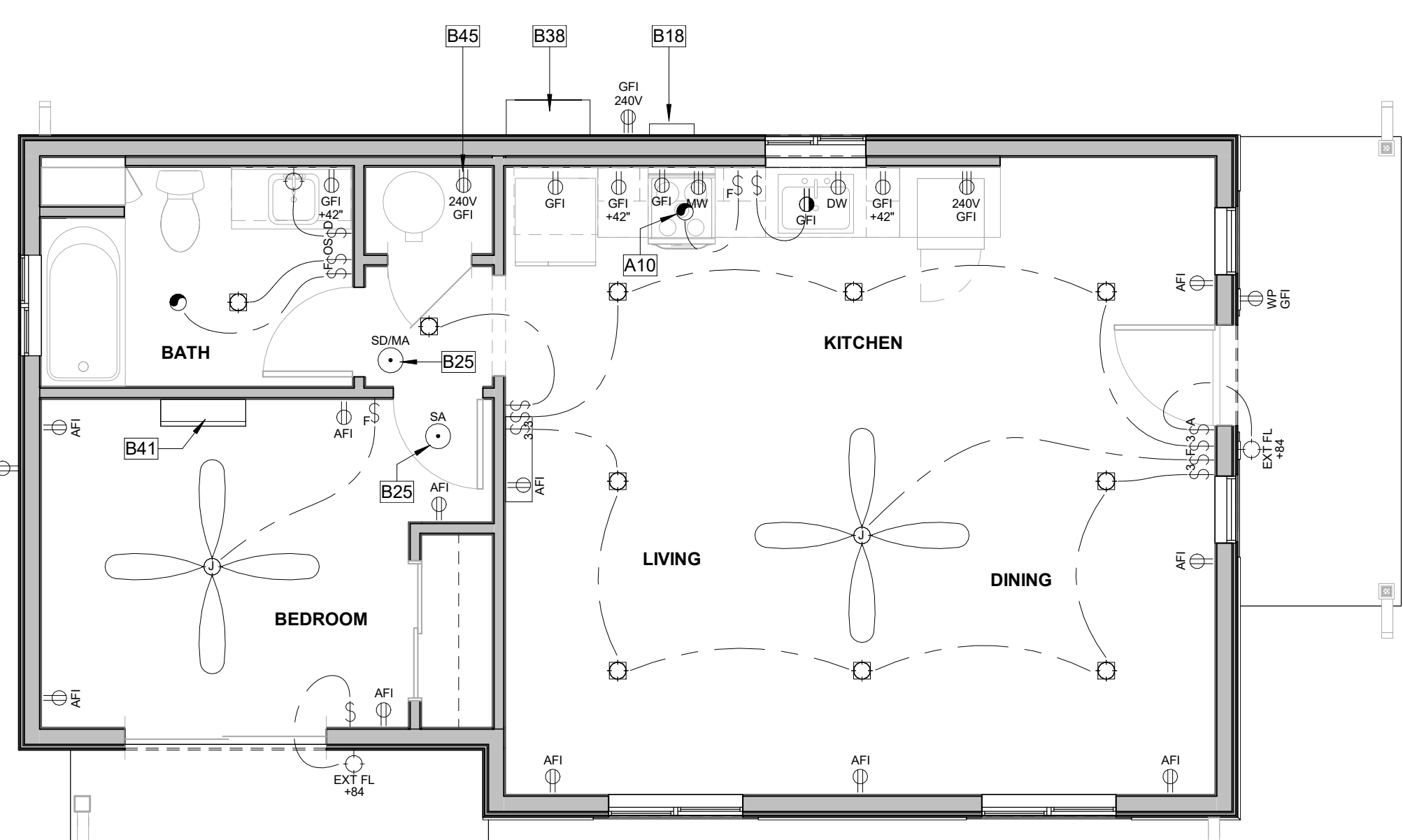
**3 PLAN 3 - GROUND FLOOR FINISH PLAN**

A1-201 | A3-111 | SCALE: 1/4" = 1'-0"



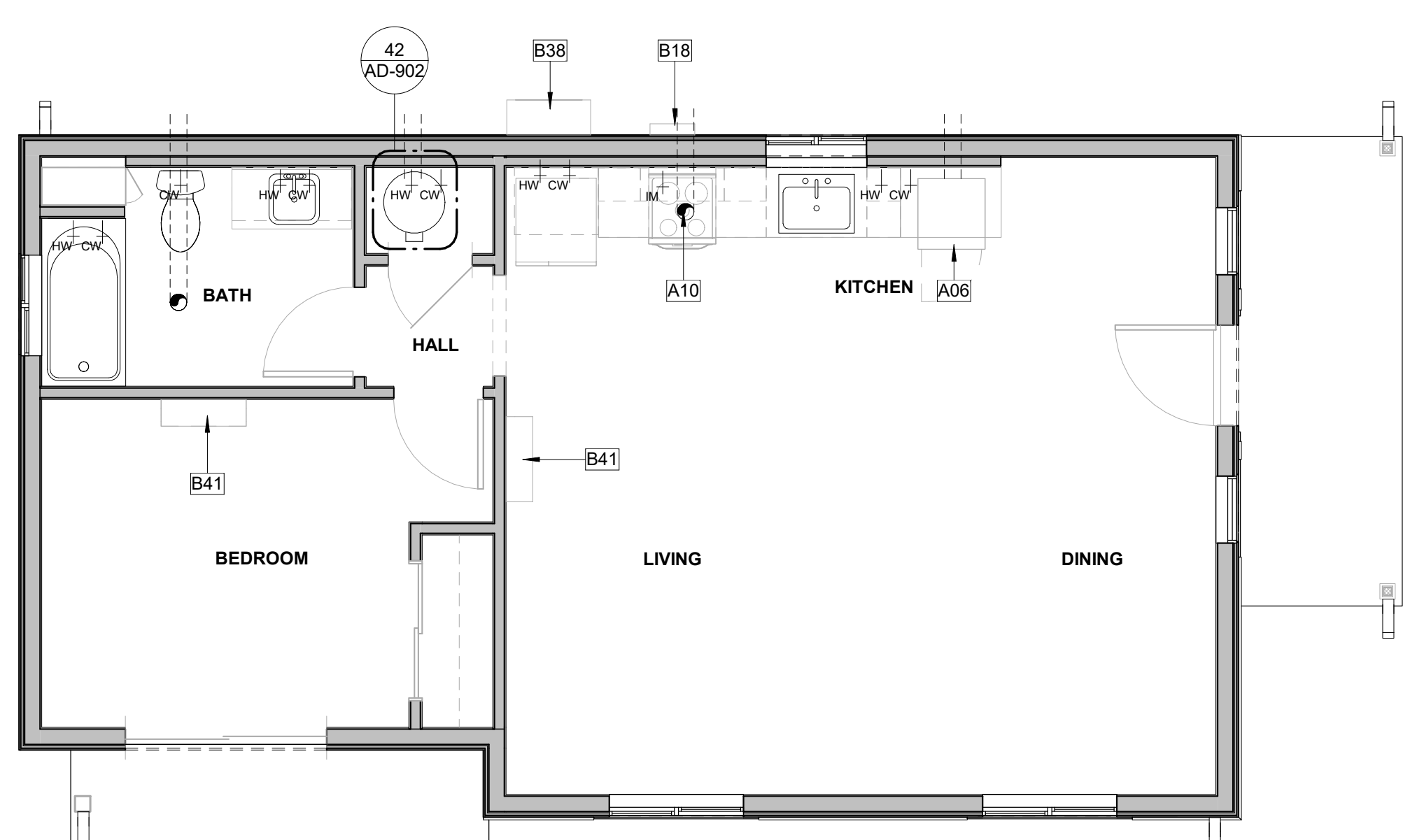
**4 OPT. ADAPTABLE BATH - ELECTRICAL**

A1-201 | A3-111 | SCALE: 1/4" = 1'-0"



**1 PLAN 3 - ELECTRICAL**

A1-201 | A3-111 | SCALE: 1/4" = 1'-0"



**2 PLAN 3 - MECHANICAL**

A1-201 | A3-111 | SCALE: 1/4" = 1'-0"

**FINISH PLAN GENERAL NOTES**

1. REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS.
2. REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION.
3. REFER TO PLUMBING PLANS FOR FURTHER INFORMATION.
4. REFER TO DETAILS FOR FLOOR/CEILING ASSEMBLIES AND INTERIOR FINISH DETAILS.
5. ALL HARD SURFACE FLOORING SHALL BE SLIP RESISTANT AND MEET THE **ANSI A326.3** STANDARD FOR MEASURING THE DYNAMIC COEFFICIENT OF FRICTION (DCOF).
6. ALL FLOORING MATERIALS SHALL COMPLY WITH **2019 CBC SEC. 804.1**.
7. ALL WALL AND CEILING FINISHES SHALL COMPLY WITH **2019 CBC TABLE 803.13** FOR MAXIMUM FLAME SPREAD AND SMOKE DENSITY.

**FINISH SCHEDULE**

FINISH SCHEDULE 3					
NUMBER	NAME	FLOOR	CEILING	BASE	NOTES
116	LIVING	LVT	GWB		
117	W.I.C.	CPT	GWB		
118	CL	LVT	GWB		
119	CL	LVT	GWB		
120	BATH	CT	GWB		
121	BEDROOM 2	CPT	GWB		
122	W.I.C.	CPT	GWB		
123	BEDROOM 1	CPT	GWB		

**FINISH LEGEND**

- LUXURY VINYL PLANK (LVP)
- CERAMIC TILE (CT)
- CONCRETE (EC)

**LEGEND**

- EXTERIOR - 5 1/2" WOOD STUD W/ PLYWOOD SHEATHING AND EXTERIOR FINISH (REFER TO ELEVATIONS), ONE LAYER 5/8" TYPE X GYPSUM WALL BOARD INTERIOR.
- INTERIOR - 3 1/2" WOOD STUD W/ONE LAYER 5/8" TYPE X GYPSUM WALL BOARD EACH SIDE.

**GENERAL ELECTRICAL NOTES**

1. REFER TO ELECTRICAL NOTES ON SHEET G-101.

**KEYNOTES**

- A06 STACKED WASHER/DRYER MACHINE LOCATION. PROVIDE WASTE AND WATER IN RECESSED WALL BOX. PROVIDE DRYER VENT. VENT TO OUTSIDE AIR.
- A10 (50) CFM MIN. INTERMITTENT VENTILATION HOOD.
- B14 50 GALLON TANK TYPE ELECTRIC WATER HEATER. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION.
- B18 EXTERIOR RATED ELECTRIC SUB PANEL 80 AMP 120/240 VOLT. CONTRACTOR TO VERIFY MAIN PANEL.
- B25 SMOKE ALARM OR SMOKE DETECTOR SHALL BE INSTALLED A MINIMUM OF 20 FEET HORIZONTAL DISTANCE FROM A PERMANENTLY INSTALLED COOKING APPLIANCE AND 3 FEET AWAY FROM PATH OF CEILING FAN BLADES. EXCEPTION: IONIZATION SMOKE ALARMS WITH AN ALARM SILENCING SWITCH OR PHOTOELECTRIC SMOKE ALARMS SHALL BE PERMITTED TO BE INSTALLED 10 FEET OR GREATER FROM A PERMANENTLY INSTALLED COOKING APPLIANCE. PHOTOELECTRIC SMOKE ALARMS SHALL BE PERMITTED TO BE INSTALLED GREATER THAN 6 FEET FROM PERMANENTLY INSTALLED COOKING APPLIANCE WHERE KITCHEN AND ADJACENT SPACES HAVE NO CLEAR INTERIOR PARTITIONS AND THE 10 FOOT DISTANCE WOULD PROHIBIT PLACEMENT OF A SMOKE ALARM OR SMOKE DETECTOR REQUIRED BY OTHER SECTIONS OF THE CODE. SMOKE ALARMS SHALL BE LISTED FOR USE IN CLOSE PROXIMITY TO A PERMANENTLY INSTALLED COOKING APPLIANCE. PER CRC R314.3.3 ITEM 4.
- B38 WALL-MOUNTED MULTI-ZONE HEAT PUMP CONDENSING UNIT. REFER TO PLANS FOR LOCATION OF INDOOR FAN FAN COIL UNITS. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION.
- B41 FAN COIL. REFER TO PLANS FOR LOCATION OF OUTDOOR CONDENSING UNIT. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION. PROVIDE OUTLET.
- B45 OUTLET SERVING WATER HEATER SHALL BE ACCESSIBLE TO THE WATER HEATER WITH NO OBSTRUCTION. LOCATE OUTLET AT 72" A.F.F.

**VENTILATION SUMMARIES**

PER ASHRAE Standard 62.2, Table 7.1 (Prescriptive Duct Sizing Requirements) (Table 7.1 Assumes no elbows. Deduct 15-feet of allowable duct length for each turn, elbow or fitting. Fan rating cfm @ 0.25 in w.g., and rated at less than one size.)

**LOCAL VENTILATION RATE SUMMARY - BATHROOM(S)**  
Bathroom Minimum Fan Flow (cfm) = 50 cfm  
Per Table 7.1, Duct Size = 4" Diameter; Flex Duct  
Maximum Allowable Duct Length (ft) = 70'

**LOCAL VENTILATION RATE SUMMARY - KITCHEN**  
Kitchen Minimum Fan Flow (cfm) = 100 cfm  
Per Table 7.1, Duct Size = 5" Diameter; Smooth Duct  
Maximum Allowable Duct Length (ft) = 85 Feet

**LOCAL VENTILATION RATE SUMMARY - WHOLE BUILDING**  
Per ASHRAE Standard 62.2 Equation 4.1(a)

EXHAUST DUCT SIZE  
Qcfm = .01(floor area) + 7.5 (# of bedrooms + 1)  
**1-BEDROOM**  
Qcfm = .01(692) + 7.5 (1 + 1)  
Qcfm = 21.92

DUCT SIZE PER ASHRAE TABLE 7.1  
REFER TO LEGEND FOR WHOLE HOUSE FAN (WH)

**CONTINUOUS FAN FLOW (CFM) = 50 CFM**  
Per Table 7.1, Duct Size = 4" Diameter; Smooth duct  
Maximum Allowable Duct Length (ft) = 35'  
OR  
Per Table 7.1, Duct Size = 4" Diameter; FLEX DUCT  
Maximum Allowable Duct Length (ft) = 70'

**LEGEND**

- ELECTRICAL SWITCH
- ELECTRICAL SWITCH-THREE WAY
- ELECTRICAL SWITCH-FOUR WAY
- ELECTRICAL SWITCH-DIMMER
- ELECTRICAL SWITCH-FAN
- ASTRONOMICAL TIME SWITCH
- EXHAUST FAN
- EXHAUST FAN/LIGHT COMBINATION
- PENDANT LIGHT
- SURFACE MOUNTED HIGH-EFFICACY LIGHT
- WALL MOUNTED LIGHT
- WALL MOUNTED HIGH-EFFICACY LIGHT
- RECESSED DOWNLIGHT
- RECESSED HIGH-EFFICACY DOWNLIGHT
- RECESSED DOWNLIGHT-VAPOR PROOF
- ELECTRICAL SWITCH
- SMOKE DETECTOR/ALARM
- COMBINATION SMOKE/CARBON MONOXIDE
- DOOR BELL CHIME
- DOOR BELL CHIME
- DOOR BELL CHIME
- DOOR BELL CHIME
- TELEPHONE LOCATION
- CABLE TELEVISION LOCATION
- ELECTRICAL JUNCTION BOX
- DUPLEX OUTLET ARC-FAULT CIRCUIT INTERRUPTER
- DUPLEX OUTLET 240 VOLTS
- DUPLEX OUTLET GROUND FAULT INTERRUPTER 120 VOLTS
- DUPLEX OUTLET GROUND FAULT INTERRUPTER
- DUPLEX OUTLET WATERPROOF GROUND FAULT INTERRUPTER
- DUPLEX OUTLET GFCI-HALF HOT
- DUPLEX OUTLET MICROWAVE
- DUPLEX OUTLET DISH WASHER
- COLD WATER STUB OUT
- HOT WATER STUB OUT
- WATER HOSE BIBB
- WATER HOSE BIBB WITH SHUT OFF VALVE
- ICE MACHINE STUB OUT
- GAS STUB OUT
- SURFACE MOUNTED HIGH-EFFICACY LIGHT
- UNDER CABINET HIGH-EFFICACY LIGHT
- 22"X30" MIN. CEILING ACCESS PANEL
- FAN COIL. PROVIDE DEDICATED 120V OUTLET

**MONO COUNTY ADU PROTOTYPES**  
 MONO COUNTY  
**MECHANICAL & ELECTRICAL PLANS**

NO.	REVISION	DATE

**PROJECT MANAGER**  
RR

**DRAWN BY**      **CHECKED BY**

**DATE**  
6/30/2022

**PROJECT NUMBER**  
2340-01-CU21

**SHEET**  
A3-111

## ROOF VENTING CALCULATIONS

**UPPER VENTS:** O'HAGIN TAPERED LOW PROFILE STANDARD LINE  
72.0 SQ. IN. OF AIR MOVEMENT PER VENT = 72. SQ. IN. / 144 = 0.5 SF

**LOWER VENTS:** O'HAGIN TAPERED LOW PROFILE STANDARD LINE  
72.0 SQ. IN. OF AIR MOVEMENT PER VENT = 72. SQ. IN. / 144 = 0.5 SF

"UPPER VENTS PROVIDED" = (TOTAL ATTIC AREA/300) \* (0.5) / (0.5 SF)

"LOWER VENTS PROVIDED" = (TOTAL ATTIC AREA/300) \* (0.5) / (0.5 SF)

ATTIC	AREA	REQUIRED ATTIC VENTING (NFA)	UPPER VENTING REQUIRED (NFA)	LOWER VENTING REQUIRED (NFA)
ATTIC - PLAN 3	786 SF	2.62 SF	1.31 SF	1.31 SF

CI	COUNT	VENT LENGTH	NET FREE AREA PER VENT	PROVIDED NET FREE AREA
LOWER O'HAGIN SHINGLE ROOF VENT (LOWER)	3	2' - 8"	0.50 SF	1.50 SF
UPPER O'HAGIN SHINGLE ROOF VENT (UPPER)	3	2' - 8"	0.50 SF	1.50 SF

## KEYNOTES

F03 30" X 30" MIN. ATTIC ACCESS. PROVIDED SWITCH AND OUTLET AT ATTIC FOR FAU. PERMANENTLY ATTACH R-38 OR GREATER INSULATION TO ATTIC ACCESS DOOR USING ADHESIVE OR MECHANICAL FASTENERS CENIC 150.0 (a)1. PROVIDE GASKETED ATTIC ACCESS TO PREVENT AIR LEAKAGE CENIC 150.0 (a)1.

## ROOF PLAN GENERAL NOTES

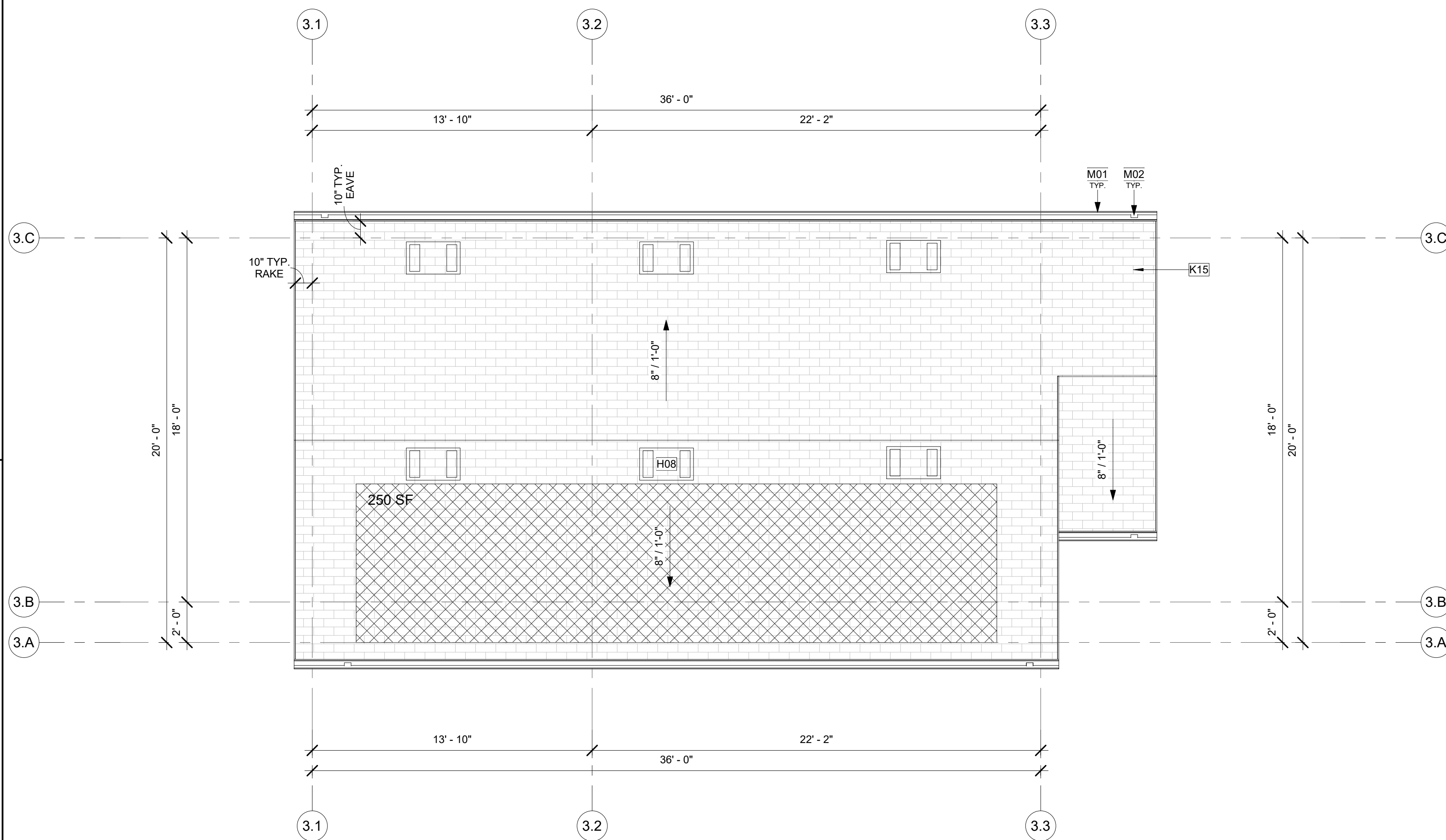
- REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS
- REFER TO STRUCTURAL PLANS FOR ROOF FRAMING INFORMATION INCLUDING MEMBER SIZES AND CONNECTION HARDWARE
- REFER TO MECHANICAL PLANS FOR ROOF MOUNTED EQUIPMENT LOCATIONS AND TYPES
- REFER TO ELECTRICAL PLANS FOR POWER DISTRIBUTION TO ROOF MOUNTED EQUIPMENT
- REFER TO PLUMBING PLANS ROOF VENT PENETRATIONS
- REFER TO SITE/GRADING PLAN FOR DOWNSPOUT DISCHARGE OR CONTINUATION
- PROVIDE A MINIMUM OF 1 INCH OF AIRSPACE BETWEEN THE INSULATION AND ROOF SHEATHING
- WHERE THE ROOF PROFILE ALLOWS A SPACE BETWEEN THE ROOF COVERING AND DECKING, THE SPACES SHALL BE CONSTRUCTED TO PREVENT THE INTRUSION OF FLAMES AND EMBERS, BE FIRESTOPPED WITH APPROVED MATERIALS OR HAVE ONE LAYER OF MINIMUM 72 POUND MINERAL-SURFACED NONPERFORATED CAP SHEET OVER THE COMBUSTIBLE DECKING
- ALL ROOFING MATERIALS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS
- OVERHANG DIMENSIONS ARE FROM FACE OF EXTERIOR WALL FRAMING TO ROOF EDGE
- ROOF COVERINGS AND UNDERLAYMENT SHALL BE APPLIED IN ACCORDANCE WITH (2019 CBC 1507.1), AND MANUFACTURER'S INSTALLATION INSTRUCTIONS
- WHERE PROVIDED, VENTILATION OPENINGS SHALL BE IN ACCORDANCE WITH (2019 CBC SECTION 1202). EXTERIOR OPENINGS INTO THE ATTIC SPACE SHALL BE COVERED WITH CORROSION-RESISTANT WIRE CLOTH SCREENING, HARDWARE CLOTH, PERFORATED VINYL OR SIMILAR MATERIAL. THE OPENINGS SHALL BE A MINIMUM OF 1/16" AND SHALL NOT EXCEED 1/4" PER (2019 CBC 1202.2.2)
- ROOF VENTS SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATIONS
- FURNISHED DIMENSIONS FOR VENTS ARE GUIDES ONLY. INSTALL PER MANUFACTURER'S SPECIFICATIONS AND ADJUST TO ACCOMMODATE TRUSS LOCATIONS, PLUMBING VENTS, AND SOLAR COLLECTORS. GREATER INSULATION TO ATTIC ACCESS DOOR USING ADHESIVE OR MECHANICAL FASTENERS CENIC 150.0 (a)1. PROVIDE GASKETED ATTIC ACCESS TO PREVENT AIR LEAKAGE CENIC 150.0 (a)1.

## LEGEND

- 10'-0" HEIGHT OF TOP OF ROOFING SURFACE
- 2' / 12" ROOF SLOPE (REFER TO PLANS FOR ACTUAL SLOPE)
- O'HAGIN ATTIC VENT, PAINT TO MATCH ROOF COLOR. (REFER TO EXTERIOR ELEVATIONS FOR COLORS AND MATERIALS.)
- WALL BELOW
- GUTTER, CONNECT TO DOWNSPOUT
- DOWNSPOUT, TO ROOF OR SPLASHBLOCK BELOW U.N.O.
- SOLAR ZONE. REFER TO SOLAR READY NOTES ON SHEET G-101.

CONSULTANT

AGENCY



**1** ROOF PLAN 3 - RURAL MOUNTAIN

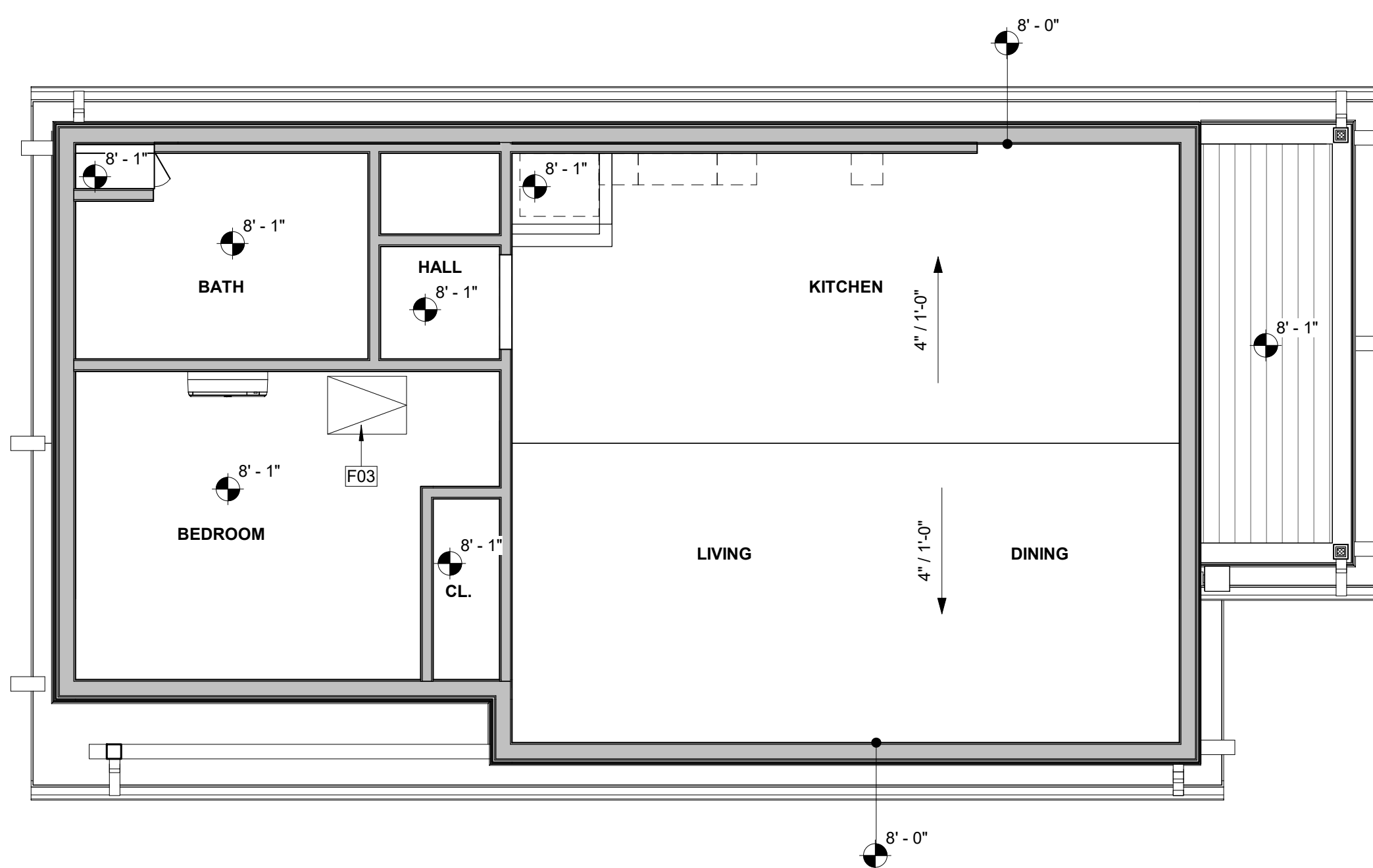
A3-121 1/4" = 1'-0"

## RCP GENERAL NOTES

- REFER TO GENERAL NOTES SHEET G-101 AND G-102 FOR ADDITIONAL REQUIREMENTS
- REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION
- REFER TO MECHANICAL PLANS FOR FURTHER INFORMATION
- REFER TO DETAILS FOR FLOOR/CEILING ASSEMBLIES
- HEIGHT OF CEILINGS SHALL BE MEASURED FROM TOP OF SLAB TO FINISH FACE OF GWB OR FACE OF CEILING GRID AS INDICATED ON THE REFLECTED CEILING PLAN, UNO.
- CONTRACTOR TO VERIFY DEPTH OF SOFFITS AND HOLD TIGHT TO PLUMBING, SPRINKLERS, ELECTRICAL AND MECHANICAL DUCTS

## LEGEND

- 10'-0" HEIGHT OF CEILING SURFACE (REFER TO PLANS FOR ACTUAL HEIGHT)
- 2' / 12" CEILING SLOPE (REFER TO PLANS FOR ACTUAL SLOPE)
- INTERIOR CEILING FINISH. REFER TO FINISH SCHEDULE.
- EXTERIOR 7/8" 3-COAT CEMENT PLASTER CEILING. 1HR FIRE-RESISTANCE PER CBC TABLE 721.1(1) ITEM 1-4.1
- EXTERIOR FIBER CEMENT BOARD CEILING. HARIE SOFFIT PANELS - BEADED PORCH PANEL OR EQ.



**2** GROUND FLOOR RCP 3 - RURAL MOUNTAIN

A1-201A3-121 1/4" = 1'-0"

**MONO COUNTY ADU  
PROTOTYPES**  
MONO COUNTY  
ROOF PLAN & RCP - RURAL  
MOUNTAIN

NO.	REVISION	DATE

**PROJECT MANAGER**  
RR

**DRAWN BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_

**DATE**  
6/30/2022

**PROJECT NUMBER**  
2340-01-CU21

**SHEET**

**A3-121**

### ROOF VENTING CALCULATIONS

**UPPER VENTS:** 14" x 17.5" VULCAN GABLE VENT  
86.0 SQ. IN. OF AIR MOVEMENT PER VENT = 86 SQ. IN. / 144 = 0.60 SF

14" x 12" VULCAN GABLE VENT  
58.0 SQ. IN. OF AIR MOVEMENT PER VENT = 58 SQ. IN. / 144 = 0.40 SF

**LOWER VENTS:** (3) 3" ROUND MESH FACE FIRE VULCAN VENTS IN EAVE BLOCKING  
12 SQ. IN. / 144 = 0.08 SF

"UPPER VENTS PROVIDED" = (TOTAL ATTIC AREA/300) \* (0.5) / (0.40 SF)

"LOWER VENTS PROVIDED" = (TOTAL ATTIC AREA/300) \* (0.5) / (0.08 SF)

ATTIC	AREA	REQUIRED ATTIC VENTING (NFA)	UPPER VENTING REQUIRED (NFA)	LOWER VENTING REQUIRED (NFA)
ATTIC - PLAN 3	786 SF	2.62 SF	1.31 SF	1.31 SF

CI	COUNT	VENT LENGTH	NET FREE AREA PER VENT	PROVIDED NET FREE AREA
LOWER				
(3) 3" HOLES (LOWER)	18	2' - 0"	0.08 SF	1.44 SF
UPPER				
14x12 VULCAN GABLE VENT (UPPER)	1	1' - 2"	0.40 SF	0.40 SF
14x17.5 VULCAN GABLE VENT (UPPER)	2	1' - 2"	0.60 SF	1.20 SF
				1.60 SF

### KEYNOTES

F03 30" X 30" MIN. ATTIC ACCESS. PROVIDED SWITCH AND OUTLET AT ATTIC FOR FAU. PERMANENTLY ATTACH R-38 OR GREATER INSULATION TO ATTIC ACCESS DOOR USING ADHESIVE OR MECHANICAL FASTENERS CEN 150.0 (a)1. PROVIDE GASKETED ATTIC ACCESS TO PREVENT AIR LEAKAGE CEN 150.0 (a)1.

### ROOF PLAN GENERAL NOTES

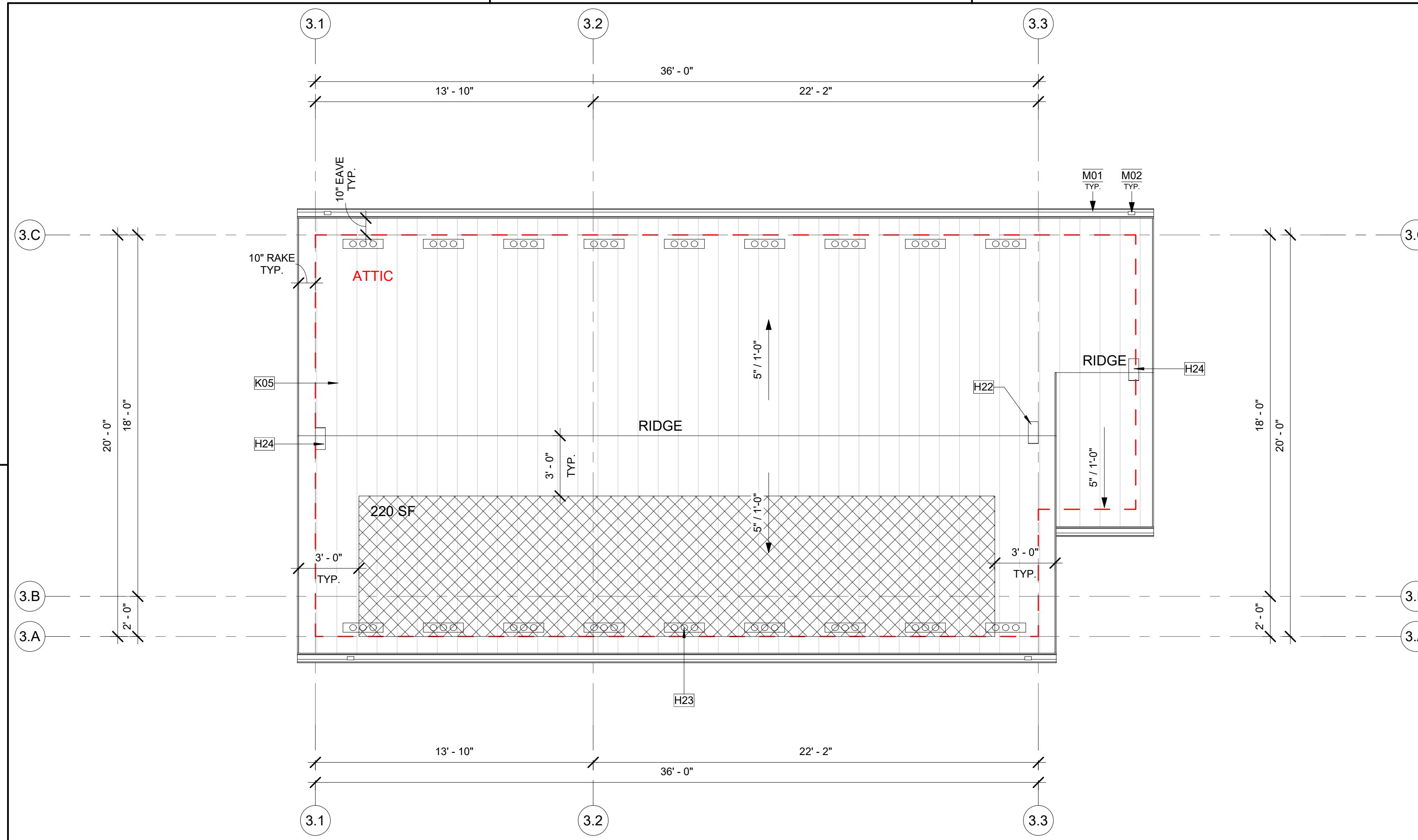
- REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS
- REFER TO STRUCTURAL PLANS FOR ROOF FRAMING INFORMATION INCLUDING MEMBER SIZES AND CONNECTION HARDWARE
- REFER TO MECHANICAL PLANS FOR ROOF MOUNTED EQUIPMENT LOCATIONS AND TYPES
- REFER TO ELECTRICAL PLANS FOR POWER DISTRIBUTION TO ROOF MOUNTED EQUIPMENT
- REFER TO PLUMBING PLANS ROOF VENT PENETRATIONS
- REFER TO SITE/GRADING PLAN FOR DOWNSPOUT DISCHARGE OR CONTINUATION
- PROVIDE A MINIMUM OF 1 INCH OF AIRSPACE BETWEEN THE INSULATION AND ROOF SHEATHING
- WHERE THE ROOF PROFILE ALLOWS A SPACE BETWEEN THE ROOF COVERING AND DECKING, THE SPACES SHALL BE CONSTRUCTED TO PREVENT THE INTRUSION OF FLAMES AND EMBERS. BE FIRESTOPPED WITH APPROVED MATERIALS OR HAVE ONE LAYER OF MINIMUM 72 POUND MINERAL-SURFACED NONPERFORATED CAP SHEET OVER THE COMBUSTIBLE DECKING
- ALL ROOFING MATERIALS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS
- OVERHANG DIMENSIONS ARE FROM FACE OF EXTERIOR WALL FRAMING TO ROOF EDGE
- ROOF COVERINGS AND UNDERLAYMENT SHALL BE APPLIED IN ACCORDANCE WITH (2019 CBC 1507.1), AND MANUFACTURER'S INSTALLATION INSTRUCTIONS
- WHERE PROVIDED, VENTILATION OPENINGS SHALL BE IN ACCORDANCE WITH (2019 CBC SECTION 1202). EXTERIOR OPENINGS INTO THE ATTIC SPACE SHALL BE COVERED WITH CORROSION-RESISTANT WIRE CLOTH SCREENING, HARDWARE CLOTH, PERFORATED VINYL OR SIMILAR MATERIAL. THE OPENINGS SHALL BE A MINIMUM OF 1/16" AND SHALL NOT EXCEED 1/4" PER (2019 CBC 1202.2.2)
- ROOF VENTS SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATIONS
- FURNISHED DIMENSIONS FOR VENTS ARE GUIDES ONLY. INSTALL PER MANUFACTURER'S SPECIFICATIONS AND ADJUST TO ACCOMMODATE TRUSS LOCATIONS, PLUMBING VENTS, AND SOLAR COLLECTORS.

### LEGEND

- 10' - 0" HEIGHT OF TOP OF ROOFING SURFACE
- 2" / 12" ROOF SLOPE (REFER TO PLANS FOR ACTUAL SLOPE)
- O'HAGIN ATTIC VENT, PAINT TO MATCH ROOF COLOR. (REFER TO EXTERIOR ELEVATIONS FOR COLORS AND MATERIALS.)
- WALL BELOW
- GUTTER, CONNECT TO DOWNSPOUT
- DOWNSPOUT, TO ROOF OR SPLASHBLOCK BELOW U.N.O.
- SOLAR ZONE. REFER TO SOLAR READY NOTES ON SHEET G-101.

CONSULTANT

AGENCY



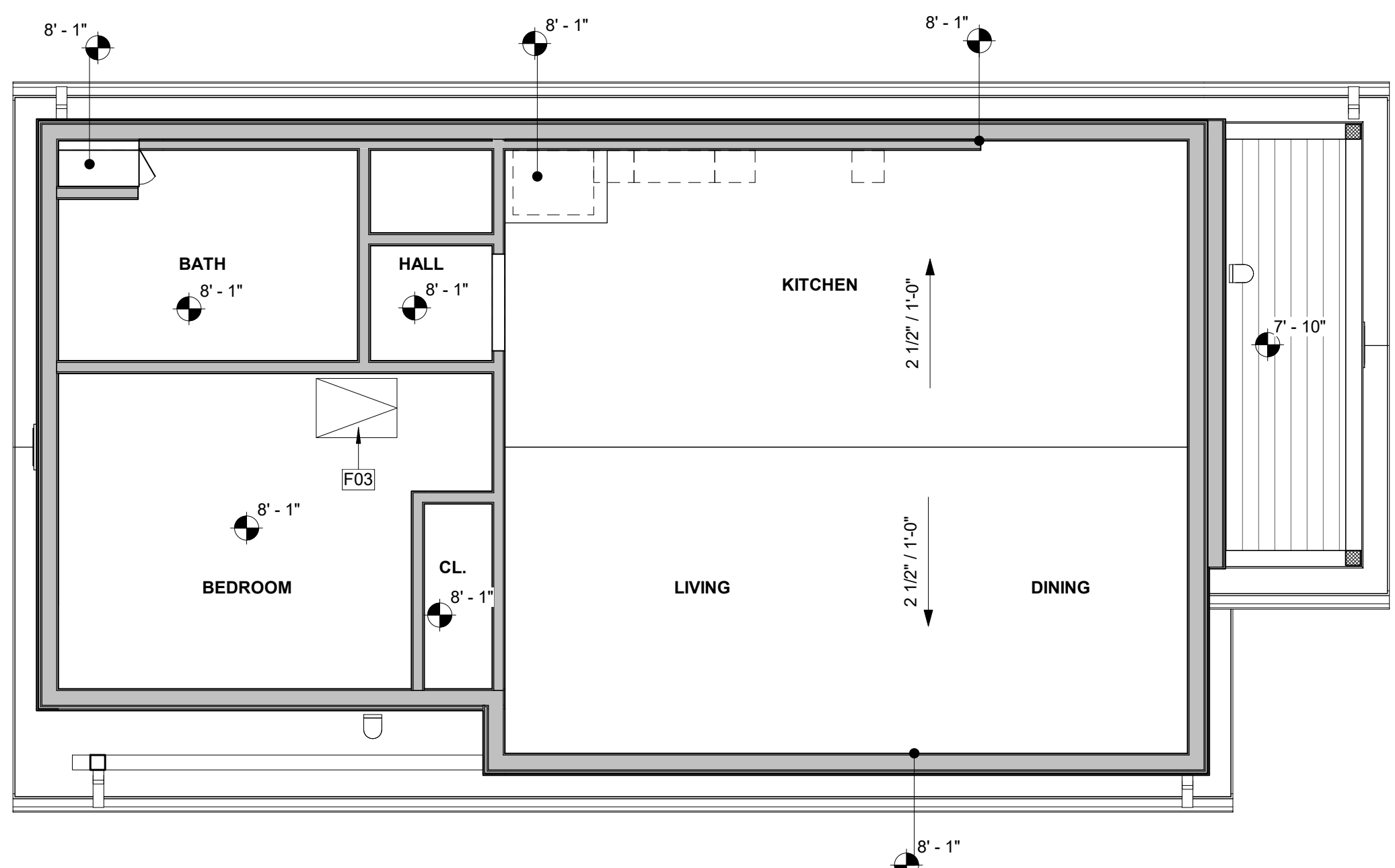
**1 ROOF PLAN 3 - HIGH DESERT**  
A3-122 1/4" = 1'-0"

### RCP GENERAL NOTES

- REFER TO GENERAL NOTES SHEET G-101 AND G-102 FOR ADDITIONAL REQUIREMENTS
- REFER TO ELECTRICAL PLANS FOR FURTHER INFORMATION
- REFER TO MECHANICAL PLANS FOR FURTHER INFORMATION
- REFER TO DETAILS FOR FLOOR/CEILING ASSEMBLIES
- HEIGHT OF CEILINGS SHALL BE MEASURED FROM TOP OF SLAB TO FINISH FACE OF GWB OR FACE OF CEILING GRID AS INDICATED ON THE REFLECTED CEILING PLAN, UNO.
- CONTRACTOR TO VERIFY DEPTH OF SOFFITS AND HOLD TIGHT TO PLUMBING, SPRINKLERS, ELECTRICAL AND MECHANICAL DUCTS

### LEGEND

- 10' - 0" HEIGHT OF CEILING SURFACE (REFER TO PLANS FOR ACTUAL HEIGHT)
- 2" / 12" CEILING SLOPE (REFER TO PLANS FOR ACTUAL SLOPE)
- INTERIOR CEILING FINISH. REFER TO FINISH SCHEDULE.
- EXTERIOR 7/8" 3-COAT CEMENT PLASTER CEILING. 1HR FIRE-RESISTANCE PER CBC TABLE 721.1(1) ITEM 1-4.1
- EXTERIOR FIBER CEMENT BOARD CEILING. HARIE SOFFIT PANELS - BEADED PORCH PANEL OR EQ.



**2 GROUND FLOOR RCP 3 - HIGH DESERT**  
A1-201A3-122 1/4" = 1'-0"

**MONO COUNTY ADU  
PROTOTYPES  
MONO COUNTY**

**ROOF PLAN & RCP - HIGH DESERT**

NO.	REVISION	DATE

PROJECT MANAGER  
RR

DRAWN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_

DATE  
6/30/2022

PROJECT NUMBER  
2340-01-CU21

SHEET

**A3-122**

**ELEVATION GENERAL NOTES**

1. REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS.
2. FRAMING ELEVATIONS, INCLUDING FLOOR PLATES AND FLOOR LEVEL ELEVATIONS ARE MEASURED FROM BUILDING FINISH FLOOR, U.N.O.
3. SEE DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
4. REFER TO ROOF PLAN FOR ROOF PITCH AND OVERHANGS, FASCIA PER DETAILS.
5. SEE ROOF PLAN FOR APPROXIMATE DOWNSPOUT LOCATIONS, U.N.O.
6. REFER TO DOOR AND WINDOW SCHEDULES AND TYPES FOR DOOR AND WINDOW INFORMATION.
7. SEE ELECTRICAL DRAWINGS FOR EXTERIOR LIGHTING.
8. SEE MECHANICAL DRAWINGS FOR GRILLES AND LOUVERS, PAINT TO MATCH ADJACENT FINISH.
9. CONTRACTOR TO VERIFY COLOR SCHEME WITH OWNER BEFORE PERFORMING THE WORK.

CONSULTANT

AGENCY

**KEYNOTES**

- B18 EXTERIOR RATED ELECTRIC SUB PANEL 80 AMP 120/240 VOLT. CONTRACTOR TO VERIFY MAIN PANEL.
- B38 WALL-MOUNTED MULTI-ZONE HEAT PUMP CONDENSING UNIT. REFER TO PLANS FOR LOCATION OF INDOOR FAN FAN COIL UNITS. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION.
- K04 FIBER CEMENT BOARD AND BATTEN SIDING, IN COMPLIANCE WITH 2019 CRC R337
- K09 FIBER CEMENT HORIZONTAL SIDING, IN COMPLIANCE WITH 2019 CRC R337
- K14 CORRUGATED METAL FINISH.
- K15 ASPHALT COMPOSITE ROOF SHINGLES. CLASS A FIRE RATING

**LEGEND**

- NOTE: COLOR TO MATCH PRIMARY RESIDENCE COLOR SCHEME.
- |   |                             |
|---|-----------------------------|
| <b>STYLE - RURAL MOUNTAIN</b>   | <b>STYLE - HIGH DESERT</b>  |
| FIBER CEMENT HORIZONTAL SIDING (COLOR AND WIDTH TO MATCH PRIMARY RESIDENCE) | CORRUGATED METAL - VERTICAL |
| BOARD AND BATTEN SIDING (COLOR TO MATCH PRIMARY RESIDENCE)                  | HORIZONTAL SIDING           |
| CORRUGATED METAL - VERTICAL   |                             |

**MONO COUNTY ADU  
PROTOTYPES**  
 MONO COUNTY  
**EXTERIOR ELEVATION - RURAL  
MOUNTAIN**

NO.	REVISION	DATE

**PROJECT MANAGER**  
RR

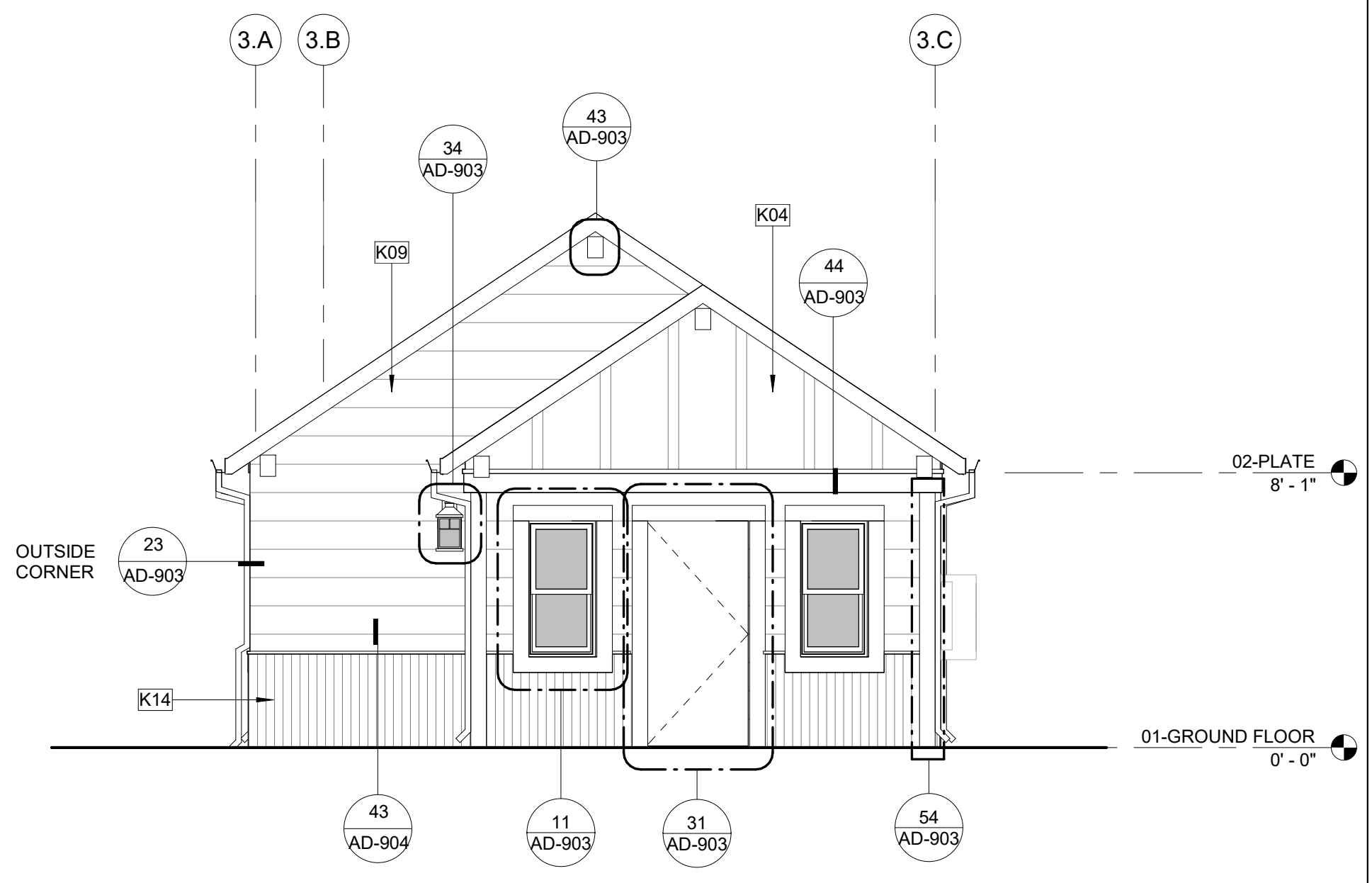
**DRAWN BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_

**DATE**  
6/30/2022

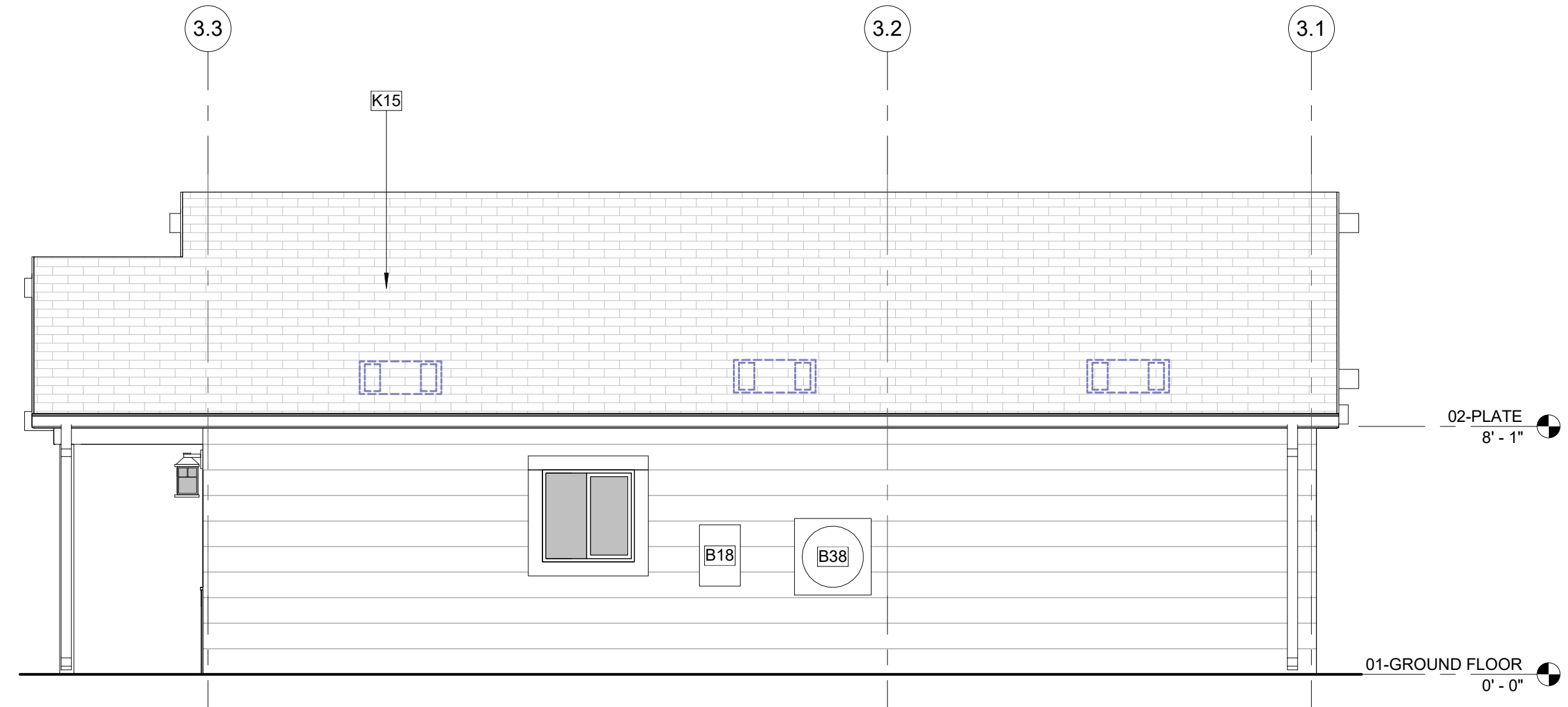
**PROJECT NUMBER**  
2340-01-CU21

**SHEET**

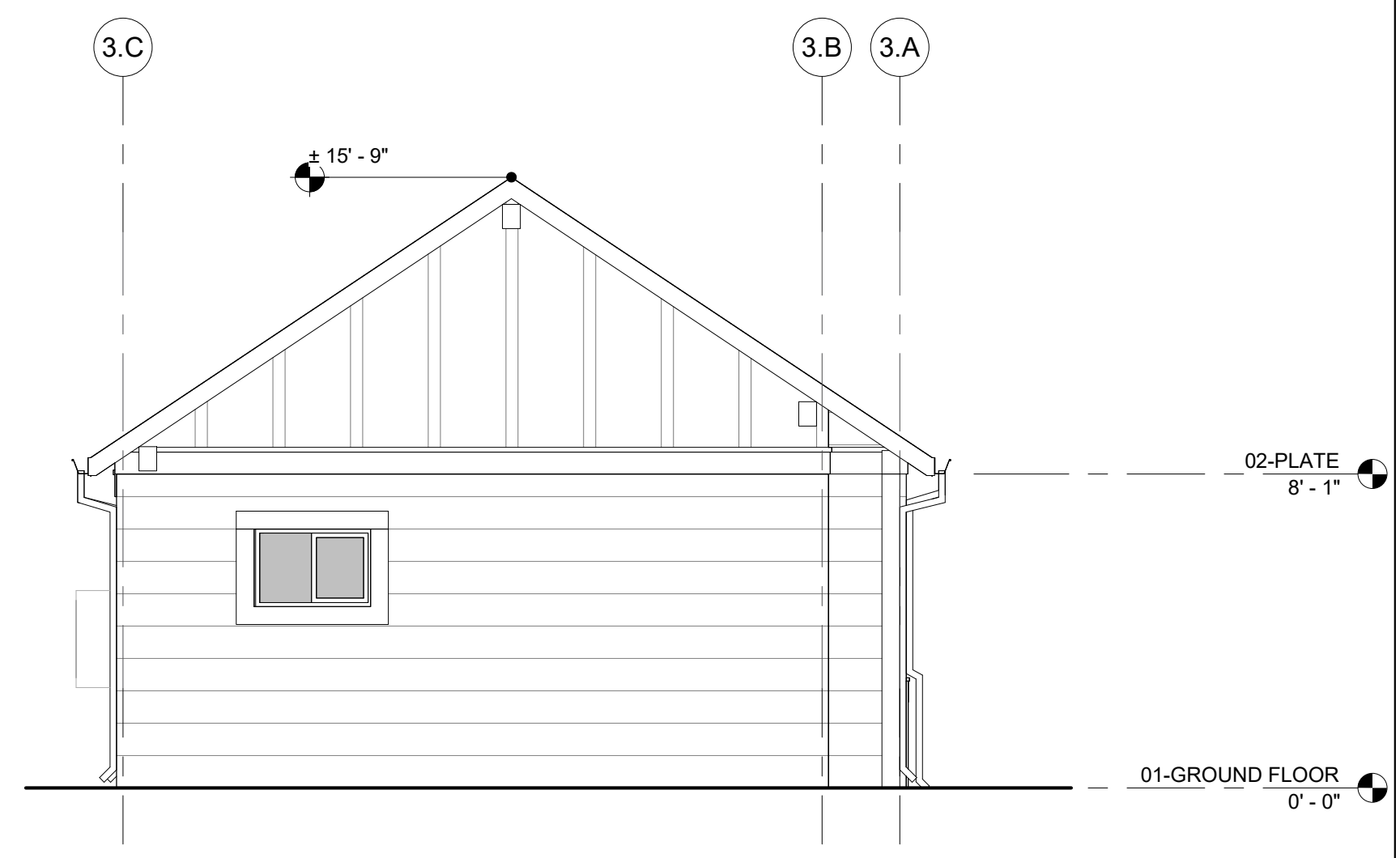
**A3-201**



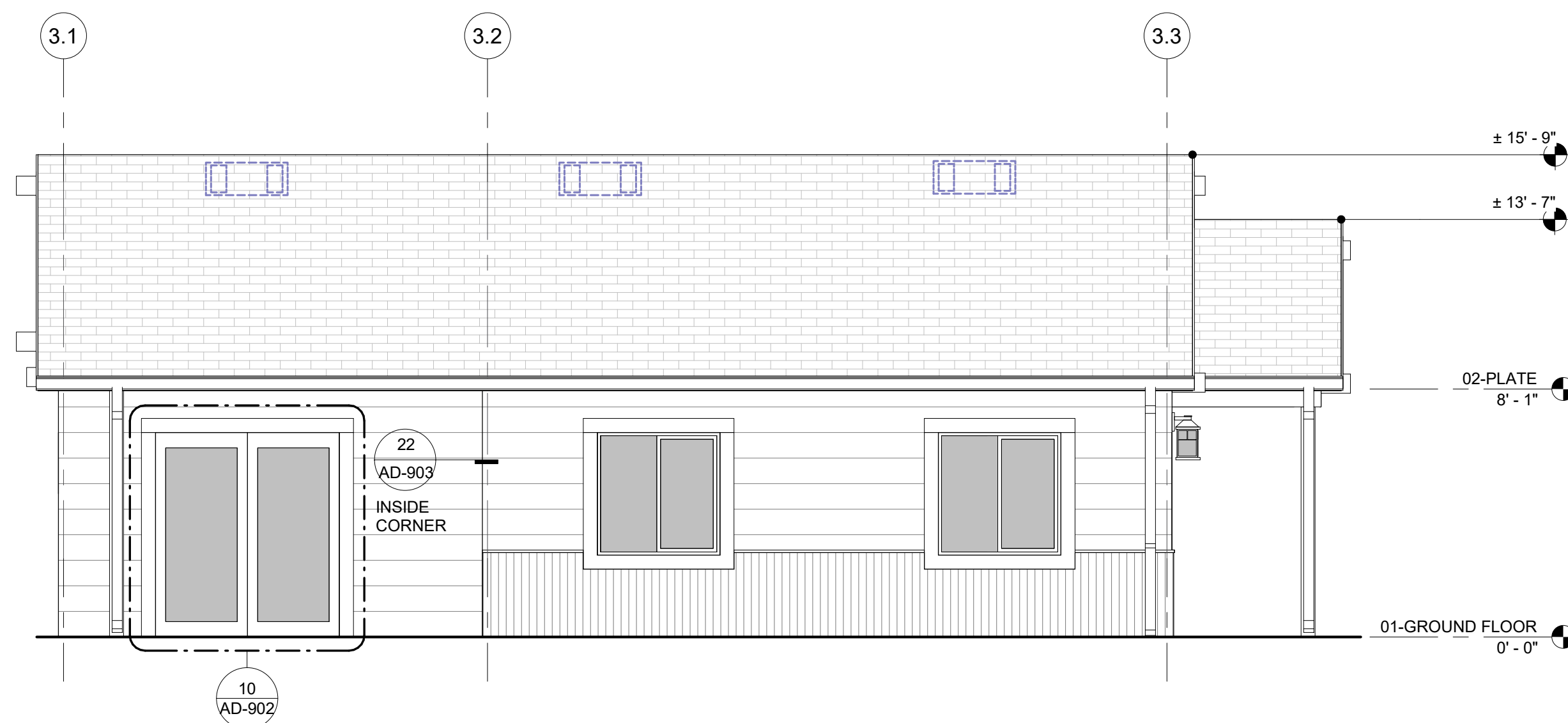
**1 PLAN 3 - RURAL MOUNTAIN - RIGHT**  
A3-101 | A3-201 SCALE: 1/4" = 1'-0"



**2 PLAN 3 - RURAL MOUNTAIN - REAR**  
A3-101 | A3-201 SCALE: 1/4" = 1'-0"



**3 PLAN 3 - RURAL MOUNTAIN - LEFT**  
A3-101 | A3-201 SCALE: 1/4" = 1'-0"



**4 PLAN 3 - RURAL MOUNTAIN - FRONT**  
A3-101 | A3-201 SCALE: 1/4" = 1'-0"



**ELEVATION GENERAL NOTES**

1. REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS.
2. FRAMING ELEVATIONS, INCLUDING FLOOR PLATES AND FLOOR LEVEL ELEVATIONS ARE MEASURED FROM BUILDING FINISH FLOOR, U.N.O.
3. SEE DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
4. REFER TO ROOF PLAN FOR ROOF PITCH AND OVERHANGS, FASCIA PER DETAILS.
5. SEE ROOF PLAN FOR APPROXIMATE DOWNSPOUT LOCATIONS, U.N.O.
6. REFER TO DOOR AND WINDOW SCHEDULES AND TYPES FOR DOOR AND WINDOW INFORMATION.
7. SEE ELECTRICAL DRAWINGS FOR EXTERIOR LIGHTING.
8. SEE MECHANICAL DRAWINGS FOR GRILLES AND LOUVERS, PAINT TO MATCH ADJACENT FINISH.
9. CONTRACTOR TO VERIFY COLOR SCHEME WITH OWNER BEFORE PERFORMING THE WORK.

CONSULTANT

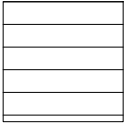
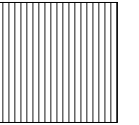
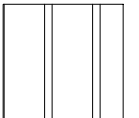
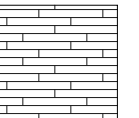
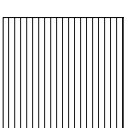
AGENCY

**KEYNOTES**

- B18 EXTERIOR RATED ELECTRIC SUB PANEL 80 AMP 120/240 VOLT. CONTRACTOR TO VERIFY MAIN PANEL.
- B38 WALL-MOUNTED MULTI-ZONE HEAT PUMP CONDENSING UNIT. REFER TO PLANS FOR LOCATION OF INDOOR FAN FAN COIL UNITS. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION.
- H22 12" X 14" VULCAN GABLE VENT.
- H24 14" X 17.5" VULCAN GABLE VENT.
- K09 FIBER CEMENT HORIZONTAL SIDING, IN COMPLIANCE WITH 2019 CRC R337
- K14 CORRUGATED METAL FINISH.

**LEGEND**

NOTE: COLOR TO MATCH PRIMARY RESIDENCE COLOR SCHEME.

<b>STYLE - RURAL MOUNTAIN</b>		<b>STYLE - HIGH DESERT</b>	
	FIBER CEMENT HORIZONTAL SIDING (COLOR AND WIDTH TO MATCH PRIMARY RESIDENCE)		CORRUGATED METAL - VERTICAL
	BOARD AND BATTEN SIDING (COLOR TO MATCH PRIMARY RESIDENCE)		HORIZONTAL SIDING
	CORRUGATED METAL - VERTICAL		

**MONO COUNTY ADU  
PROTOTYPES**  
 MONO COUNTY  
 EXTERIOR ELEVATION - HIGH  
 DESERT

NO.	REVISION	DATE

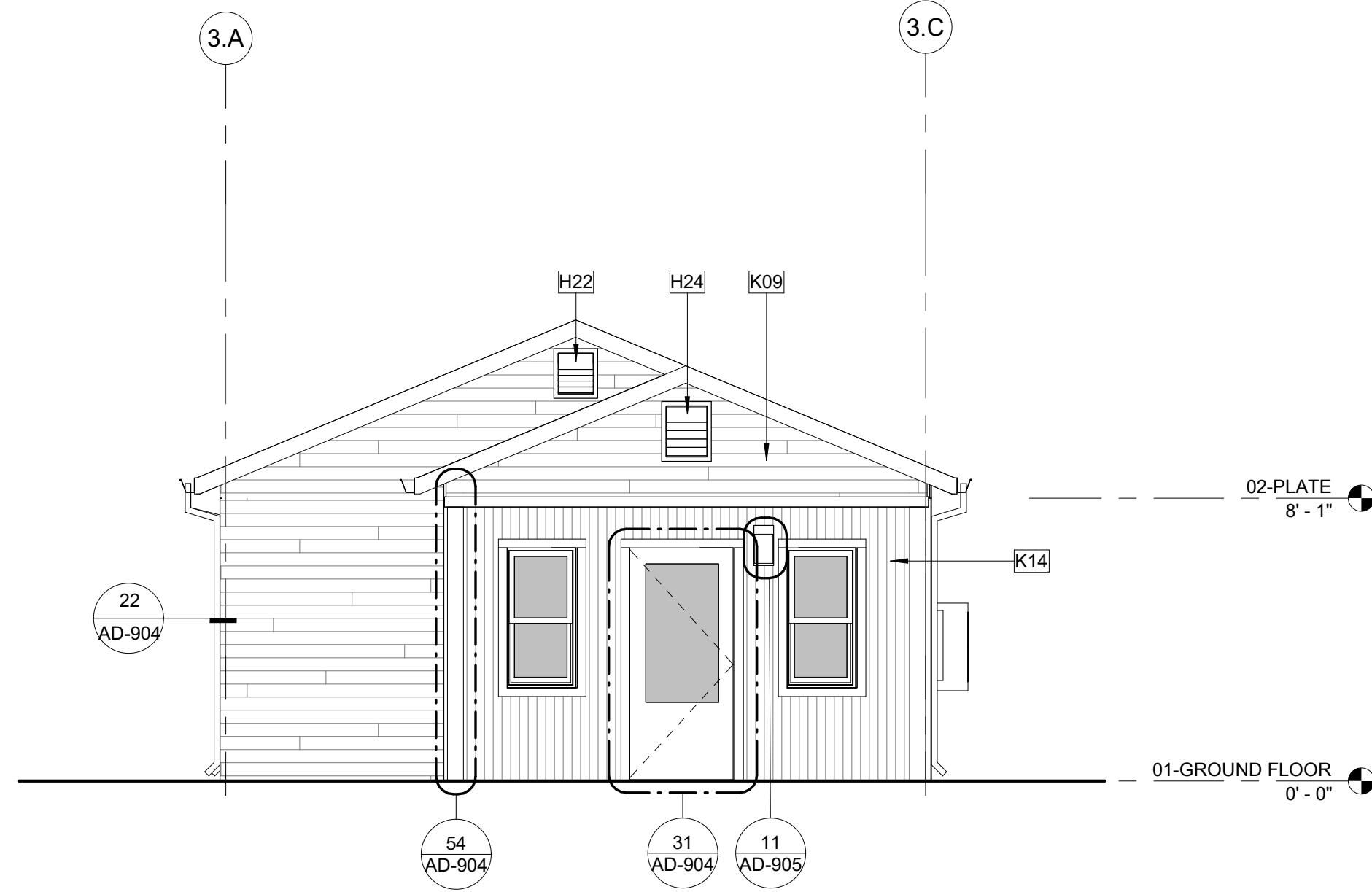
**PROJECT MANAGER**  
RR

**DRAWN BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_

**DATE**  
6/30/2022

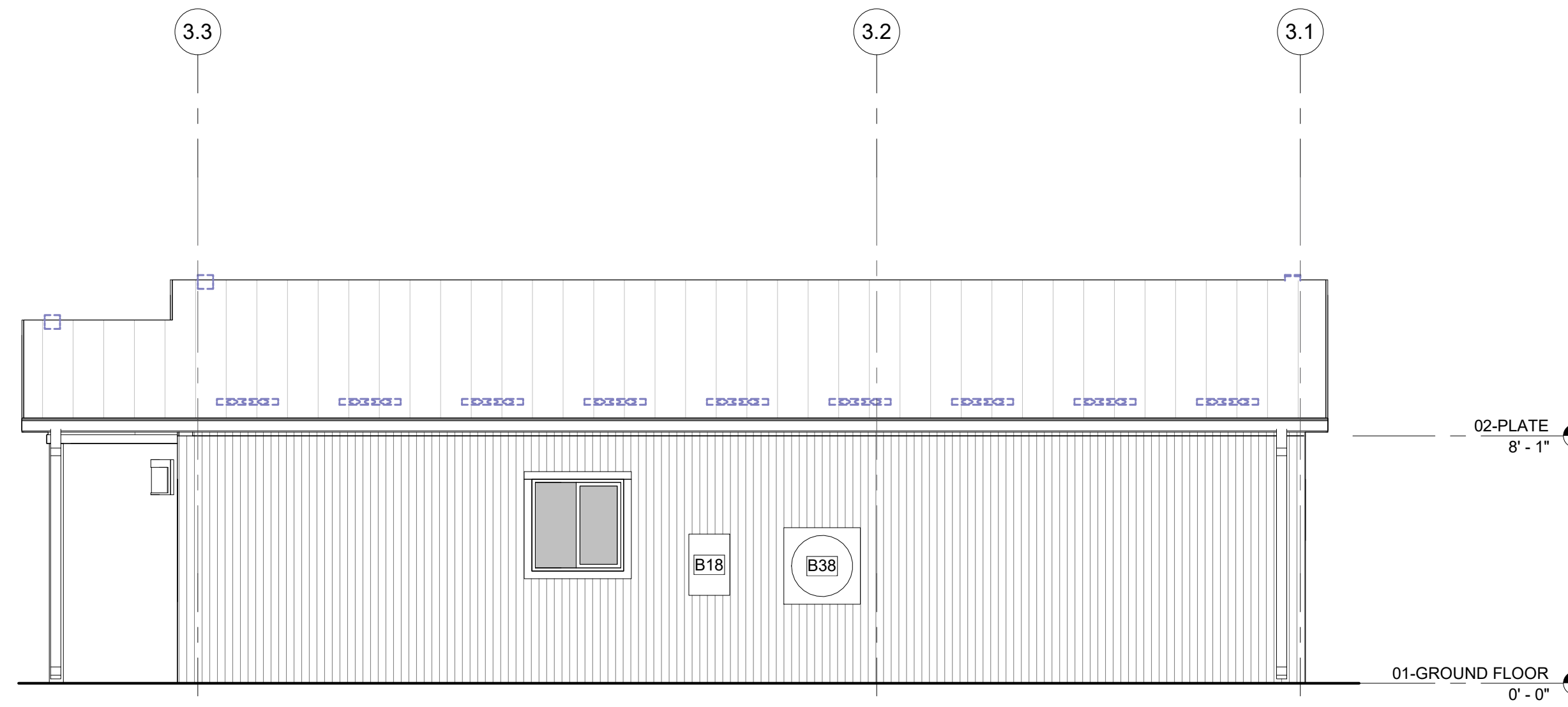
**PROJECT NUMBER**  
2340-01-CU21

**SHEET**  
A3-202



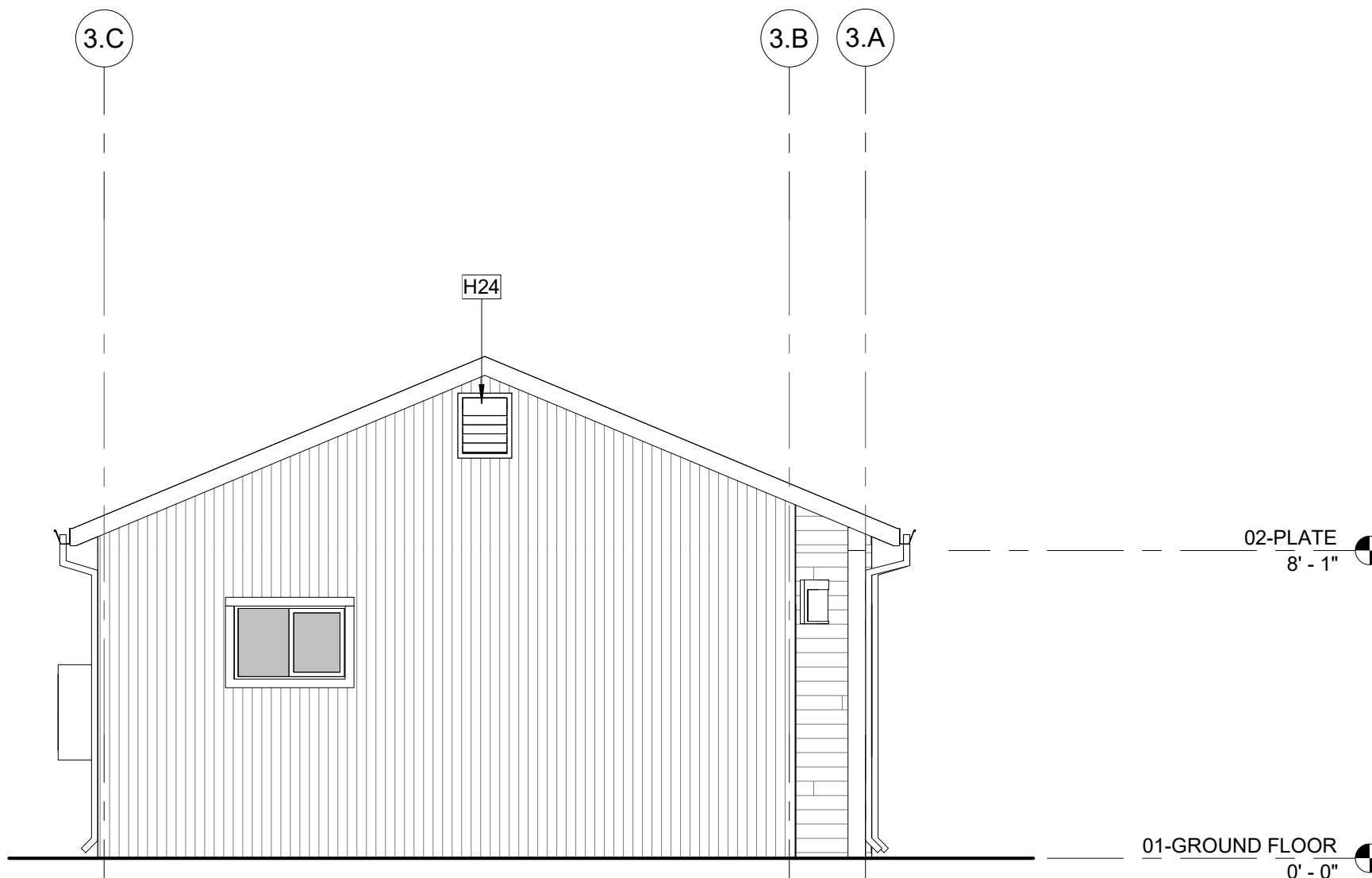
**2 PLAN 3 - HIGH DESERT - RIGHT**

A3-101 | A3-202 SCALE: 1/4" = 1'-0"



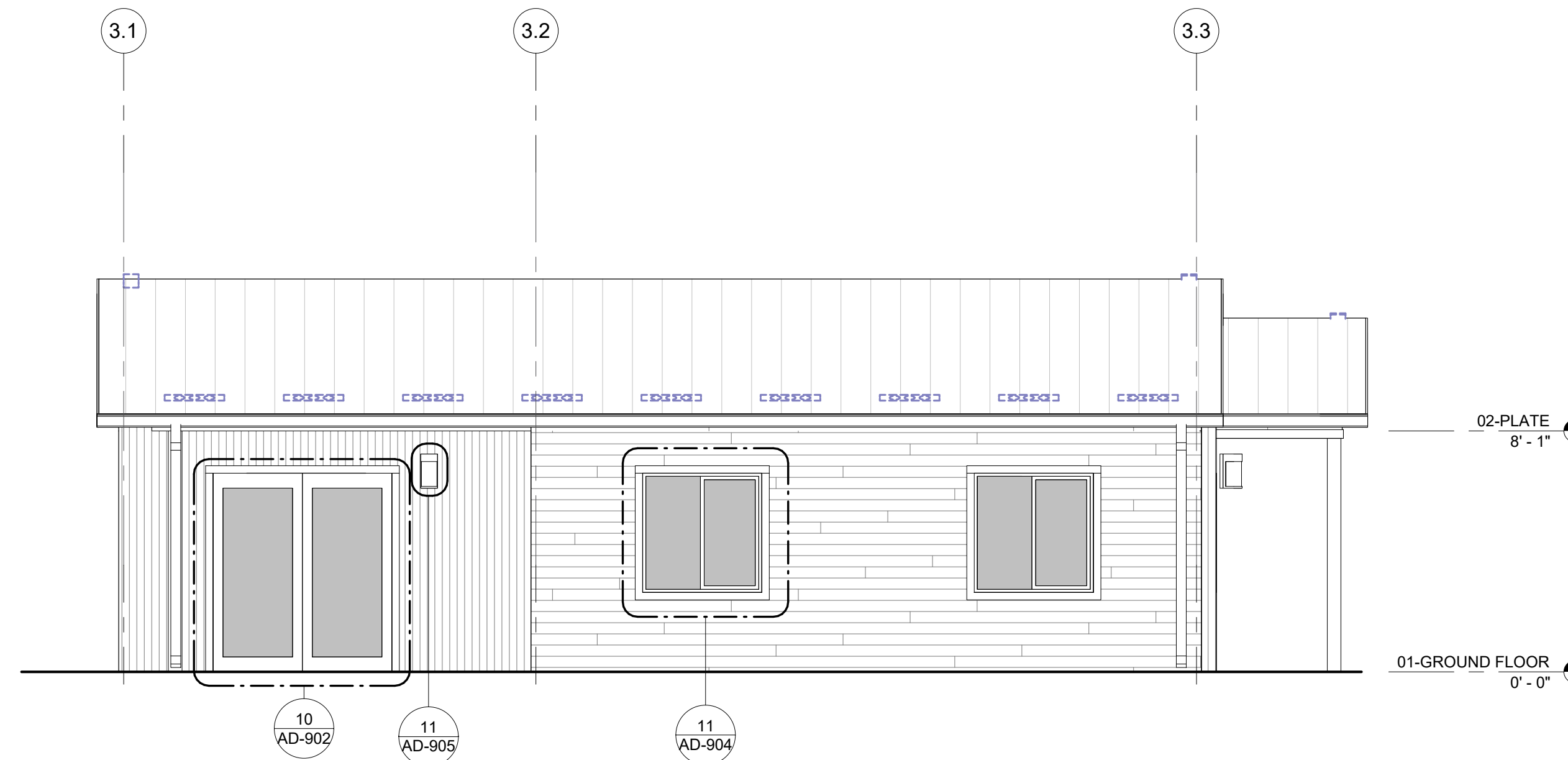
**1 PLAN 3 - HIGH DESERT - REAR**

A3-101 | A3-202 SCALE: 1/4" = 1'-0"



**3 PLAN 3 - HIGH DESERT - LEFT**

A3-101 | A3-202 SCALE: 1/4" = 1'-0"



**4 PLAN 3 - HIGH DESERT - FRONT**

A3-101 | A3-202 SCALE: 1/4" = 1'-0"

**SECTIONS GENERAL NOTES**

- THE PURPOSE OF THESE DRAWINGS IS TO SHOW CONSTRUCTION MATERIALS/ASSEMBLIES. FOR SPECIFIC SIZES AND DETAILS REFER TO ARCHITECTURAL PLANS, ELEVATIONS, DETAILS, AND STRUCTURAL PLANS. \*KEYNOTES ONLY APPLY IF REFERENCED ON PLANS.
- WALL ASSEMBLIES TO BE PER FLOOR PLAN.
- DOORS AND WINDOWS TO BE PER APPLICABLE SCHEDULE. REFER TO FLOOR PLANS FOR IDENTIFICATION.
- INSULATION: REFER TO TITLE 24 REPORT AND "INSULATION" NOTES ON SHEET FOR ADDITIONAL RATINGS, REQUIREMENTS, AND INFORMATION.
- FIREBLOCKING TO BE LOCATED AT THE FOLLOWING LOCATIONS PER 2019 **CRC SECTION R302.11**:
  - SECTION R302.11-1:**
    - FIREBLOCKING SHALL BE PROVIDED IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS, AS FOLLOWS:
      - VERTICALLY AT CEILING AND FLOOR LEVELS
      - HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET.
    - AT INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS SOFFITS, DROP CEILINGS AND COVE CEILINGS.
    - IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH **SECTION R302.7**.
    - AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES AND WIRES AT CEILINGS AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME PRODUCTS OF COMBUSTION. THE MATERIAL FILLING THIS ANNULAR SPACE SHALL NOT BE REQUIRED TO MEET THE ASTM E 136 REQUIREMENTS.
    - FOR THE FIREBLOCKING OF CHIMNEYS AND FIREPLACES, SEE **SECTION R1003.19**.
    - FIREBLOCKING OF CORNICES OF A TWO-FAMILY DWELLING IS REQUIRED AT THE LINE OF DWELLING-UNIT SEPARATION.
  - SECTION R302.11-1-1:** FIREBLOCKING MATERIALS SHALL CONSIST OF FOLLOWING MATERIALS:
    - TWO-INCH NOMINAL LUMBER
    - TWO THICKNESSES OF ONE-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS
    - THE THICKNESS OF 0.719-INCH WOOD STRUCTURAL PANELS WITH JOINTS BACKED BY 0.719-INCH WOOD STRUCTURAL PANELS
    - THE THICKNESS OF 0.75-INCH PARTICLE BOARD WITH JOINTS BACKED BY 0.75-INCH PARTICLE BOARD
    - ONE-HALF-INCH GYPSUM BOARD
    - ONE-FOURTH-INCH CEMENT-BASED MILLBOARD
    - BATTS OR BLANKETS OF MINERAL WOOL, MINERAL FIBER OR OTHER APPROVED MATERIAL INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN PLACE
    - CELLULOSE INSULATION INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E119 OR UL 263, FOR THE SPECIFIC APPLICATION.
- PER 2019 **CRC SECTION R317** SLEEPERS AND SILLS ON A CONCRETE OR MASONRY SLAB THAT IS IN DIRECT CONTACT WITH GROUND, UNLESS SEPARATED BY AN IMPERVIOUS MOISTURE BARRIER SHALL BE NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD.

CONSULTANT

AGENCY

**KEYNOTES**

- G14 4" CONCRETE SLAB ON GRADE, REFER TO STRUCTURAL PLANS  
 G28 RAISED FLOOR FOUNDATION. REFER TO STRUCTURAL.  
 K15 ASPHALT COMPOSITE ROOF SHINGLES, CLASS A FIRE RATING  
 S01 CEILING INSULATION. REFER TO TITLE 24 (R-38 MIN.).  
 S02 HORIZONTAL FLOOR INSULATION. REFER TO TITLE 24 (R-19 MIN.).  
 S04 2X6 WALL INSULATION. REFER TO TITLE 24 (R-21 MIN.).  
 T20 FOUNDATION VENTS @ STEM WALL TO BE LOCATED AS APPROPRIATE ON SITE PER CONTRACTOR. REFER TO FOUNDATION CALCS ON BUILDING SECTIONS FOR NUMBER OF VENTS REQUIRED. REFER TO G-101 FOR ADDITIONAL VENTILATION REQUIREMENTS.  
 T21 CRAWL SPACE ACCESS PANEL, MINIMUM 18" X 24" PER CBC 1208.1. LOCATION DETERMINED ON SITE PER CONTRACTOR.

**FOUNDATION VENTING CALCS**

**NOTE:**  
PER 2019 **CBC 1202.4**, THE SPACE BETWEEN THE BOTTOM OF THE FLOOR JOISTS AND THE EARTH UNDER ANY BUILDING EXCEPT SPACES OCCUPIED BY BASEMENTS OR CELLARS SHALL BE PROVIDED WITH VENTILATION. REFER TO UNDER-FLOOR VENTING NOTES ON SHEET G-101 FOR ADDITIONAL INFORMATION.

UNDER-FLOOR CALCULATION FORMULA  
 NFA OF AIR MOVEMENT PER VENT = 62 SQ.IN./144 IN./FT = 0.430 SF  
 \*VENTS PROVIDED\* = (451/150) / 0.430 SF

VENT PRODUCT INFO

VENT MANUFACTURER: VULCAN VENTS  
 PRODUCT: 8" X 14" FLANGE FRONT OR APPROVED EQUAL  
[WWW.VULCANVENTS.COM](http://WWW.VULCANVENTS.COM)

VENTING-FOUNDATION - CALCULATION - PLAN 3			
UNDER-FLOOR AREA (SF)	REQUIRED FOUNDATION VENTING @ 1/150	FOUNDATION VENTS REQUIRED	FOUNDATION VENTS PROPOSED
692 SF	4.615556	11	11

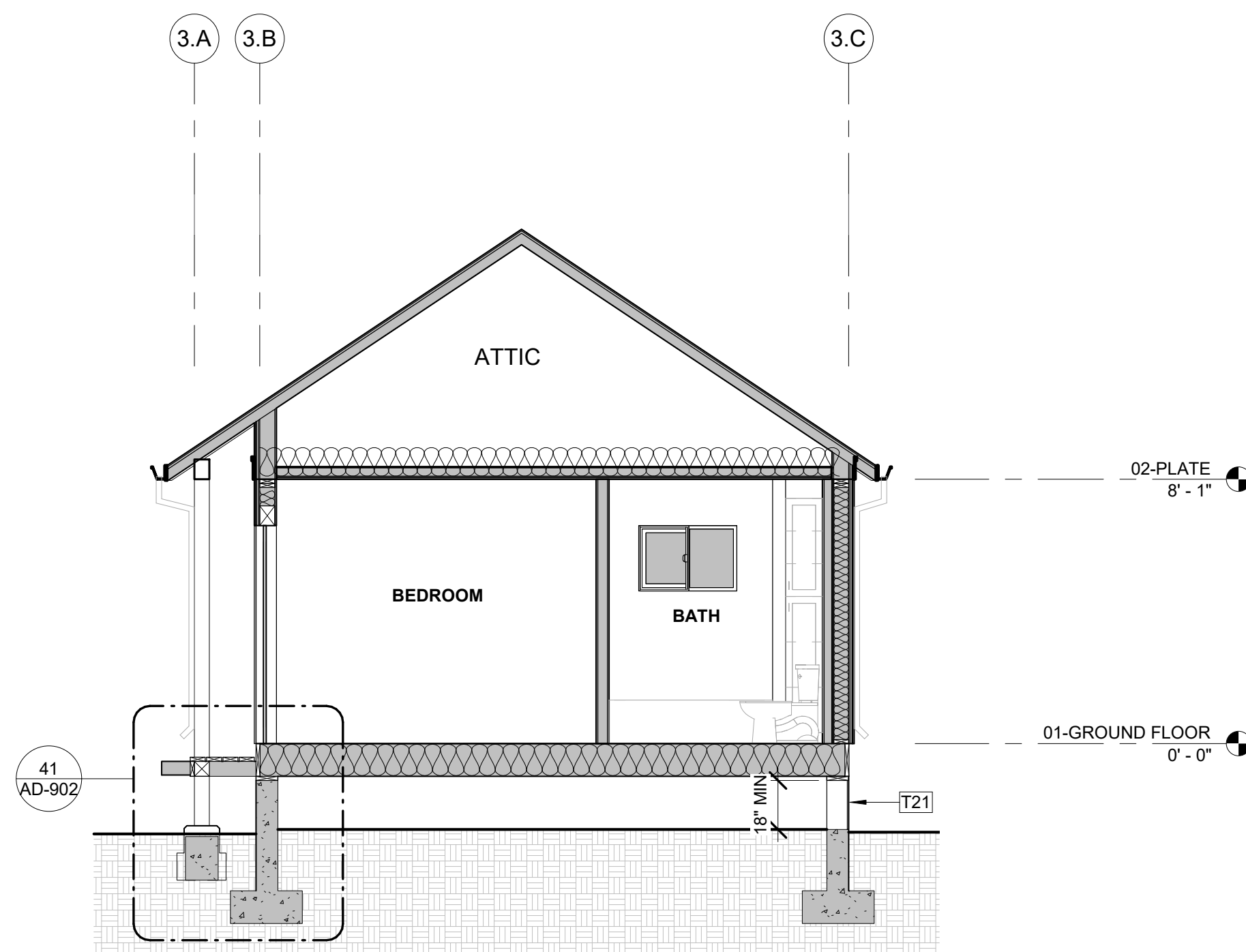
VENTING-PORCH- CALCULATION - PLAN 3				
LOCATION	BALCONY AREA (SF)	REQUIRED BALCONY VENTING @ 1/150	VENT LENGTH REQUIRED (FT)	VENT LENGTH PROPOSED
ENTRY	71 SF	0.470205	2	2
SIDE	37 SF	0.249167	1	1

**MONO COUNTY ADU  
PROTOTYPES**  
MONO COUNTY  
BUILDING SECTIONS - RURAL  
MOUNTAIN

NO.	REVISION	DATE
△		
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△		

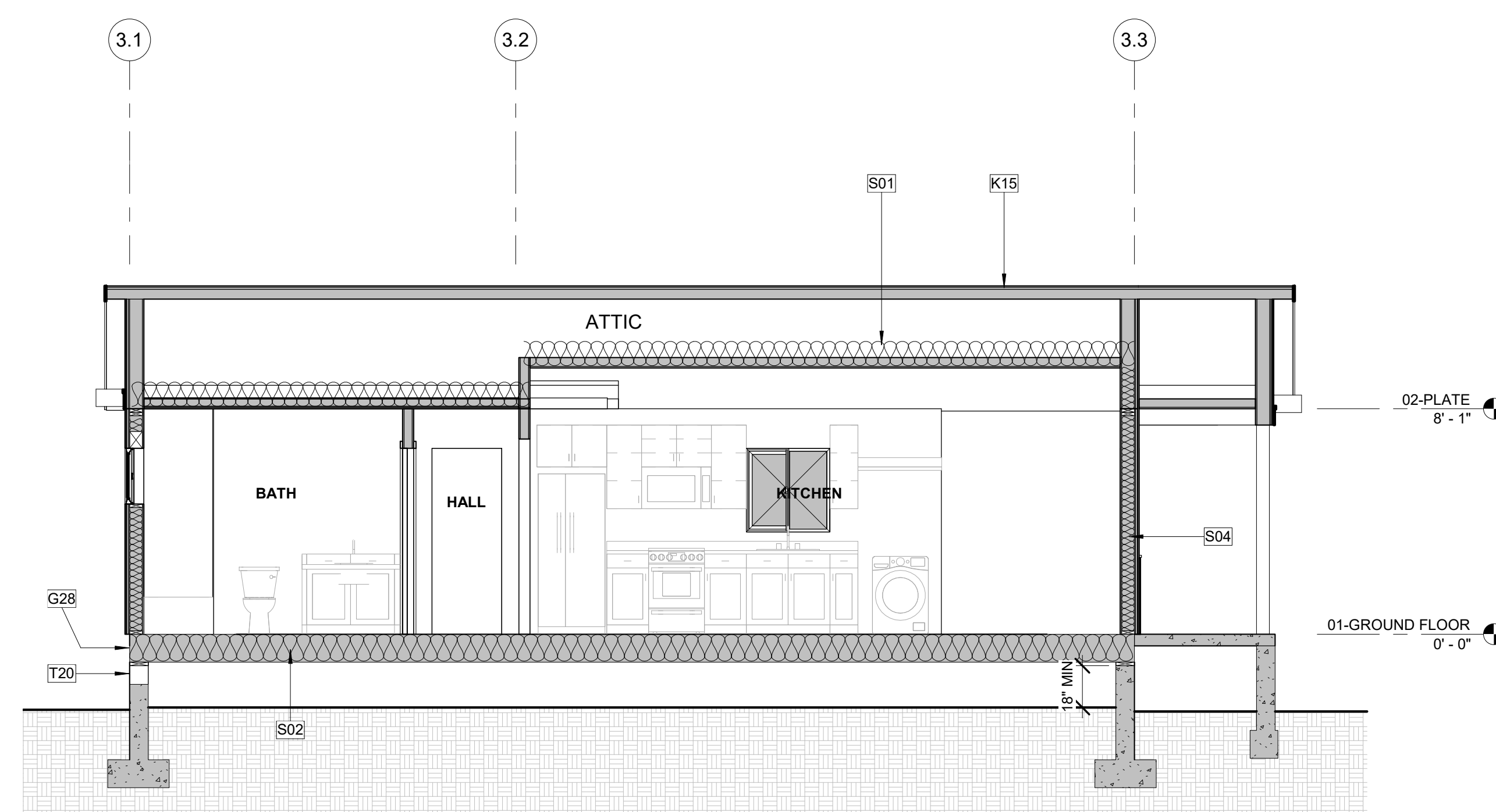
PROJECT MANAGER  
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 CHECKED BY  
 DATE  
6/30/2022  
 PROJECT NUMBER  
2340-01-CU21  
 SHEET

A3-301



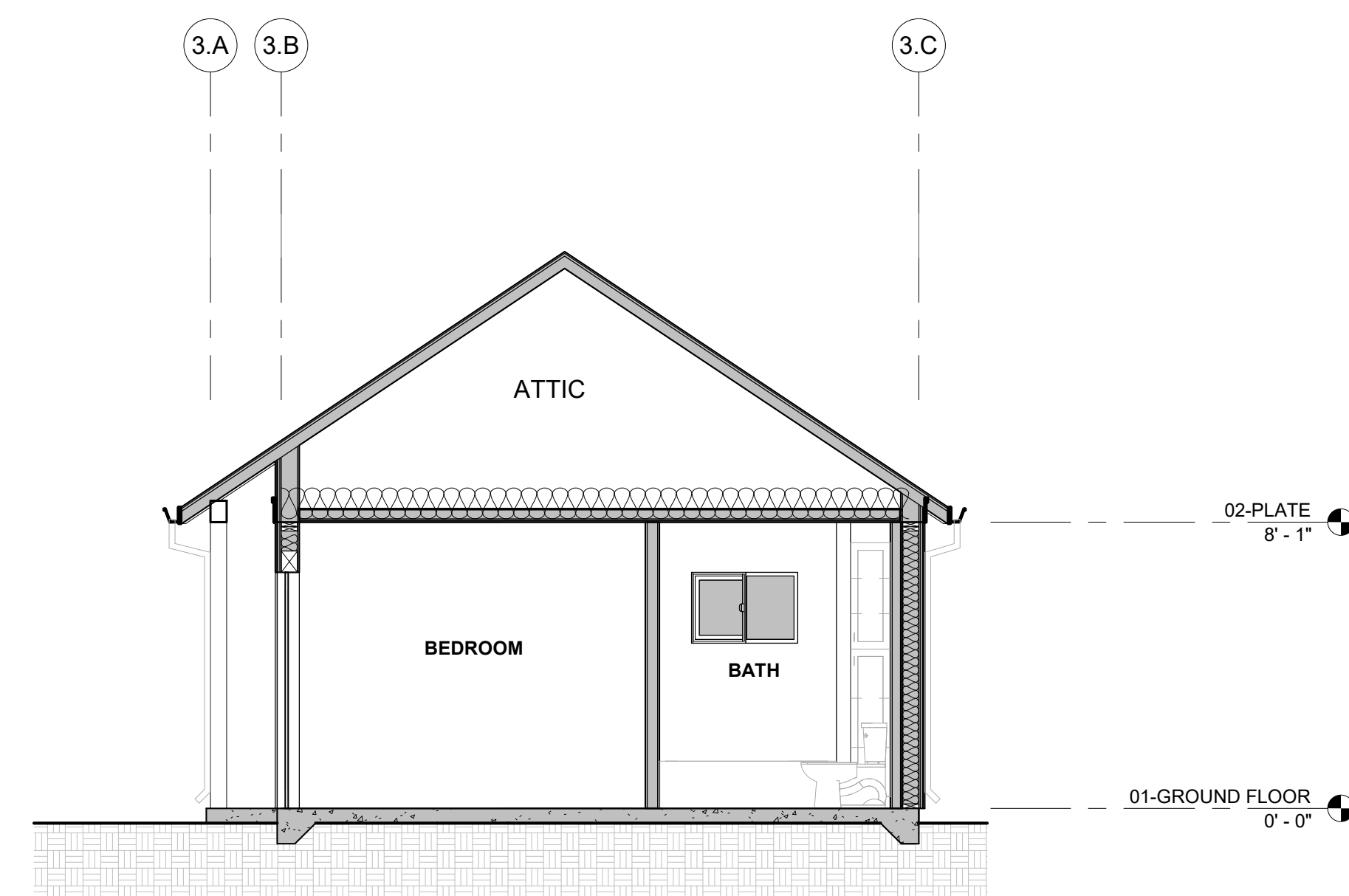
**3 PLAN - RM - SECTION 1 - RAISED FOUNDATION**

A3-301 SCALE: 1/4" = 1'-0"



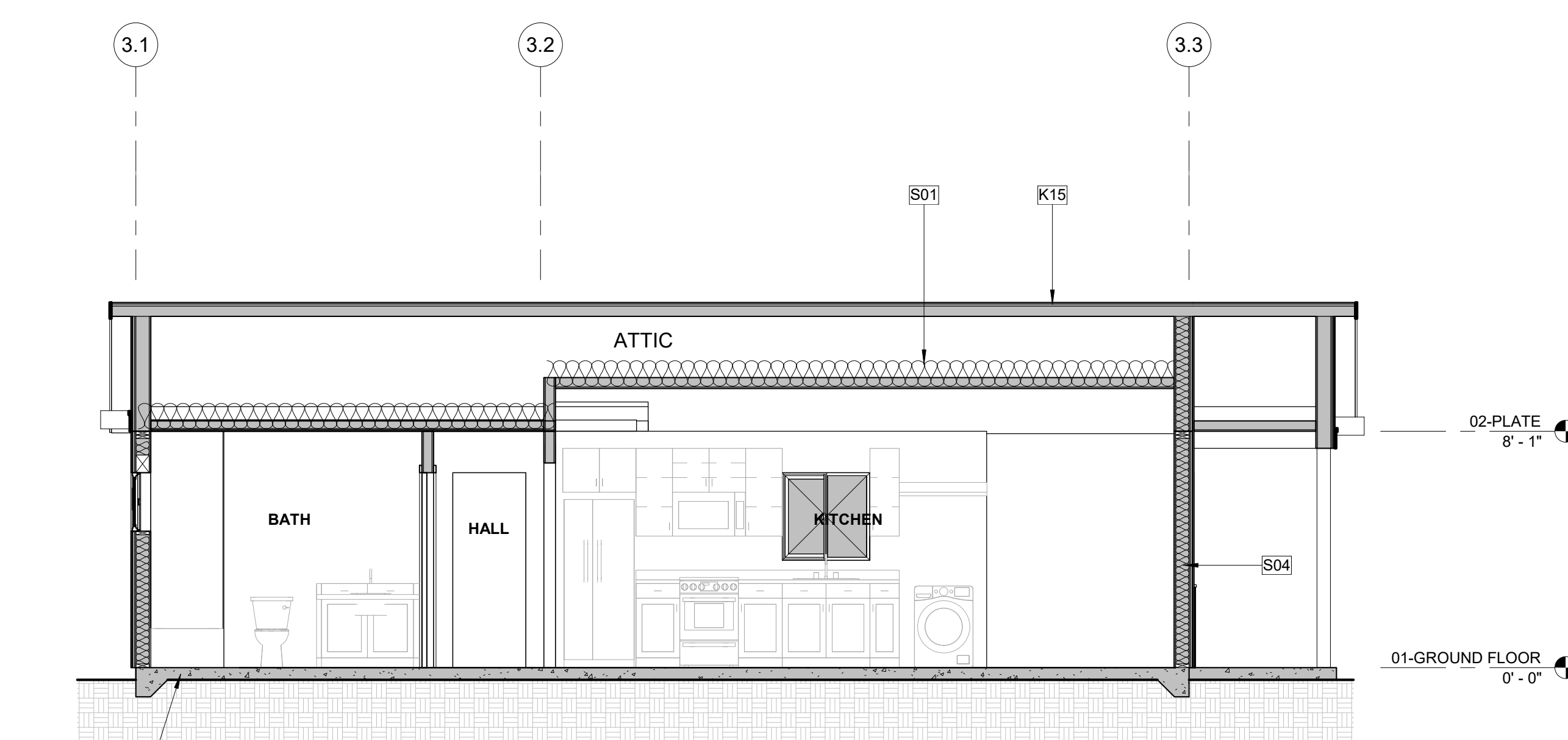
**4 PLAN 3 - RM - SECTION 2 - RAISED FOUNDATION**

A3-101 | A3-301 SCALE: 1/4" = 1'-0"



**1 PLAN 3 - RM - SECTION 1 - SLAB-ON-GRADE**

A3-101 | A3-301 SCALE: 1/4" = 1'-0"



**2 PLAN 3 - RM - SECTION 2 - SLAB-ON-GRADE**

A3-301 SCALE: 1/4" = 1'-0"

**SECTIONS GENERAL NOTES**

1. THE PURPOSE OF THESE DRAWINGS IS TO SHOW CONSTRUCTION MATERIALS/ASSEMBLIES. FOR SPECIFIC SIZES AND DETAILS REFER TO ARCHITECTURAL PLANS, ELEVATIONS, DETAILS, AND STRUCTURAL PLANS. \*KEYNOTES ONLY APPLY IF REFERENCED ON PLANS.
2. WALL ASSEMBLIES TO BE PER FLOOR PLAN.
3. DOORS AND WINDOWS TO BE PER APPLICABLE SCHEDULE. REFER TO FLOOR PLANS FOR IDENTIFICATION.
4. INSULATION: REFER TO TITLE 24 REPORT AND "INSULATION" NOTES ON SHEET FOR ADDITIONAL RATINGS, REQUIREMENTS, AND INFORMATION.
5. FIREBLOCKING TO BE LOCATED AT THE FOLLOWING LOCATIONS PER 2019 **CRC SECTION R302.11**:
  - A. **SECTION R302.11-1**:
    1. FIREBLOCKING SHALL BE PROVIDED IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS, AS FOLLOWS:
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      2. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET.
    2. AT INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS SOFFITS, DROP CEILINGS AND COVE CEILINGS.
    3. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH **SECTION R302.7**.
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  - A. **SECTION R302.11.1**: FIREBLOCKING MATERIALS SHALL CONSIST OF FOLLOWING MATERIALS:
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    2. TWO THICKNESSES OF ONE-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS
    3. THE THICKNESS OF 0.719-INCH WOOD STRUCTURAL PANELS WITH JOINTS BACKED BY 0.719-INCH WOOD STRUCTURAL PANELS
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    8. CELLULOSE INSULATION INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E119 OR UL 263, FOR THE SPECIFIC APPLICATION.
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CONSULTANT

AGENCY

**KEYNOTES**

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- G28 RAISED FLOOR FOUNDATION. REFER TO STRUCTURAL.
- K05 CORRUGATED METAL ROOF. CLASS A FIRE RATING
- S01 CEILING INSULATION. REFER TO TITLE 24 (R-38 MIN.)
- S02 HORIZONTAL FLOOR INSULATION. REFER TO TITLE 24 (R-19 MIN.)
- S04 2X6 WALL INSULATION. REFER TO TITLE 24 (R-21 MIN.)
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**FOUNDATION VENTING CALCS**

**NOTE:**  
PER 2019 **CBC 1202.4**, THE SPACE BETWEEN THE BOTTOM OF THE FLOOR JOISTS AND THE EARTH UNDER ANY BUILDING EXCEPT SPACES OCCUPIED BY BASEMENTS OR CELLARS SHALL BE PROVIDED WITH VENTILATION. REFER TO UNDER-FLOOR VENTING NOTES ON SHEET G-101 FOR ADDITIONAL INFORMATION.

UNDER-FLOOR CALCULATION FORMULA  
NFA OF AIR MOVEMENT PER VENT = 62 SQ.IN./144 IN./FT = 0.430 SF  
\*VENTS PROVIDED\* = (451/150) / 0.430 SF

VENT PRODUCT INFO

VENT MANUFACTURER: VULCAN VENTS  
PRODUCT: 8" X 14" FLANGE FRONT OR APPROVED EQUAL  
[WWW.VULCANVENTS.COM](http://WWW.VULCANVENTS.COM)

VENTING-FOUNDATION - CALCULATION - PLAN 3			
UNDER-FLOOR AREA (SF)	REQUIRED FOUNDATION VENTING @ 1/150	FOUNDATION VENTS REQUIRED	FOUNDATION VENTS PROPOSED
692 SF	4.615556	11	11

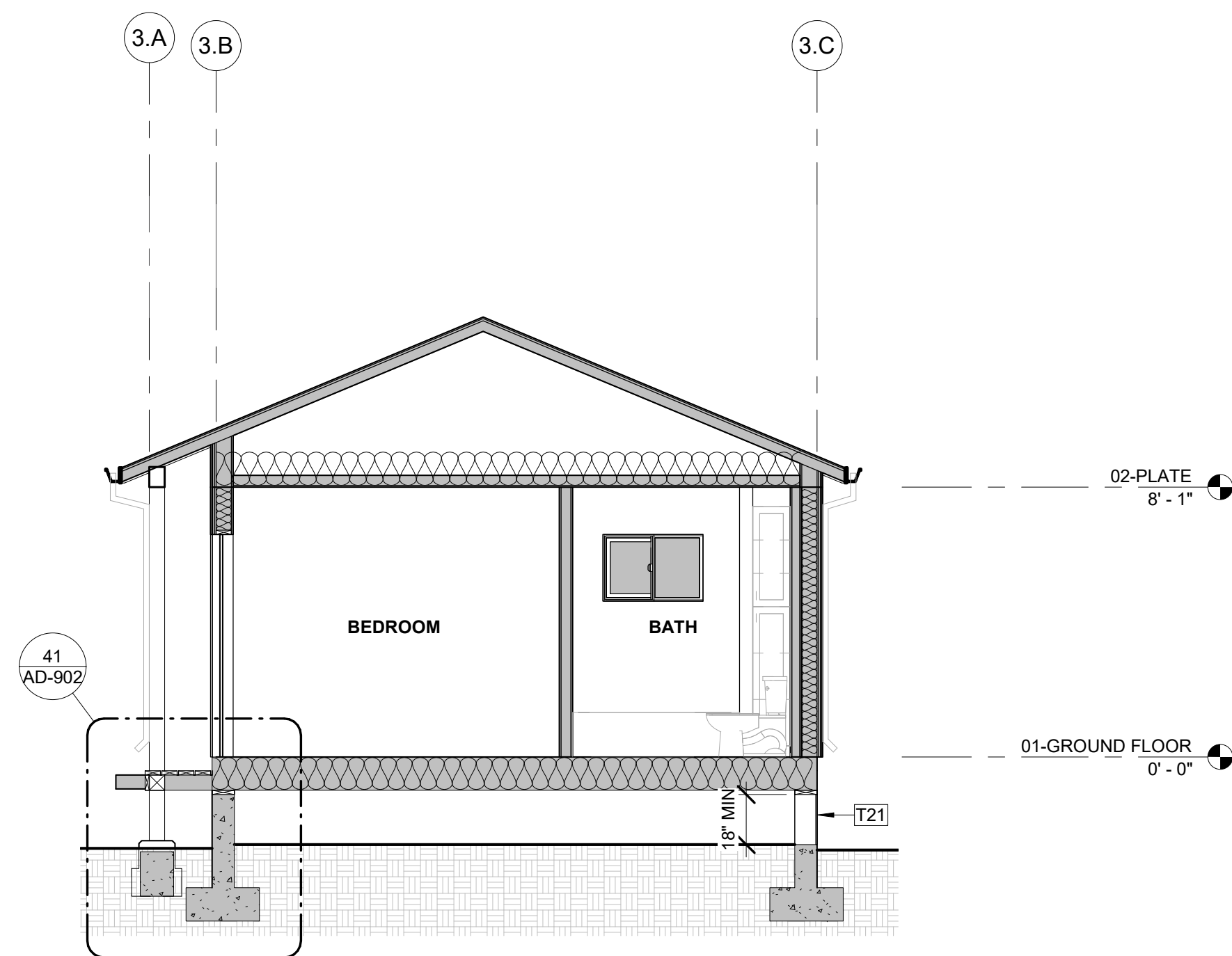
VENTING-PORCH- CALCULATION - PLAN 3				
LOCATION	BALCONY AREA (SF)	REQUIRED BALCONY VENTING @ 1/150	VENT LENGTH REQUIRED (FT)	VENT LENGTH PROPOSED
ENTRY	71 SF	0.470205	2	2
SIDE	37 SF	0.249167	1	1

**MONO COUNTY ADU  
PROTOTYPES**  
 MONO COUNTY  
**BUILDING SECTIONS - HIGH  
DESERT**

NO.	REVISION	DATE

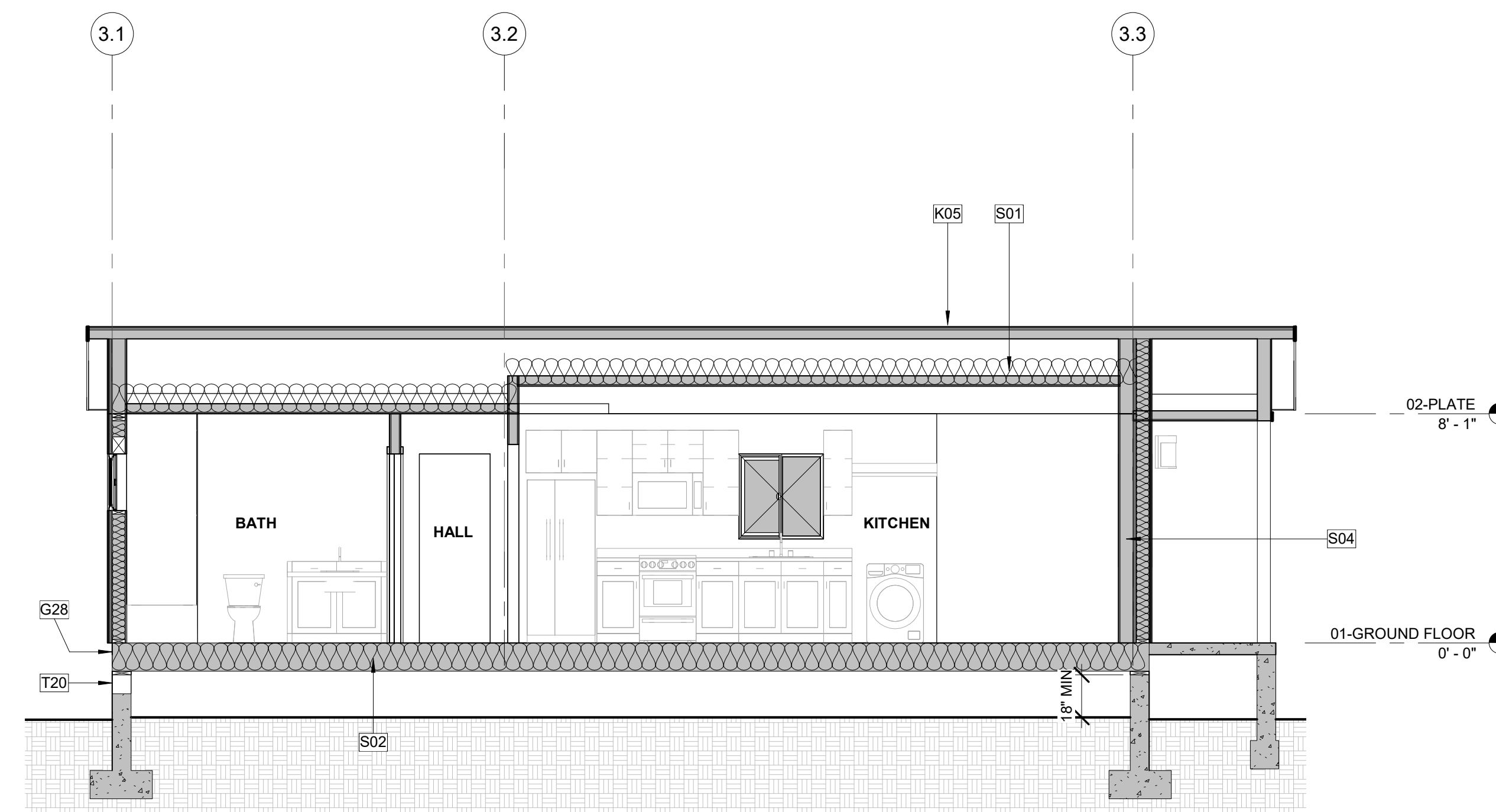
**PROJECT MANAGER**  
RR  
**DRAWN BY** \_\_\_\_\_ **CHECKED BY** \_\_\_\_\_  
**DATE**  
6/30/2022  
**PROJECT NUMBER**  
2340-01-CU21  
**SHEET**

A3-302



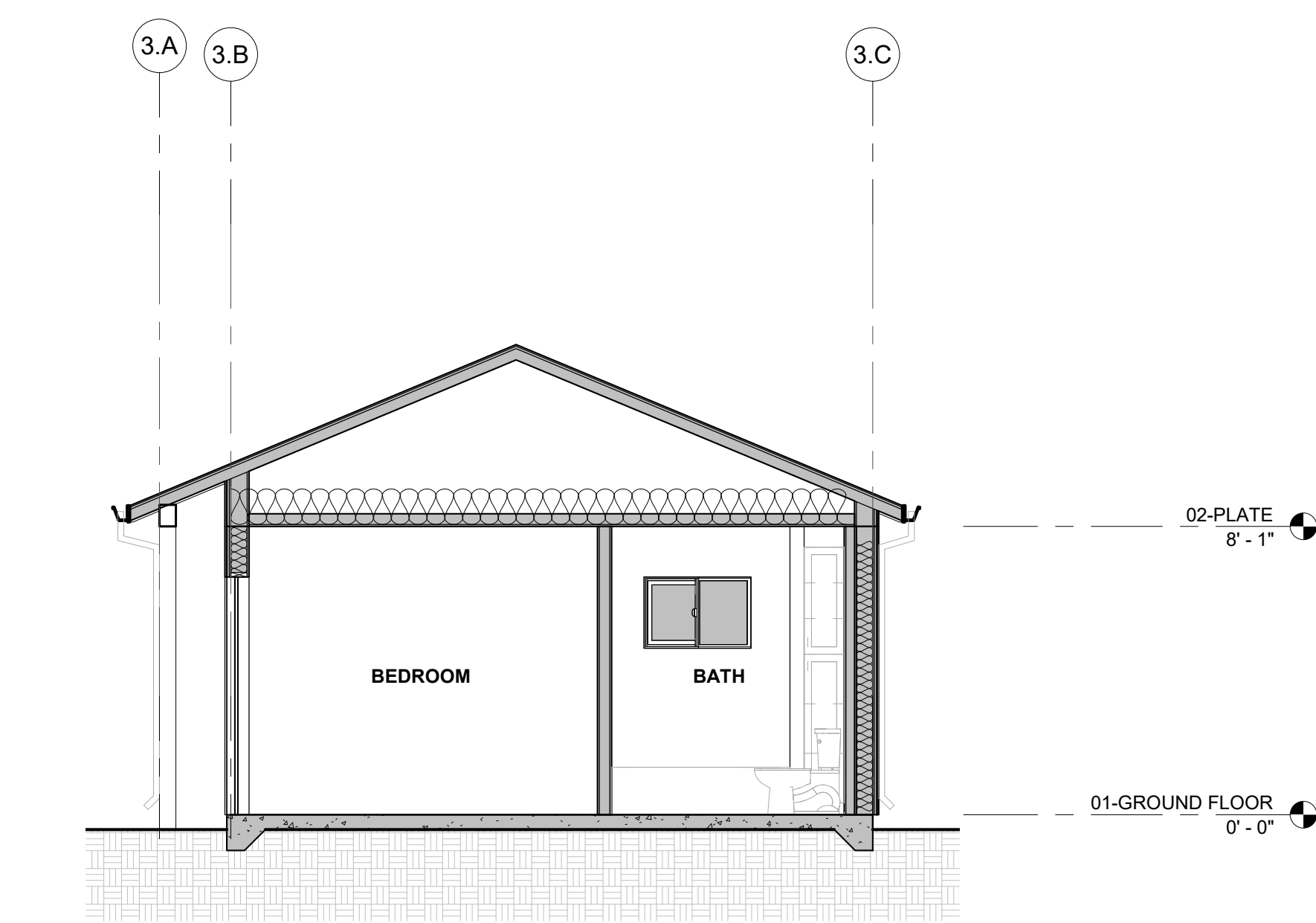
**3 PLAN 3 - HD - SECTION 1 - RAISED FOUNDATION**

A3-302 SCALE: 1/4" = 1'-0"



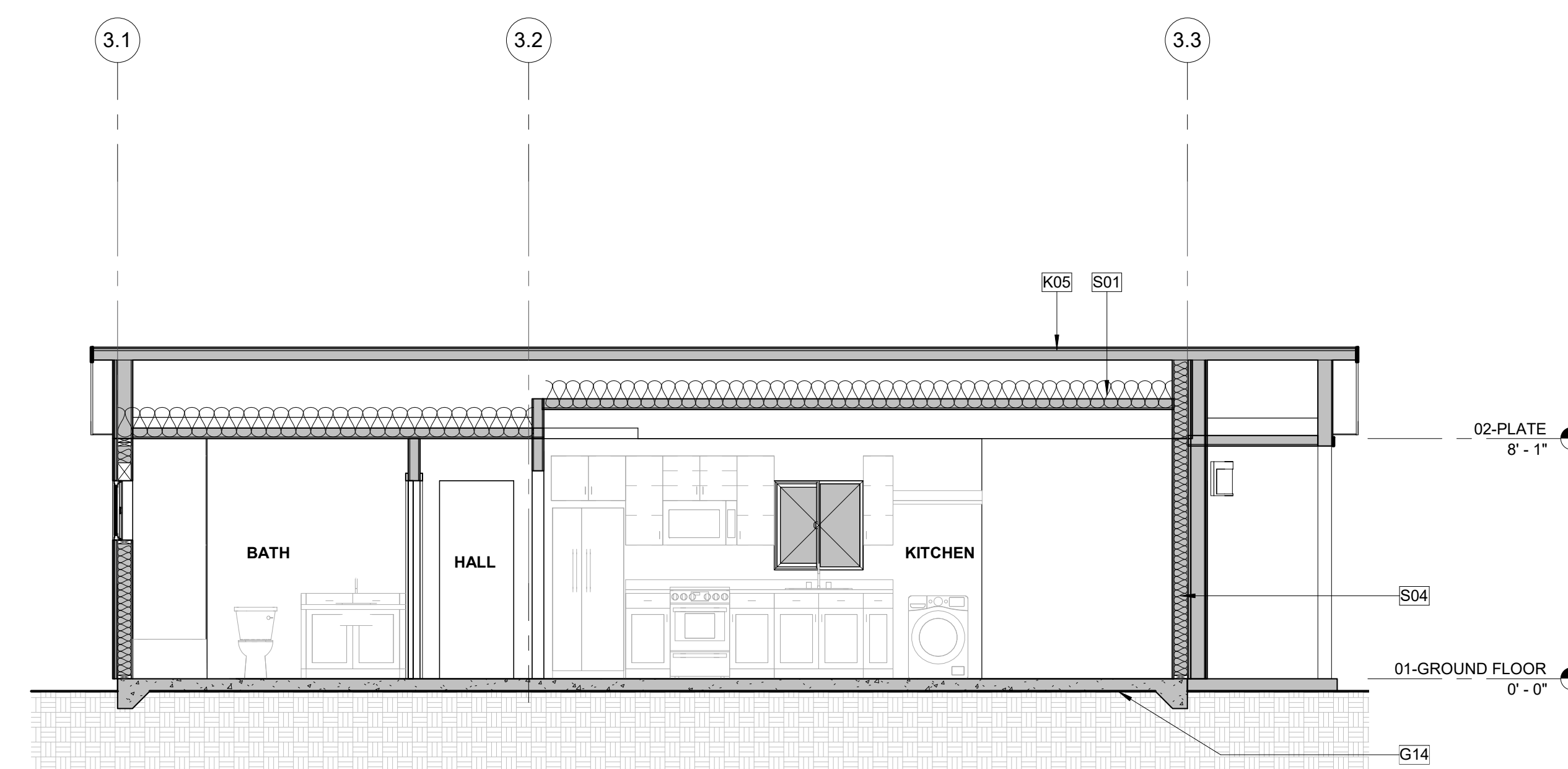
**4 PLAN 3 - HD - SECTION 2 - RAISED FOUNDATION**

A2-101 | A3-302 SCALE: 1/4" = 1'-0"



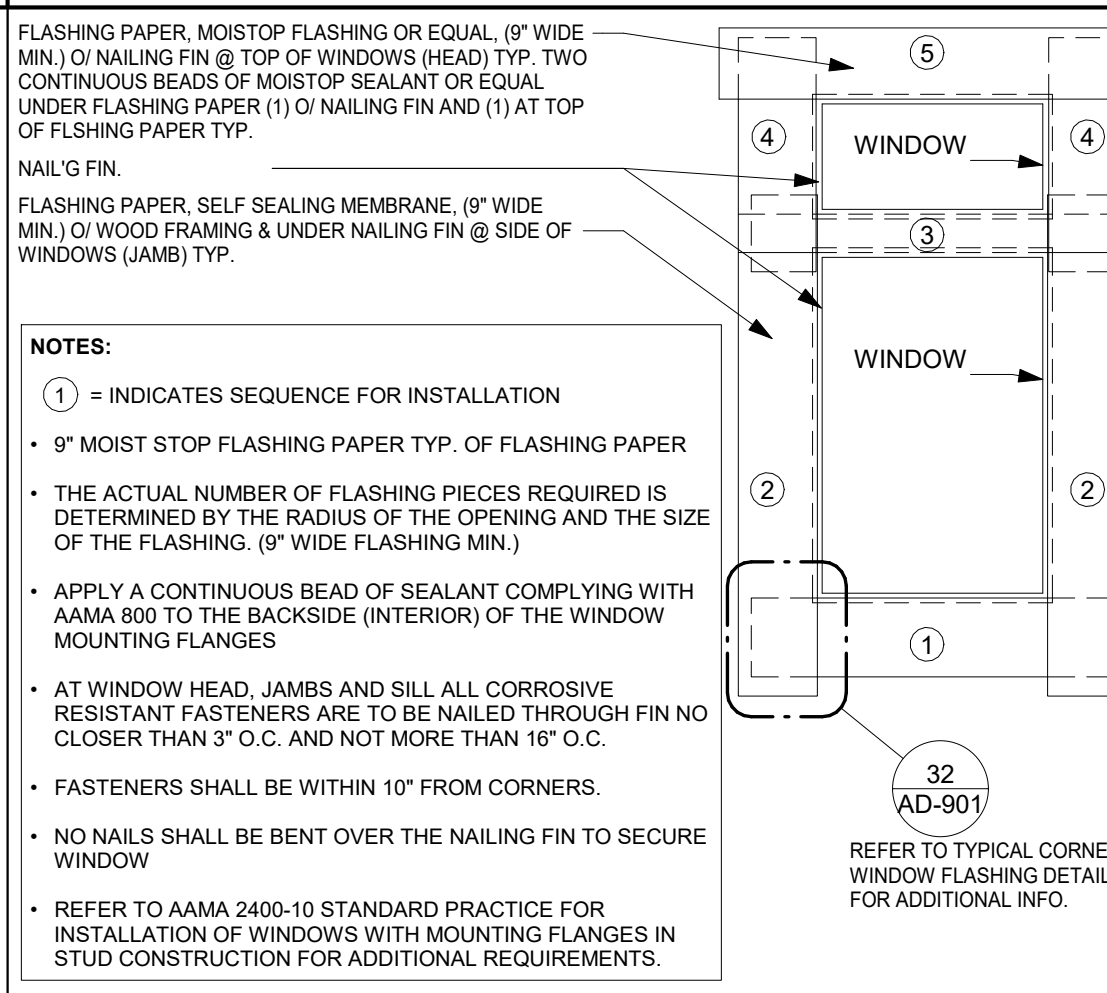
**1 PLAN 3 - HD - SECTION 1 - SLAB-ON-GRADE**

A3-302 SCALE: 1/4" = 1'-0"



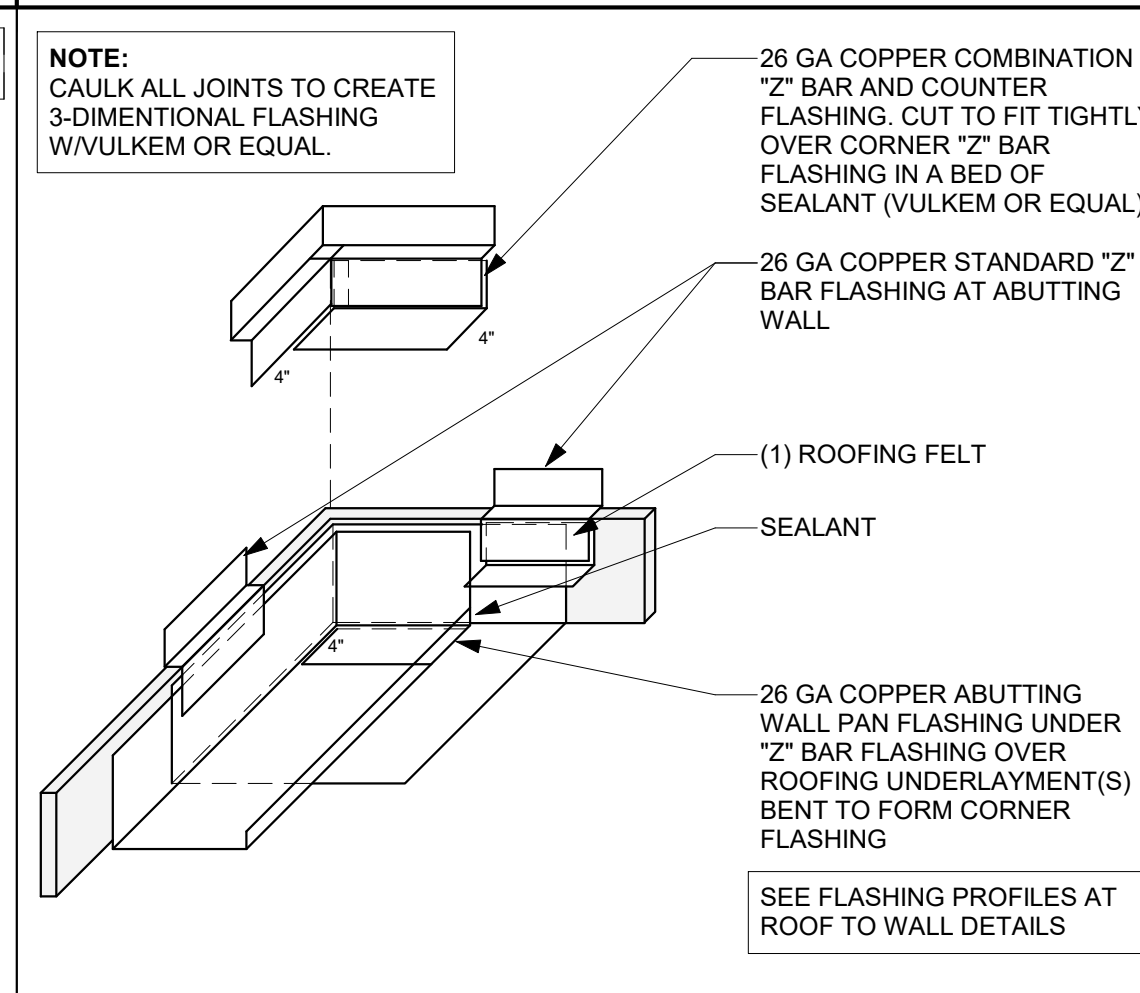
**2 PLAN 3 - HD - SECTION 2 - SLAB-ON-GRADE**

A3-302 SCALE: 1/4" = 1'-0"



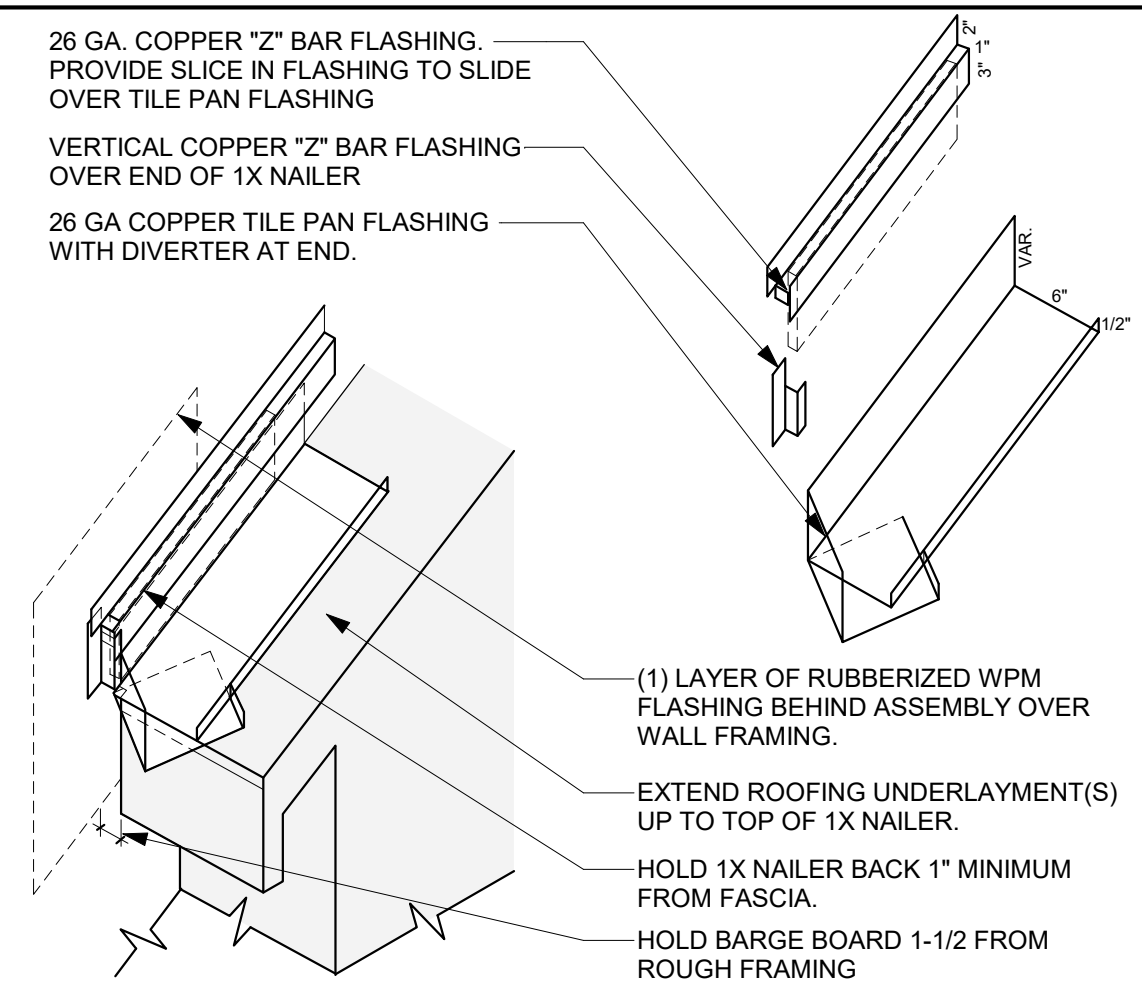
**31 FLASHING - WINDOW TYP.**

SCALE: 1/2" = 1'-0"



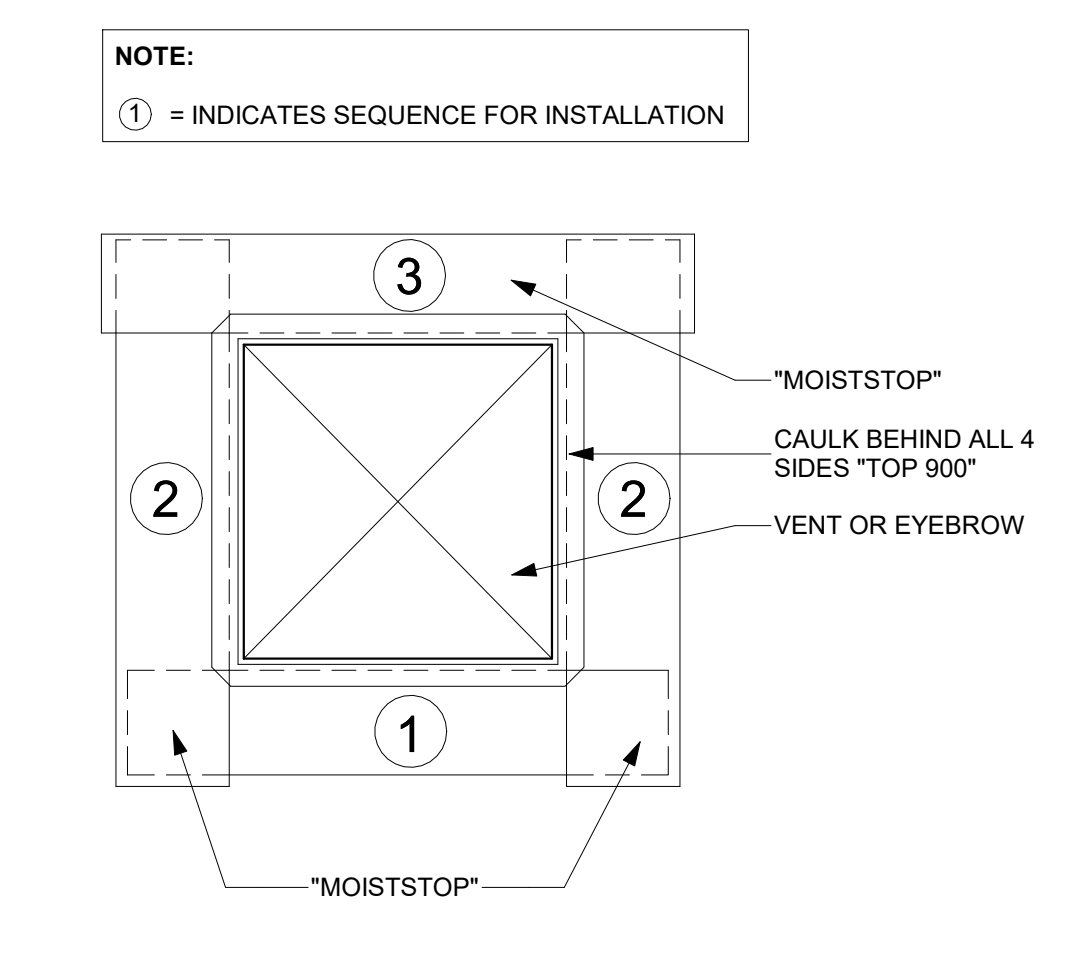
**21 ROOF TO WALL TYP. FLASHING 5**

SCALE: 3" = 1'-0"



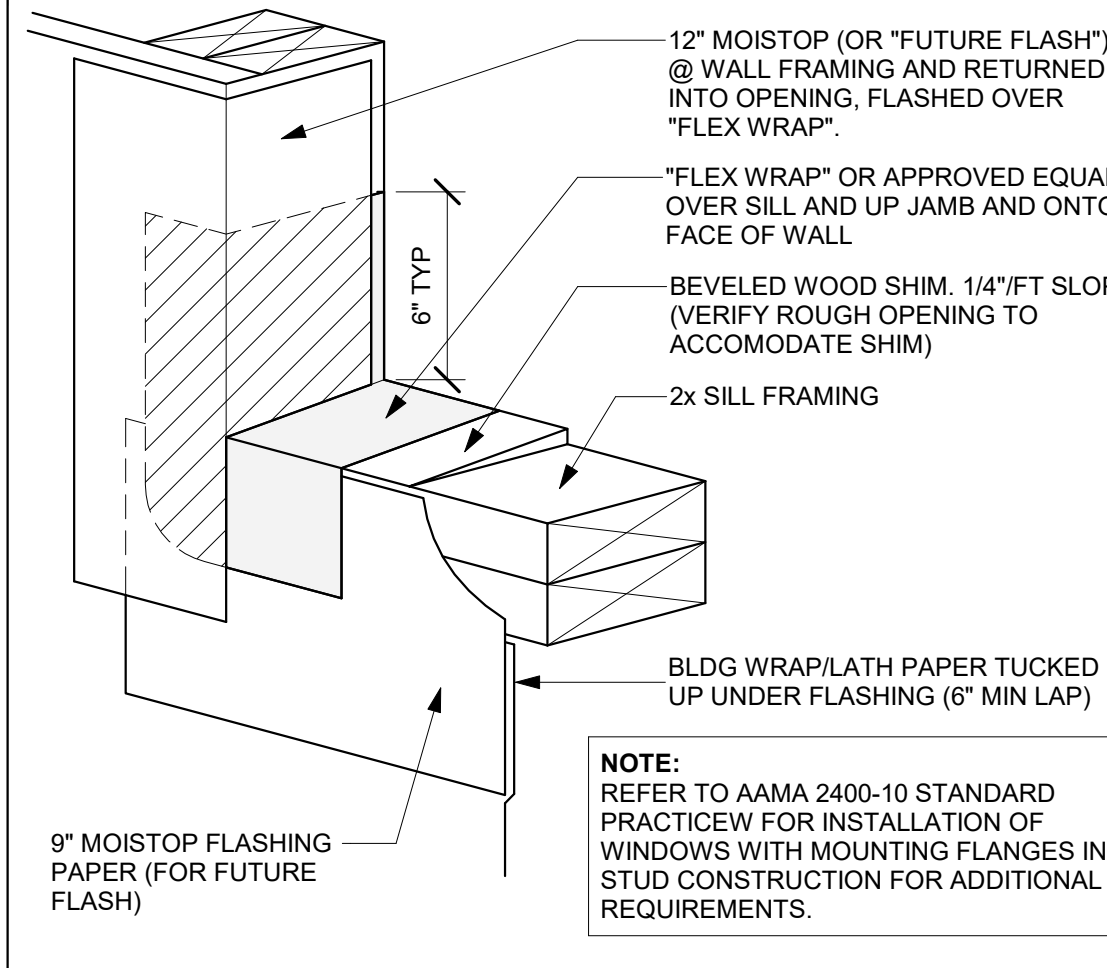
**11 ROOF TO WALL TYP. FLASHING 1**

SCALE: 6" = 1'-0"



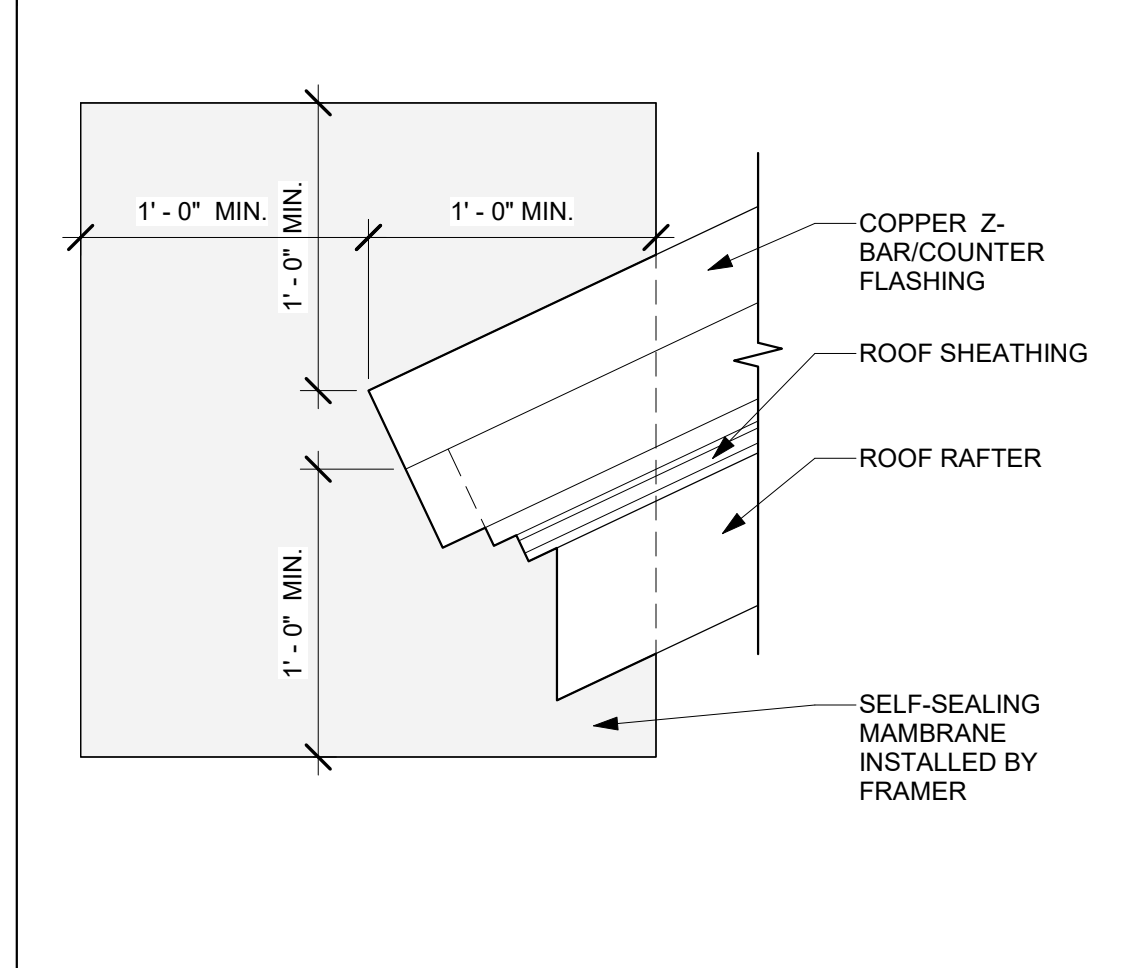
**42 FLASHING - G.I. VENT**

SCALE: 1" = 1'-0"



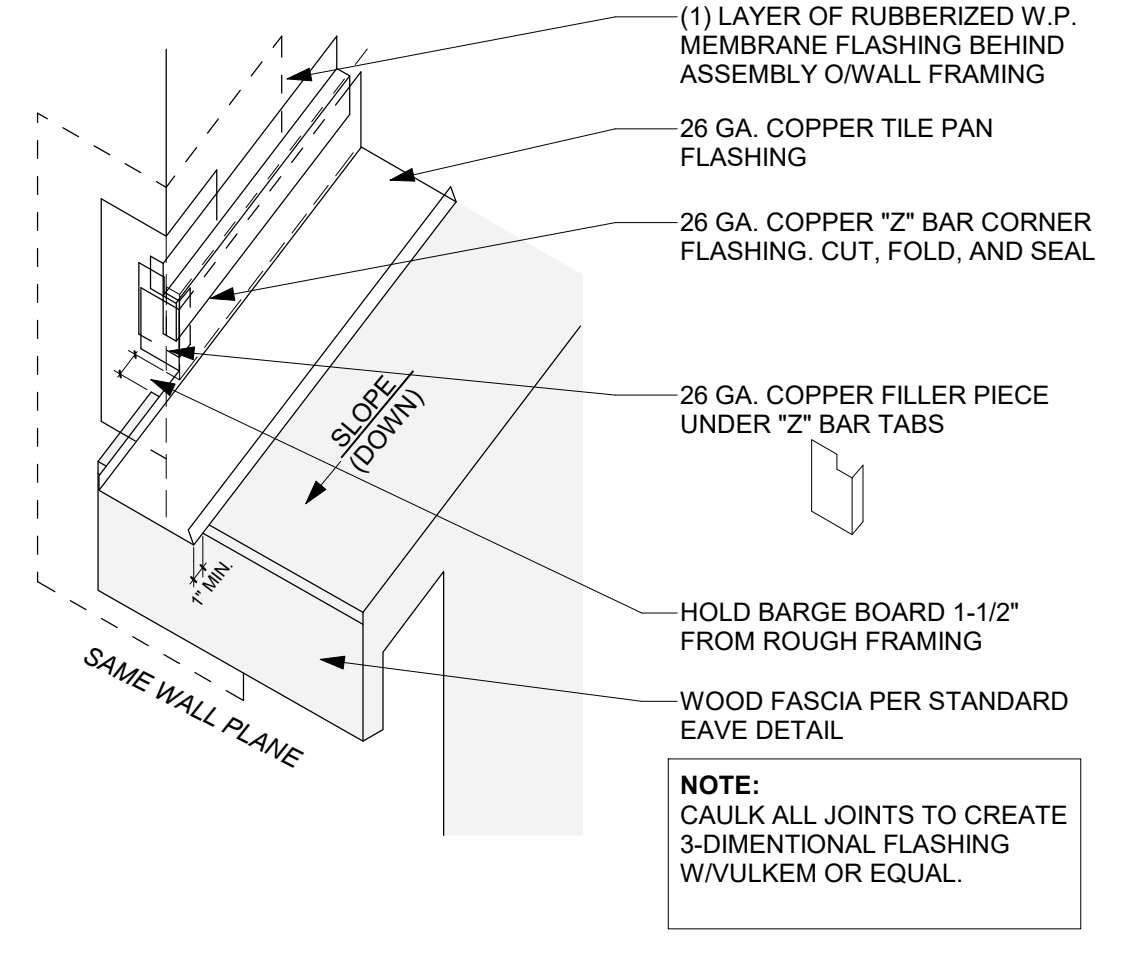
**32 FLASHING - WINDOW CORNER TYP.**

SCALE: 1/2" = 1'-0"



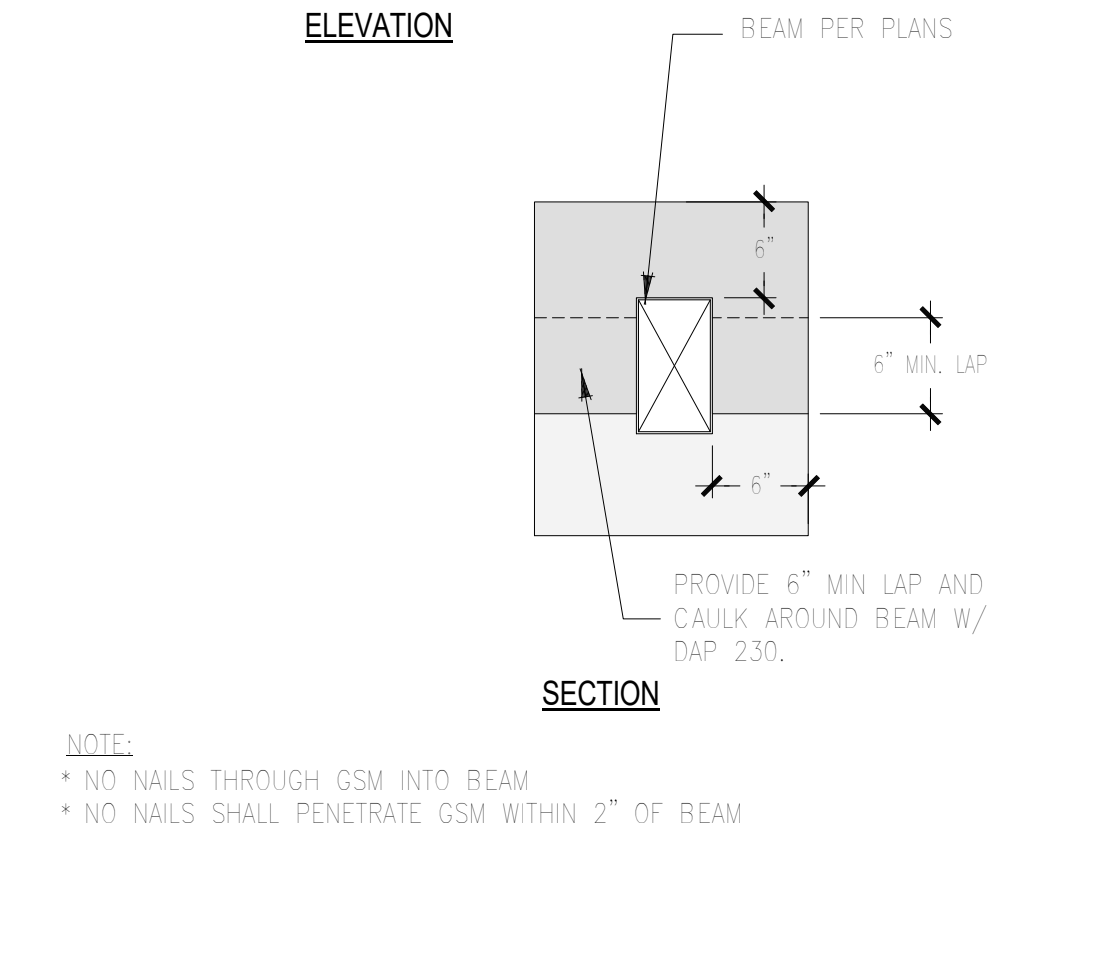
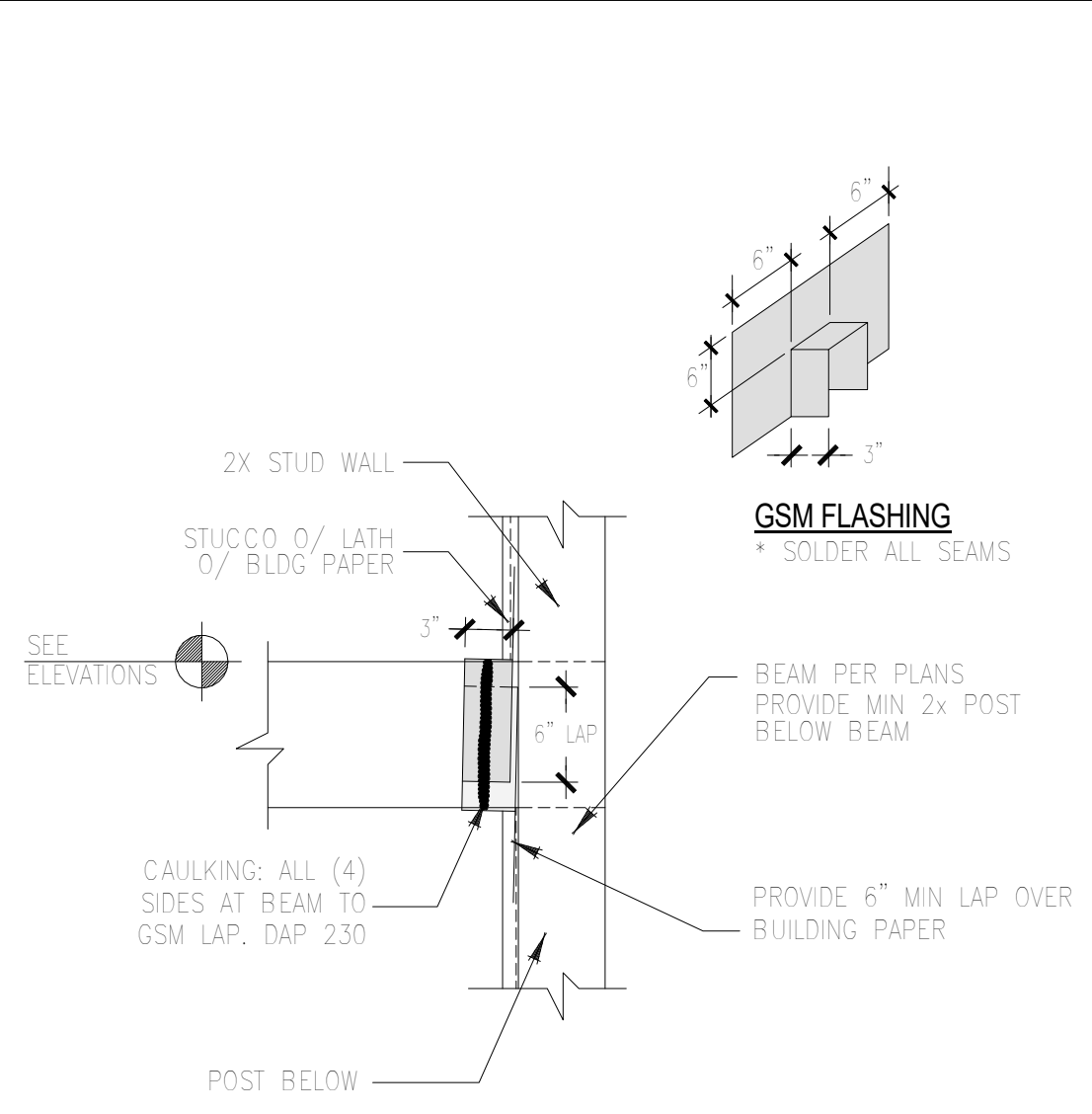
**22 FLASHING - FASCIA TO WALL TYP.**

SCALE: 1 1/2" = 1'-0"



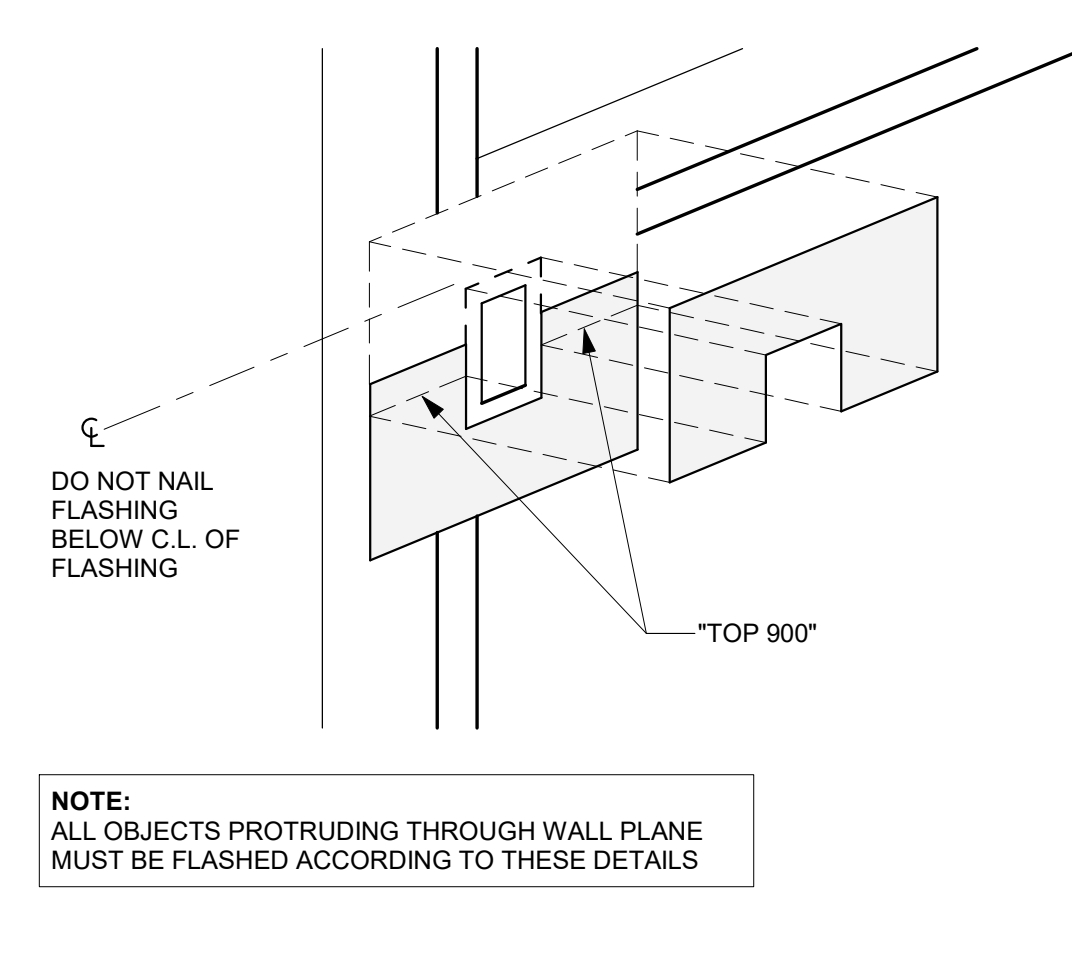
**12 ROOF TO WALL TYP. FLASHING 2**

SCALE: 3" = 1'-0"



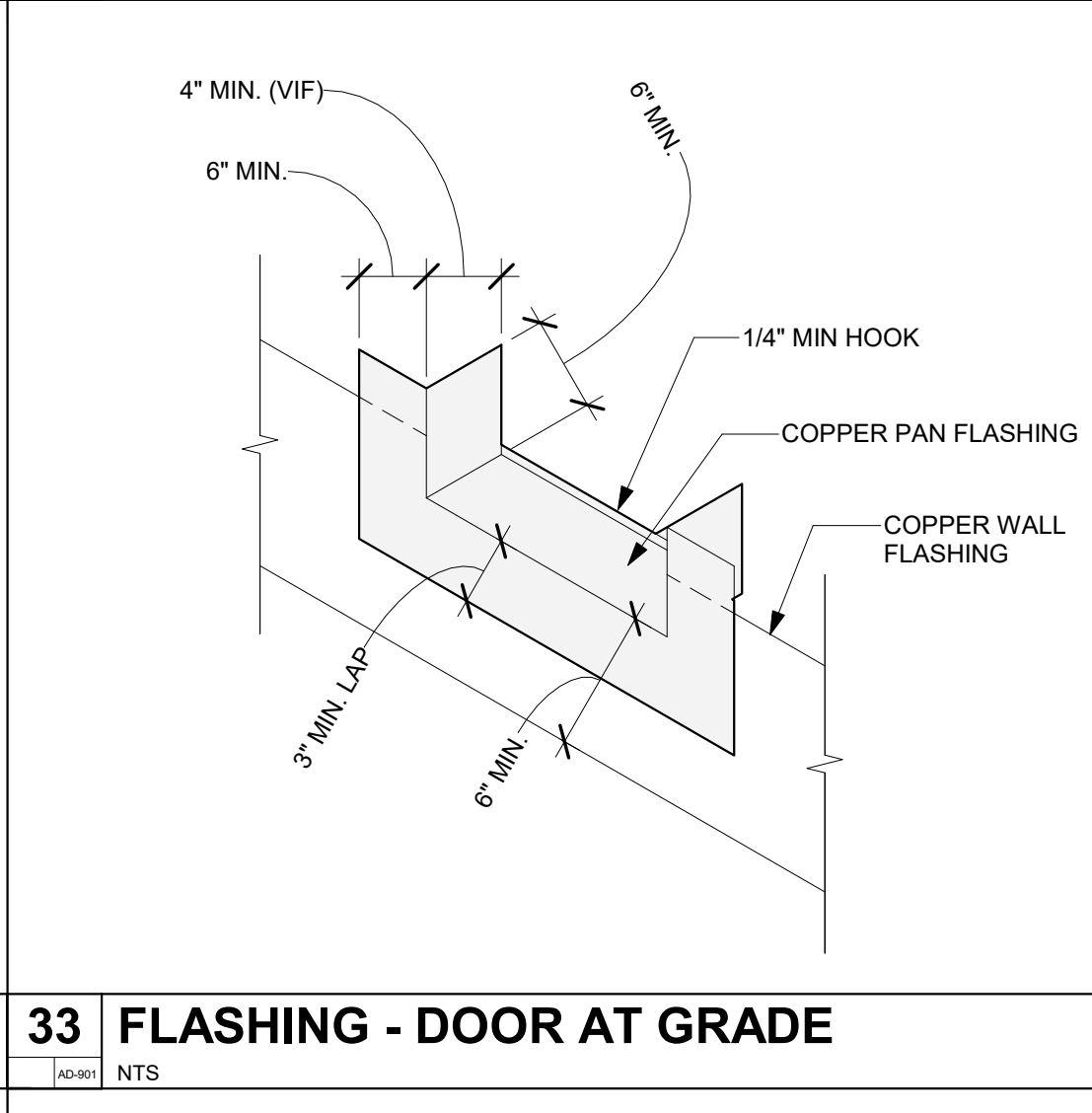
**43 FLASHING - PROTRUSIONS**

SCALE: 1 1/2" = 1'-0"



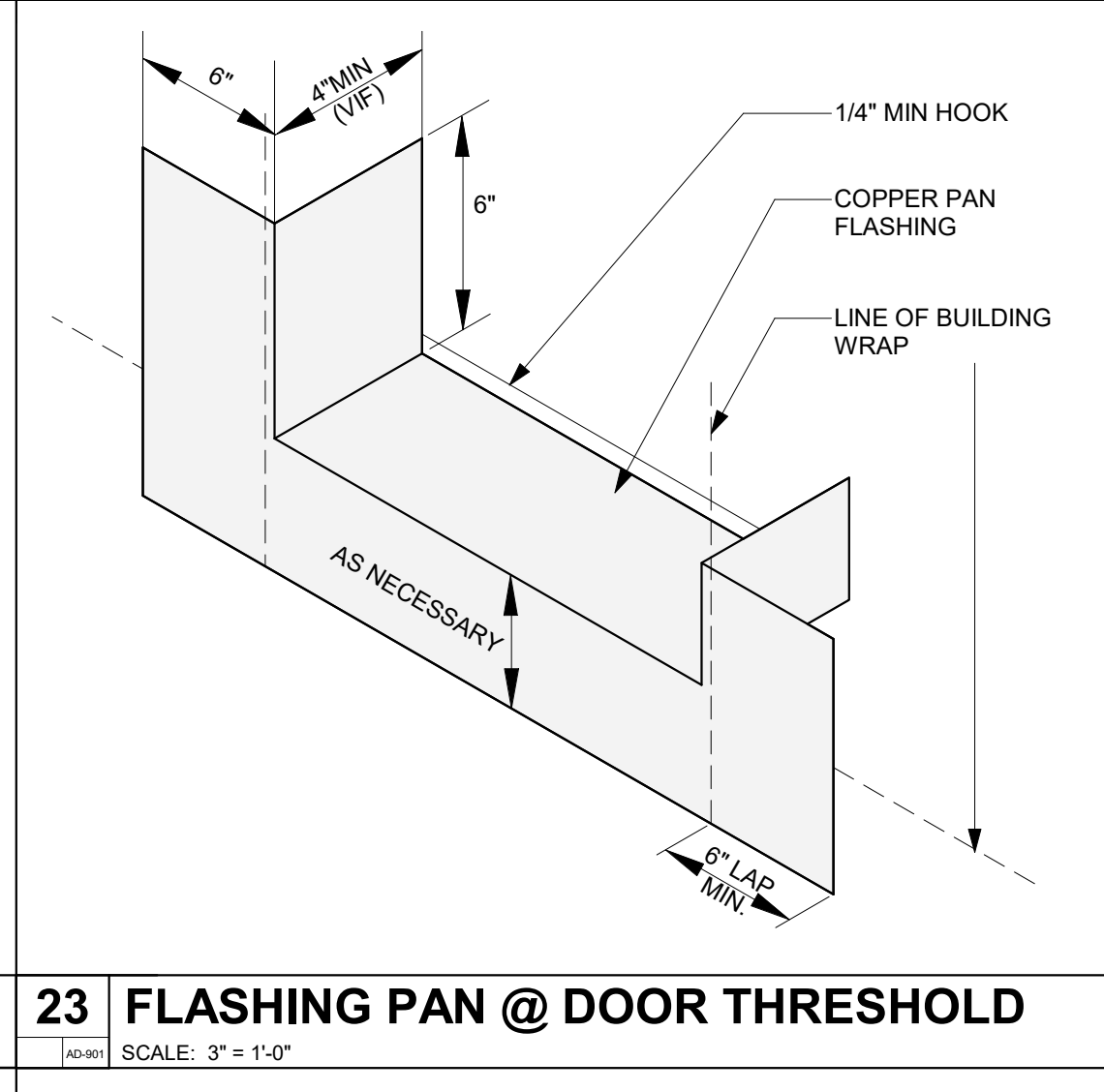
**44 FLASHING - DETAILED PROTRUSION**

SCALE: 1 1/2" = 1'-0"



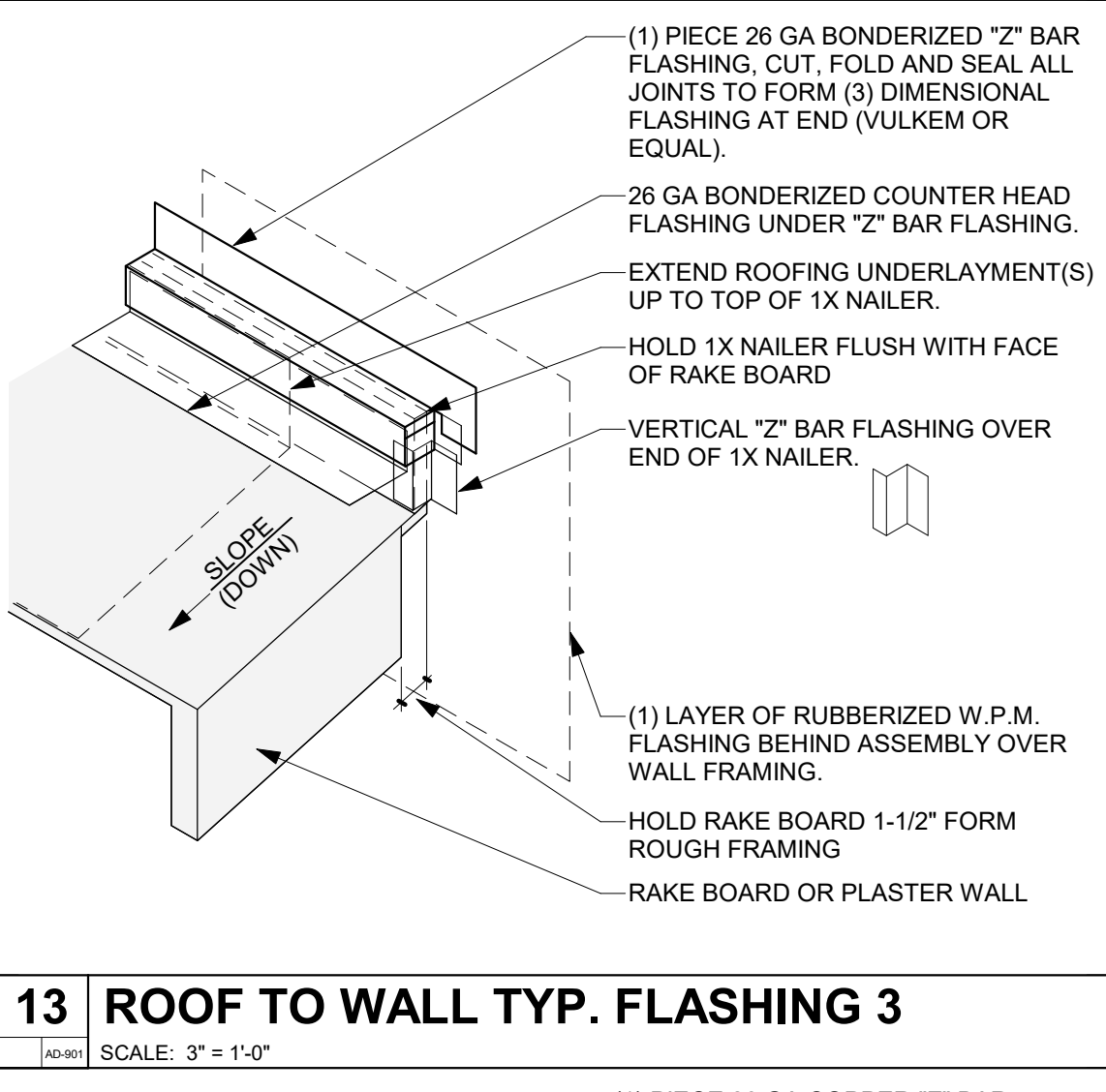
**33 FLASHING - DOOR AT GRADE**

NTS



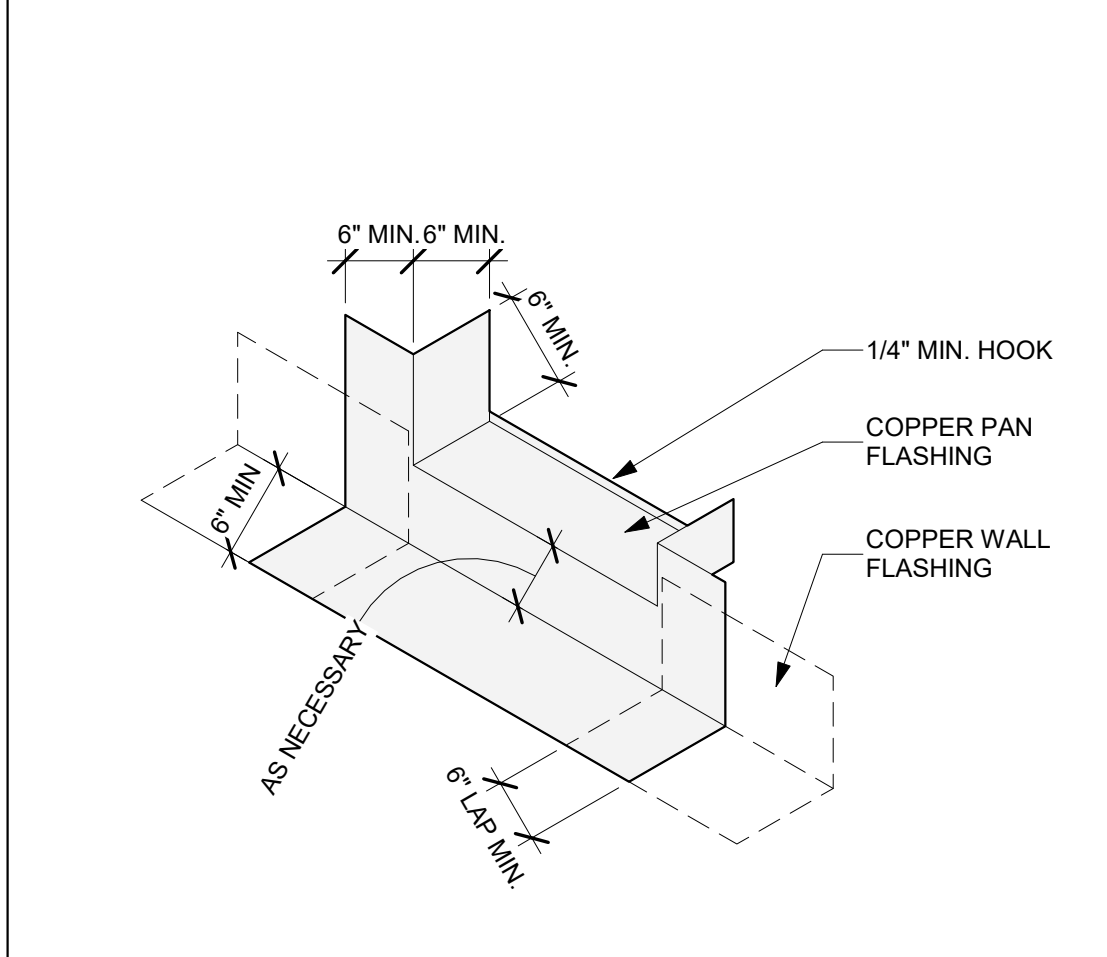
**23 FLASHING PAN @ DOOR THRESHOLD**

SCALE: 3" = 1'-0"



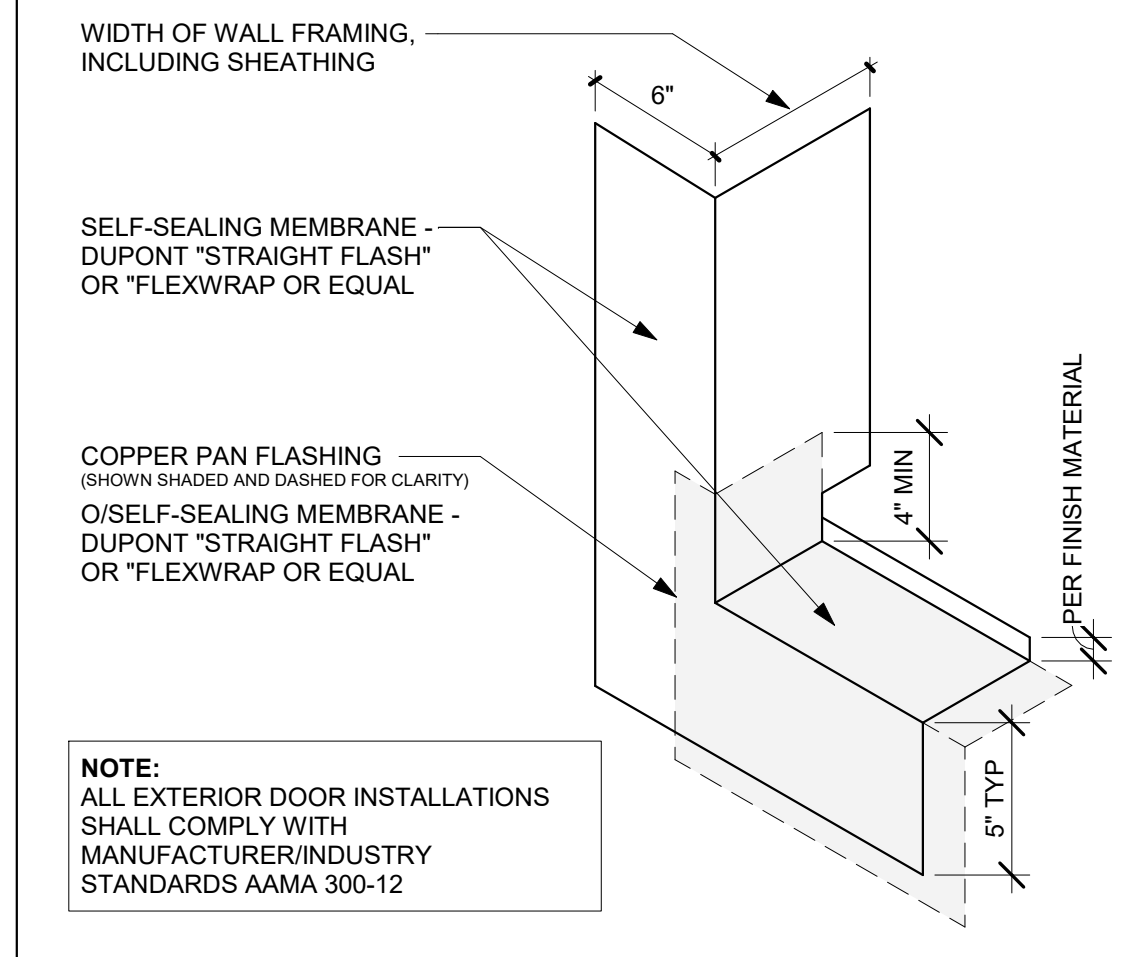
**13 ROOF TO WALL TYP. FLASHING 3**

SCALE: 3" = 1'-0"



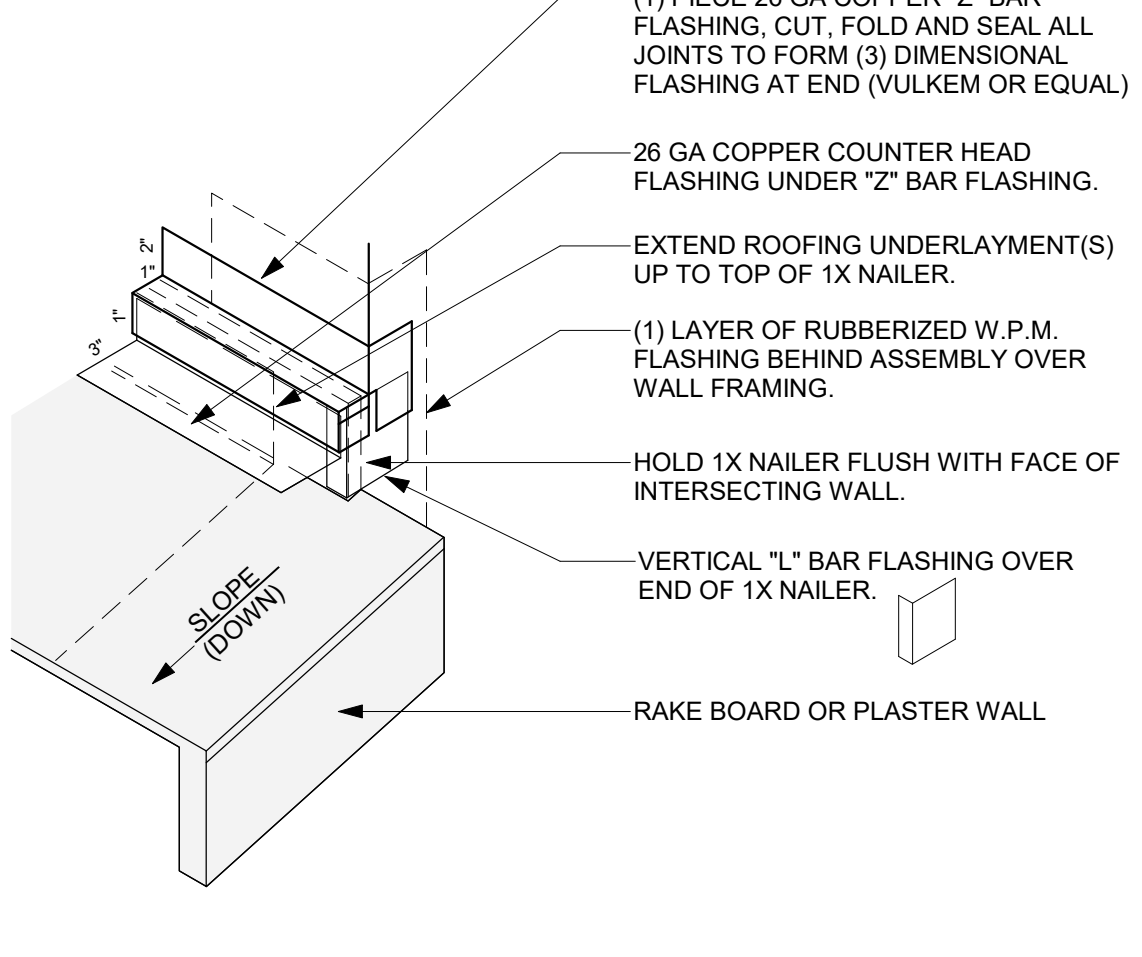
**34 FLASHING - DOOR AT W.P. DECK**

NTS



**24 FLASHING - JAMB TO SILL TYP.**

SCALE: 3" = 1'-0"



**14 ROOF TO WALL TYP. FLASHING 4**

SCALE: 3" = 1'-0"

CONSULTANT

AGENCY

**MONO COUNTY ADU PROTOTYPES**  
MONO COUNTY  
**ARCHITECTURAL DETAILS - COMMON**

NO.	REVISION	DATE

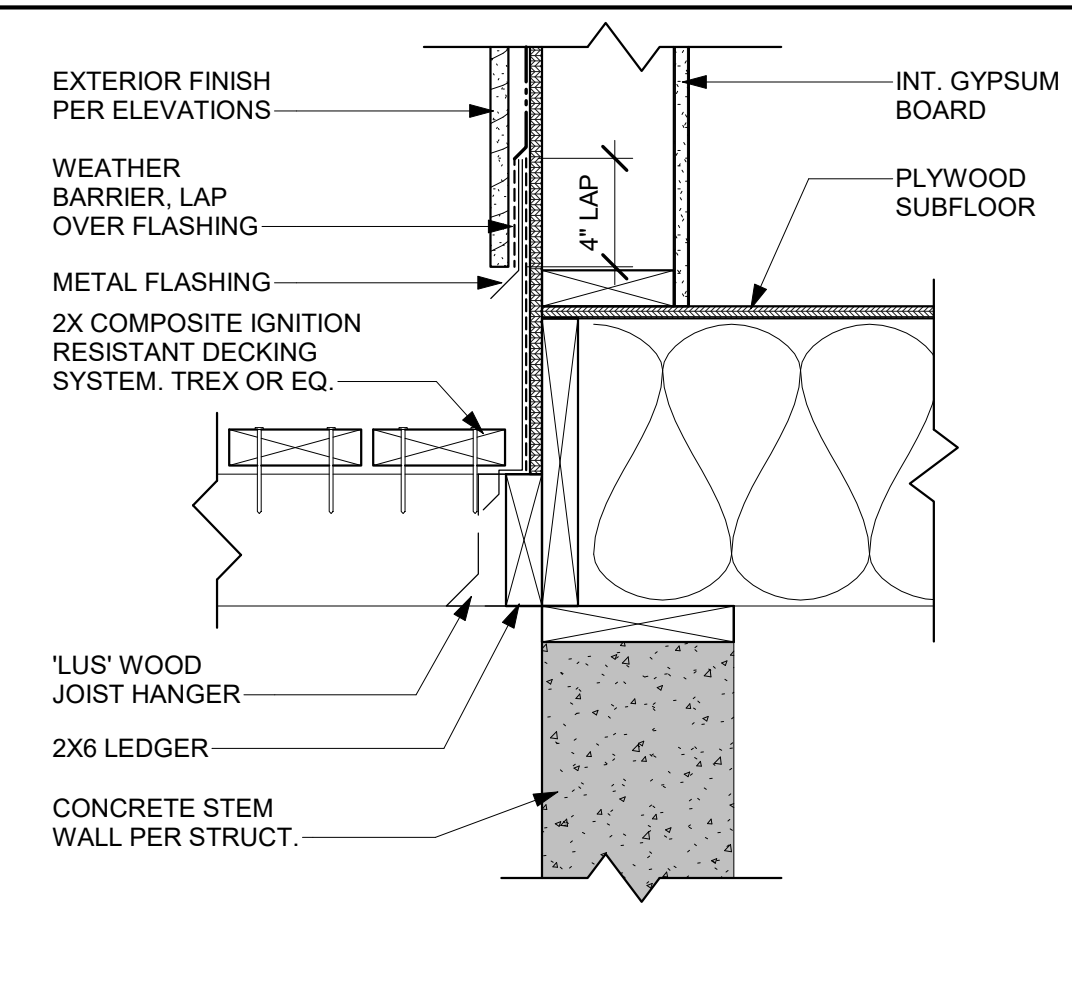
PROJECT MANAGER  
RR

DRAWN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_

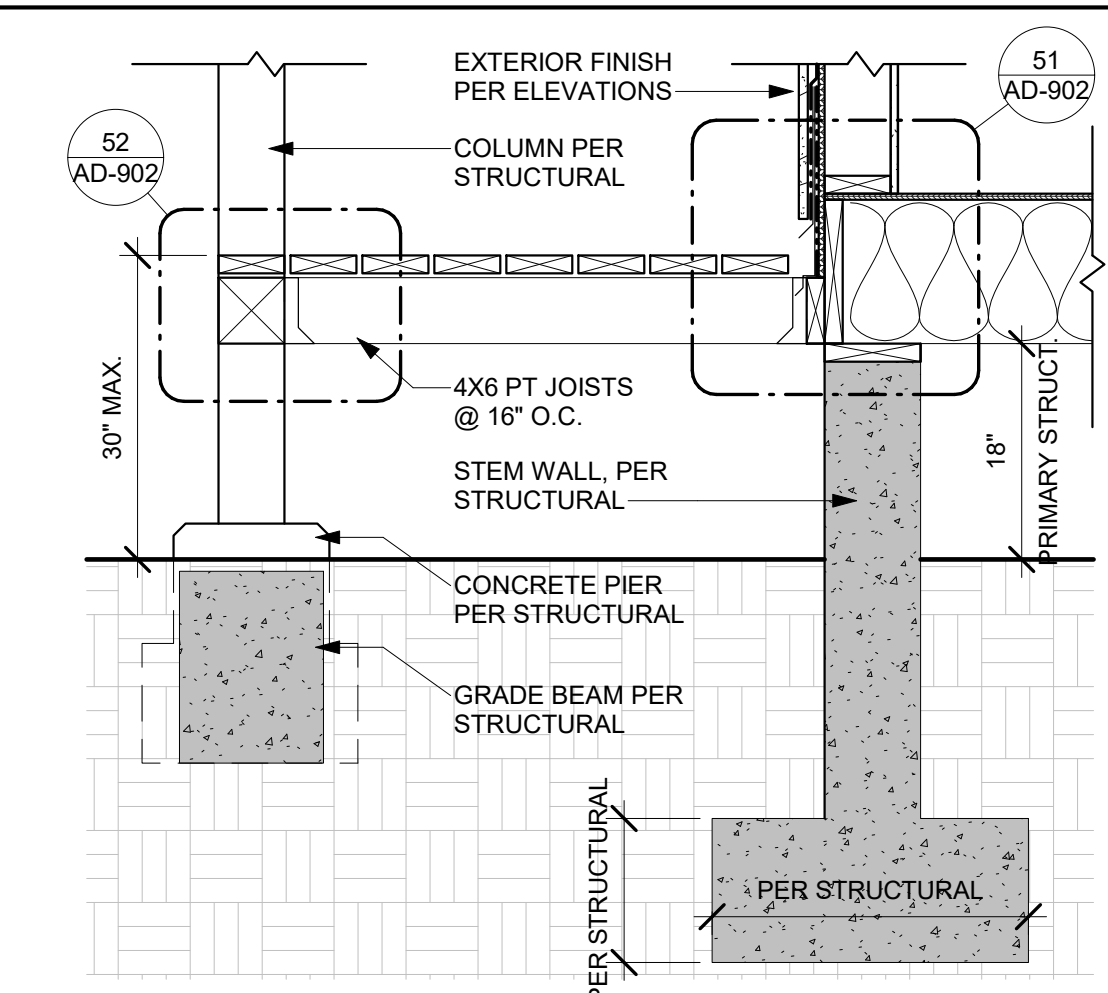
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6/30/2022

PROJECT NUMBER  
2340-01-CU21

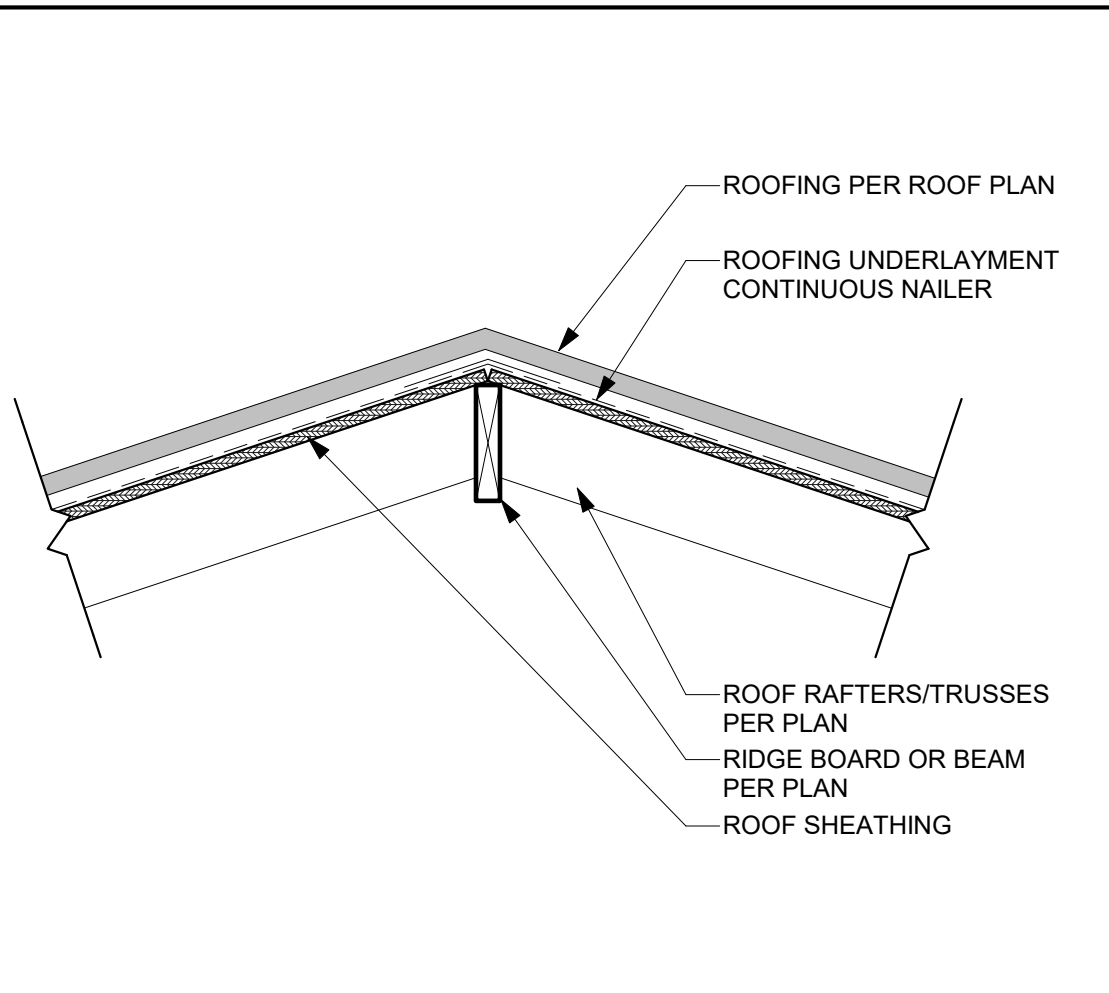
SHEET  
AD-901



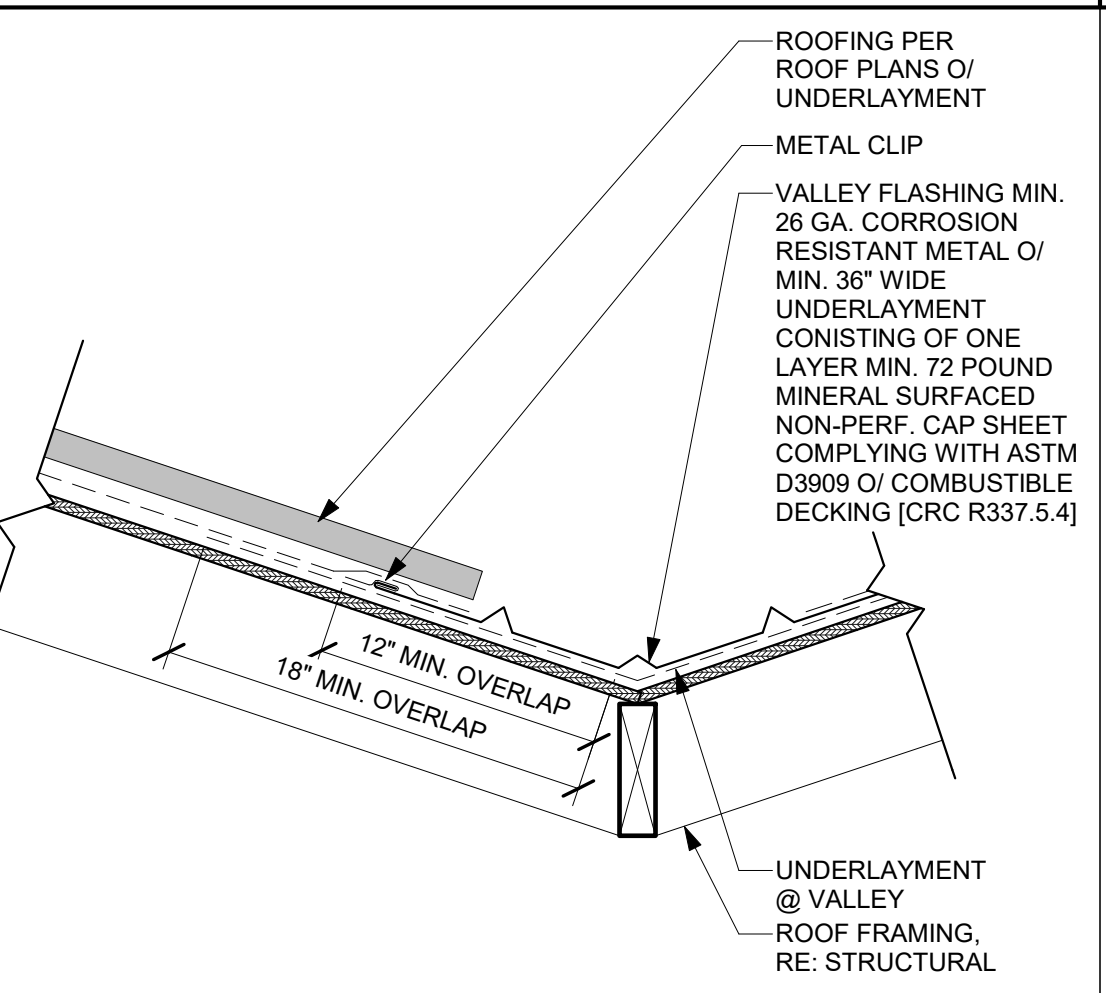
**51 DECKING TO EXT. WALL**  
AD-902AD-902 1 1/2" = 1'-0"



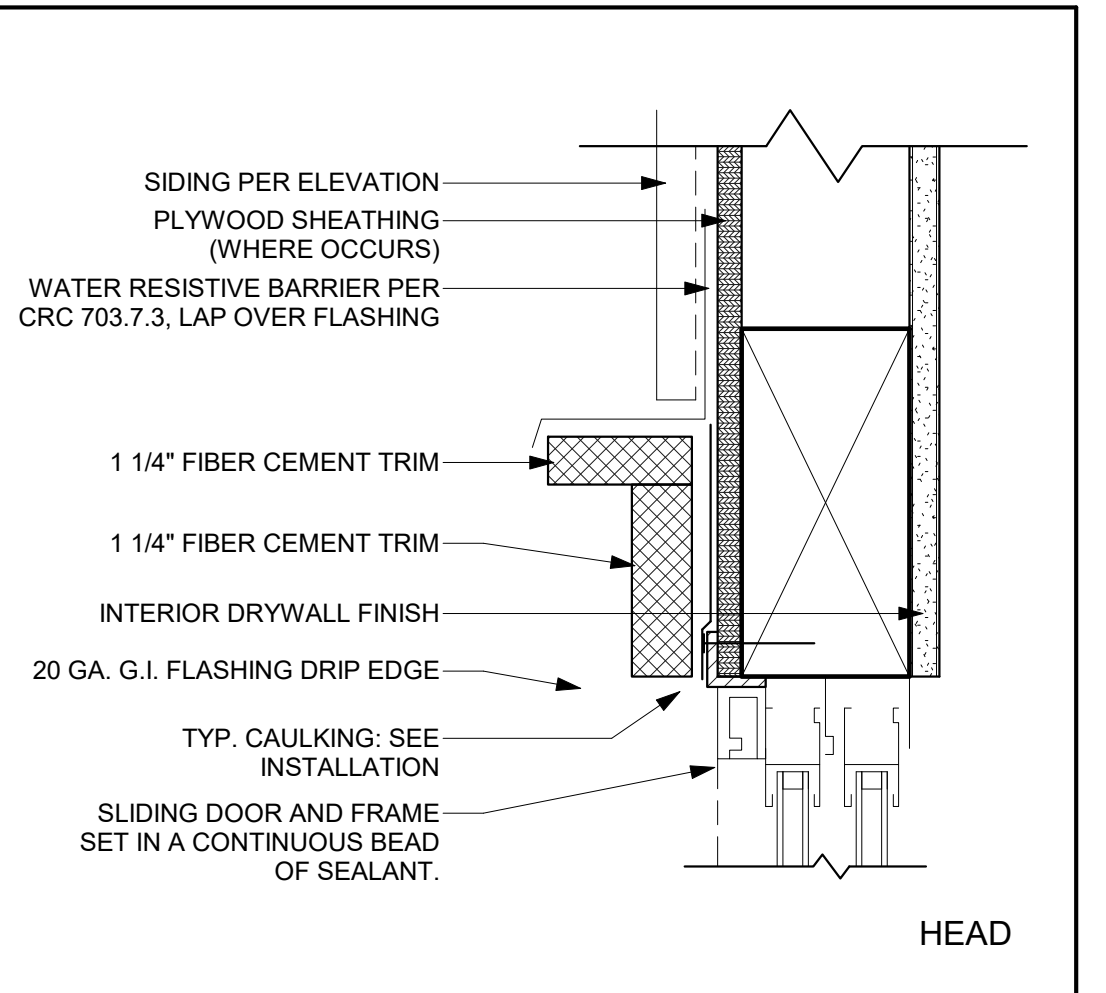
**41 RAISED PORCH DETAIL**  
A1-301AD-902 3/4" = 1'-0"



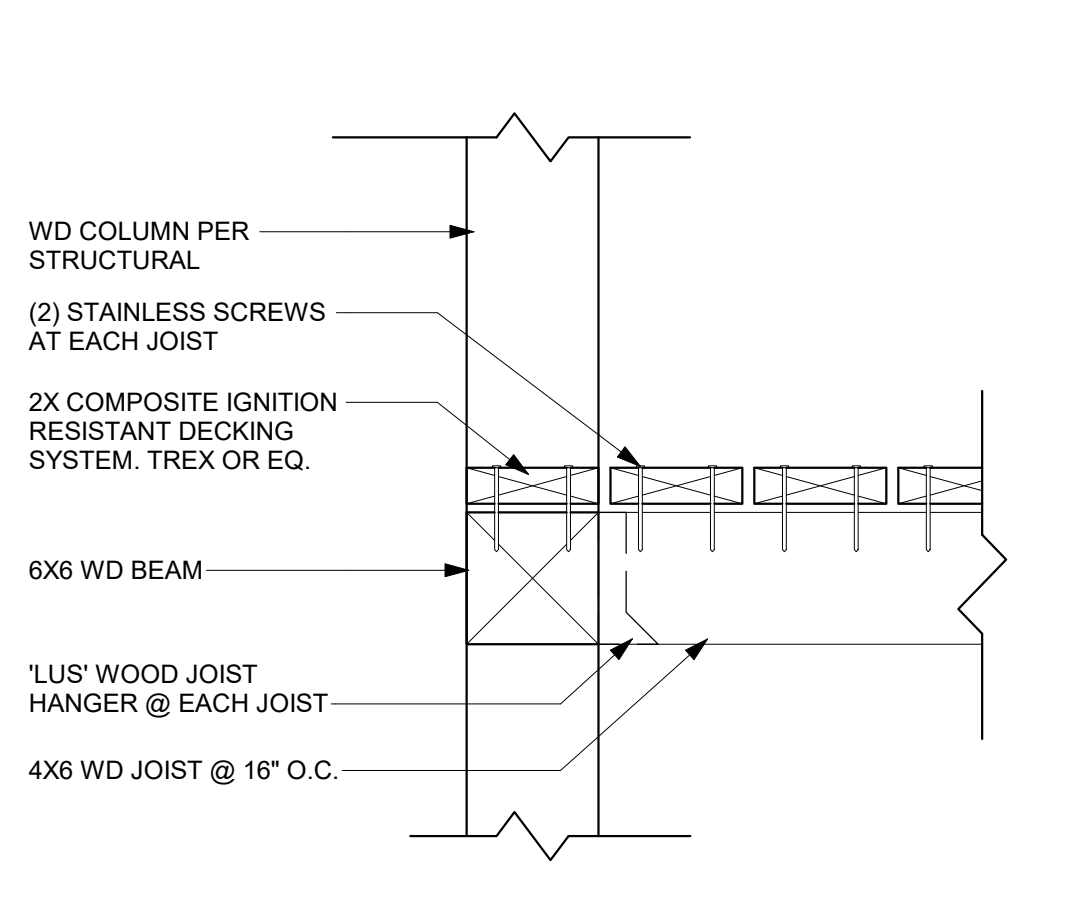
**31 ROOF - HIP/RIDGE**  
AD-902 1" = 1'-0"



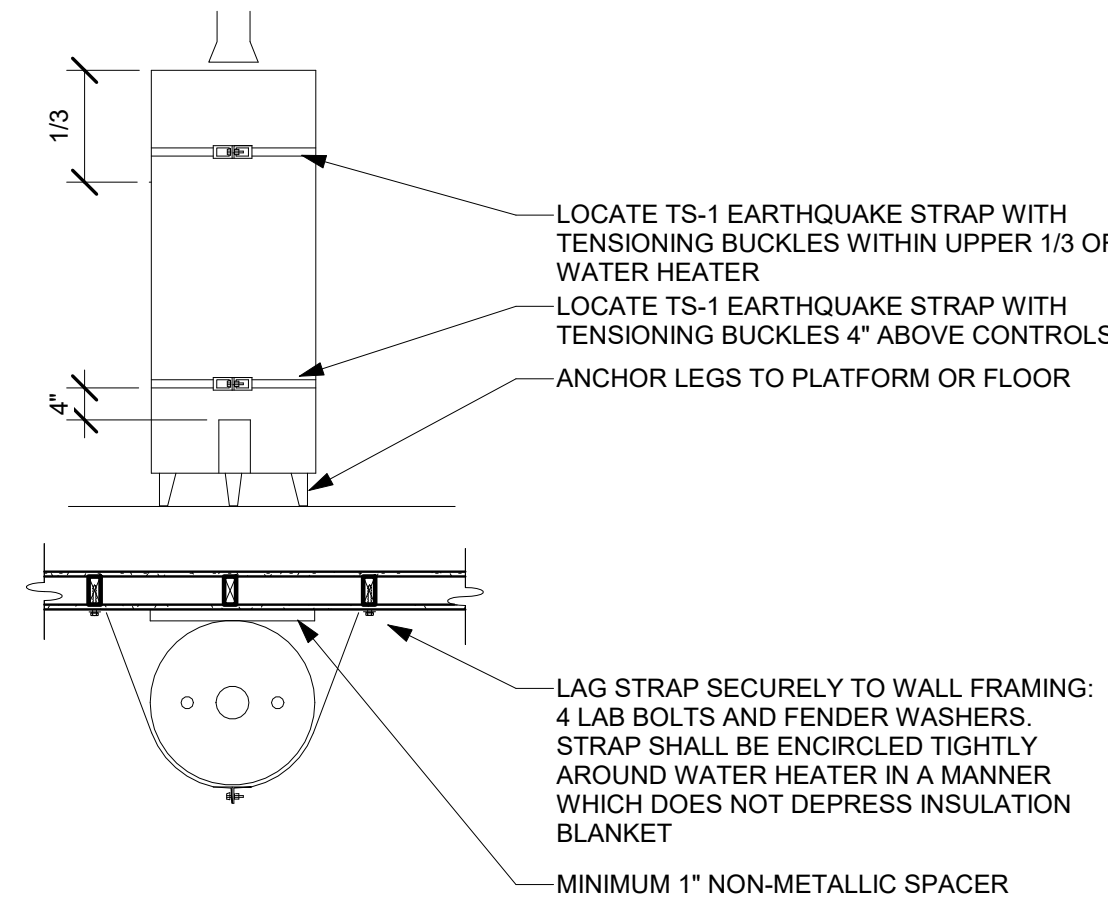
**21 ROOF - VALLEY**  
AD-902 1 1/2" = 1'-0"



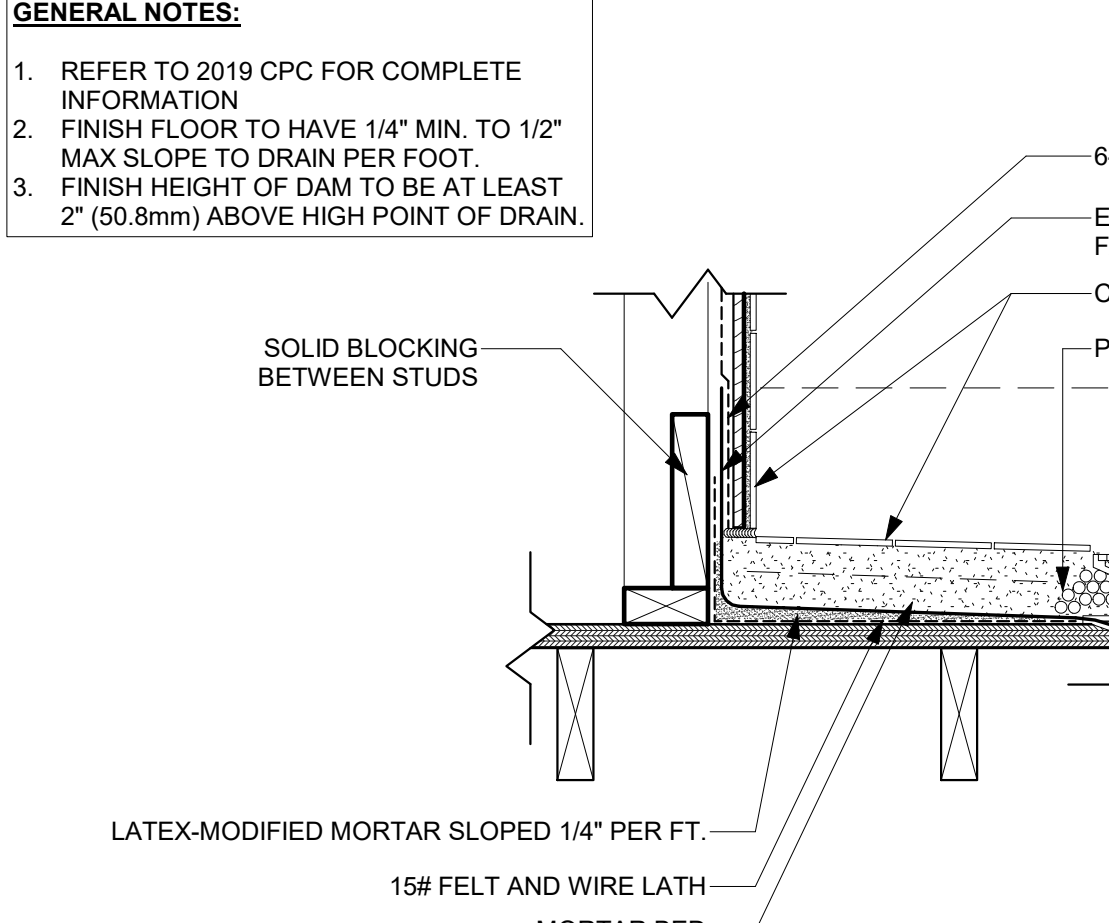
**11 DOOR-SLIDING GLASS**  
AD-902 3" = 1'-0"



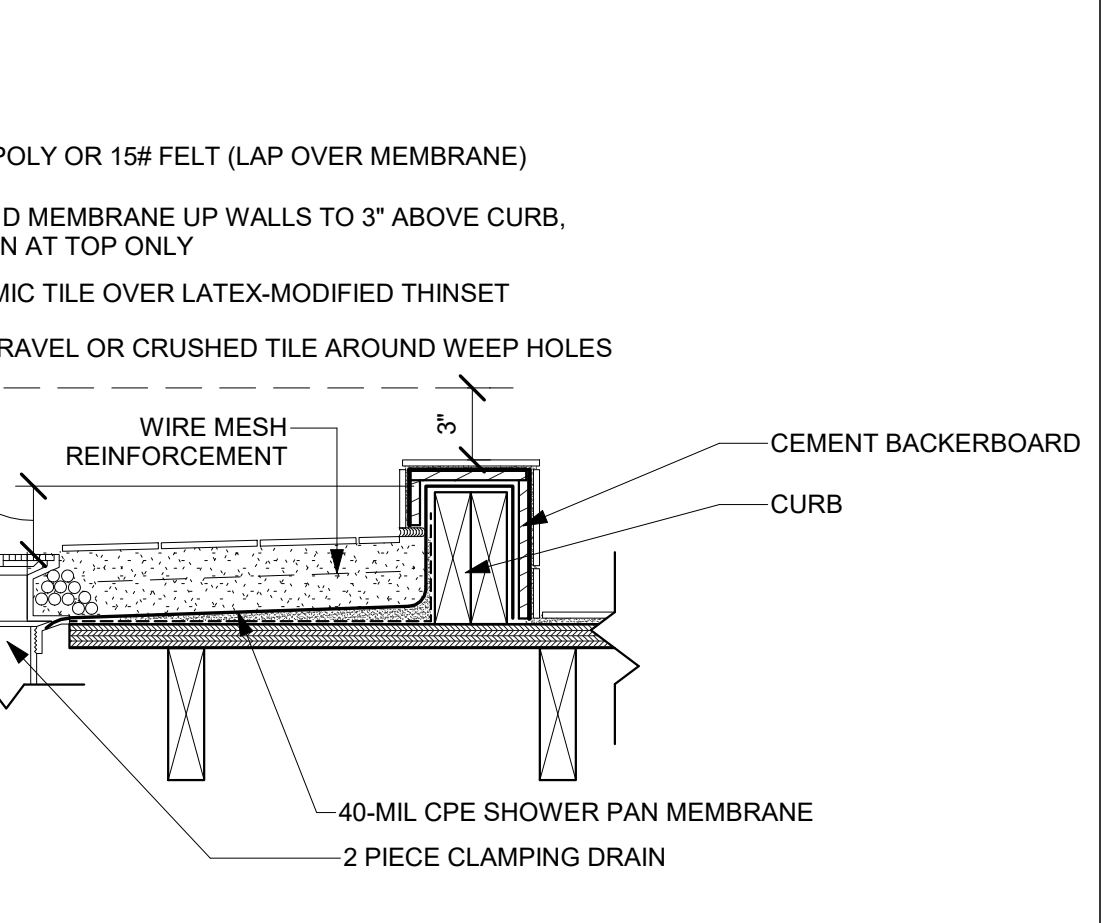
**52 PORCH DECK EDGE**  
AD-902AD-902 1 1/2" = 1'-0"



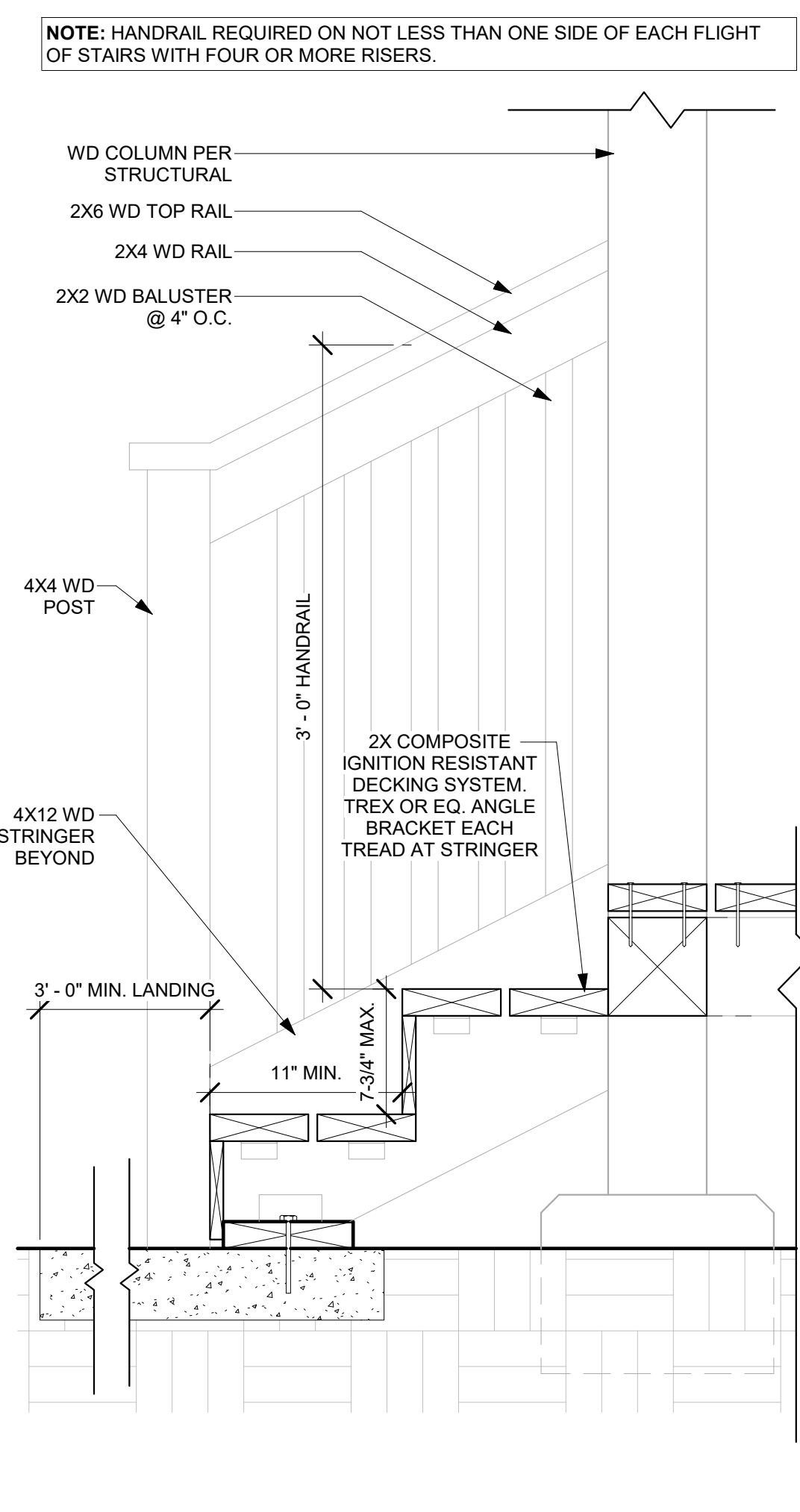
**42 WATER HEATER MOUNTING**  
A1-111AD-902 1/2" = 1'-0"



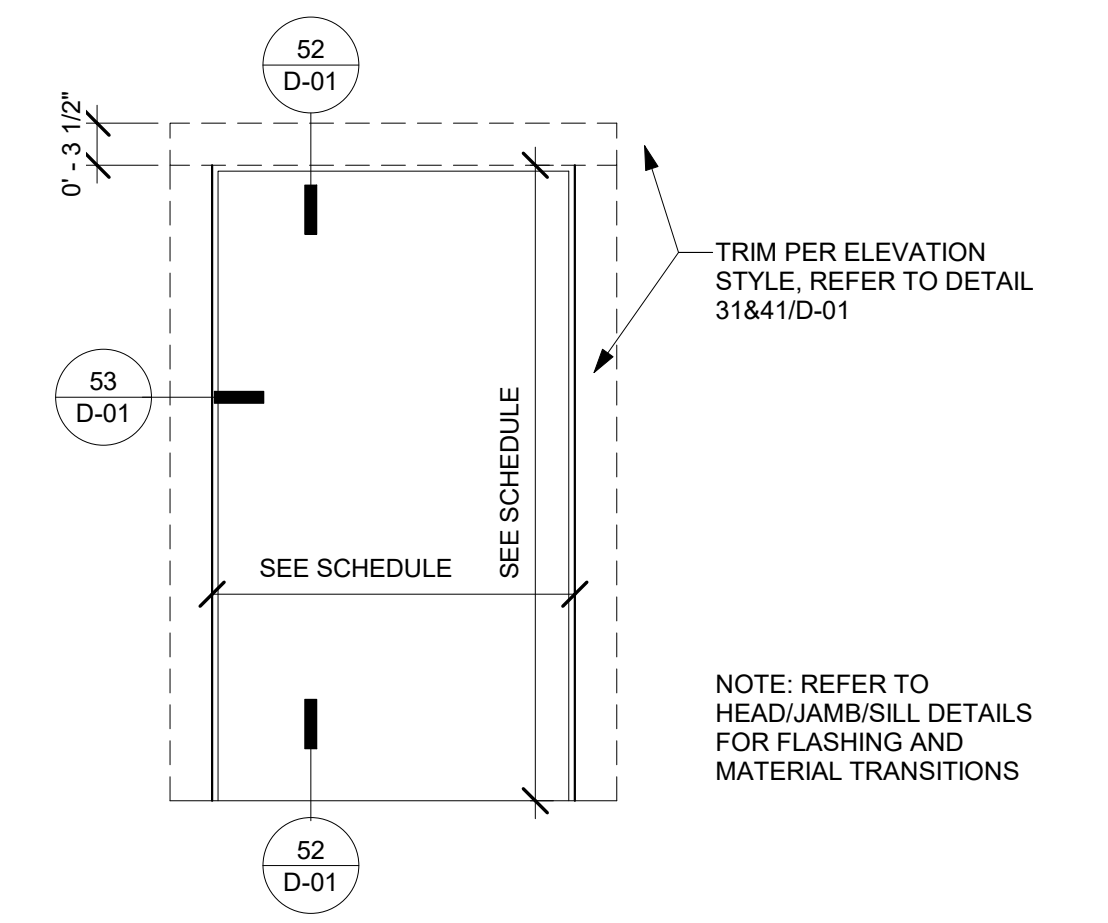
**32 SHOWER - SECTION**  
AD-902 1 1/2" = 1'-0"



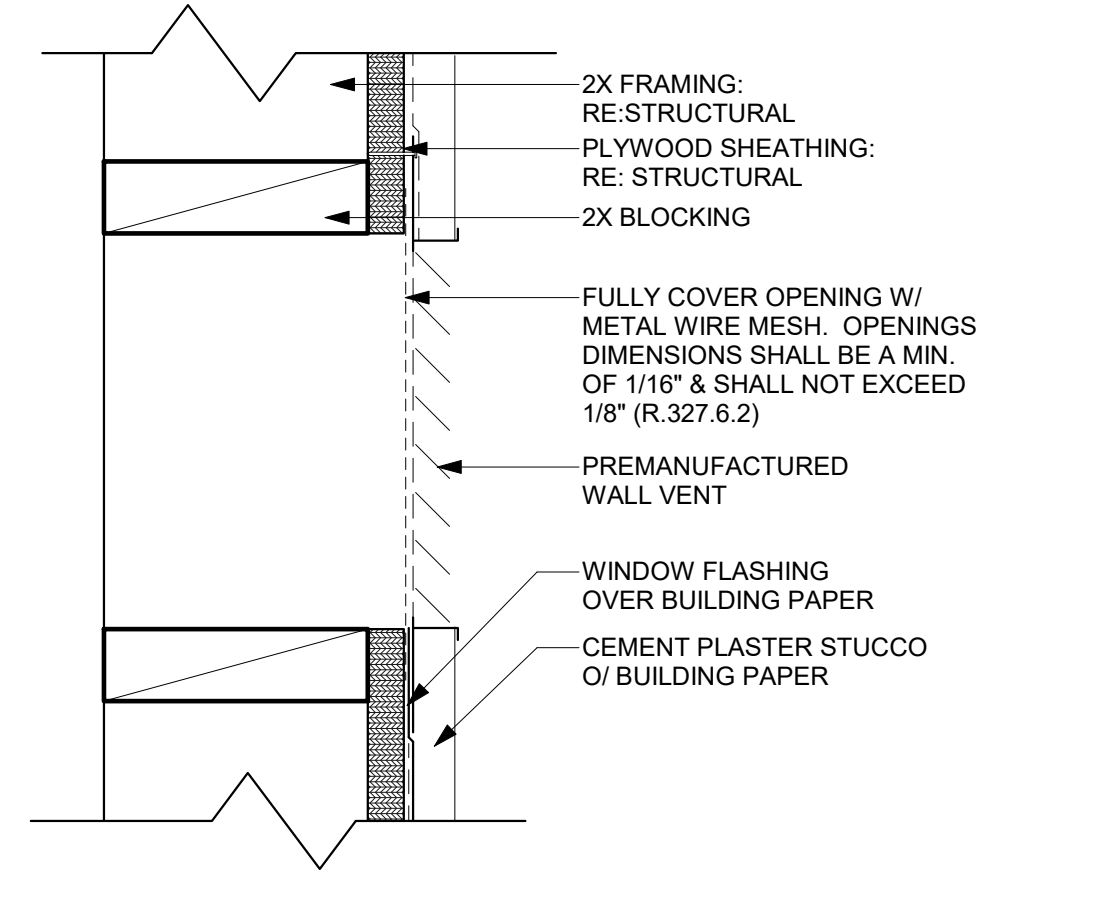
**12 DOOR-SLIDING GLASS**  
AD-902 3" = 1'-0"



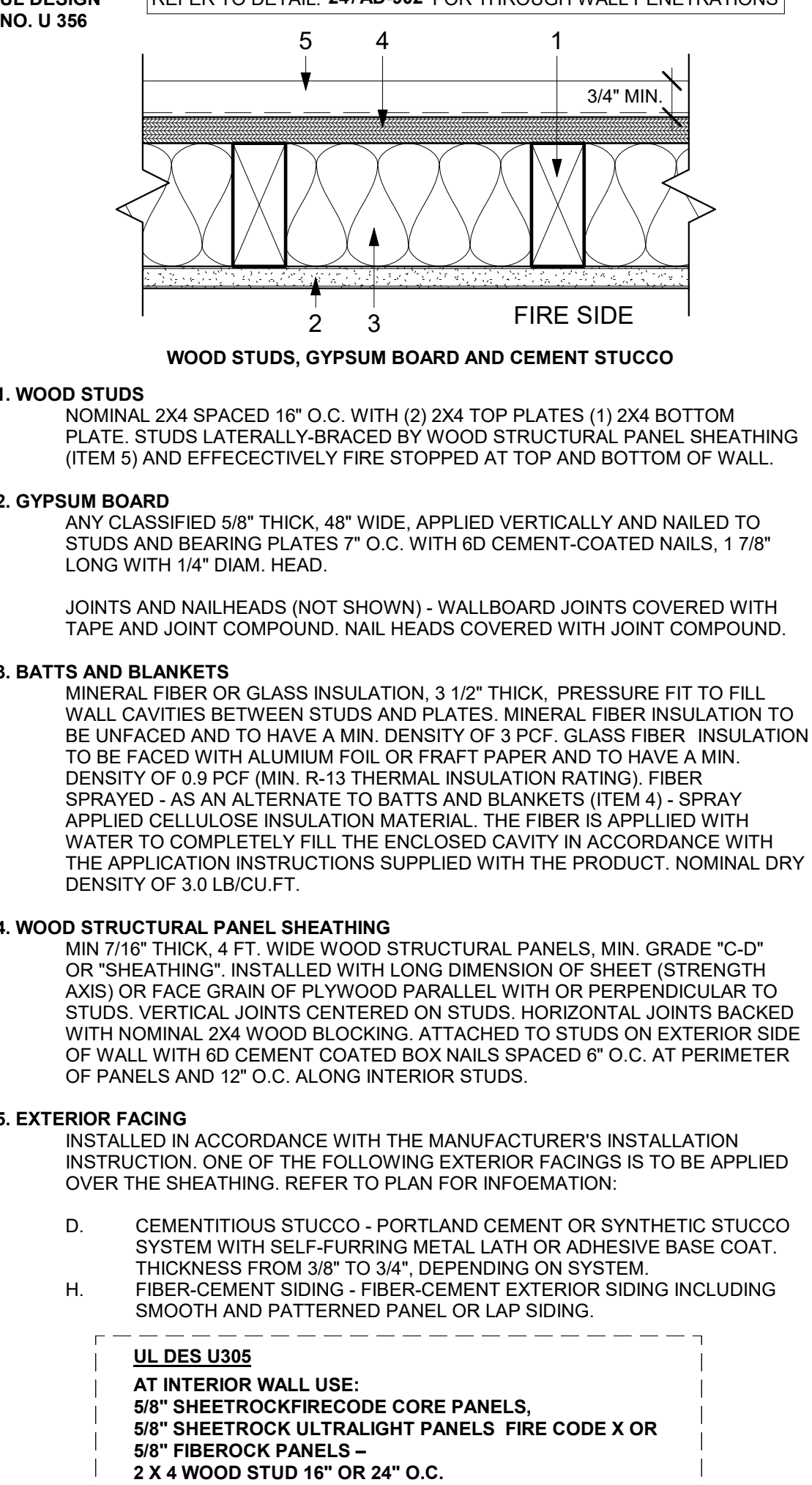
**54 PORCH STAIRS**  
AD-902 1 1/2" = 1'-0"



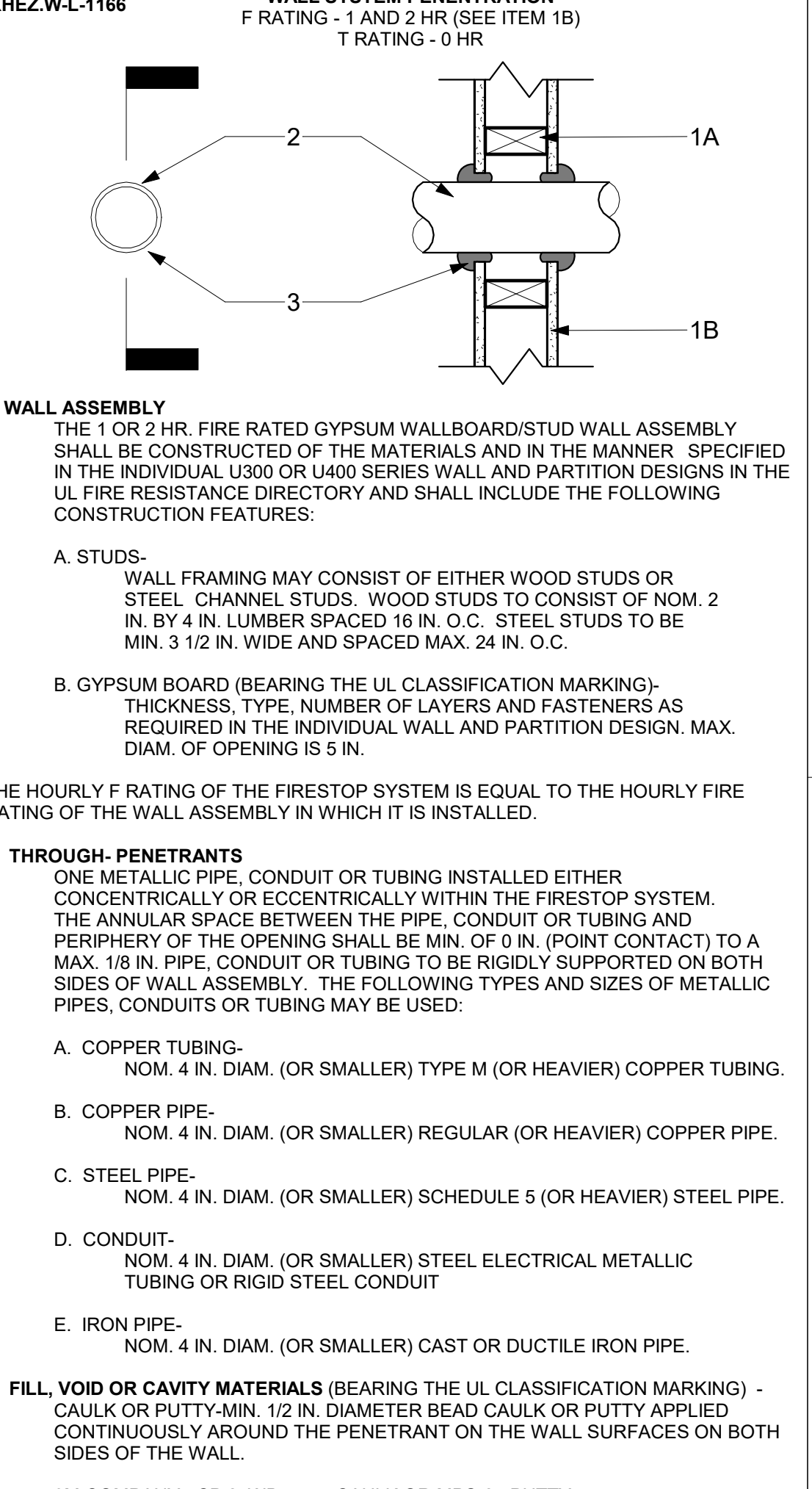
**10 DOOR TRIM - SLIDING GLASS**  
A2-201AD-902 3/4" = 1'-0"



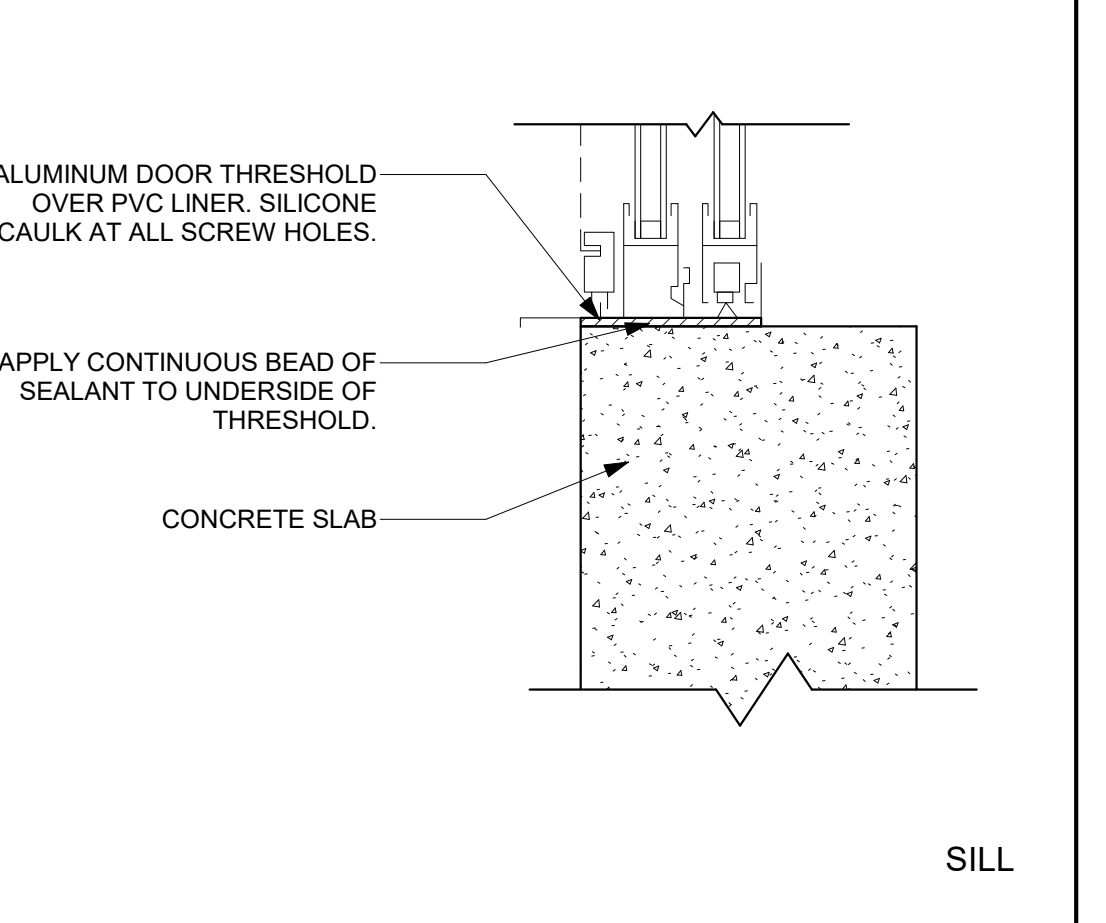
**44 WALL VENT**  
A1-201AD-902 3" = 1'-0"



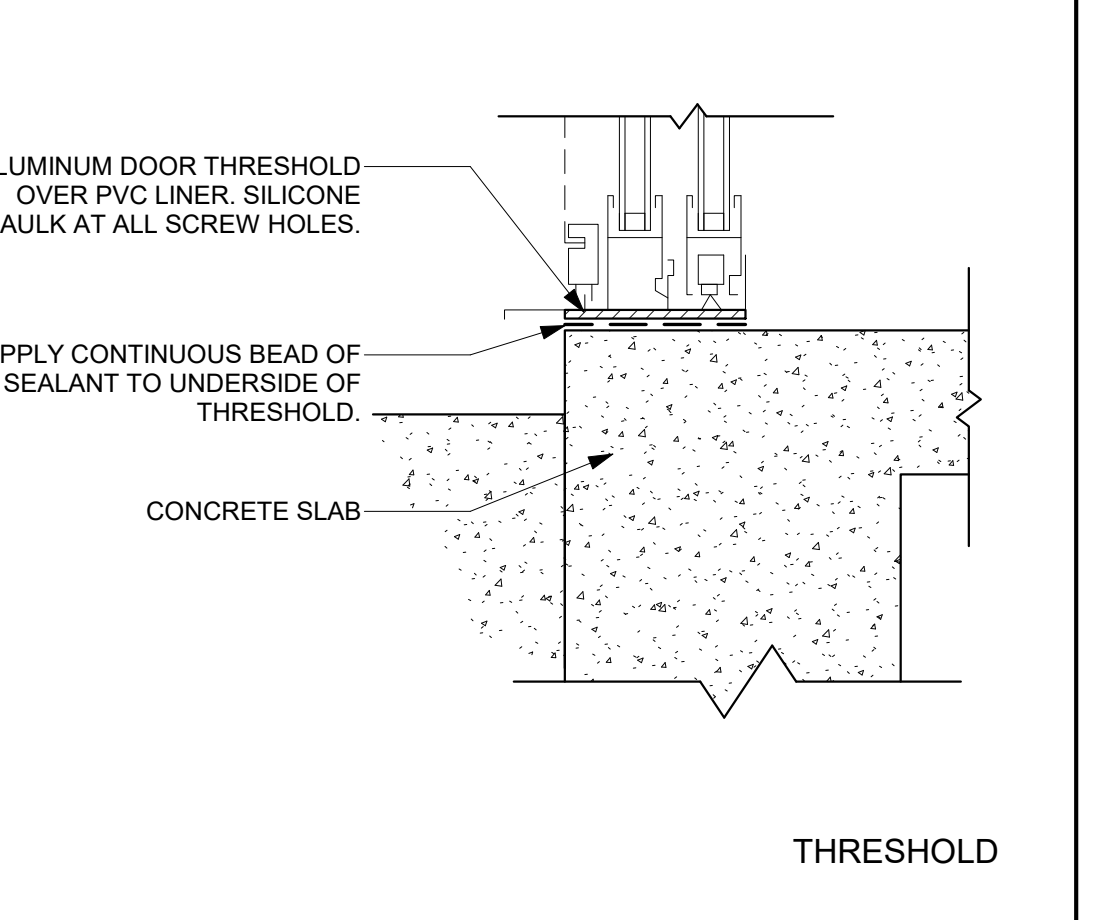
**34 1-HR EXT. RATED WALL ASSEMBLY**  
AD-902 1" = 1'-0"



**24 THROUGH PENETRATION @ WALL 1**  
AD-902 1 1/2" = 1'-0"



**13 DOOR-SLIDING GLASS**  
AD-902 3" = 1'-0"



**14 DOOR-SLIDING GLASS - THRESHOLD**  
AD-902 3" = 1'-0"

**GENERAL NOTES:**

- REFER TO 2019 CPC FOR COMPLETE INFORMATION
- FINISH FLOOR TO HAVE 1/4" MIN. TO 1/2" MAX SLOPE TO DRAIN PER FOOT
- FINISH HEIGHT OF DAM TO BE AT LEAST 2" (50.8mm) ABOVE HIGH POINT OF DRAIN.

**UL DESIGN NO. U 356** REFER TO DETAIL: 24/AD-902 FOR THROUGH WALL PENETRATIONS

**1. WOOD STUDS**  
NOMINAL 2X4 SPACED 16" O.C. WITH (2) 2X4 TOP PLATES (1) 2X4 BOTTOM PLATE. STUDS LATERALLY-BRACED BY WOOD STRUCTURAL PANEL SHEATHING (ITEM 5) AND EFFECTIVELY FIRE STOPPED AT TOP AND BOTTOM OF WALL.

**2. GYPSUM BOARD**  
ANY CLASSIFIED 5/8" THICK, 48" WIDE, APPLIED VERTICALLY AND NAILED TO STUDS AND BEARING PLATES 7" O.C. WITH 6D CEMENT-COATED NAILS, 1 7/8" LONG WITH 1/4" DIAM. HEAD.

JOINTS AND NAILHEADS (NOT SHOWN) - WALLBOARD JOINTS COVERED WITH TAPE AND JOINT COMPOUND. NAIL HEADS COVERED WITH JOINT COMPOUND.

**3. BATTS AND BLANKETS**  
MINERAL FIBER OR GLASS INSULATION, 3 1/2" THICK, PRESSURE FIT TO FILL WALL CAVITIES BETWEEN STUDS AND PLATES. MINERAL FIBER INSULATION TO BE UNFACED AND TO HAVE A MIN. DENSITY OF 3 PCF. GLASS FIBER INSULATION TO BE FACED WITH ALUMINUM FOIL OR FRAKT PAPER AND TO HAVE A MIN. DENSITY OF 0.9 PCF (MIN. R-13 THERMAL INSULATION RATING). FIBER SPRAYED - AS AN ALTERNATE TO BATTS AND BLANKETS (ITEM 4) - SPRAY APPLIED CELLULOSE INSULATION MATERIAL. THE FIBER IS APPLIED WITH WATER TO COMPLETELY FILL THE ENCLOSED CAVITY IN ACCORDANCE WITH THE APPLICATION INSTRUCTIONS SUPPLIED WITH THE PRODUCT. NOMINAL DRY DENSITY OF 3.0 LB/CU.FT.

**4. WOOD STRUCTURAL PANEL SHEATHING**  
MIN 7/16" THICK, 4 FT. WIDE WOOD STRUCTURAL PANELS, MIN. GRADE "C-D" OR "SHEATHING". INSTALLED WITH LONG DIMENSION OF SHEET (STRENGTH AXIS) OR FACE GRAIN OF PLYWOOD PARALLEL WITH OR PERPENDICULAR TO STUDS. VERTICAL JOINTS CENTERED ON STUDS. HORIZONTAL JOINTS BACKED WITH NOMINAL 2X4 WOOD BLOCKING. ATTACHED TO STUDS ON EXTERIOR SIDE OF WALL WITH 6D CEMENT COATED BOX NAILS SPACED 6" O.C. AT PERIMETER OF PANELS AND 12" O.C. ALONG INTERIOR STUDS.

**5. EXTERIOR FACING**  
INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTION. ONE OF THE FOLLOWING EXTERIOR FACINGS IS TO BE APPLIED OVER THE SHEATHING. REFER TO PLAN FOR INFORMATION:

D. CEMENTITIOUS STUCCO - PORTLAND CEMENT OR SYNTHETIC STUCCO SYSTEM WITH SELF-FURRING METAL LATH OR ADHESIVE BASE COAT. THICKNESS FROM 3/8" TO 3/4", DEPENDING ON SYSTEM.

H. FIBER-CEMENT SIDING - FIBER-CEMENT EXTERIOR SIDING INCLUDING SMOOTH AND PATTERNED PANEL OR LATH SIDING.

**UL DES U305**  
AT INTERIOR WALL USE:  
5/8" SHEETROCK FIRECODE CORE PANELS,  
5/8" SHEETROCK ULTRALIGHT PANELS FIRE CODE X OR  
5/8" FIBEROCK PANELS -  
2 X 4 WOOD STUD 16" OR 24" O.C.

**XHEZ-WL-1166** WALL SYSTEM PENETRATION  
F RATING - 1 AND 2 HR (SEE ITEM 1B)  
T RATING - 0 HR

**1. WALL ASSEMBLY**  
THE 1 OR 2 HR. FIRE RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM. 2 IN. BY 4 IN. LUMBER SPACED 16 IN. O.C. STEEL STUDS TO BE MIN. 3 1/2 IN. WIDE AND SPACED MAX. 24 IN. O.C.

B. GYPSUM BOARD (BEARING THE UL CLASSIFICATION MARKING)- THICKNESS, TYPE, NUMBER OF LAYERS AND FASTENERS AS REQUIRED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX. DIAM. OF OPENING IS 5 IN.

THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.

**2. THROUGH-PENETRANTS**  
ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE PIPE, CONDUIT OR TUBING AND PERIPHERY OF THE OPENING SHALL BE MIN. OF 0 IN. (POINT CONTACT) TO A MAX. 1/8 IN. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:

A. COPPER TUBING- NOM. 4 IN. DIAM. (OR SMALLER) TYPE M (OR HEAVIER) COPPER TUBING.

B. COPPER PIPE- NOM. 4 IN. DIAM. (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.

C. STEEL PIPE- NOM. 4 IN. DIAM. (OR SMALLER) SCHEDULE 5 (OR HEAVIER) STEEL PIPE.

D. CONDUIT- NOM. 4 IN. DIAM. (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR RIGID STEEL CONDUIT

E. IRON PIPE- NOM. 4 IN. DIAM. (OR SMALLER) CAST OR DUCTILE IRON PIPE.

**3. FILL, VOID OR CAVITY MATERIALS** (BEARING THE UL CLASSIFICATION MARKING) - CAULK OR PUTTY-MIN. 1/2 IN. DIAMETER BEAD CAULK OR PUTTY APPLIED CONTINUOUSLY AROUND THE PENETRANT ON THE WALL SURFACES ON BOTH SIDES OF THE WALL.

3M COMPANY - CP 25WB+ CAULK OR MPS-2+ PUTTY

**13 DOOR-SLIDING GLASS**  
AD-902 3" = 1'-0"

**14 DOOR-SLIDING GLASS - THRESHOLD**  
AD-902 3" = 1'-0"

CONSULTANT

AGENCY

**MONO COUNTY ADU PROTOTYPES**  
MONO COUNTY ARCHITECTURAL DETAILS - COMMON

NO.	REVISION	DATE

**PROJECT MANAGER**  
RR

**DRAWN BY**      **CHECKED BY**

**DATE**  
6/30/2022

**PROJECT NUMBER**  
2340-01-CU21

**SHEET**  
AD-902

CONSULTANT

AGENCY

**MONO COUNTY ADU  
PROTOTYPES**  
MONO COUNTY  
ARCHITECTURAL DETAILS - RURAL  
MOUNTAIN

NO.	REVISION	DATE

PROJECT MANAGER  
RR

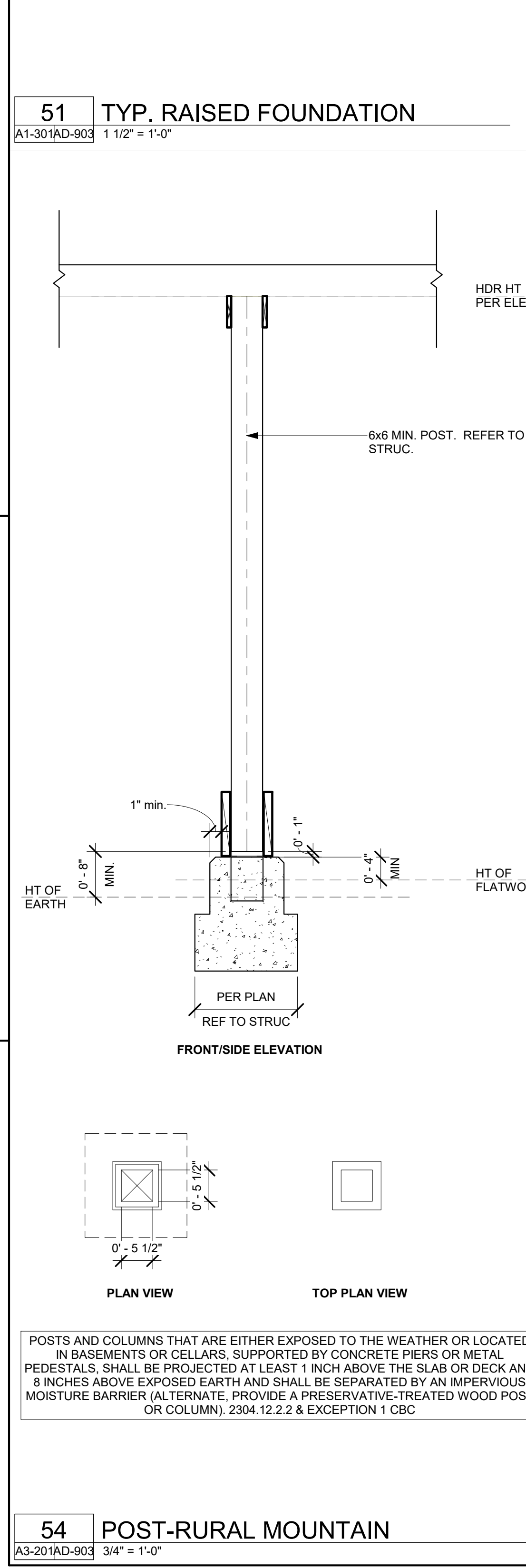
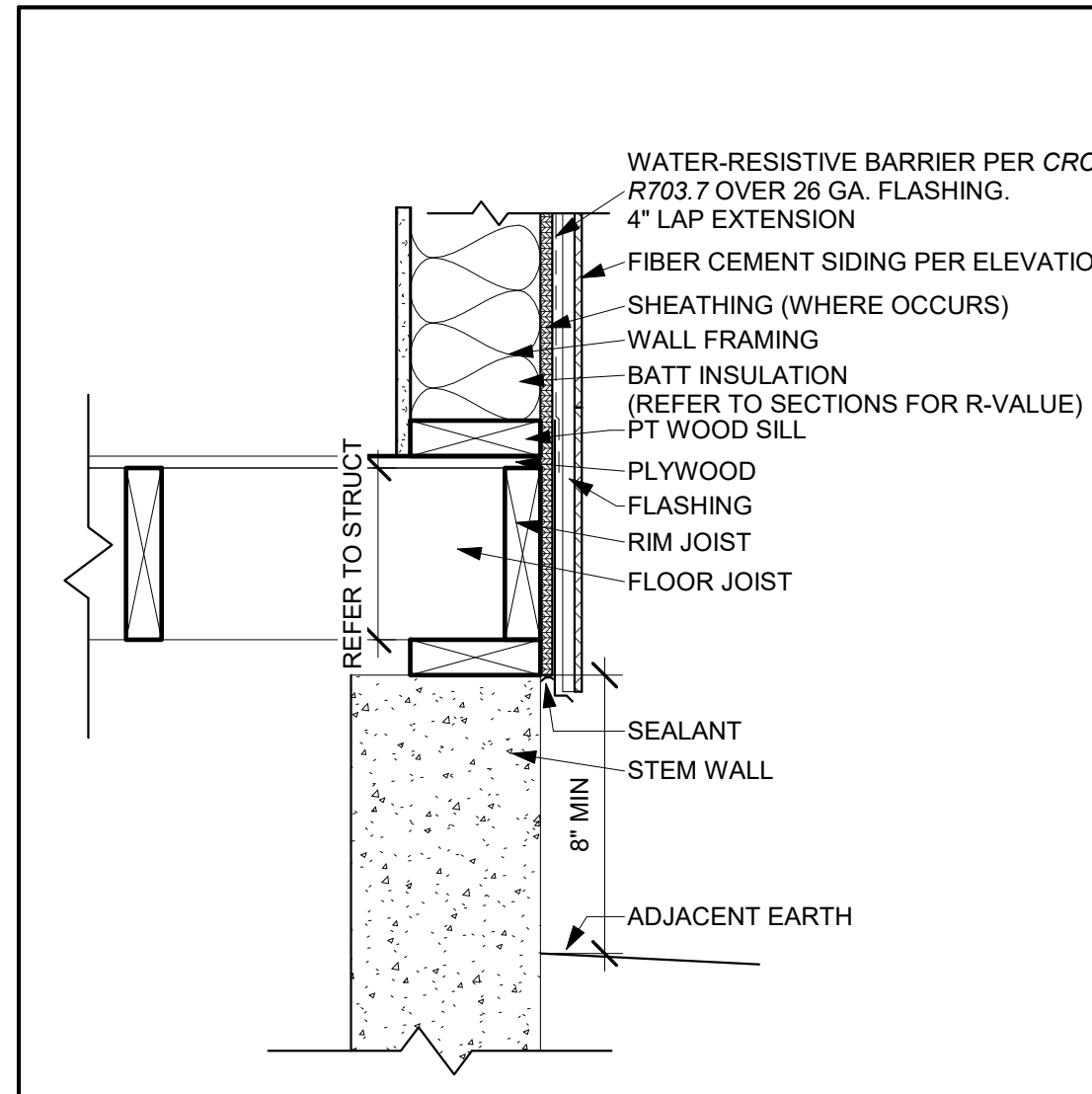
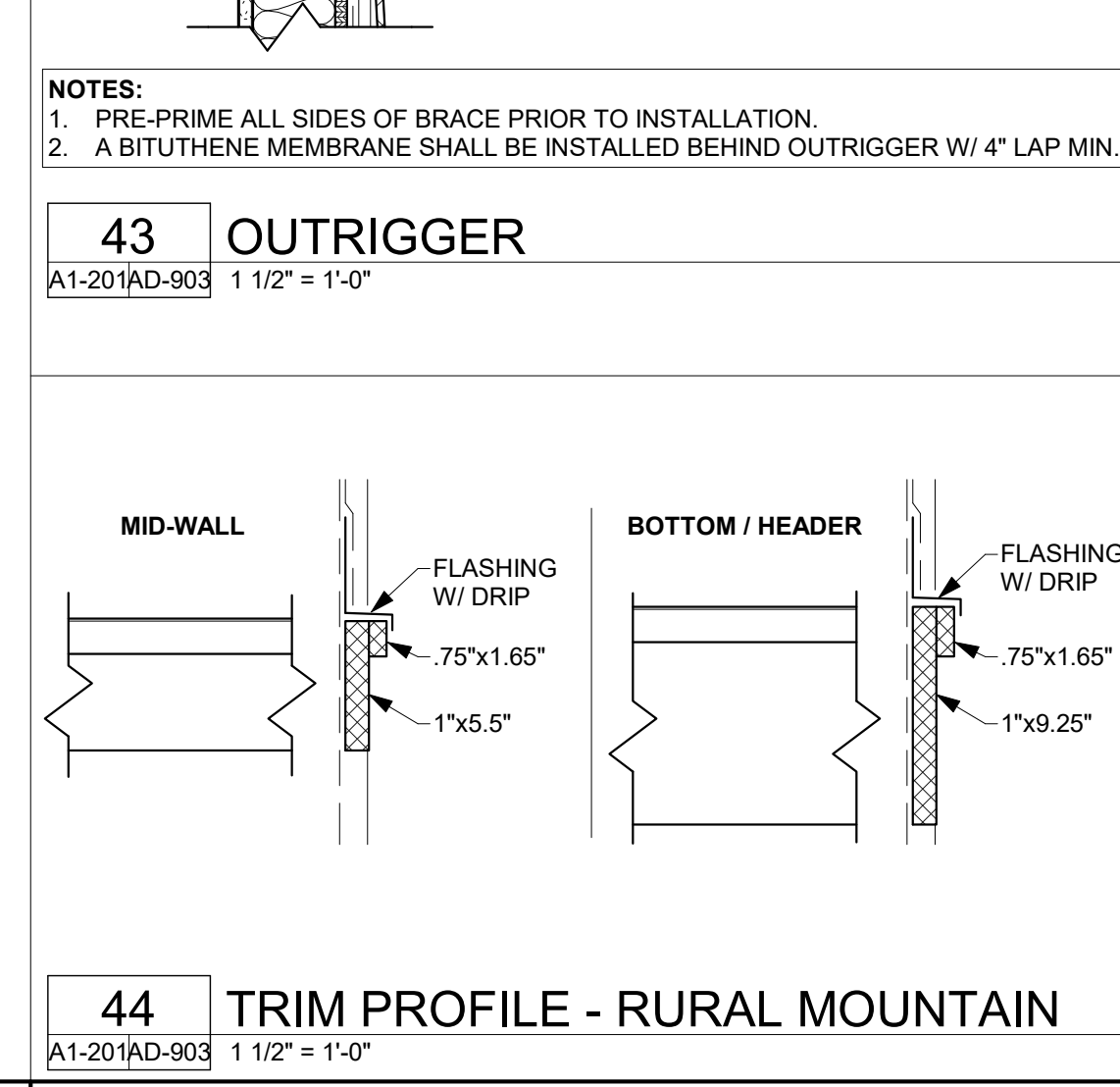
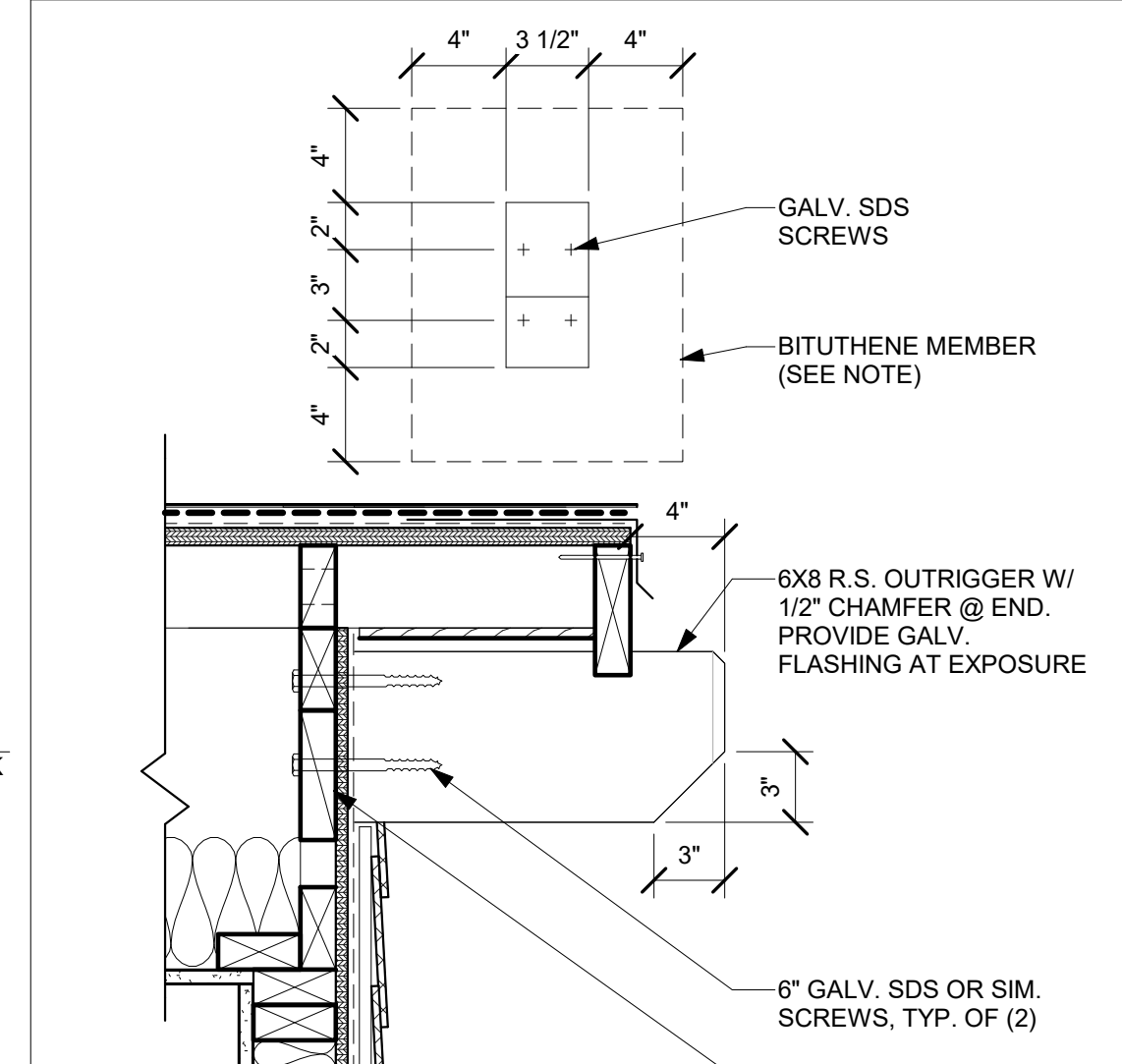
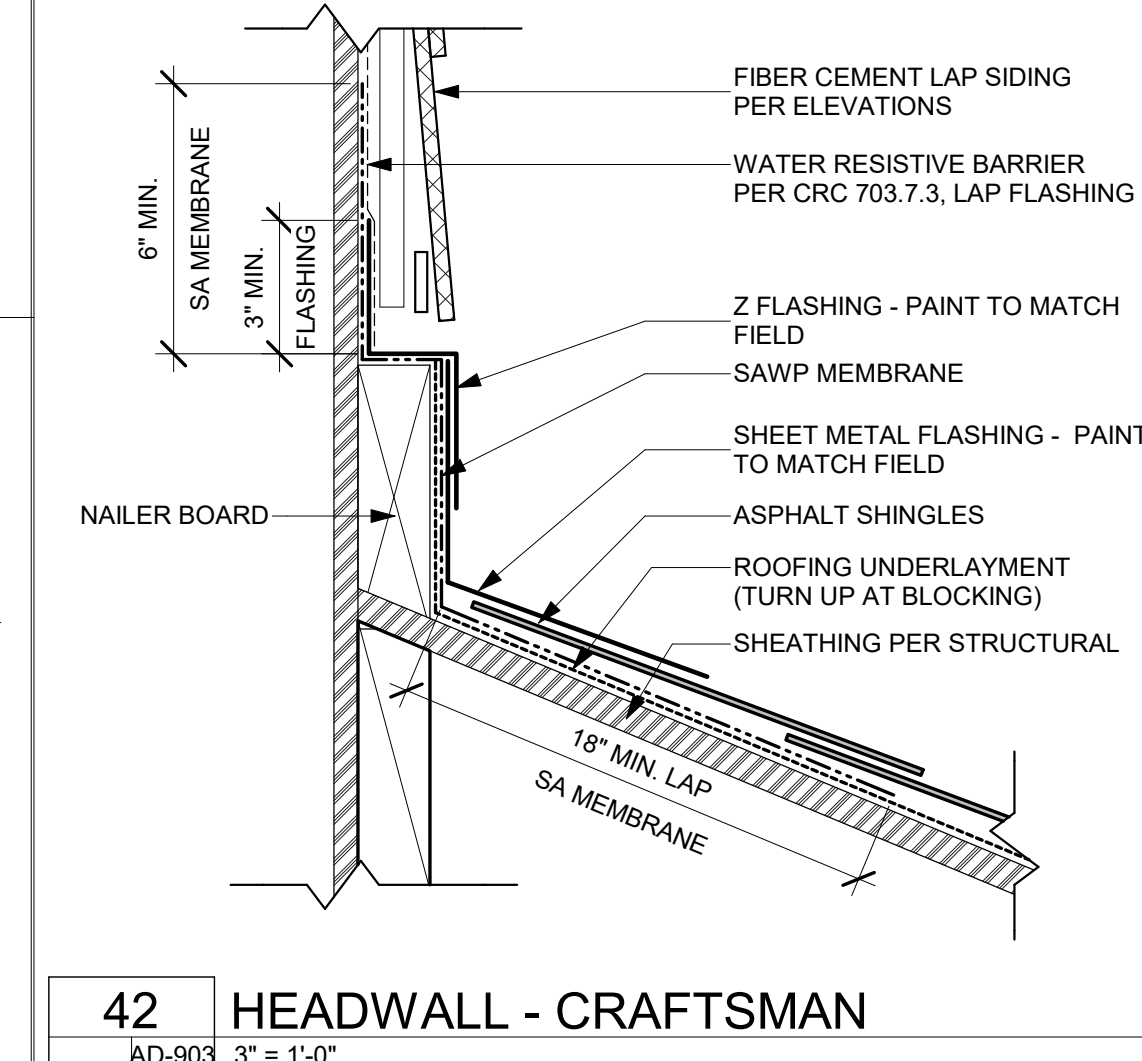
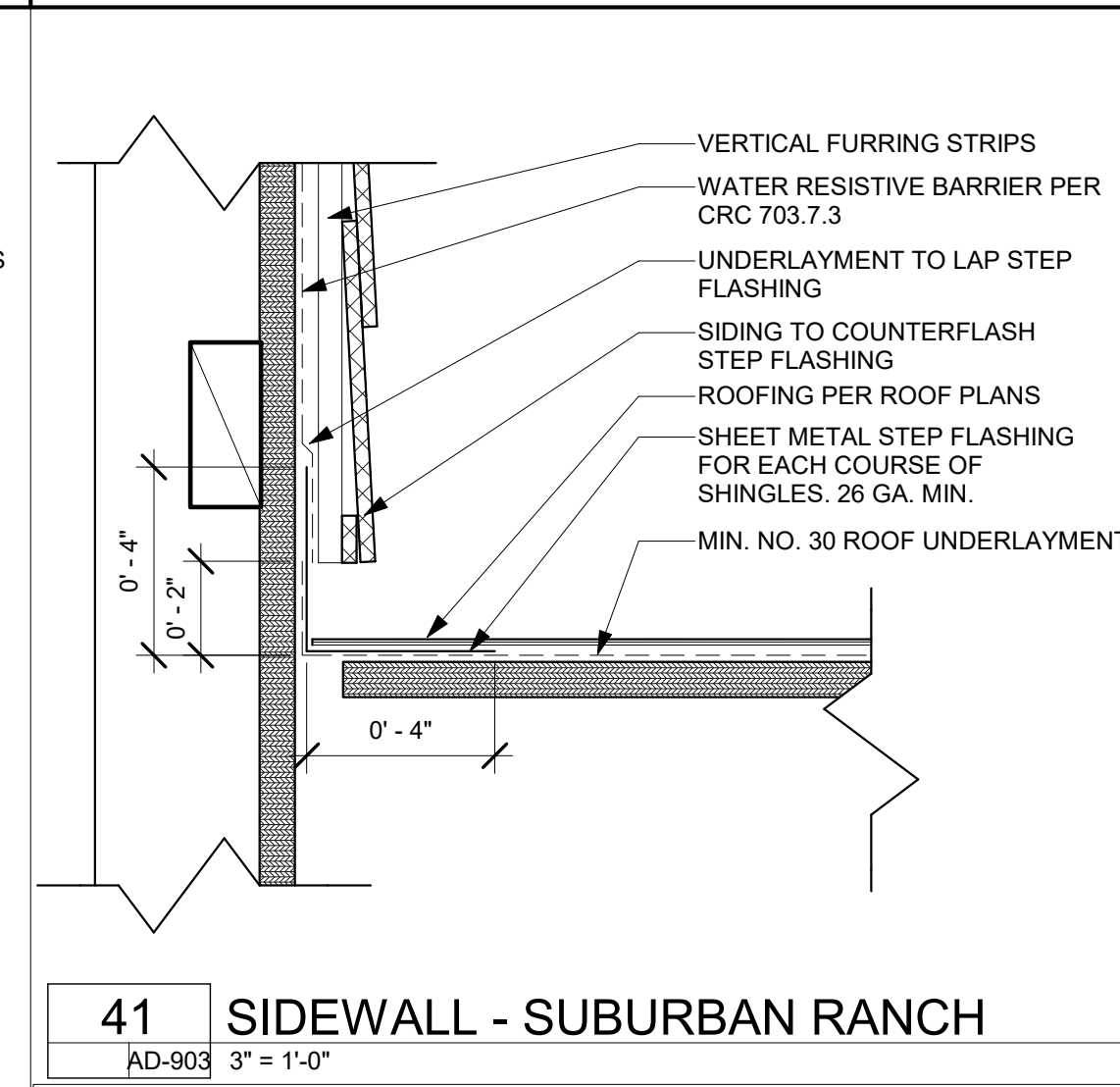
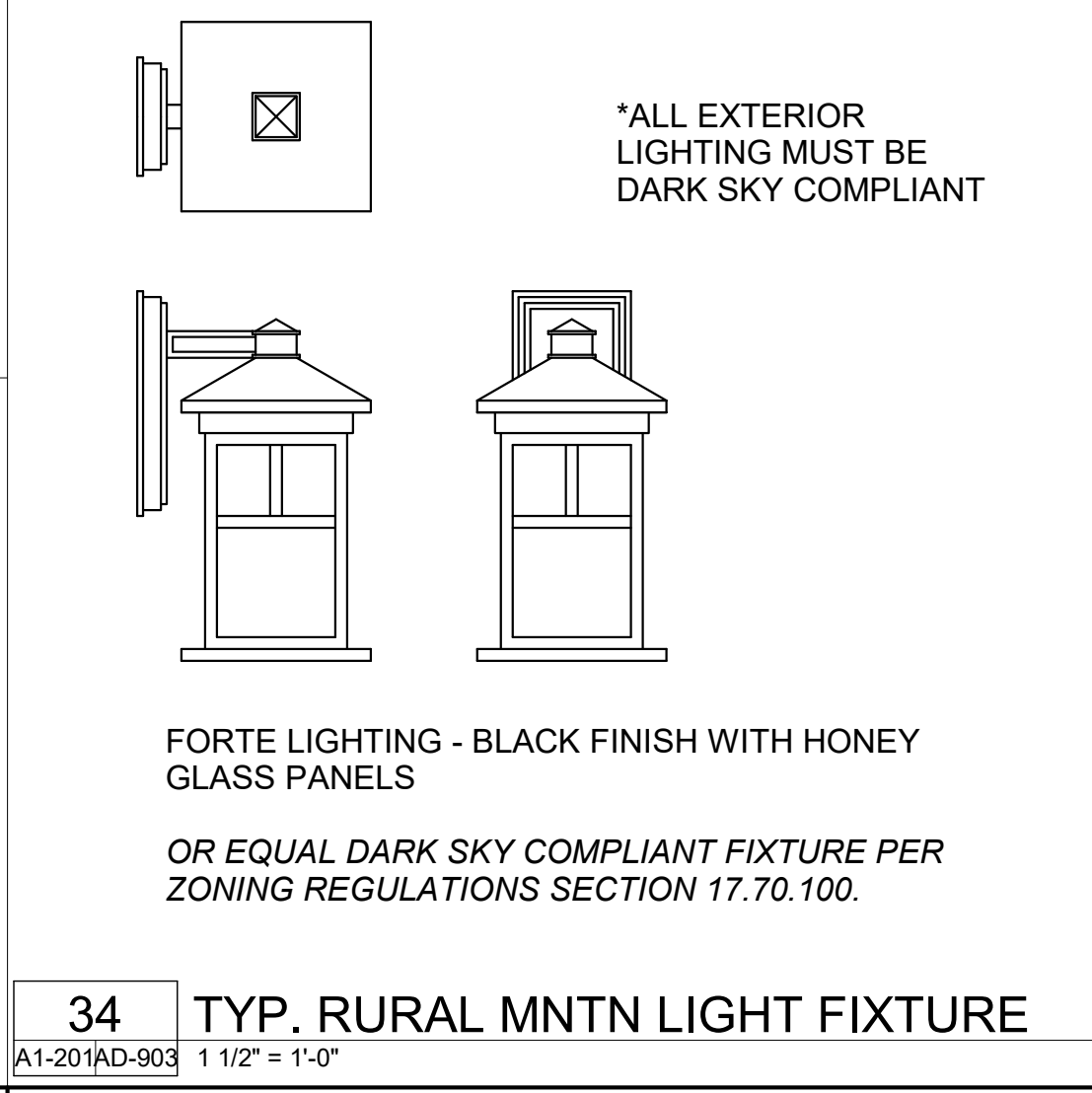
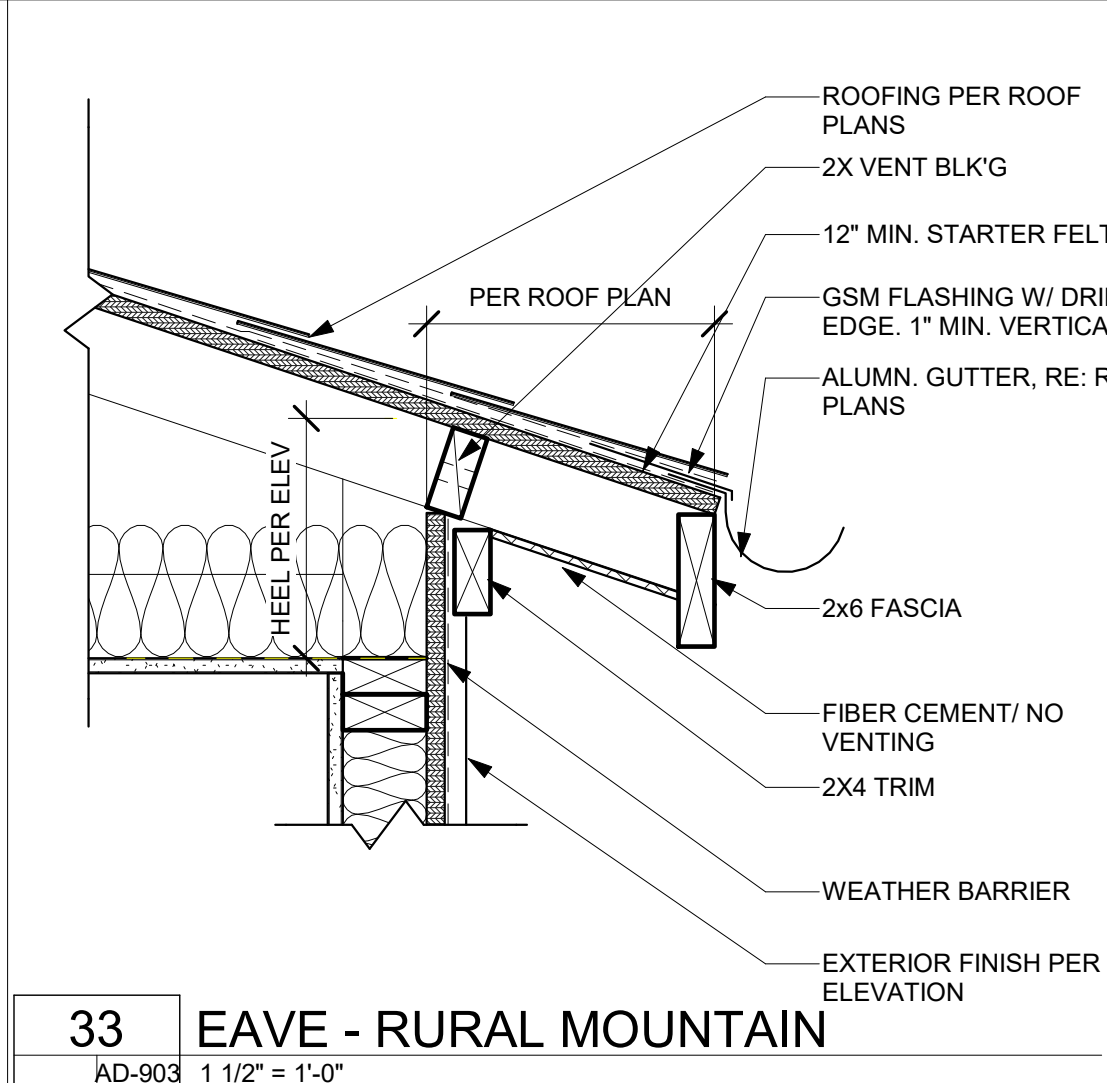
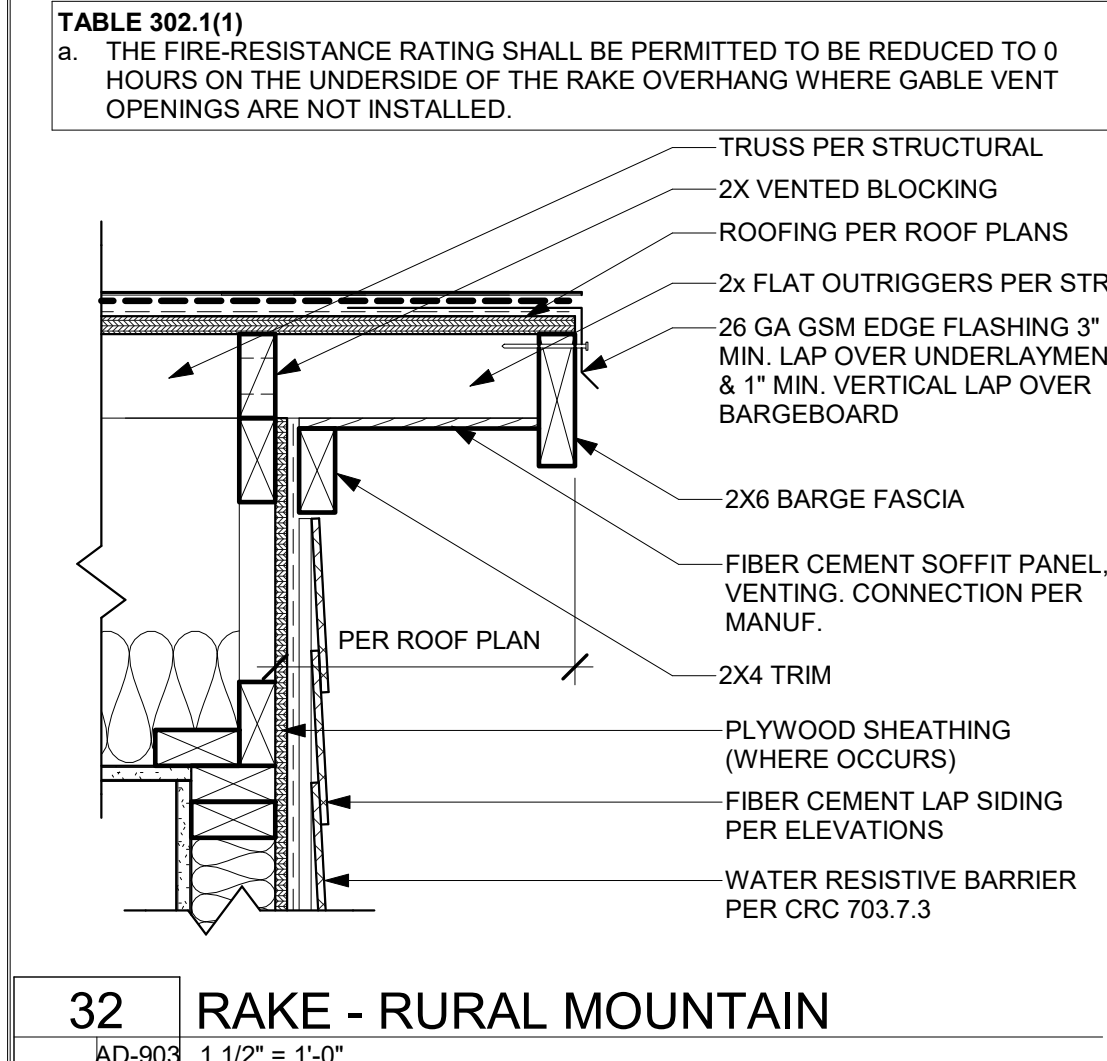
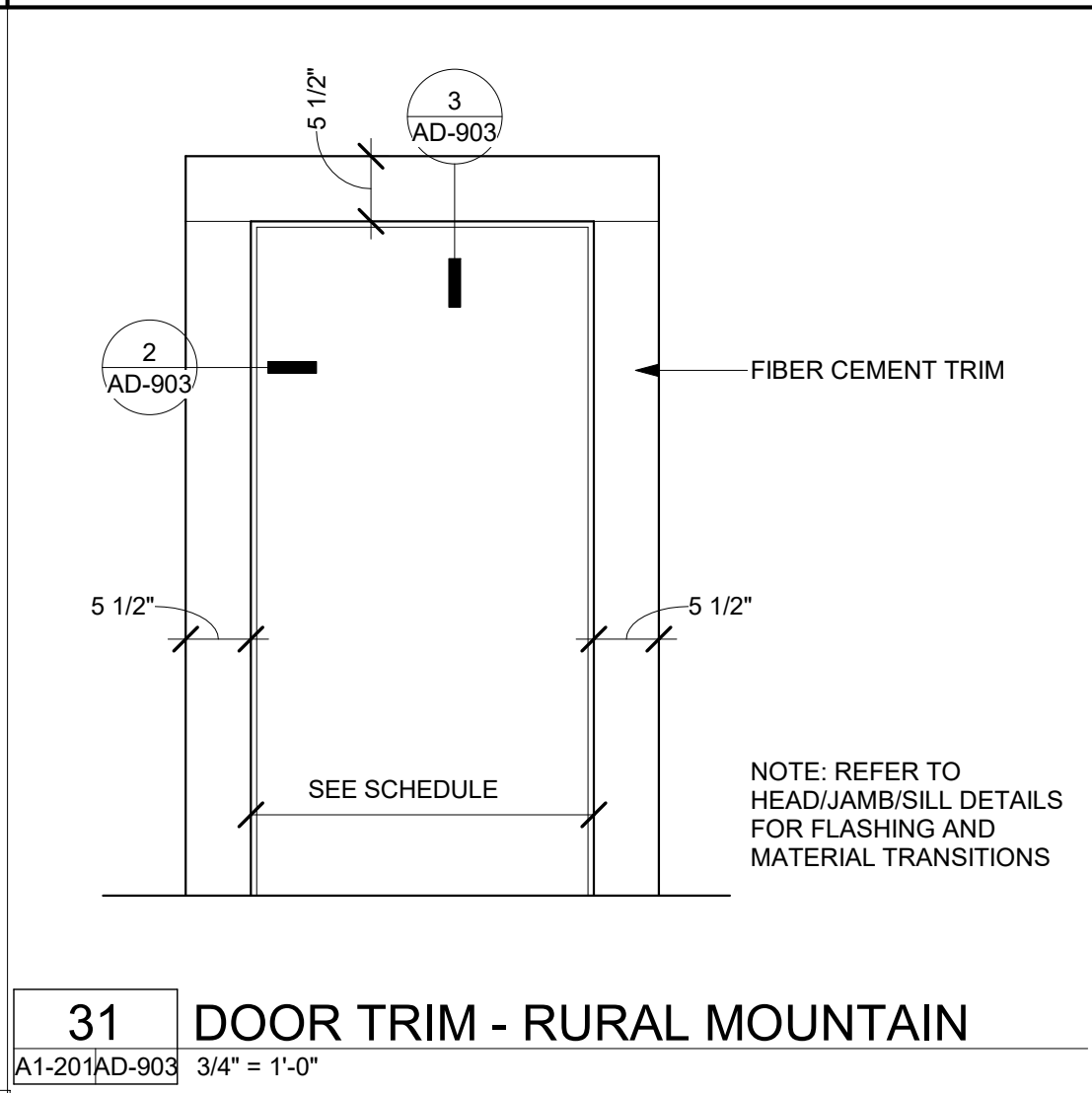
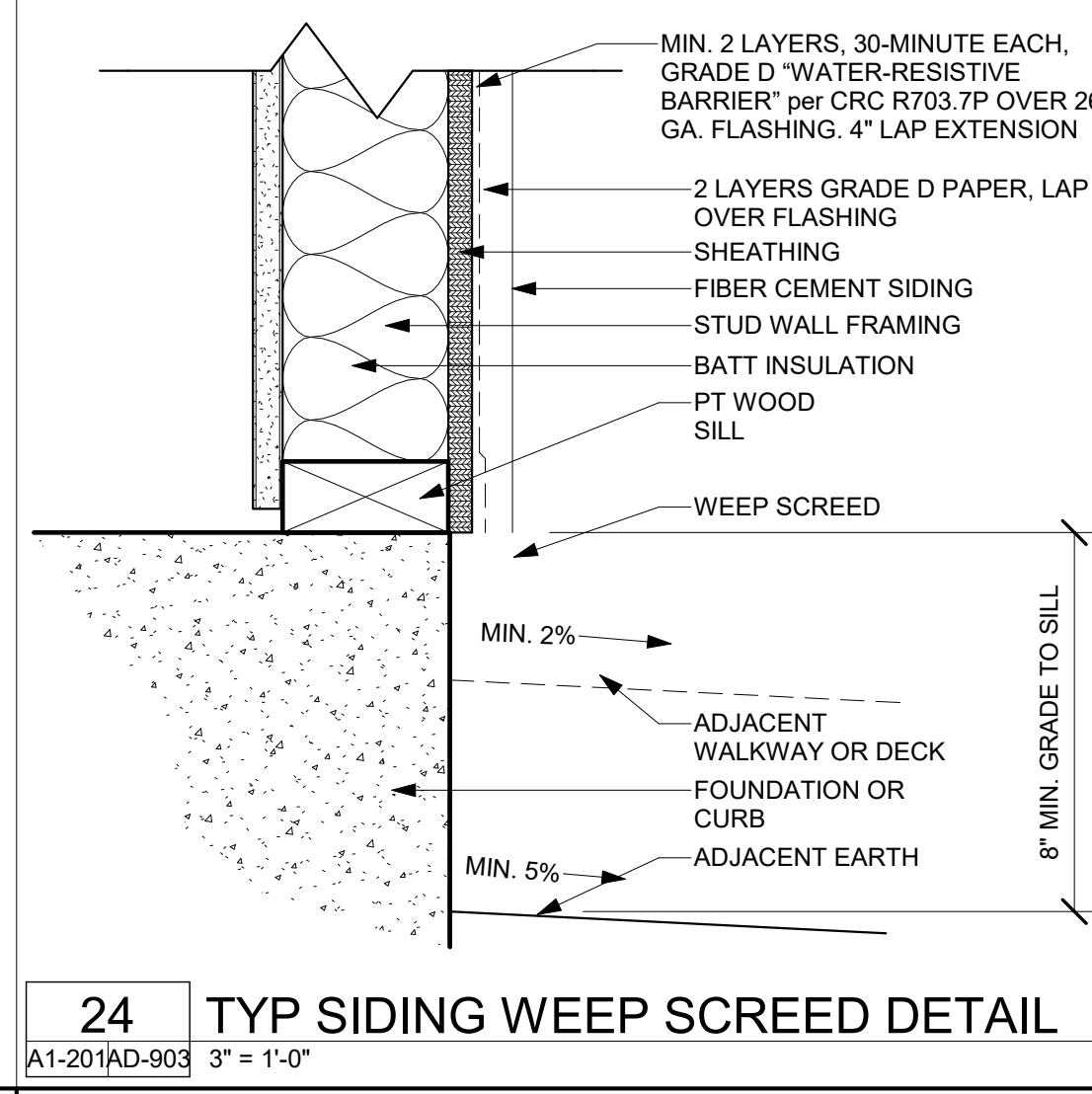
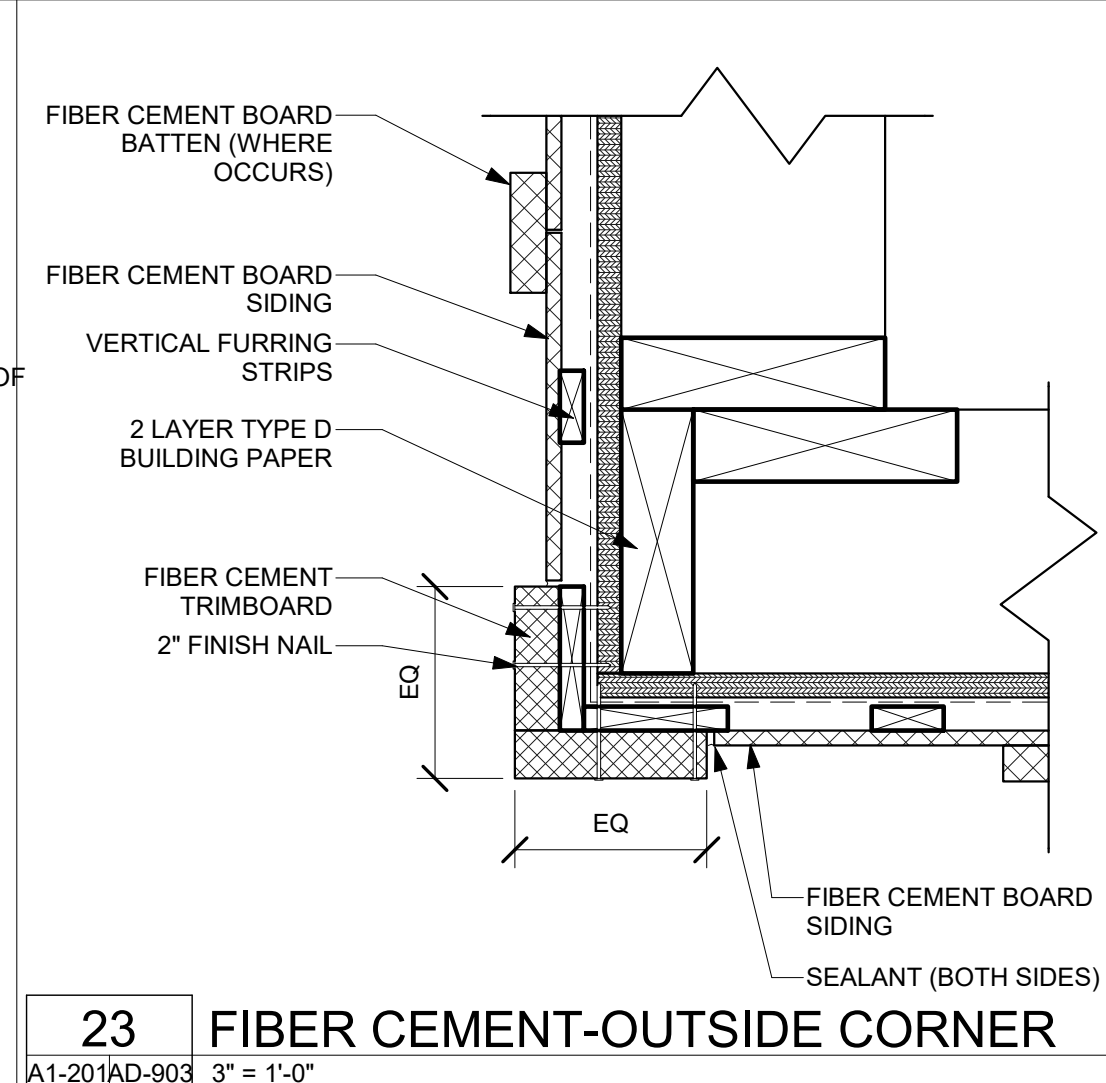
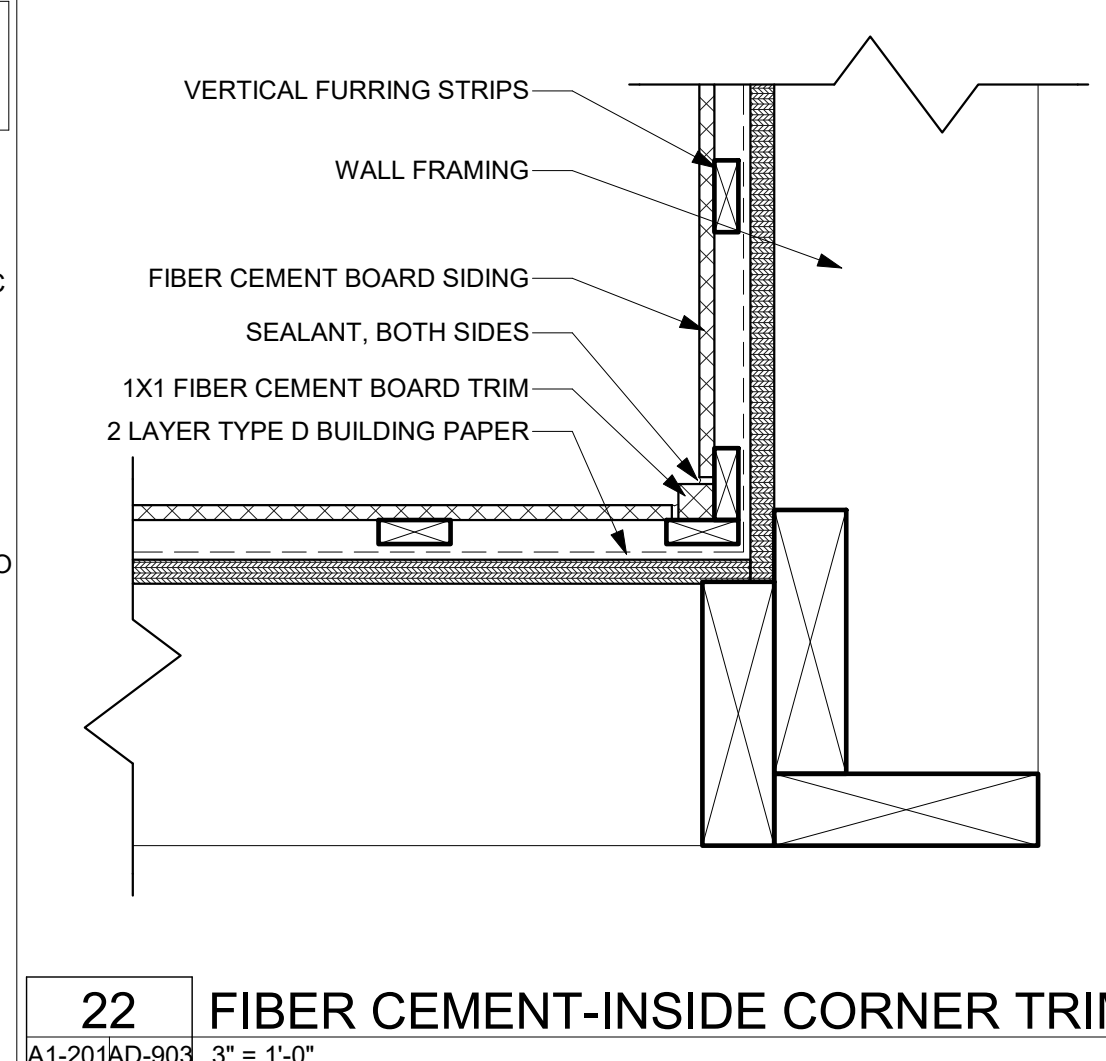
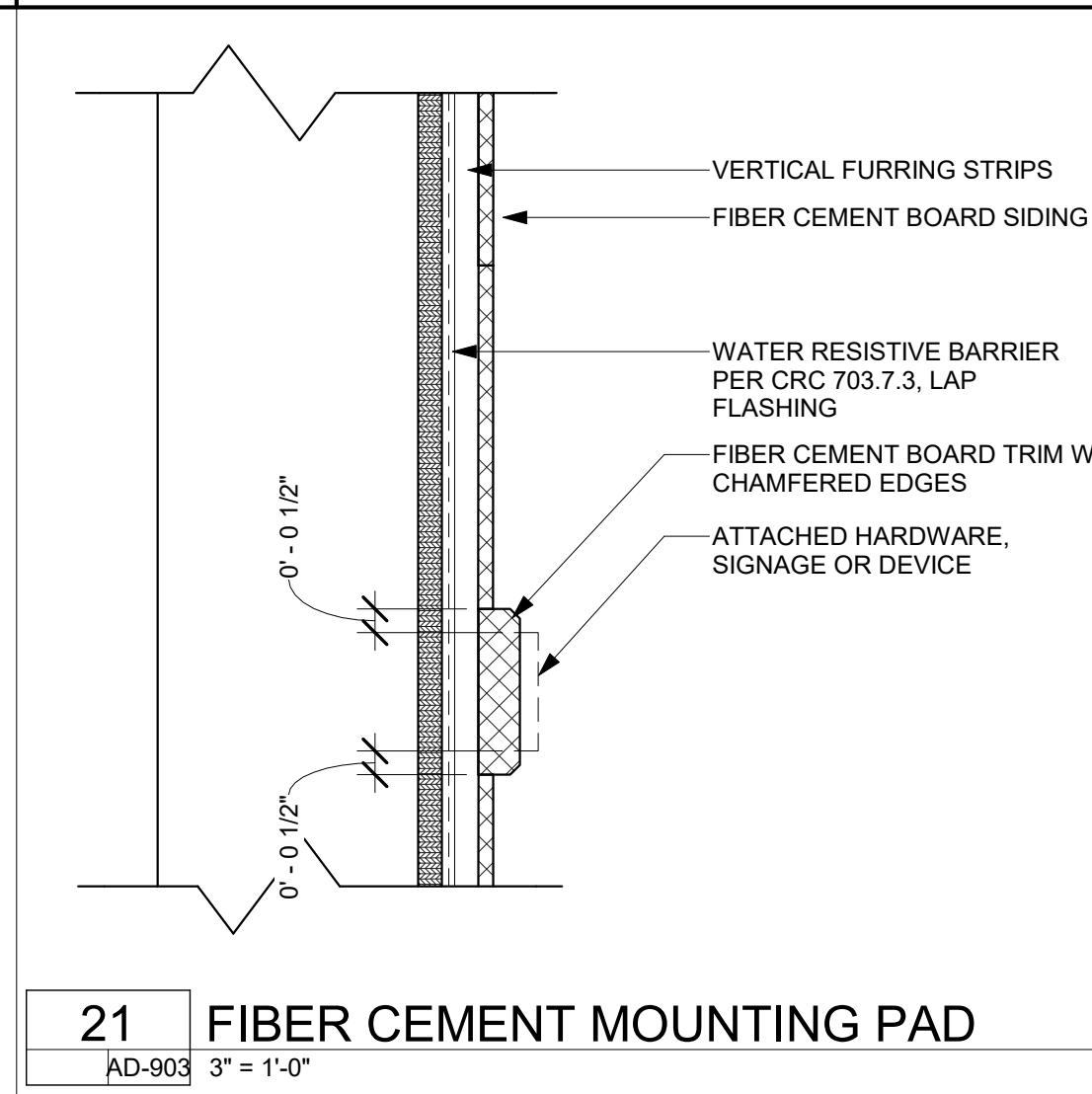
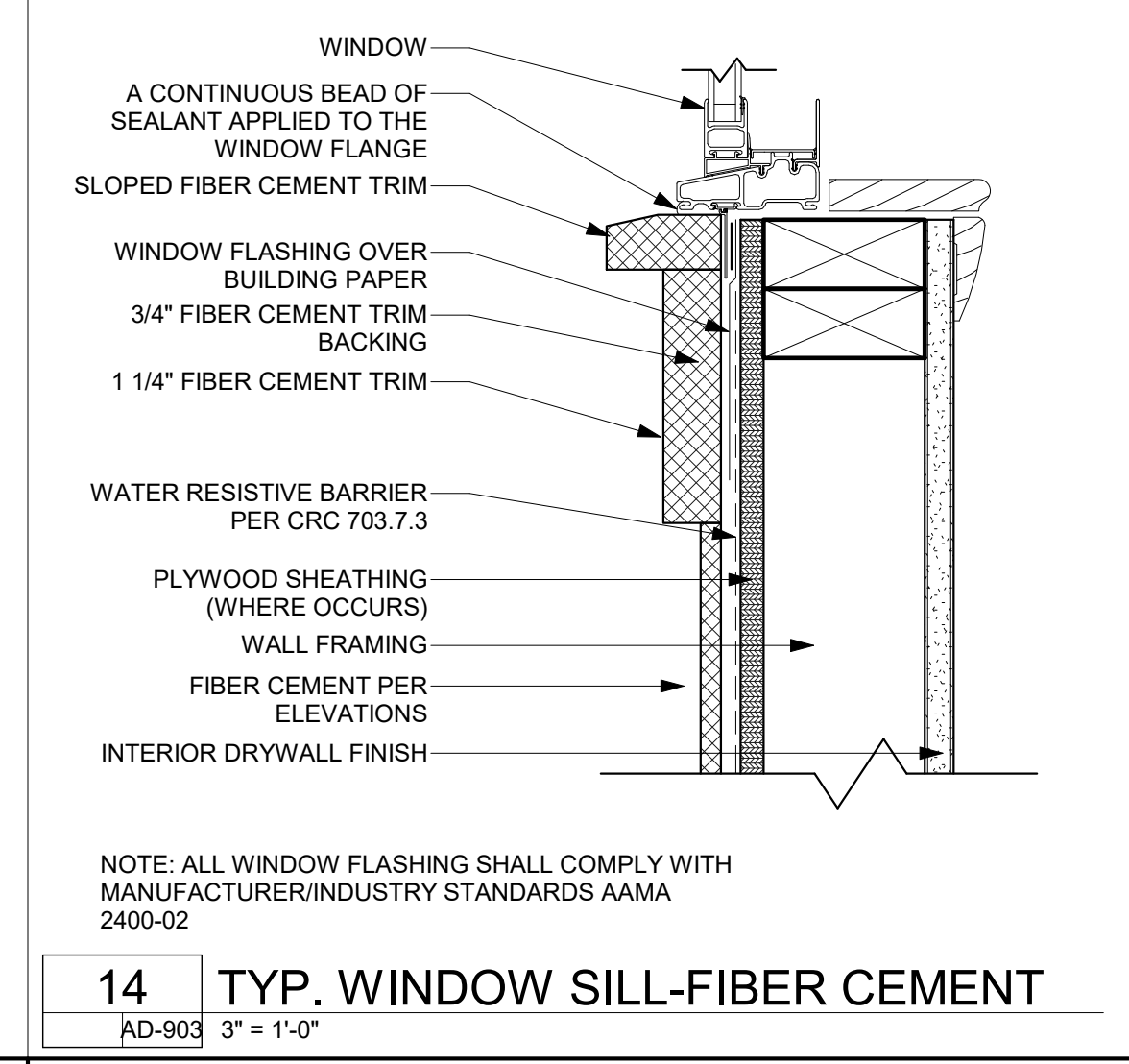
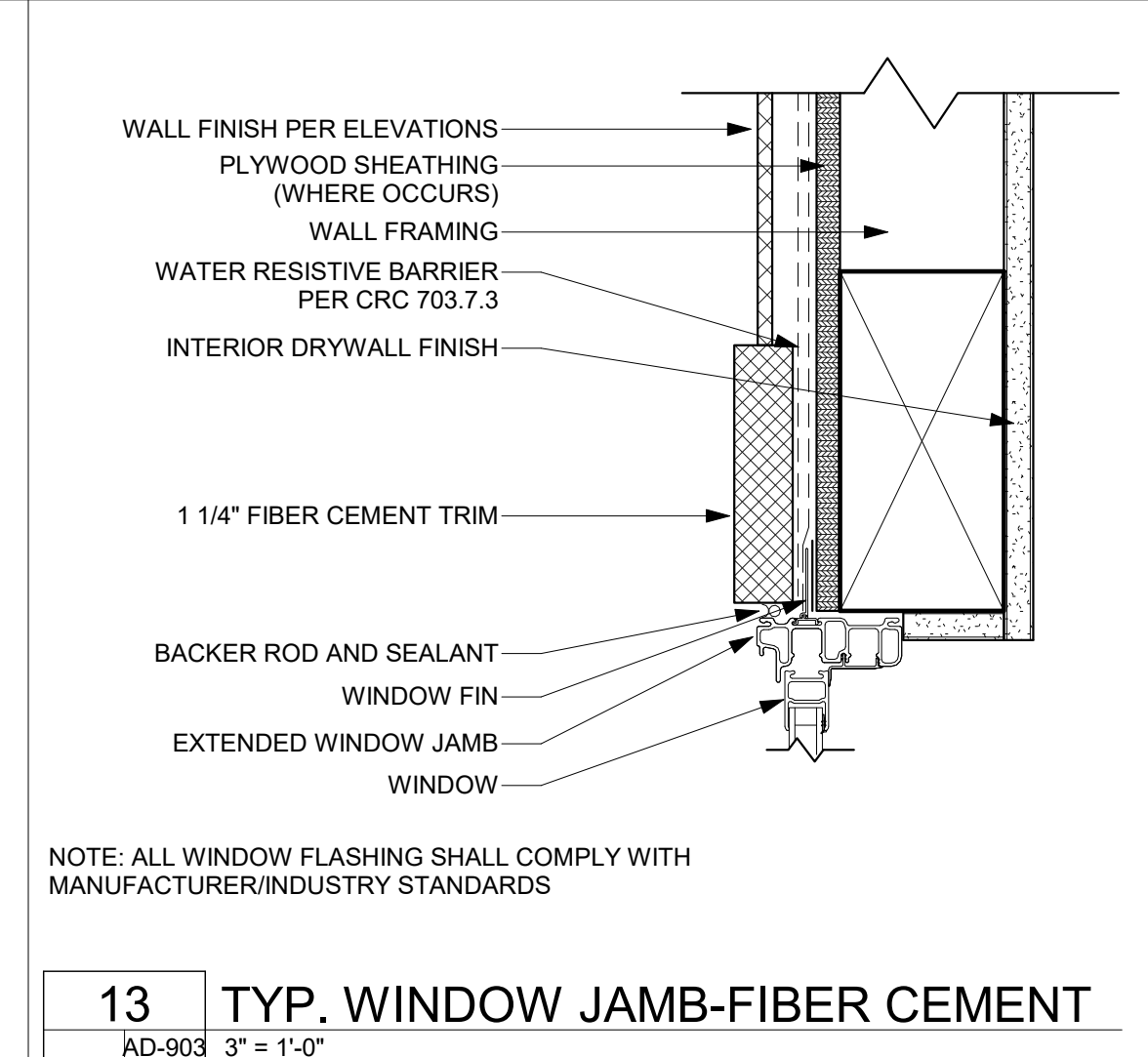
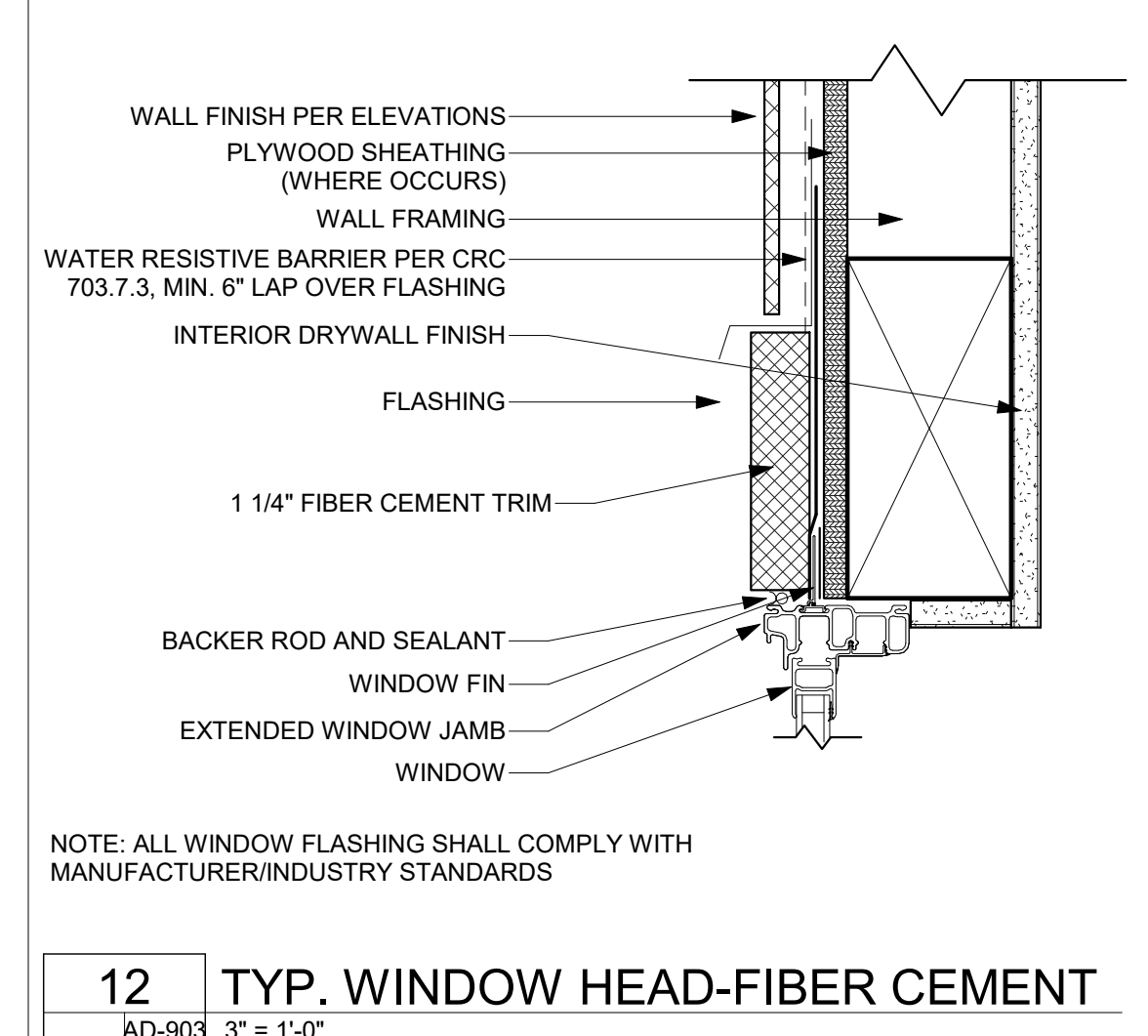
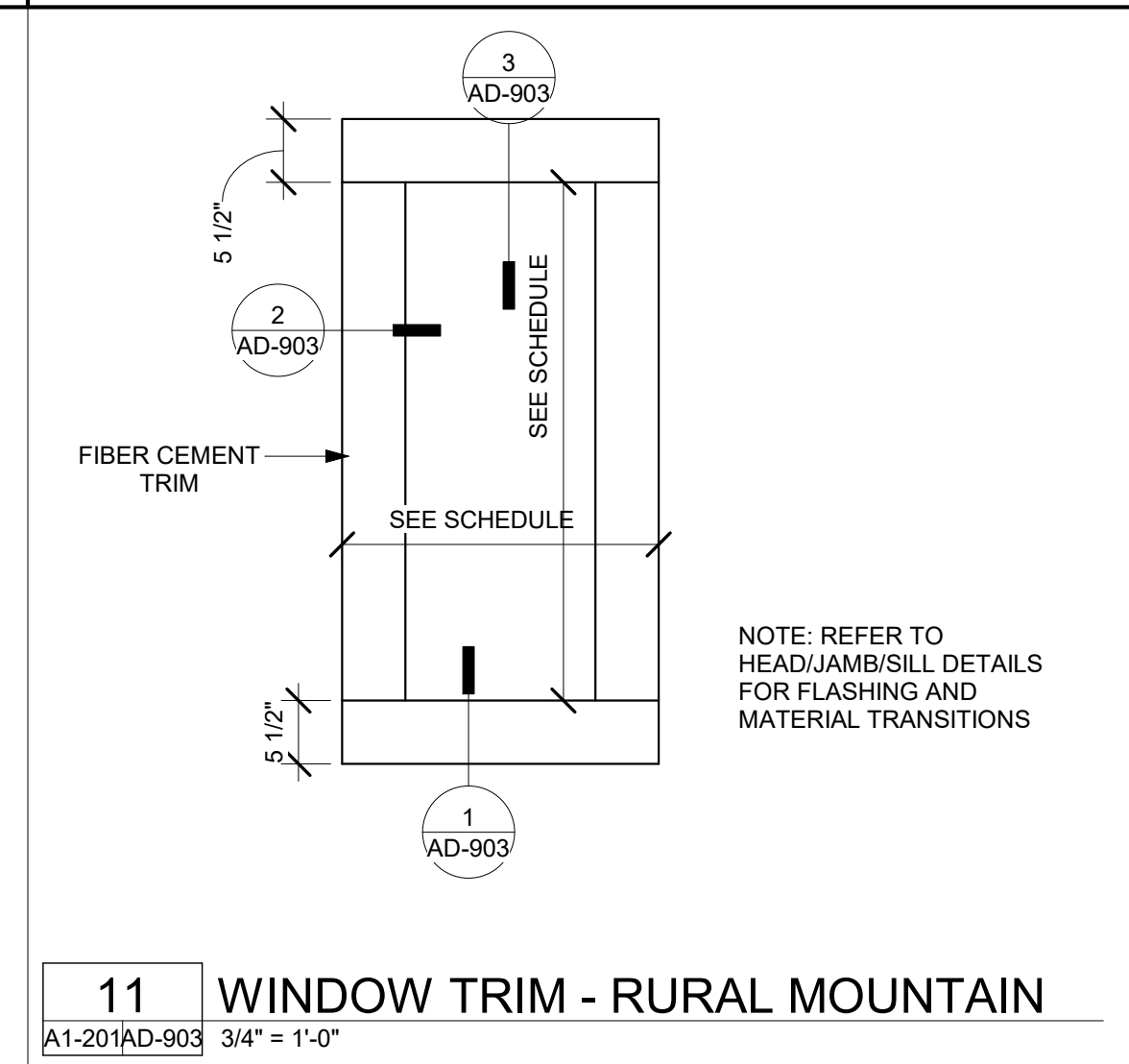
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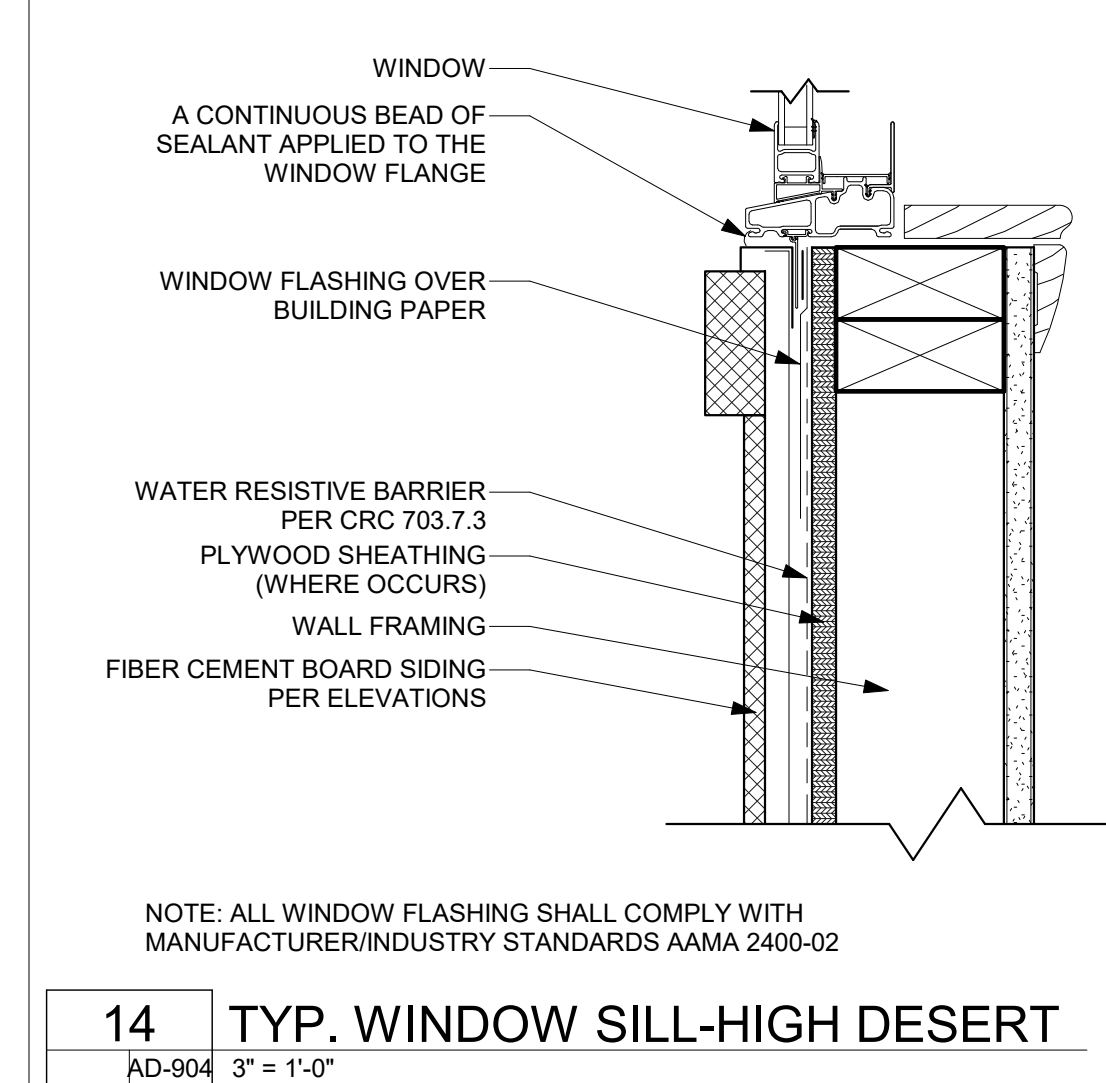
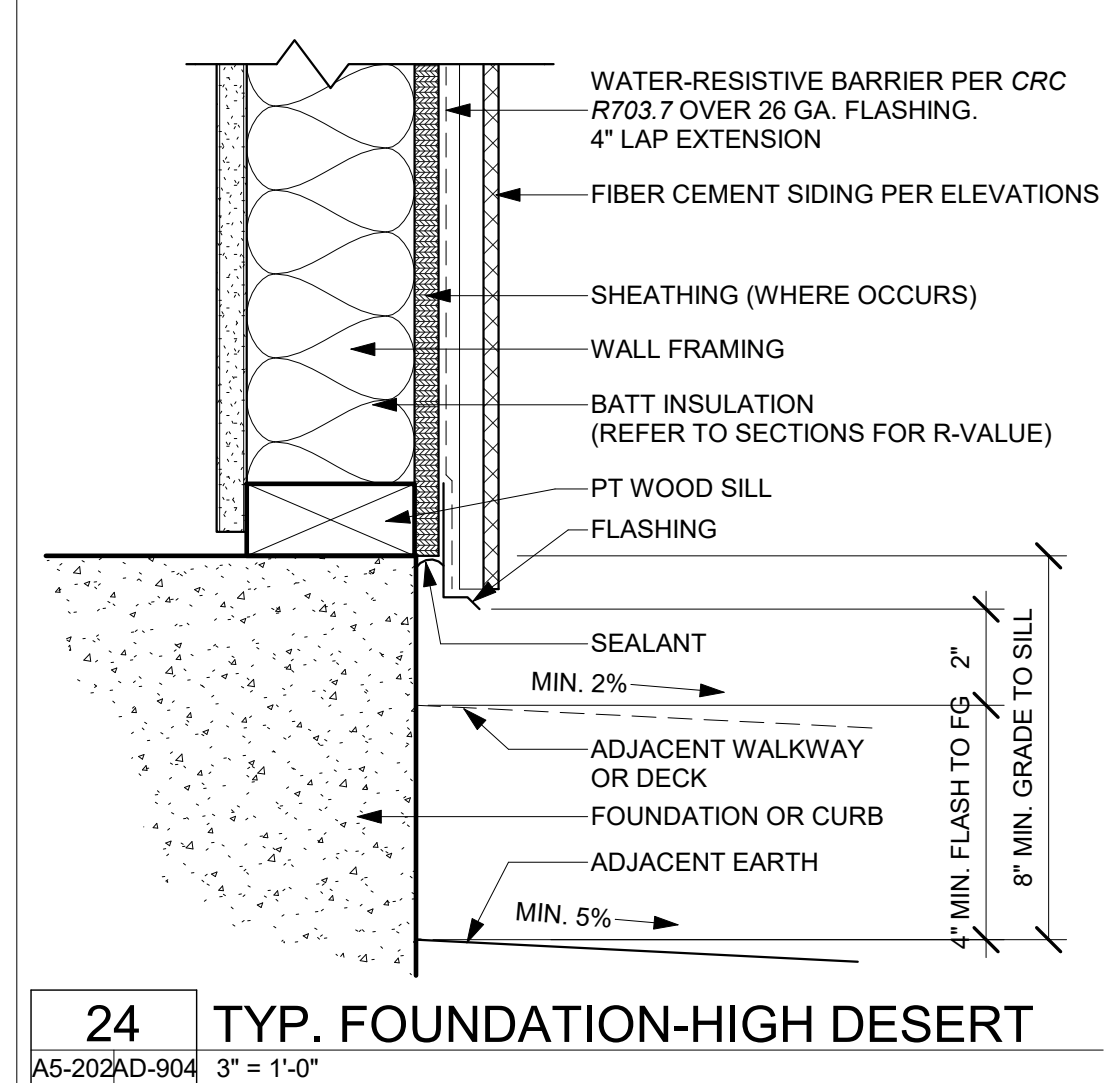
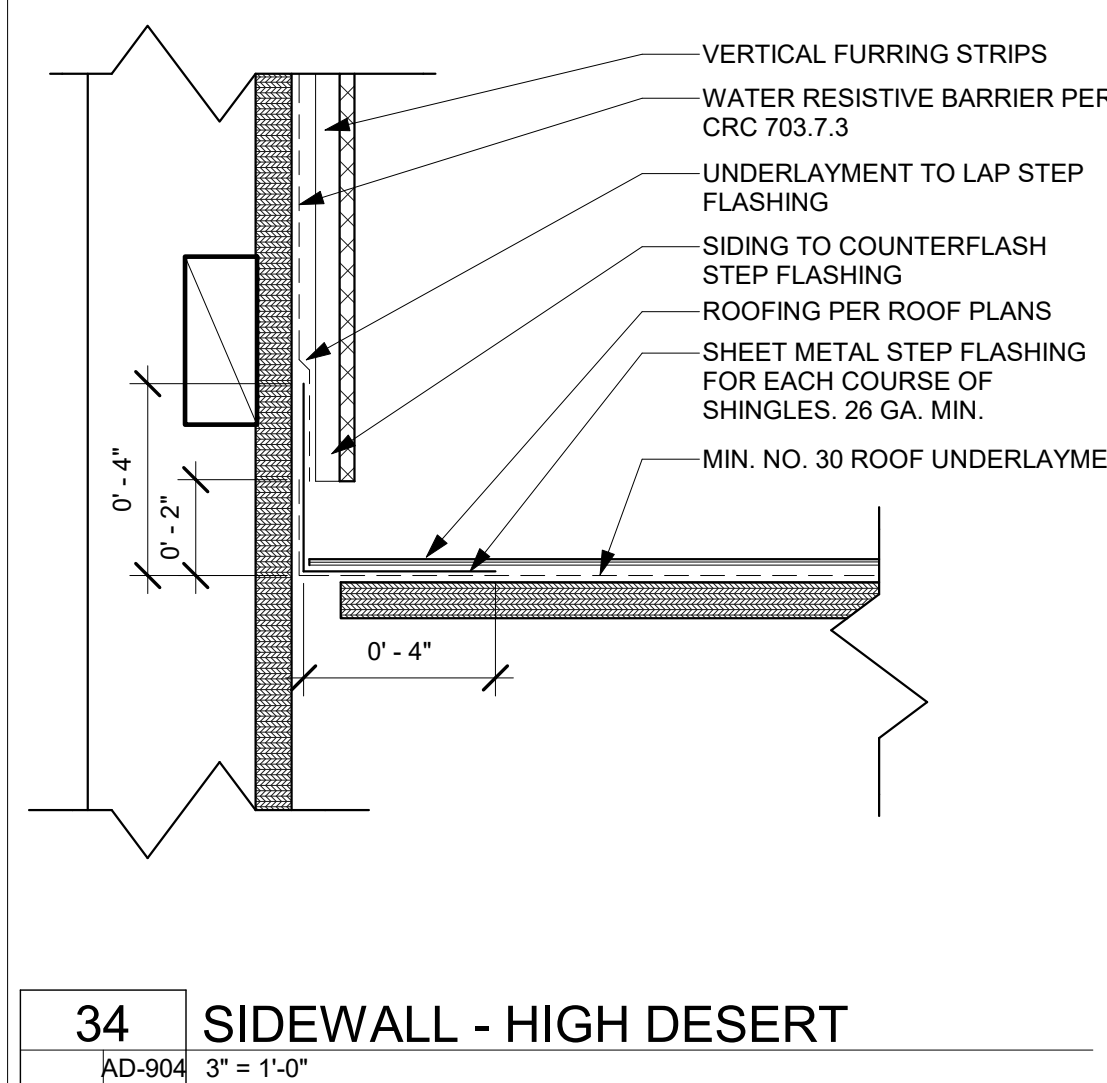
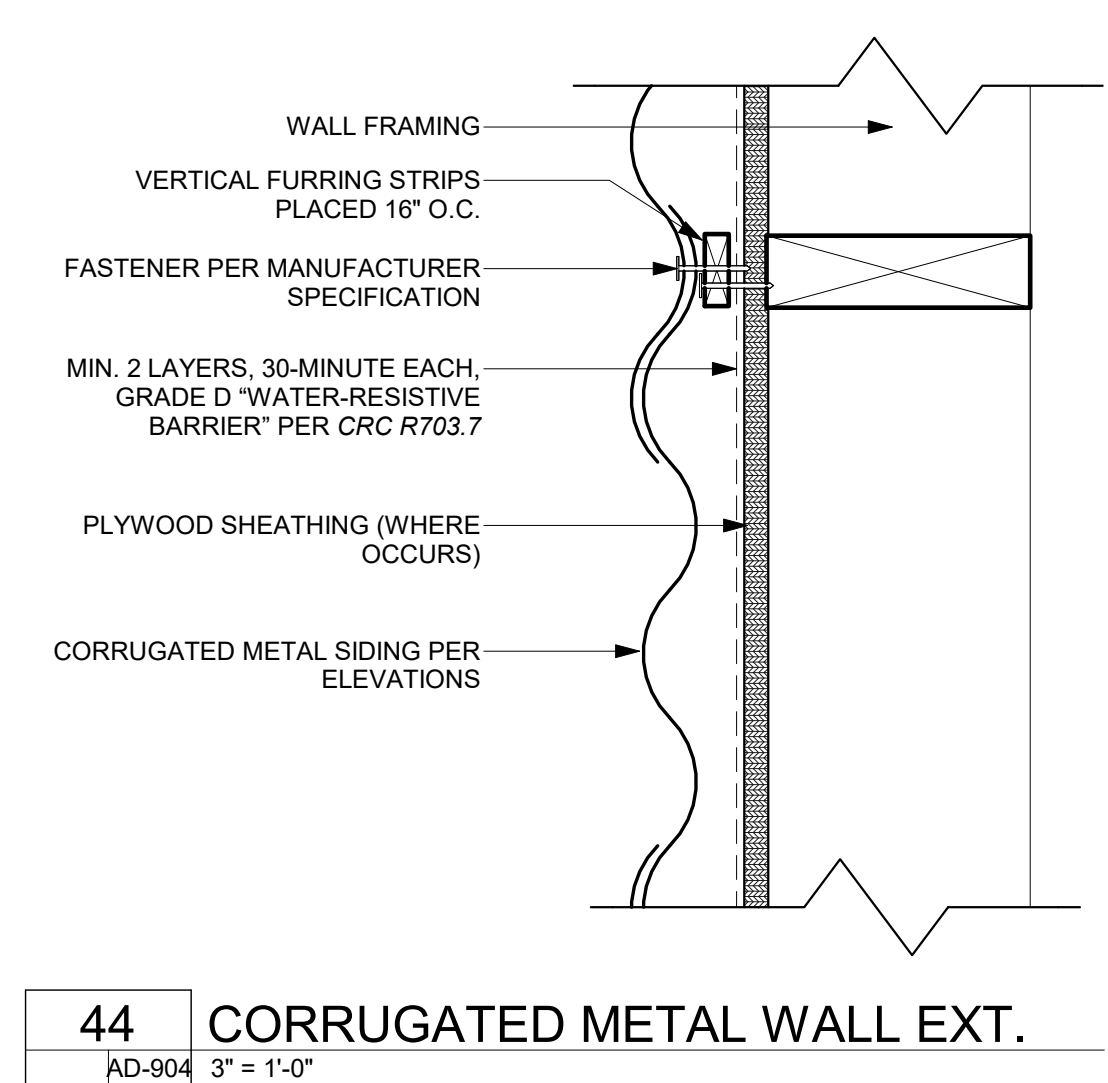
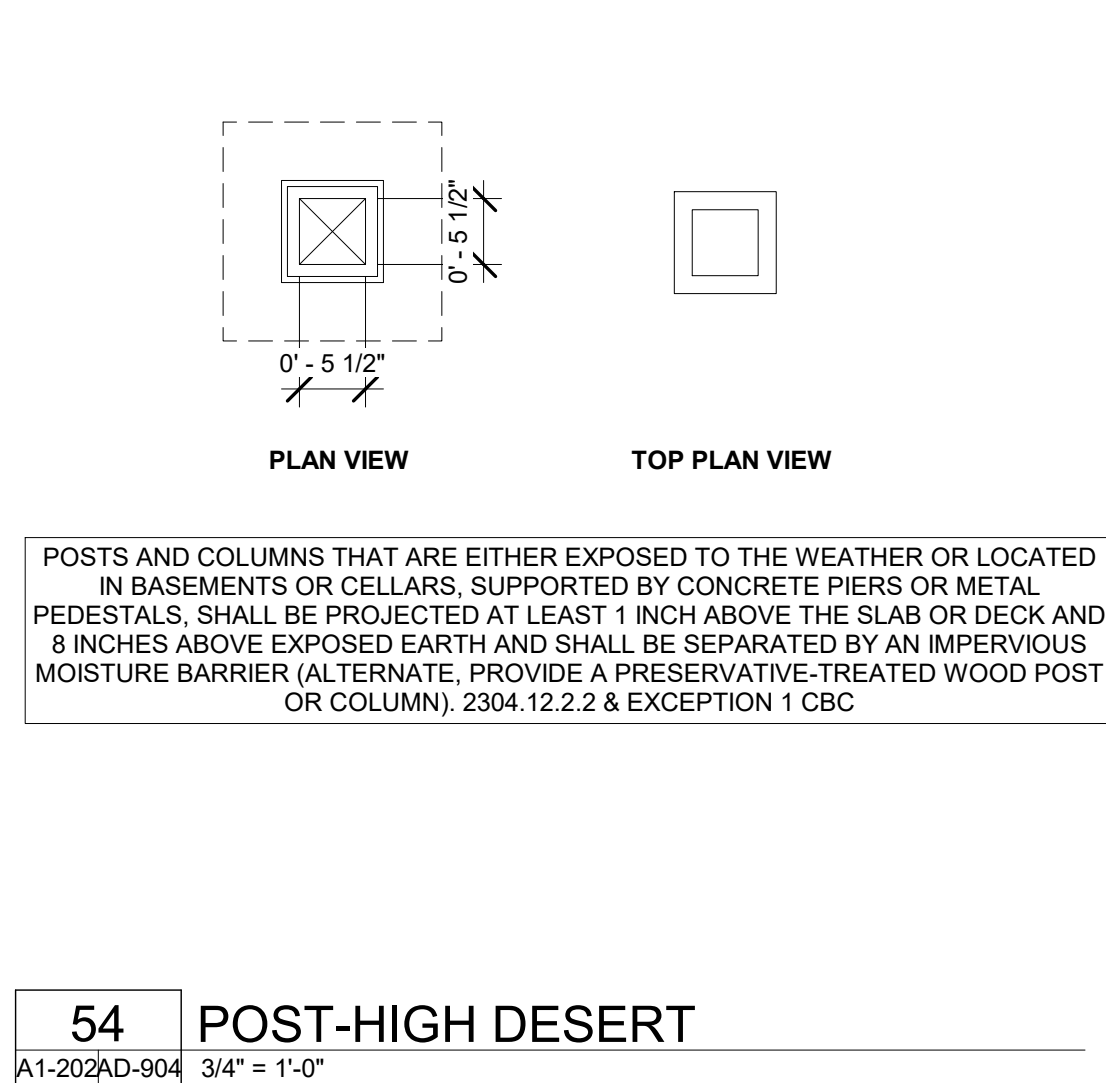
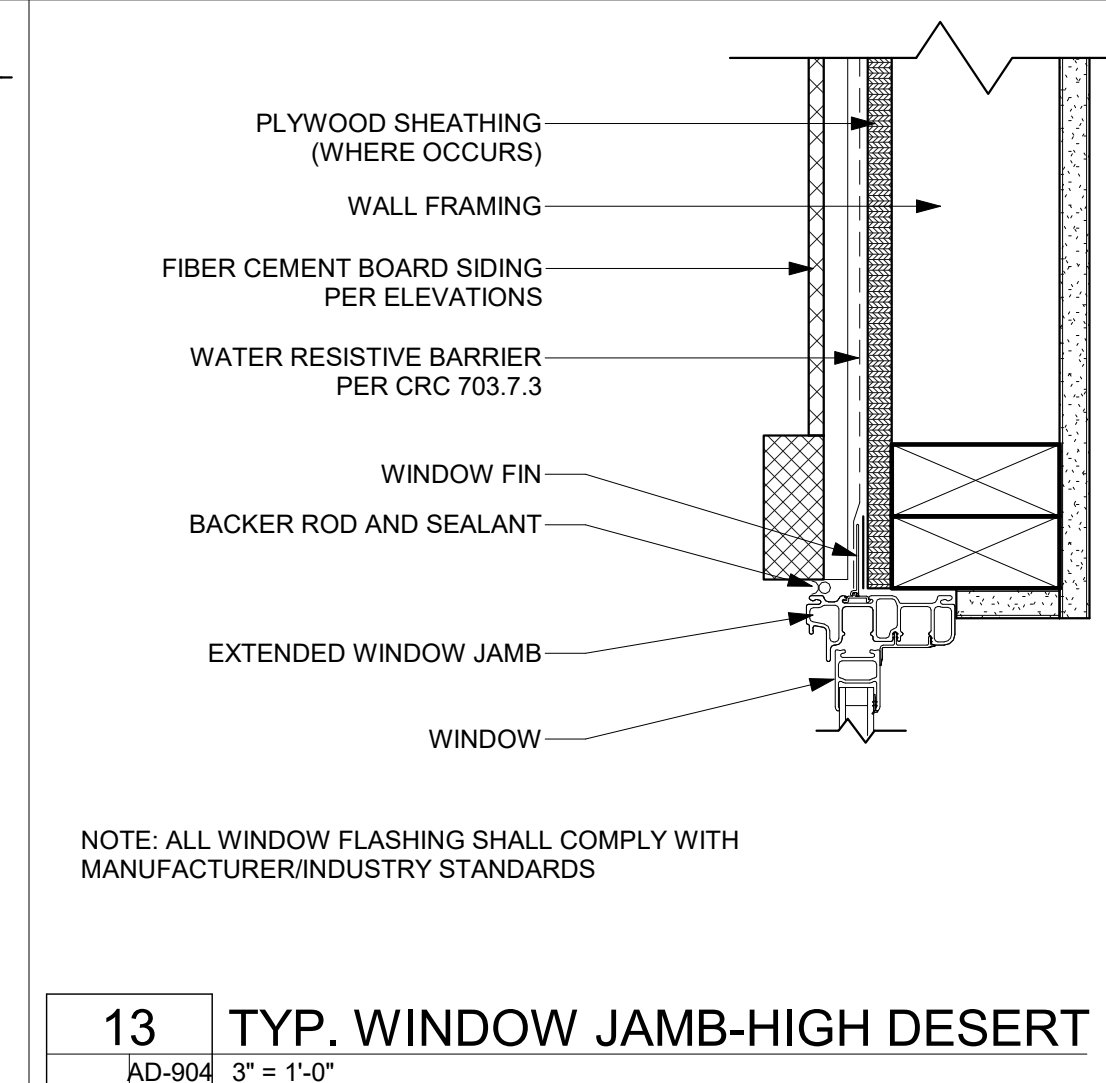
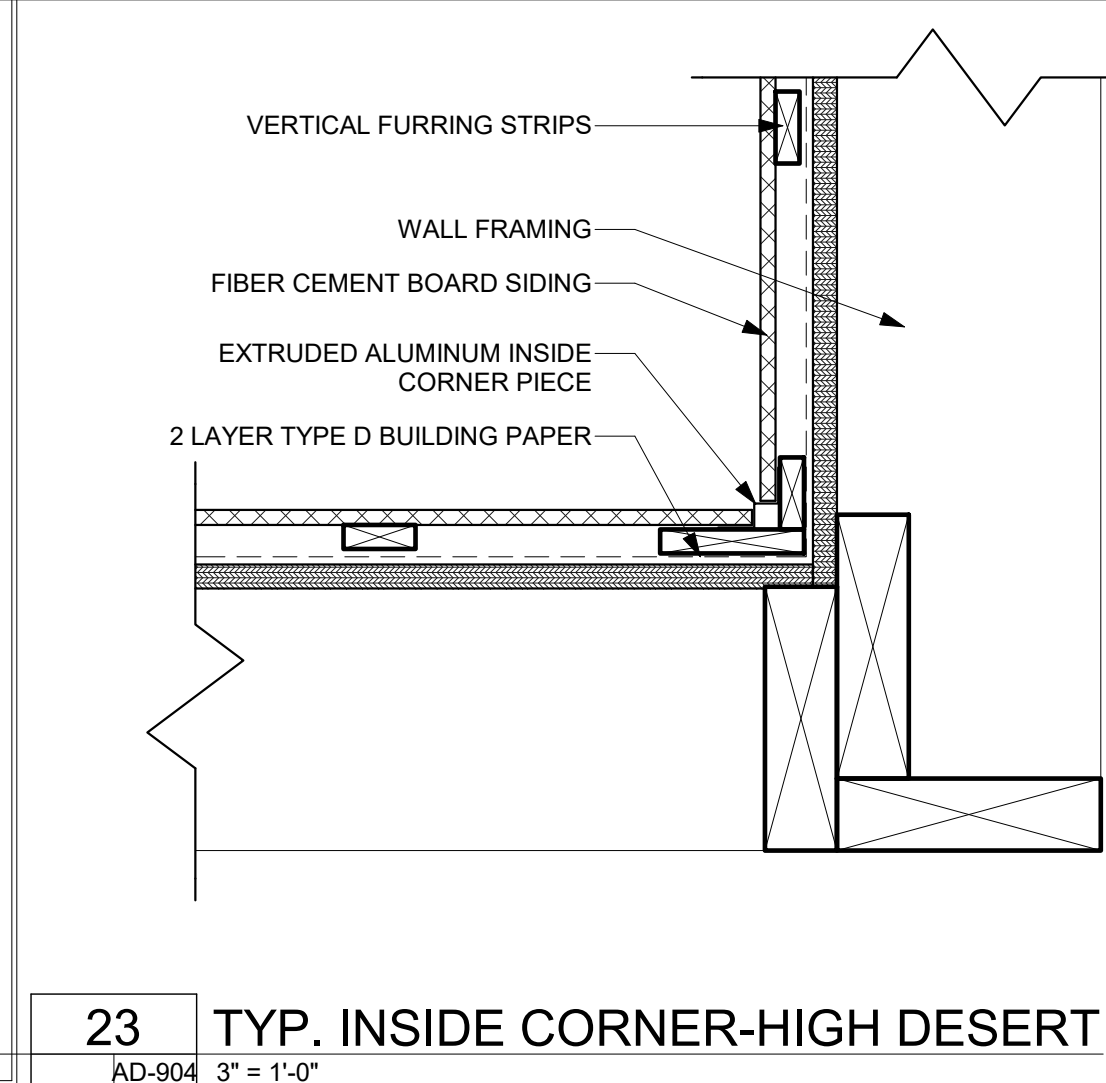
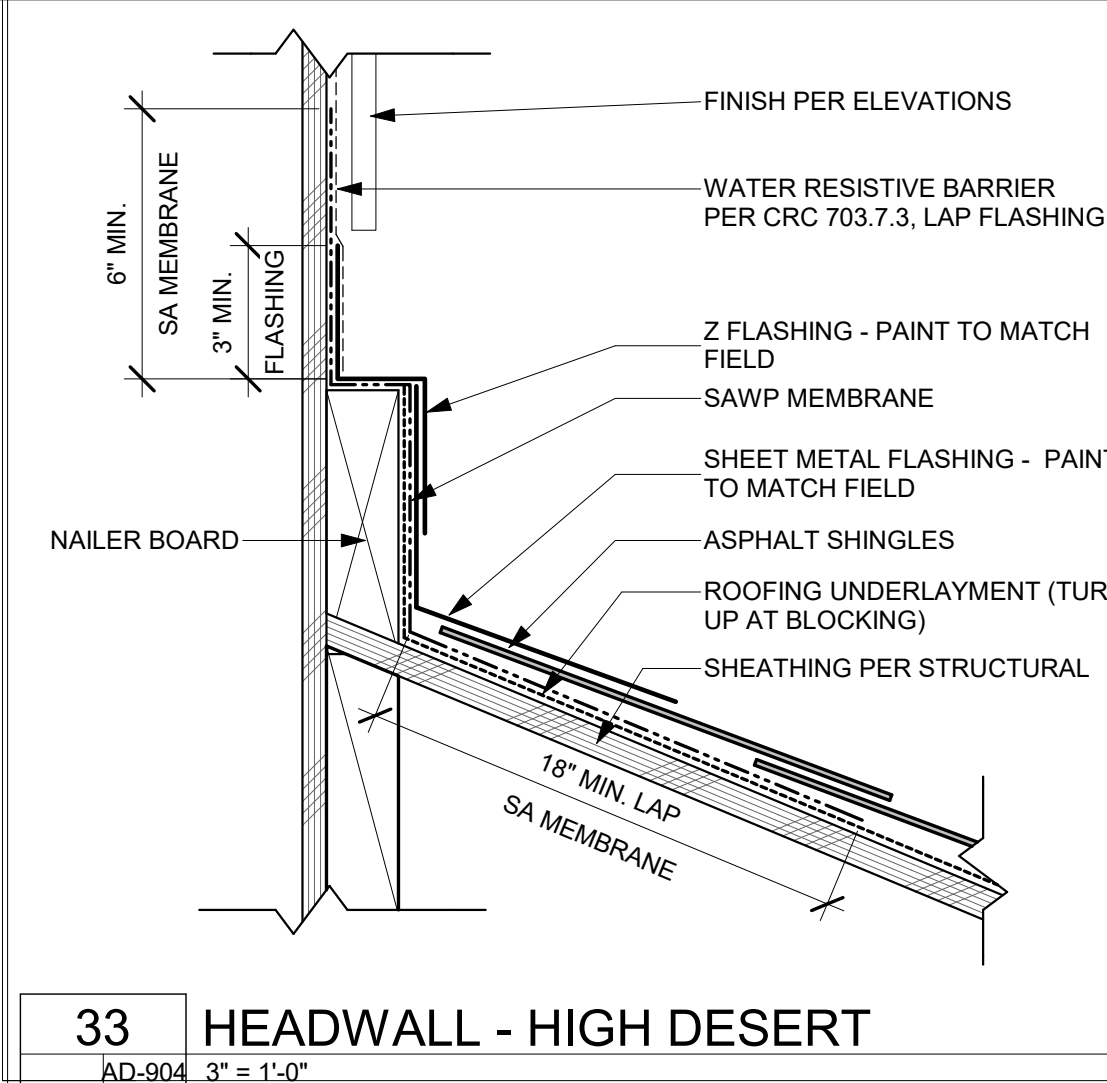
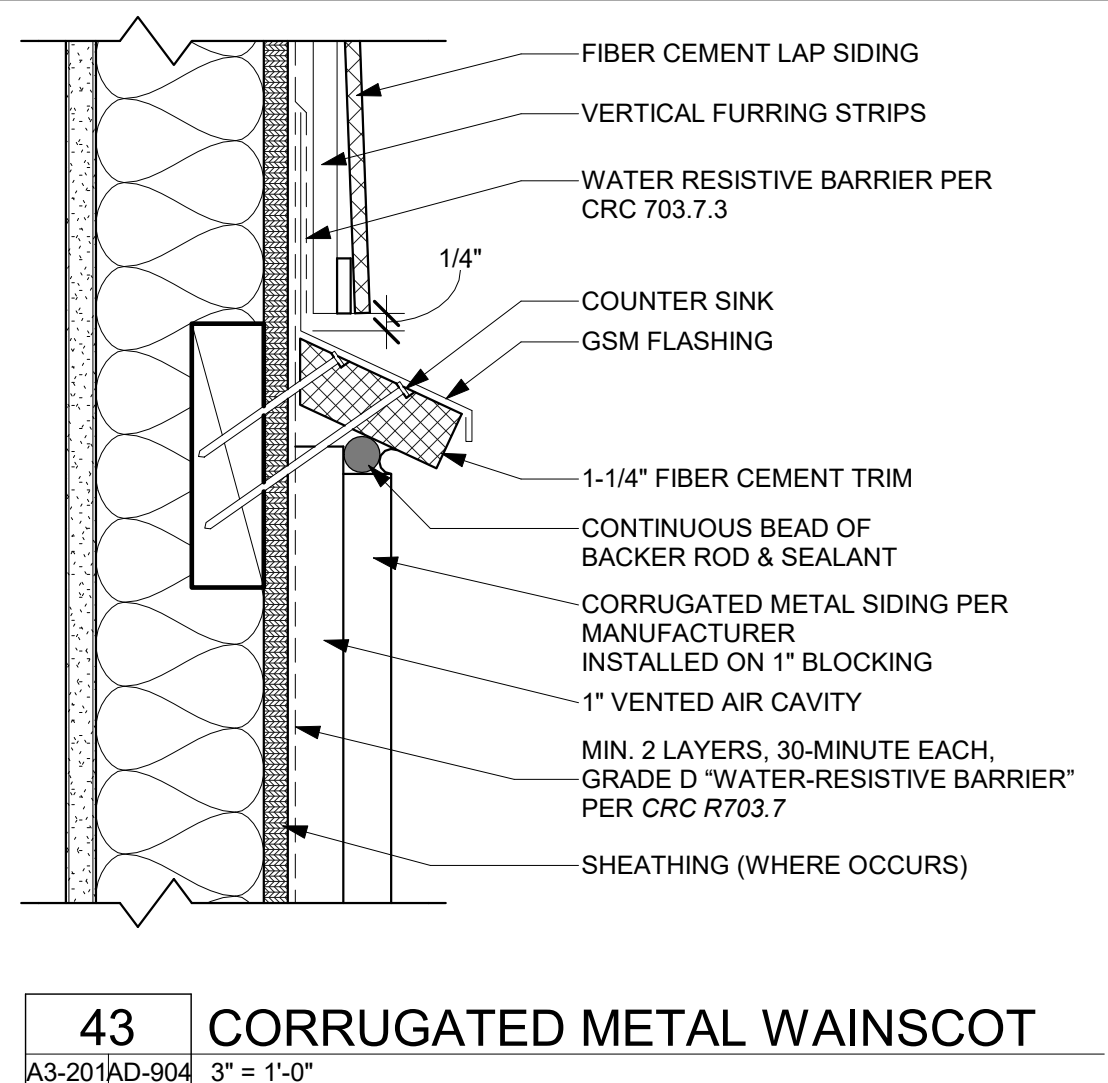
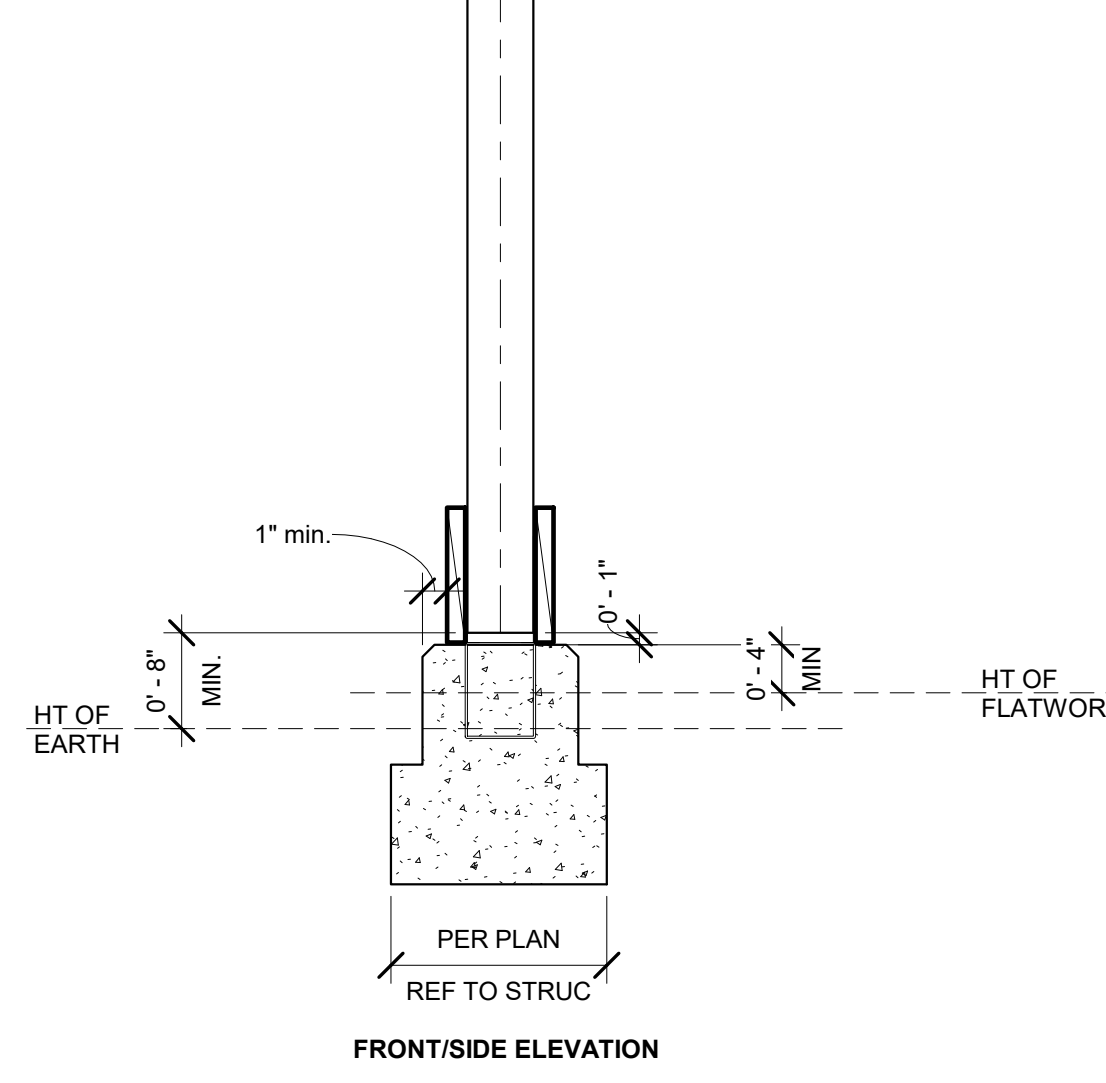
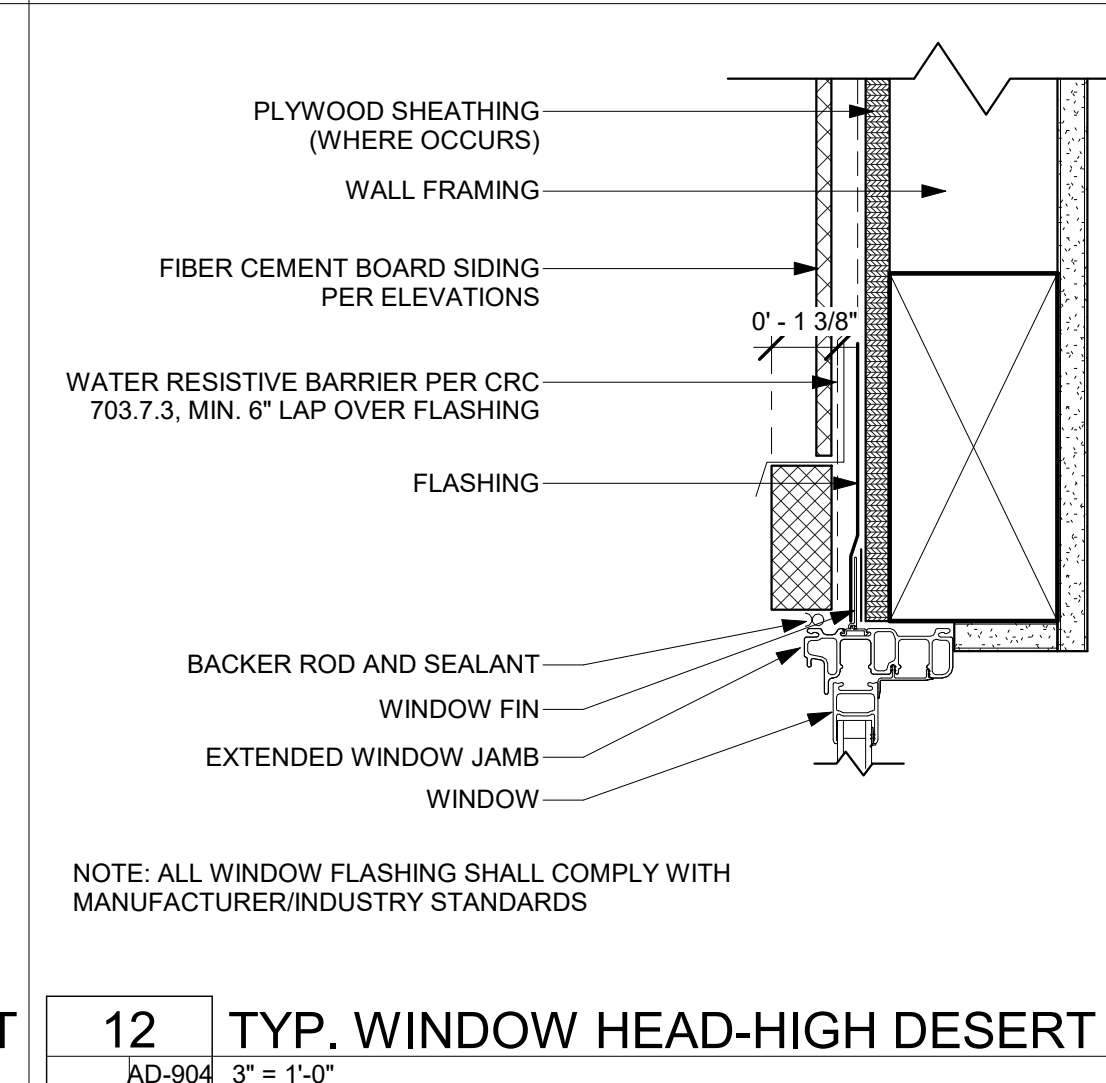
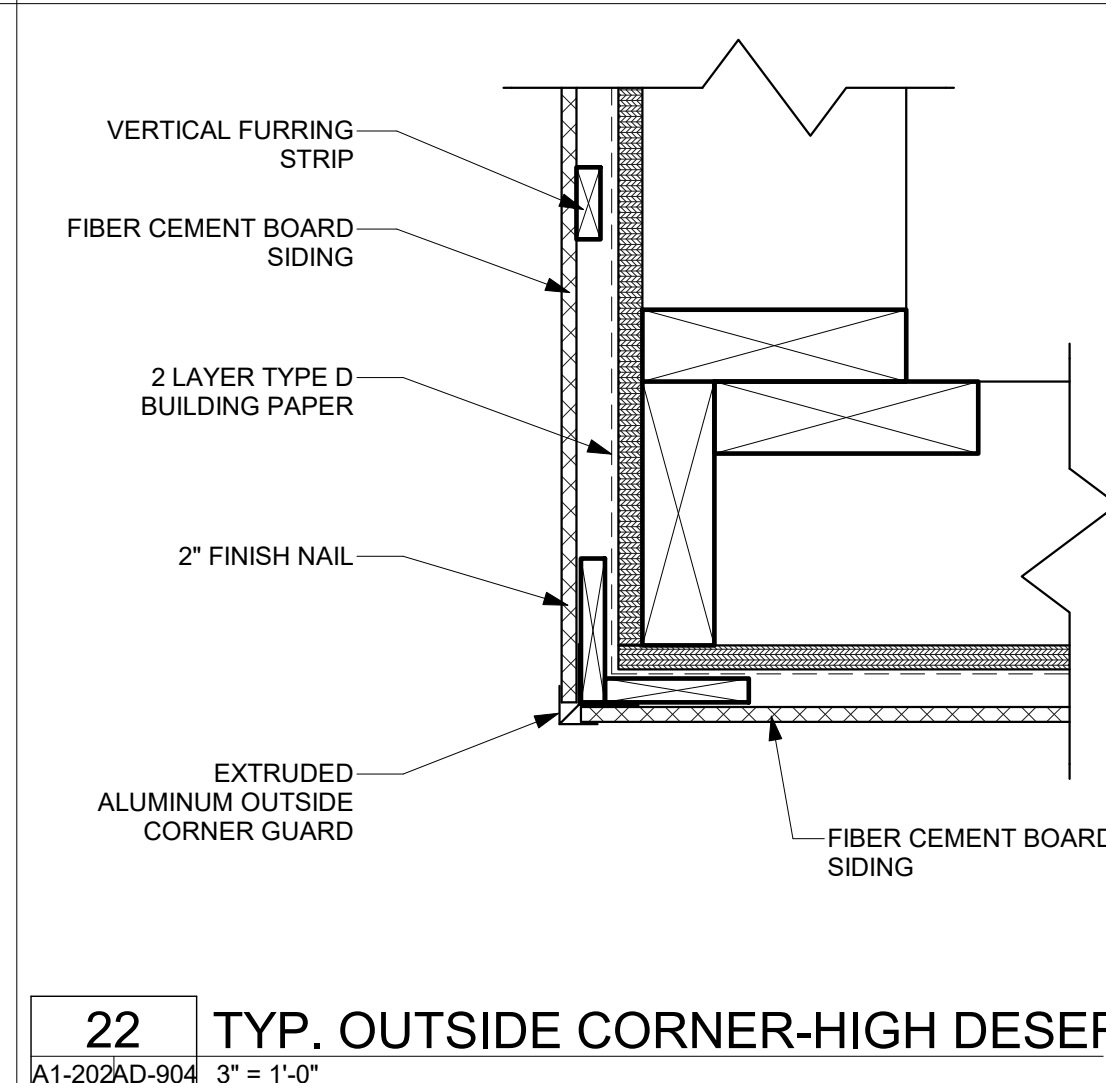
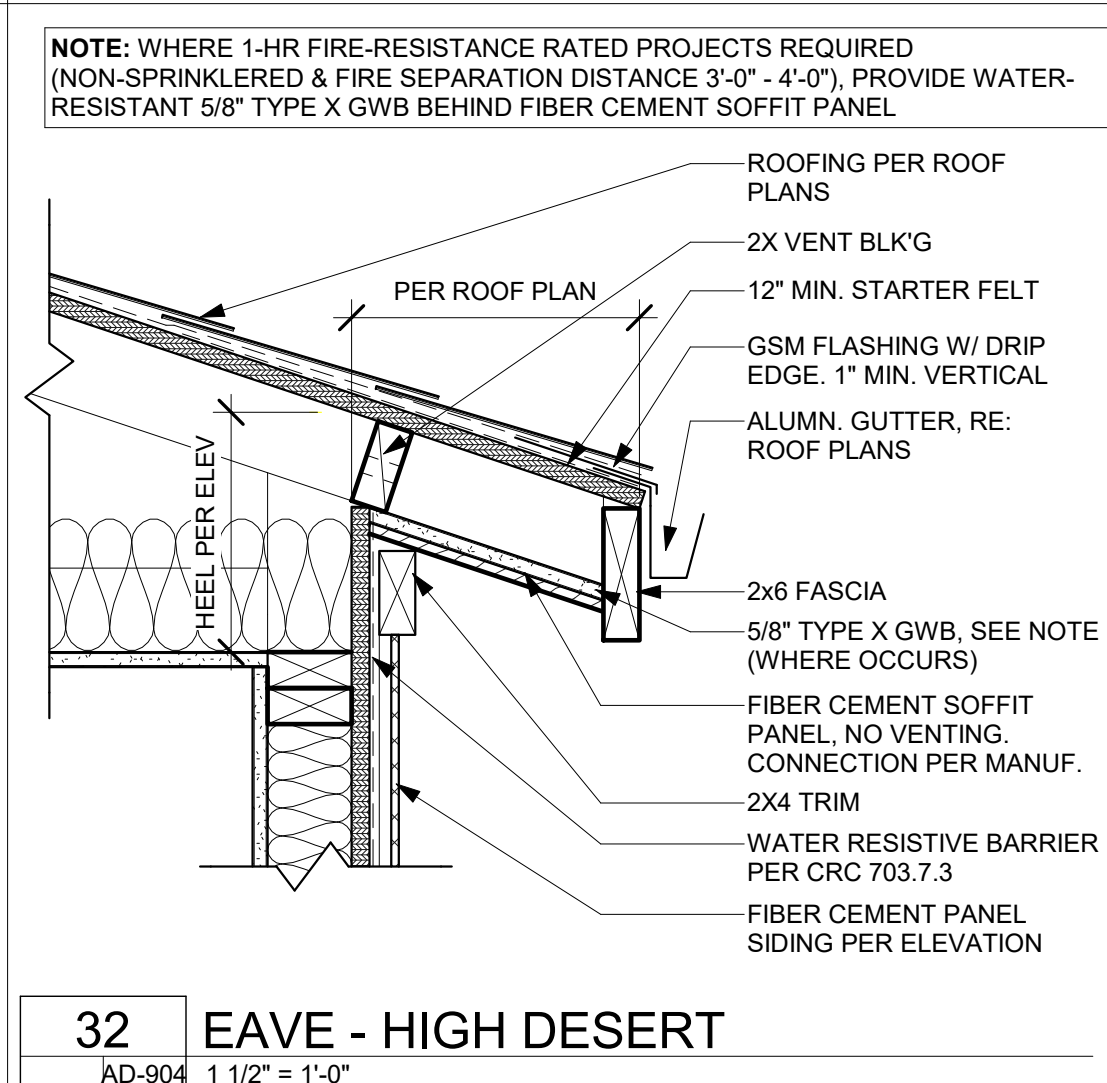
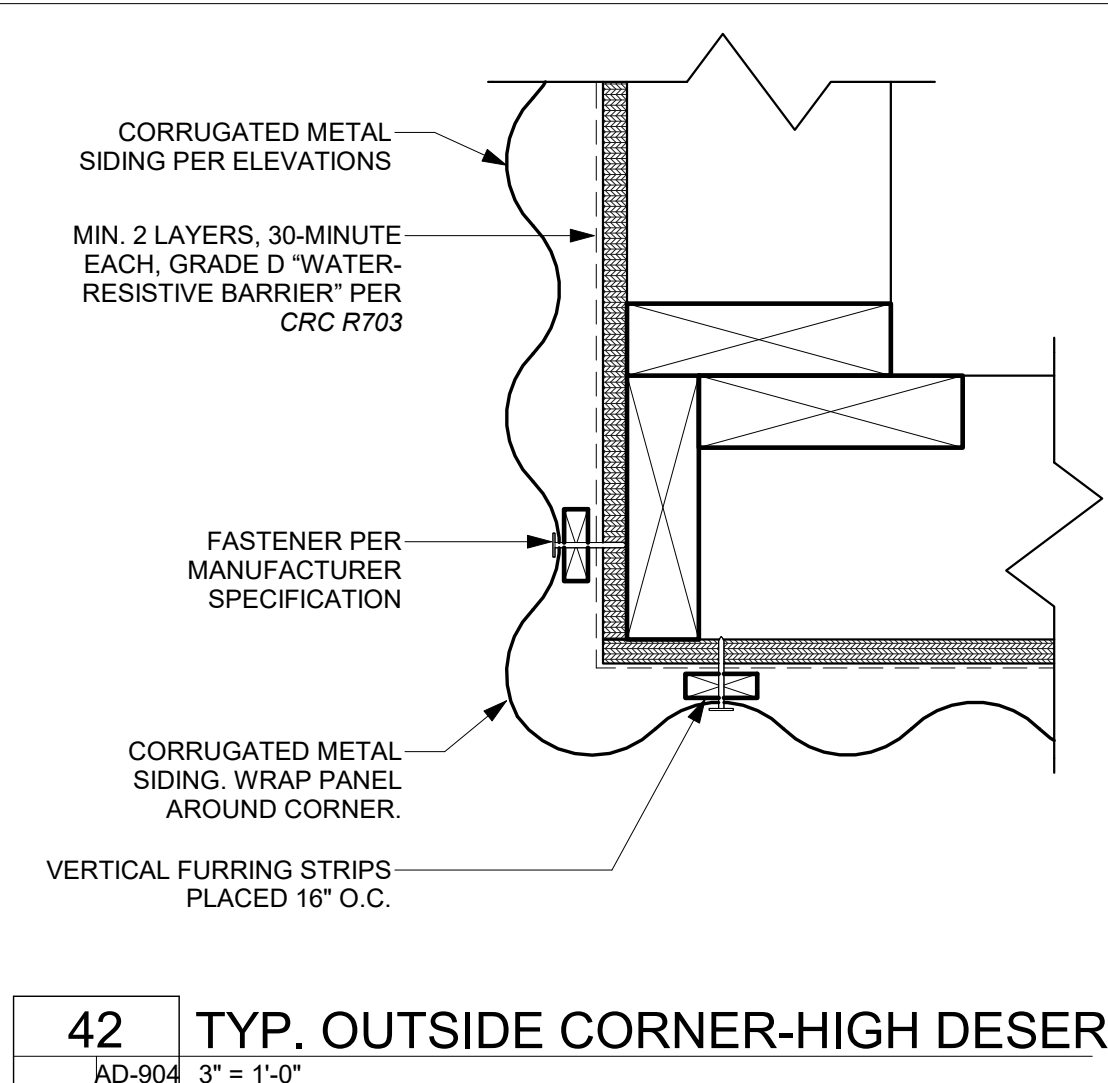
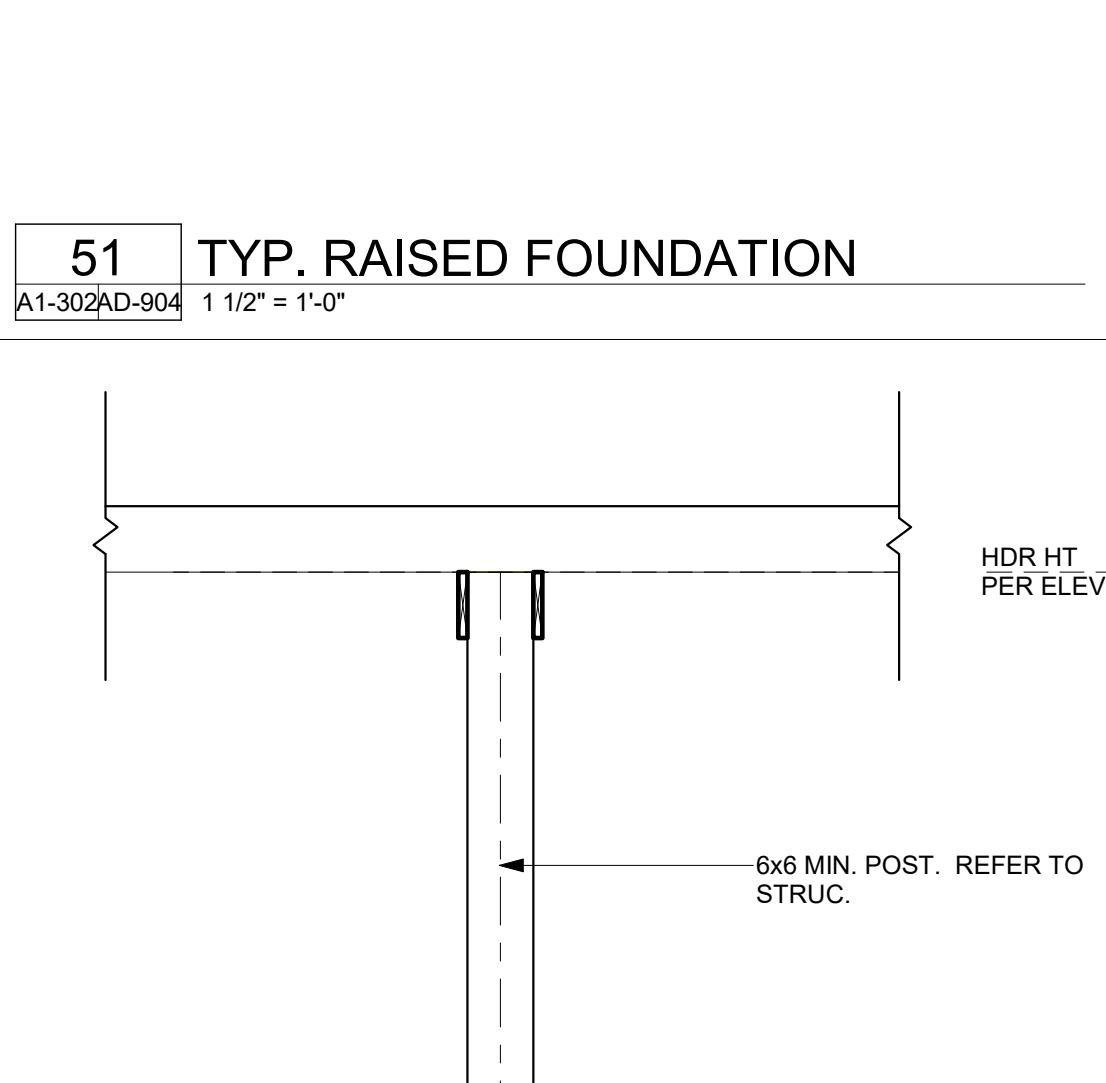
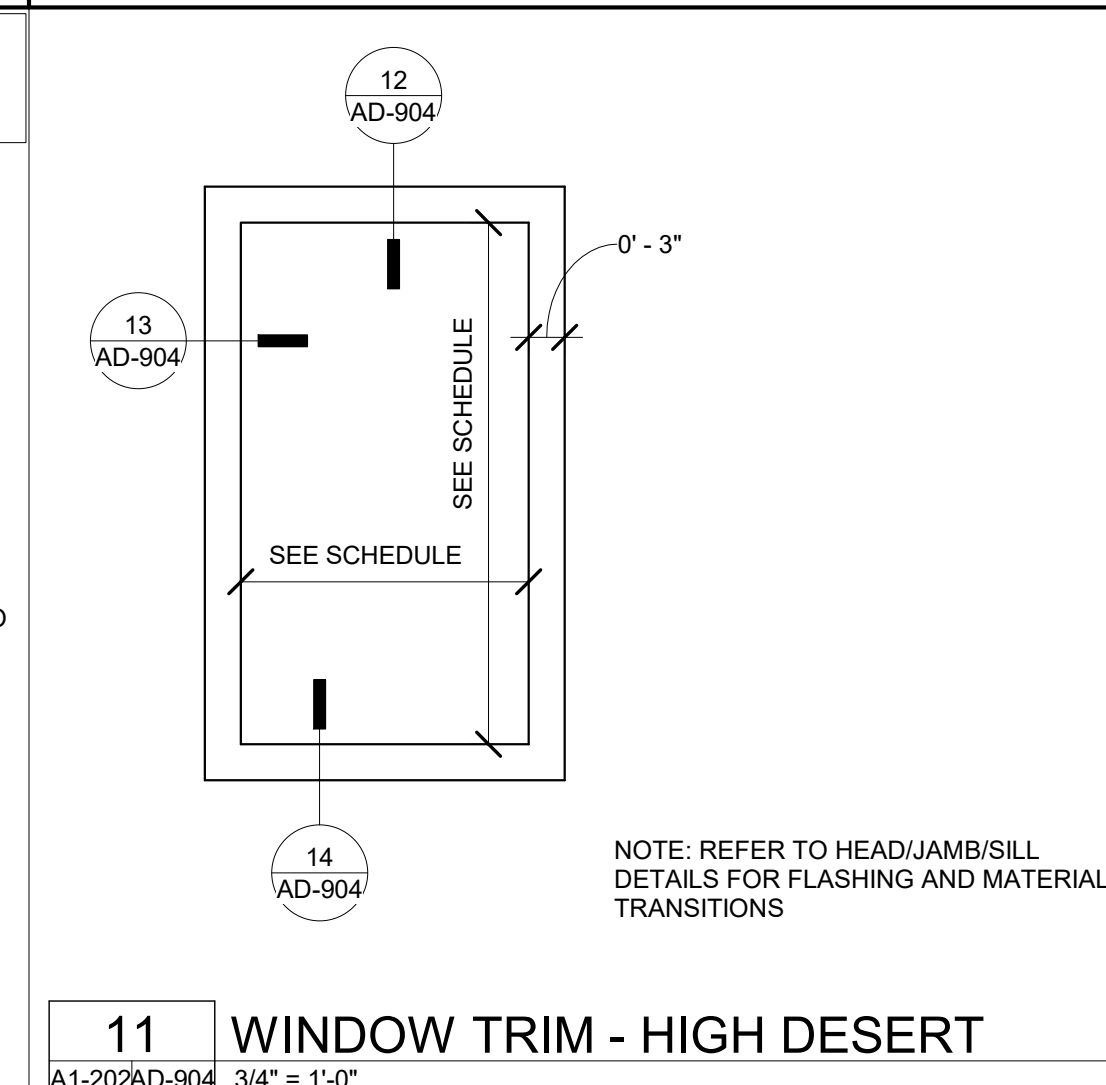
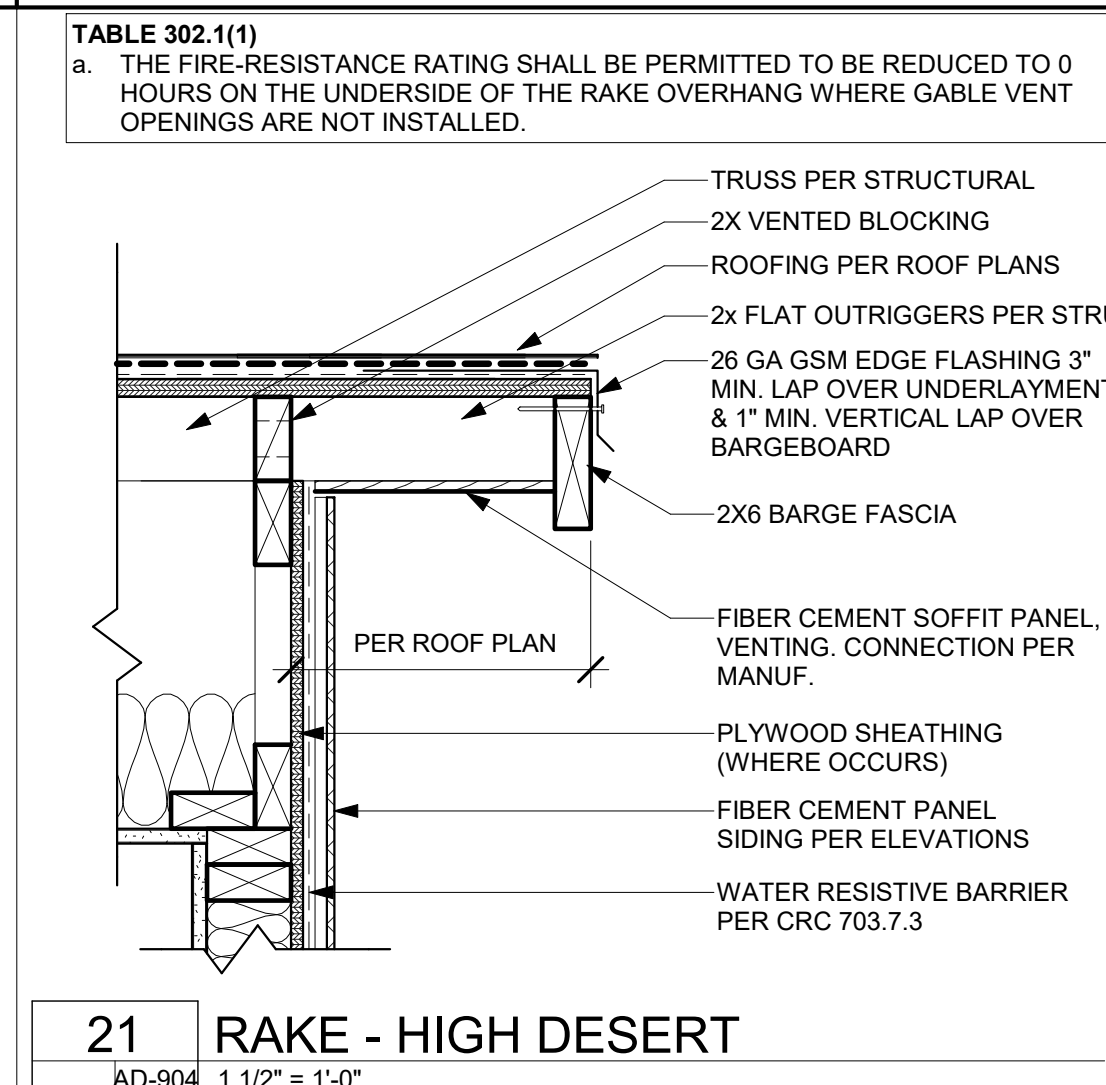
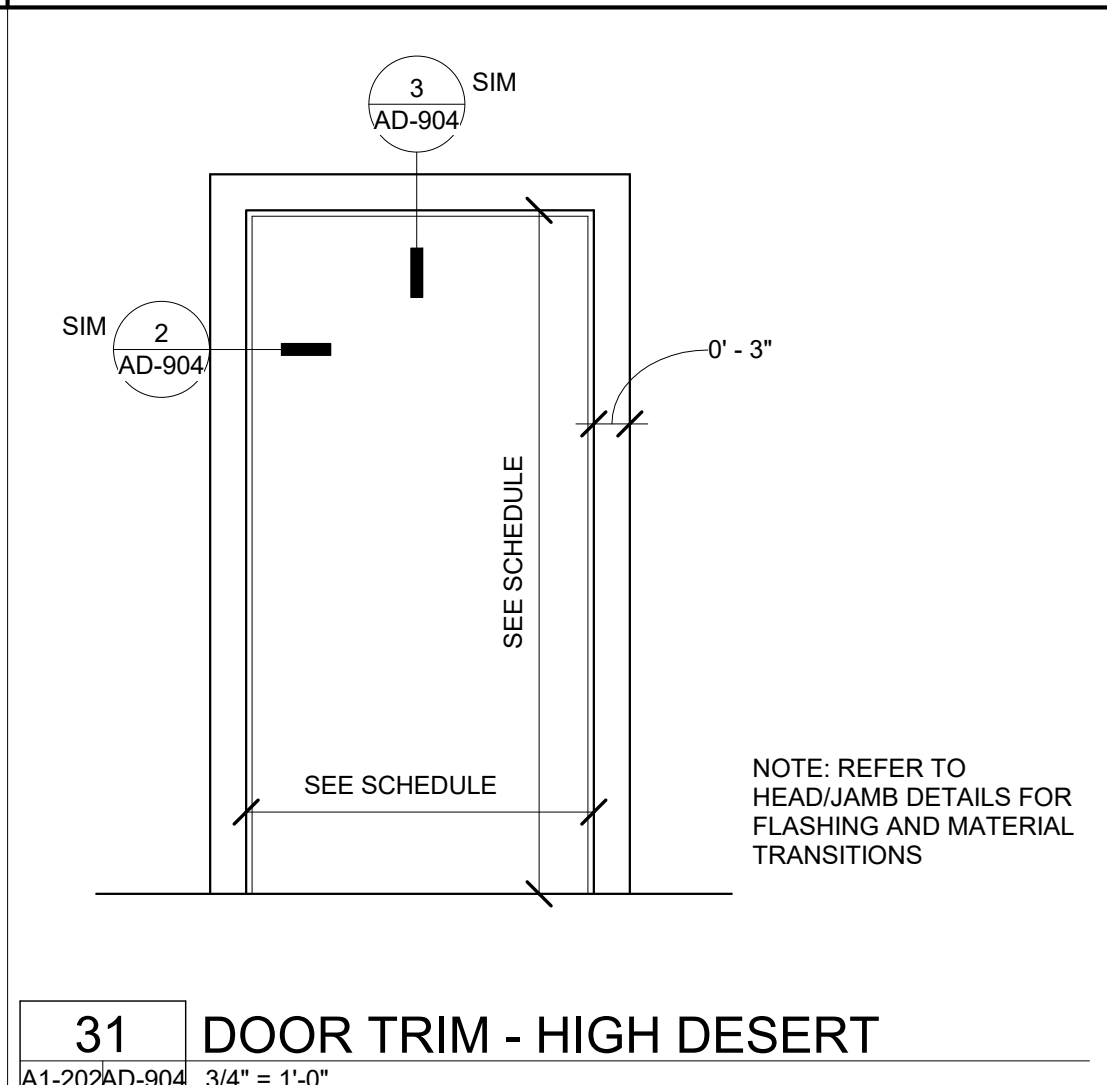
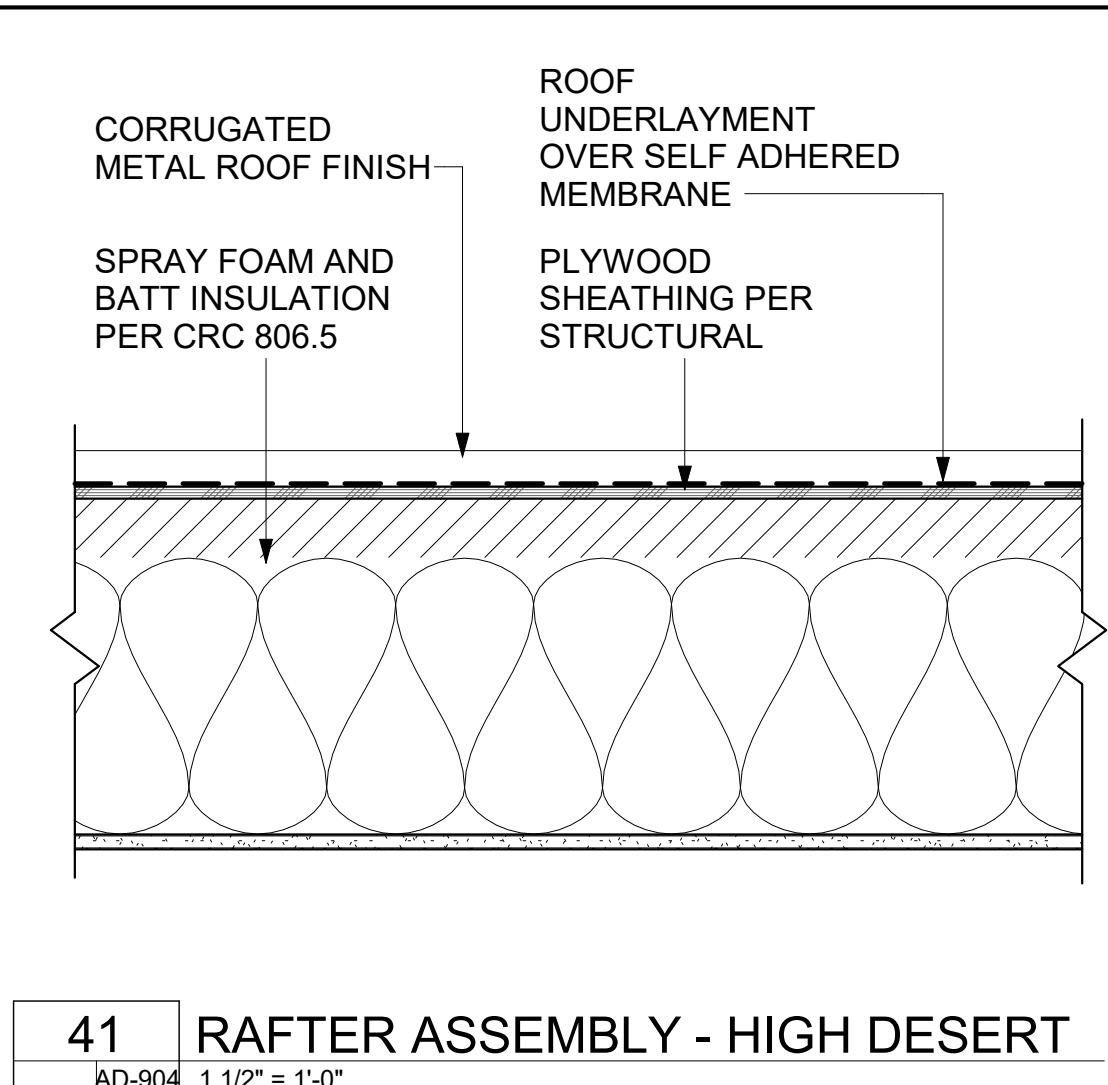
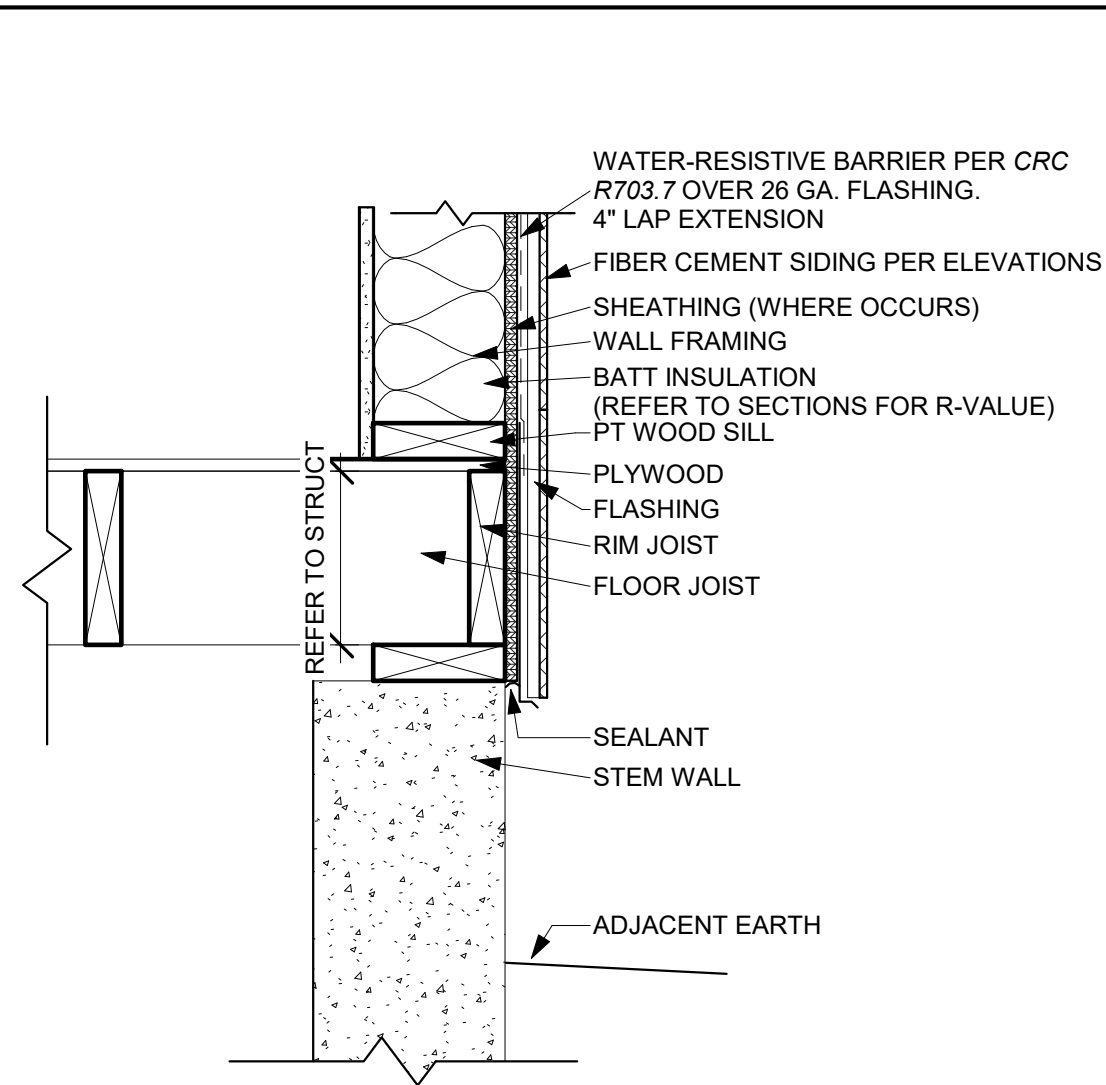
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6/30/2022

PROJECT NUMBER  
2340-01-CU21

SHEET  
AD-903



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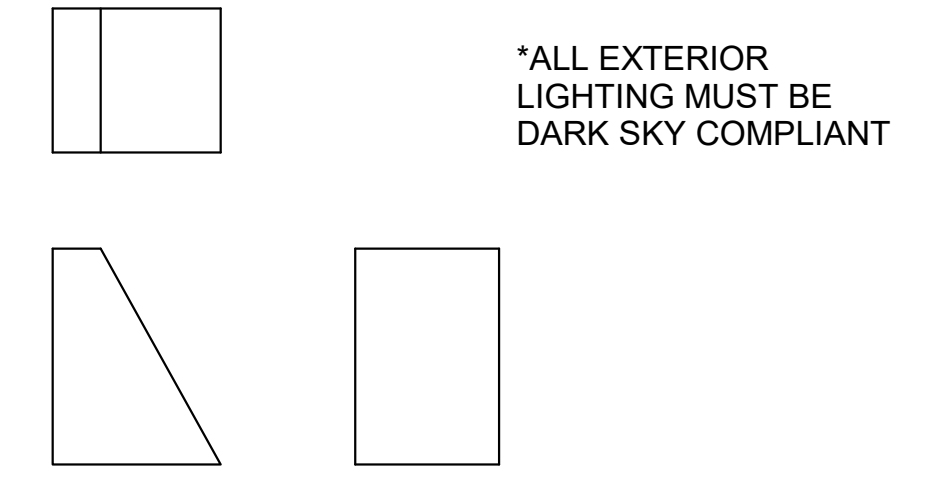


CONSULTANT  
 AGENCY

**MONO COUNTY ADU PROTOTYPES**  
 MONO COUNTY ARCHITECTURAL DETAILS - HIGH DESERT

NO.	REVISION	DATE

PROJECT MANAGER: RR  
 DRAWN BY: [ ] CHECKED BY: [ ]  
 DATE: 6/30/2022  
 PROJECT NUMBER: 2340-01-CU21  
 SHEET: AD-904

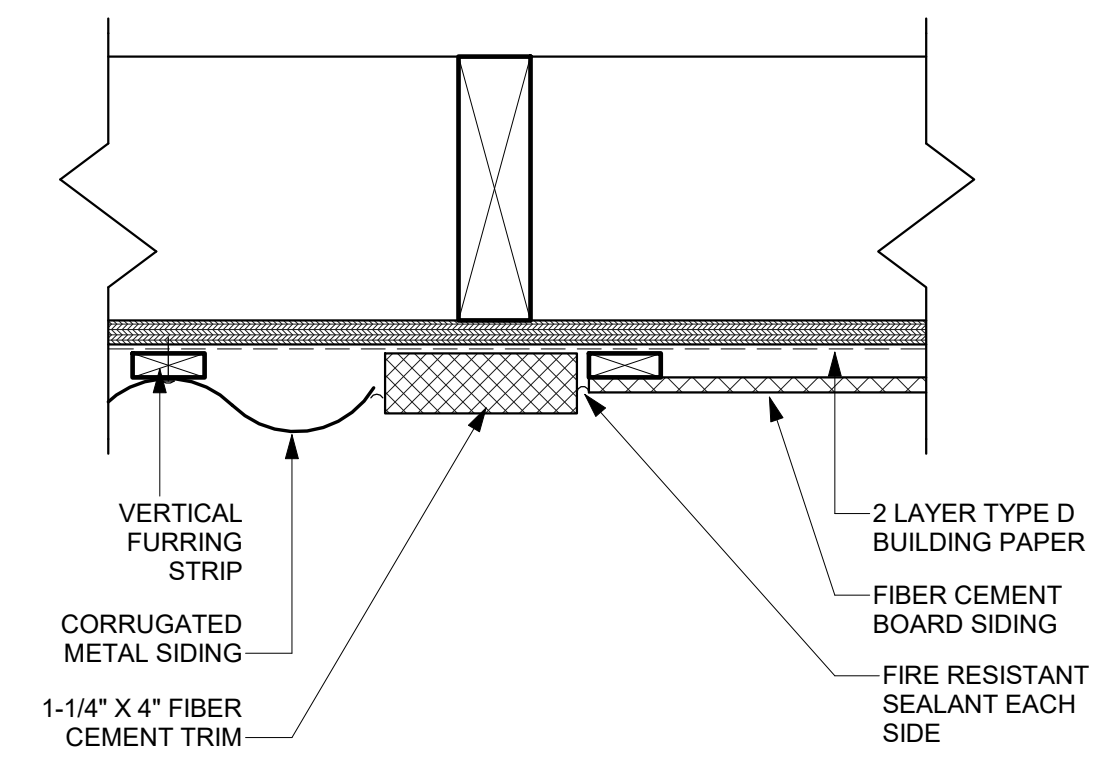


\*ALL EXTERIOR LIGHTING MUST BE DARK SKY COMPLIANT

LINGMAN LIGHTING - WALL MOUNT DIMMABLE BLACK LED WALL SCONCE (ULEW-30001-8W-T3-W30-01-120/277V)

OR EQUAL DARK SKY COMPLIANT FIXTURE PER ZONING REGULATIONS SECTION 17.70.100.

**11** LIGHT FIXTURE - HIGH DESERT  
A1-202AD-905 1 1/2" = 1'-0"



**12** WALL - CORRUGATED TO FIBER CEMENT TRANSITION  
A1-202AD-905 3" = 1'-0"

CONSULTANT

AGENCY

**MONO COUNTY ADU  
PROTOTYPES  
MONO COUNTY  
ARCHITECTURAL DETAILS - HIGH  
DESERT**

NO.	REVISION	DATE
△		
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PROJECT MANAGER  
RR

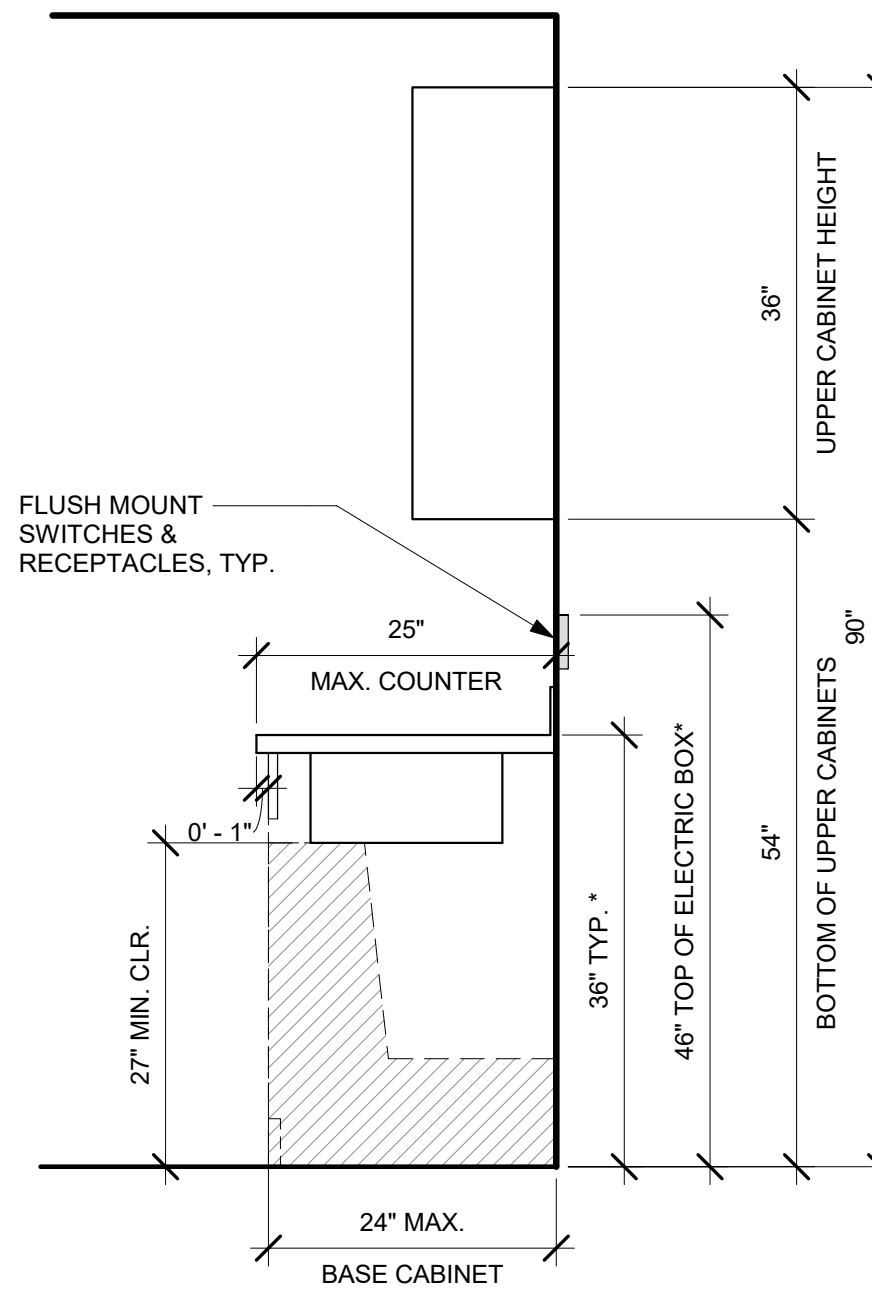
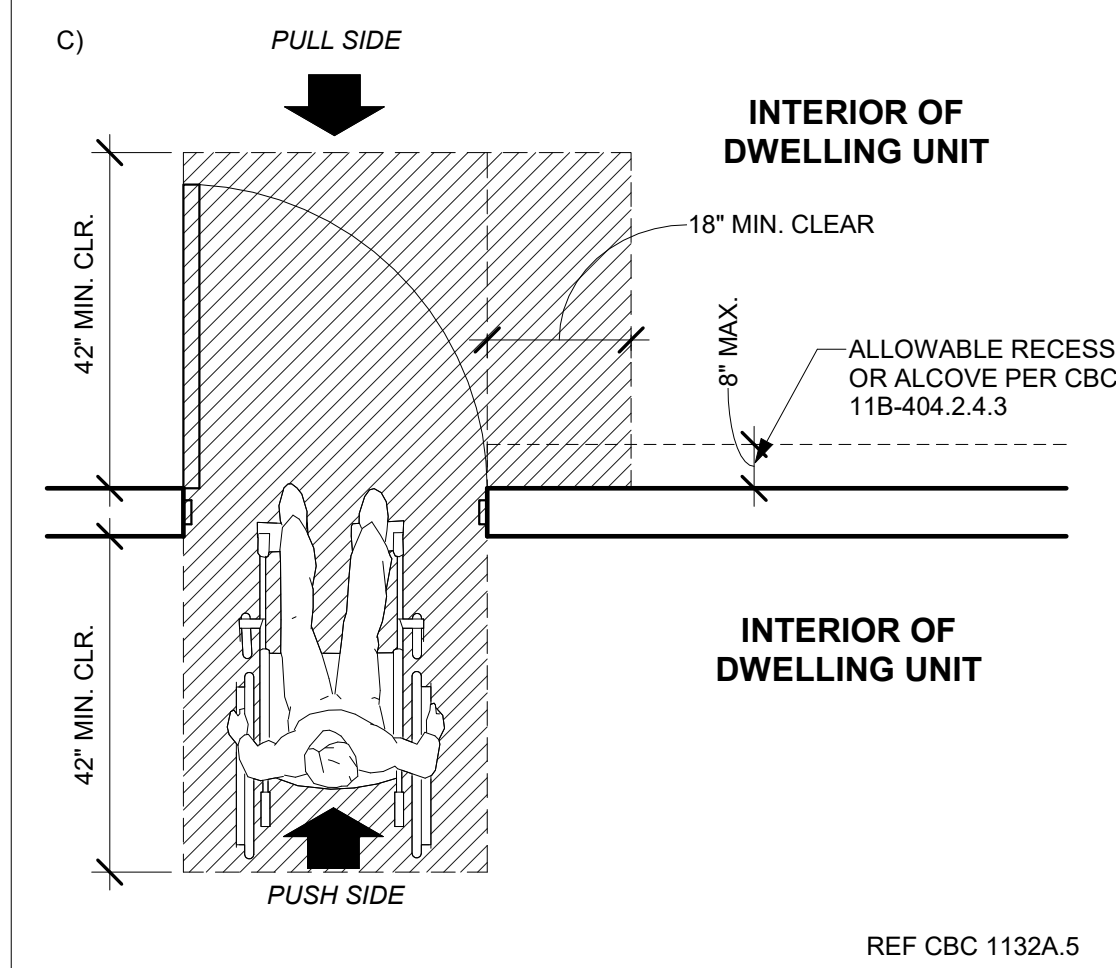
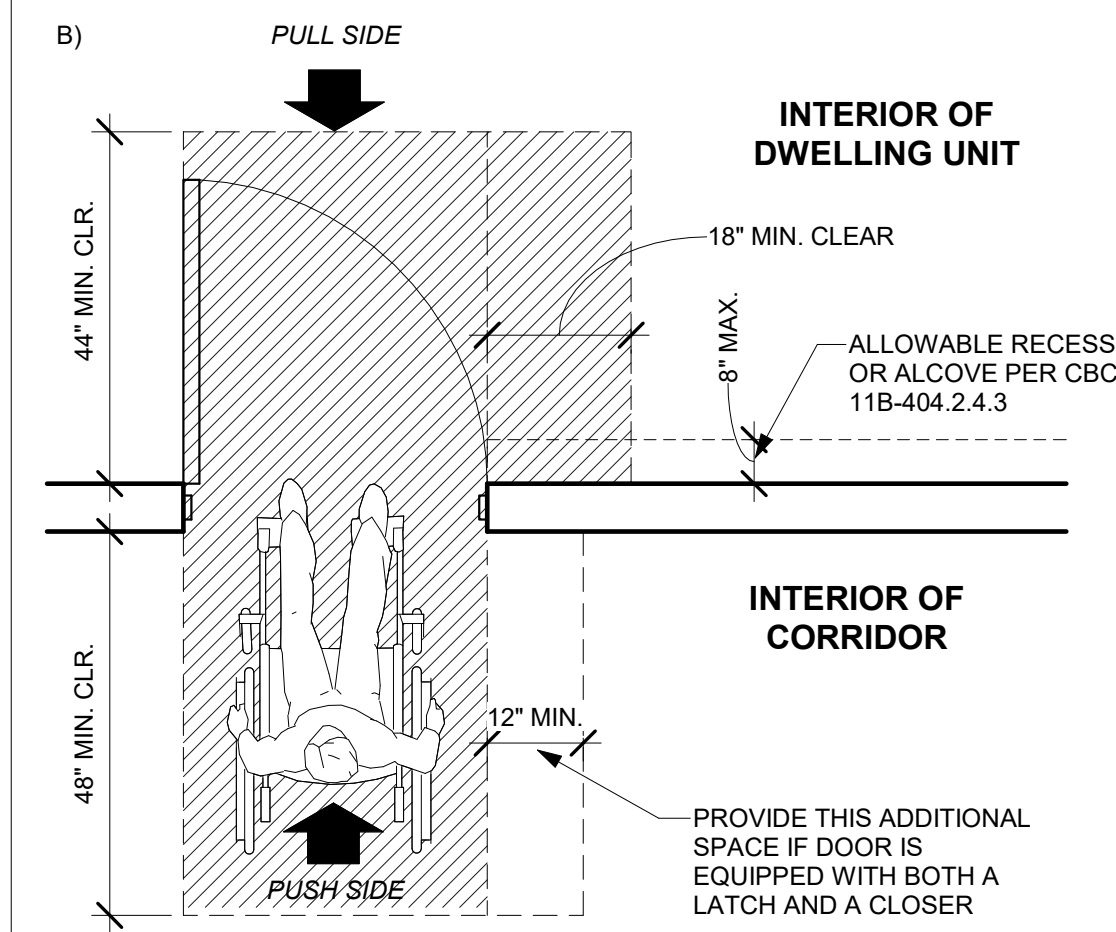
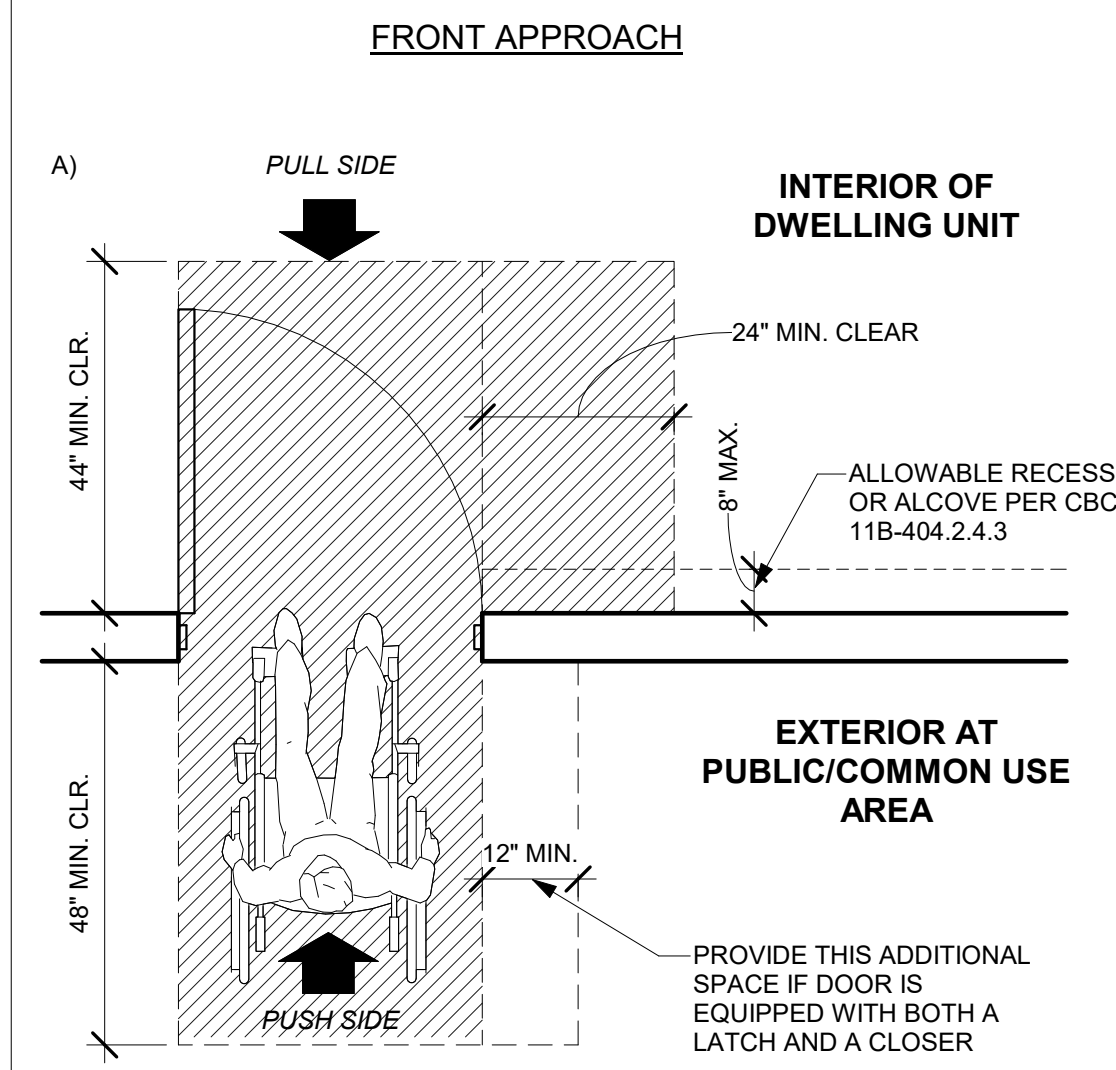
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DATE  
6/30/2022

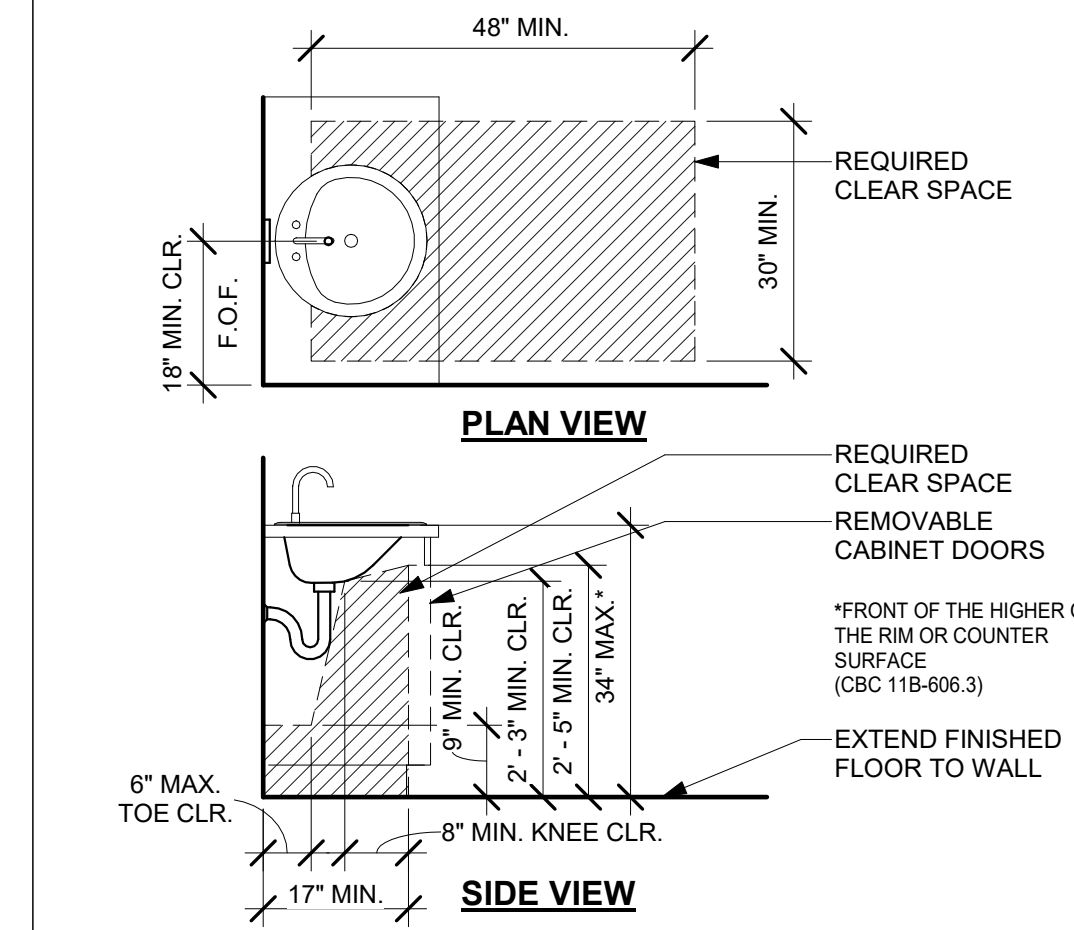
PROJECT NUMBER  
2340-01-CU21

SHEET  
**AD-905**





- NOTES:**
- (\*) DENOTES COMPLIANCE WITH SIDE REACH APPROACH PER 2019 CBC 1138A.3.2.2 EXCEPTION.
  - REMOVABLE BASE CABINET AT SINK & WORKSPACE (MIN. 30\"/>



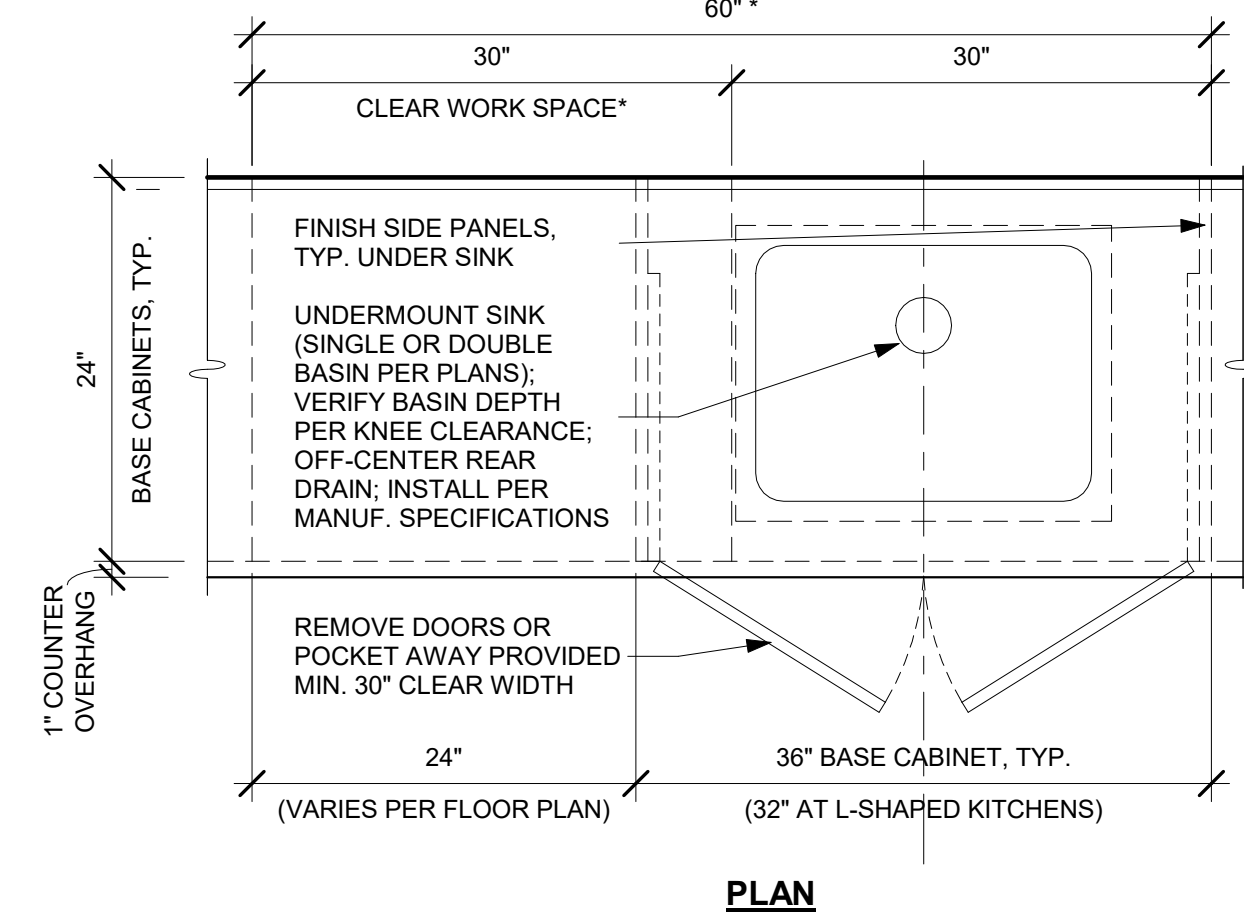
- NOTES:**
- ADAPTABLE UNITS - PROVIDE REMOVABLE DOORS AT SINK CABINET THAT DON'T REQUIRE SPECIALIZED KNOWLEDGE OR THE USE OF SPECIALIZED TOOLS.
  - THE FINISHED FLOOR SHOULD EXTEND TO THE WALL.
  - HOT WATER AND DRAIN PIPES UNDER ACCESSIBLE LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.
  - SINK SHALL BE 6 1/2\"/>

**21 11A ADP. BATHROOM SINK**

SCALE: 1/2" = 1'-0"

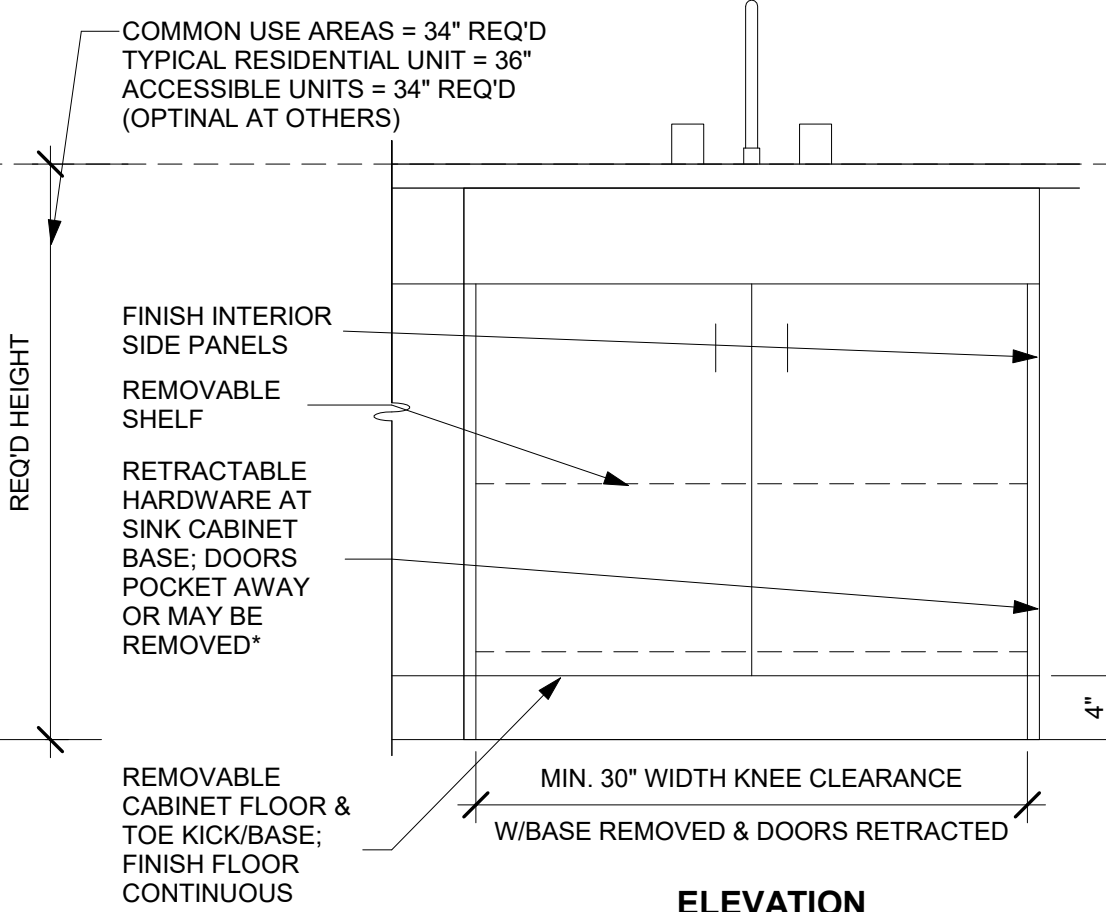
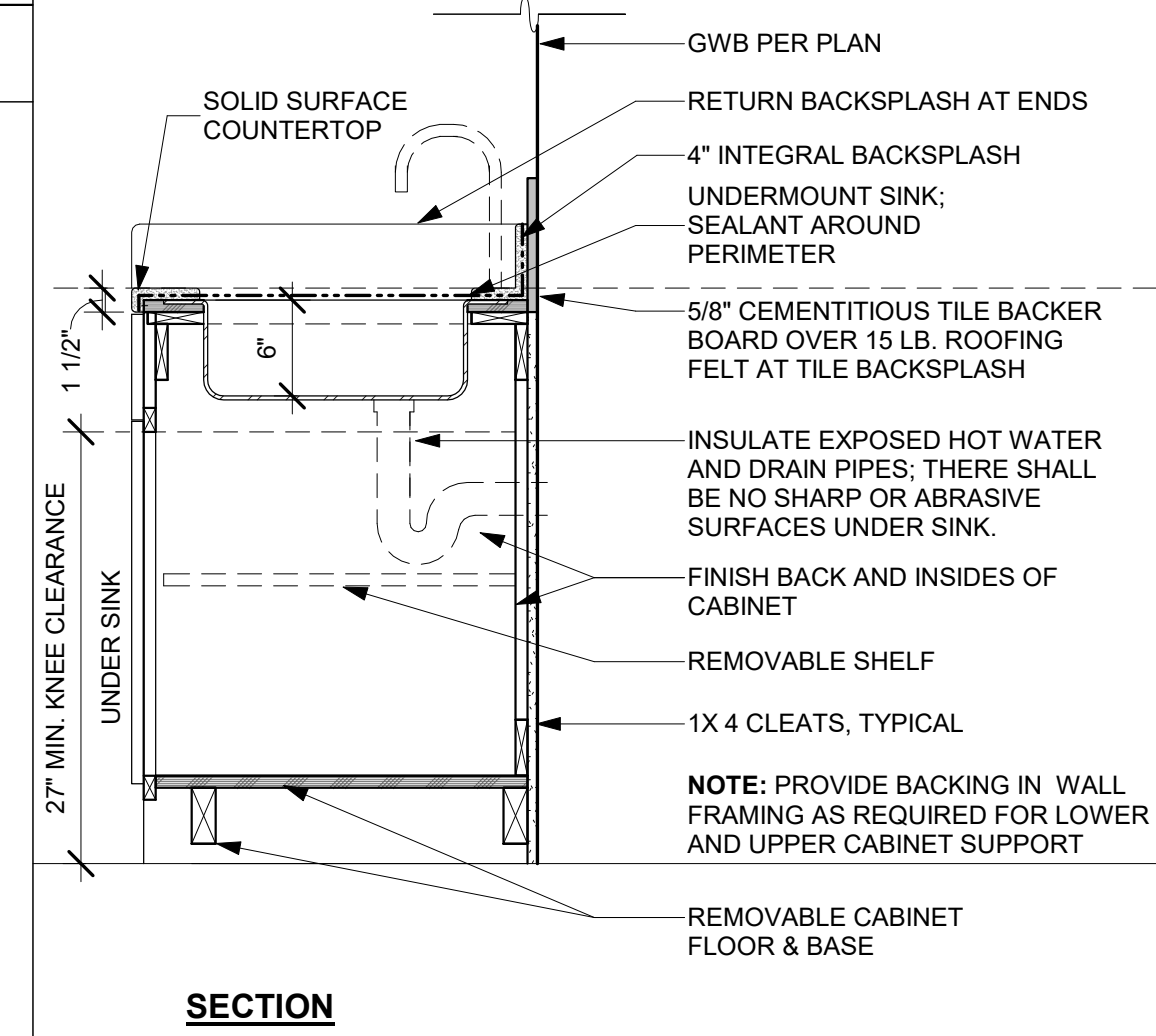
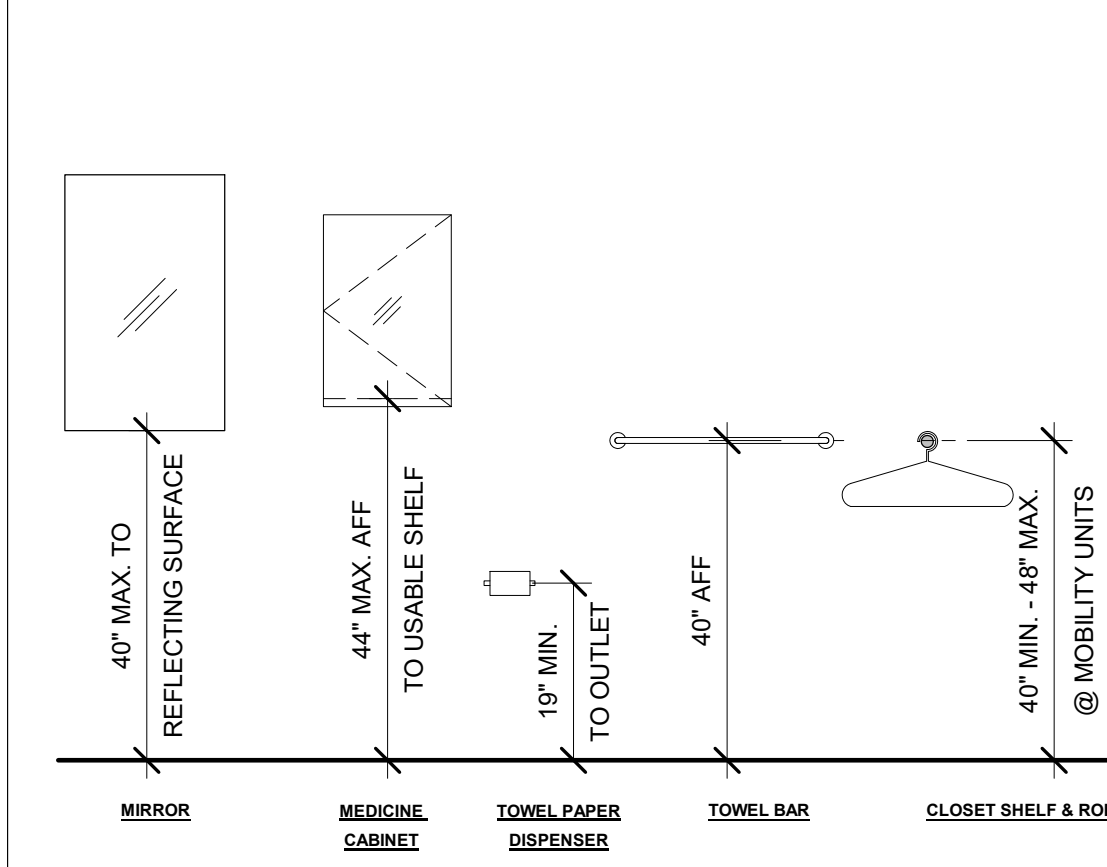
**\*KITCHEN ACCESSIBILITY NOTES**

- THE SINK AND WORK SURFACE MAY BE A SINGLE INTEGRAL UNIT A MINIMUM OF 60 INCHES IN LENGTH, OR BE SEPARATE (30\"/>



**32 11A ADP. KITCHEN CASEWORK**

SCALE: 3/4" = 1'-0"

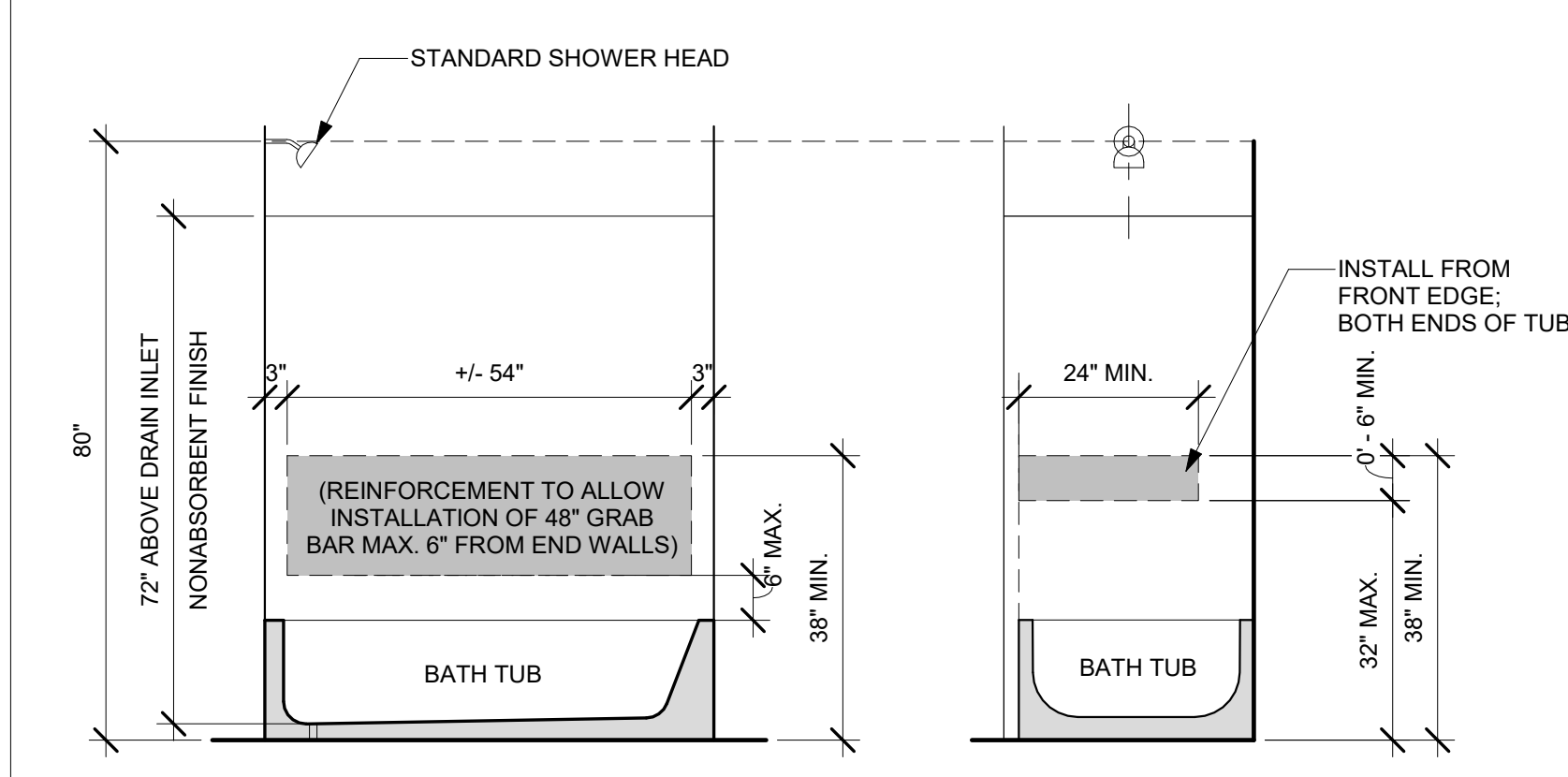


**23 ADP. KITCHEN SINK REMOVEABLE BASE CABINET**

SCALE: 1" = 1'-0"

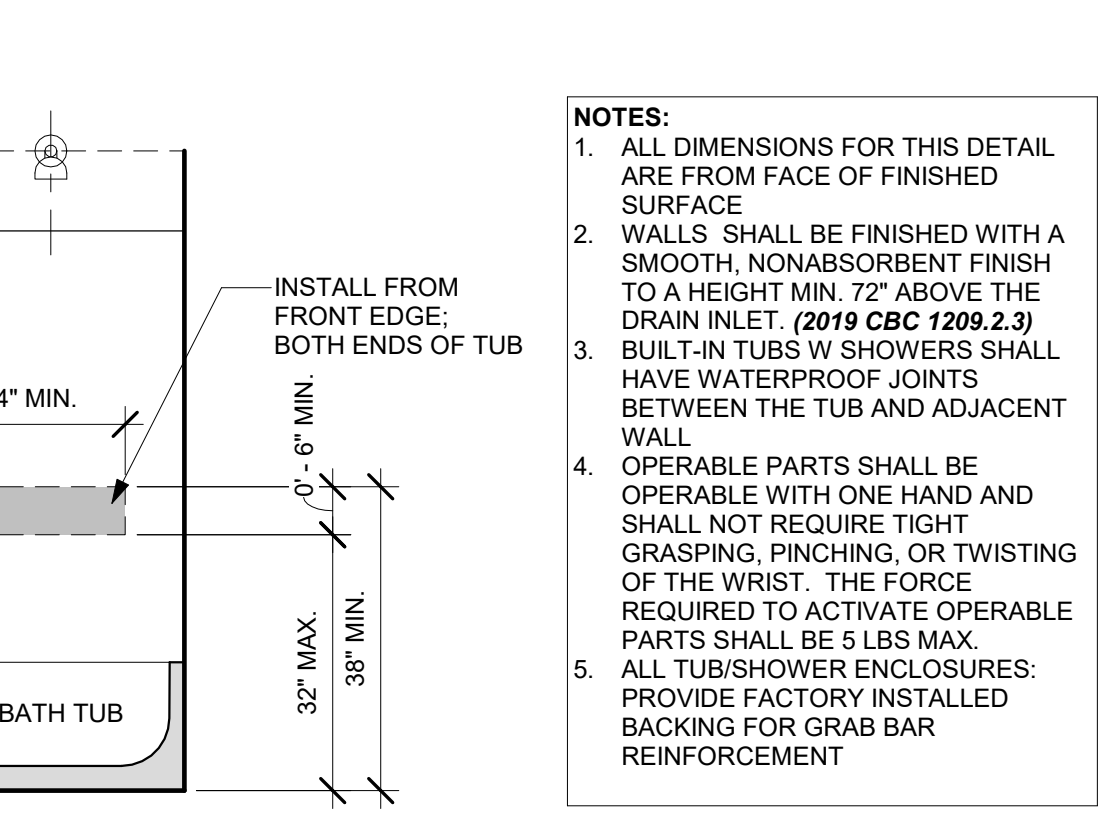
**43 CLEARANCES AT DOORS & GATES**

SCALE: 1/2" = 1'-0"



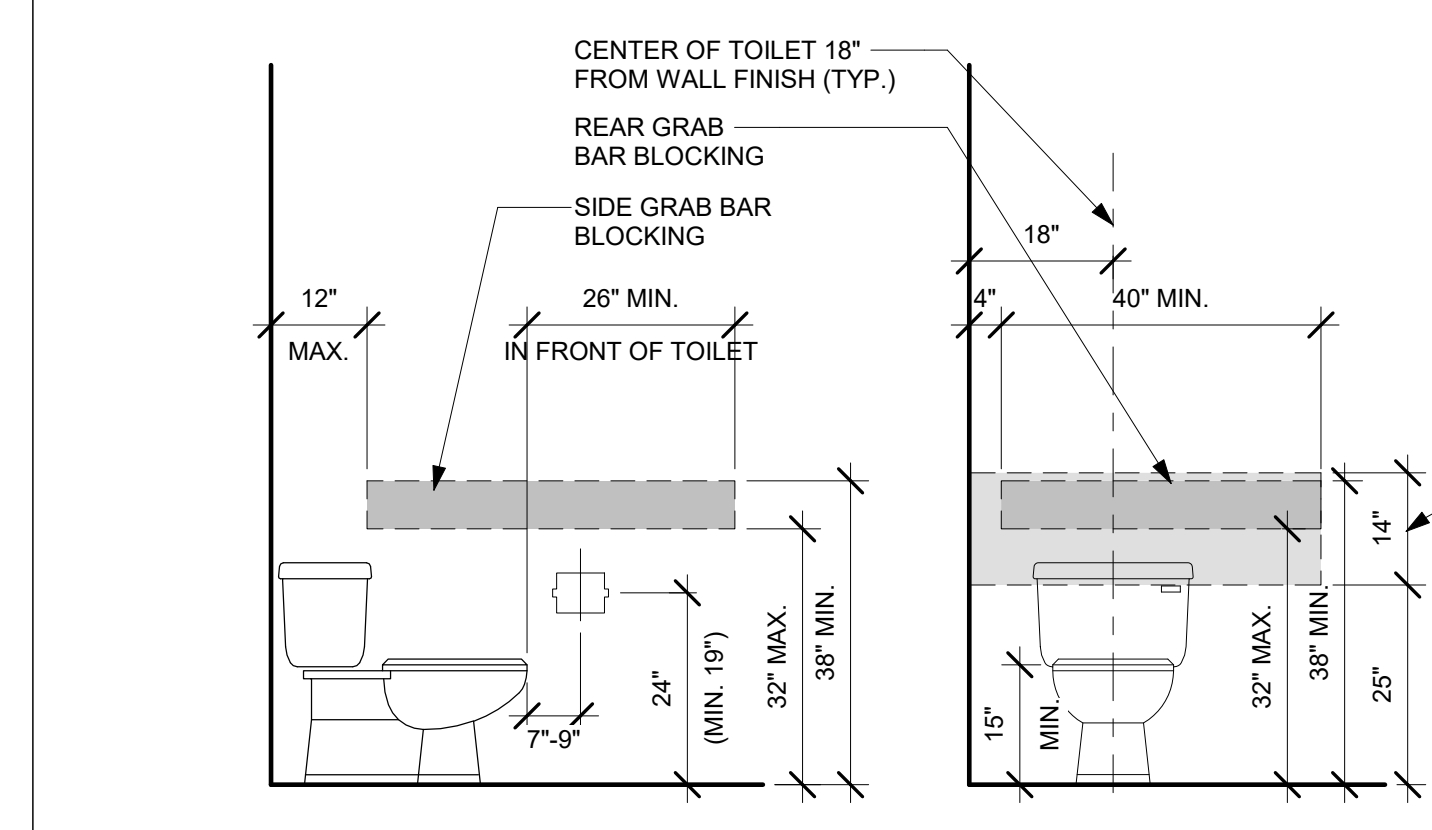
**14 ACCESSORIES - RESIDENTIAL**

SCALE: 1/2" = 1'-0"



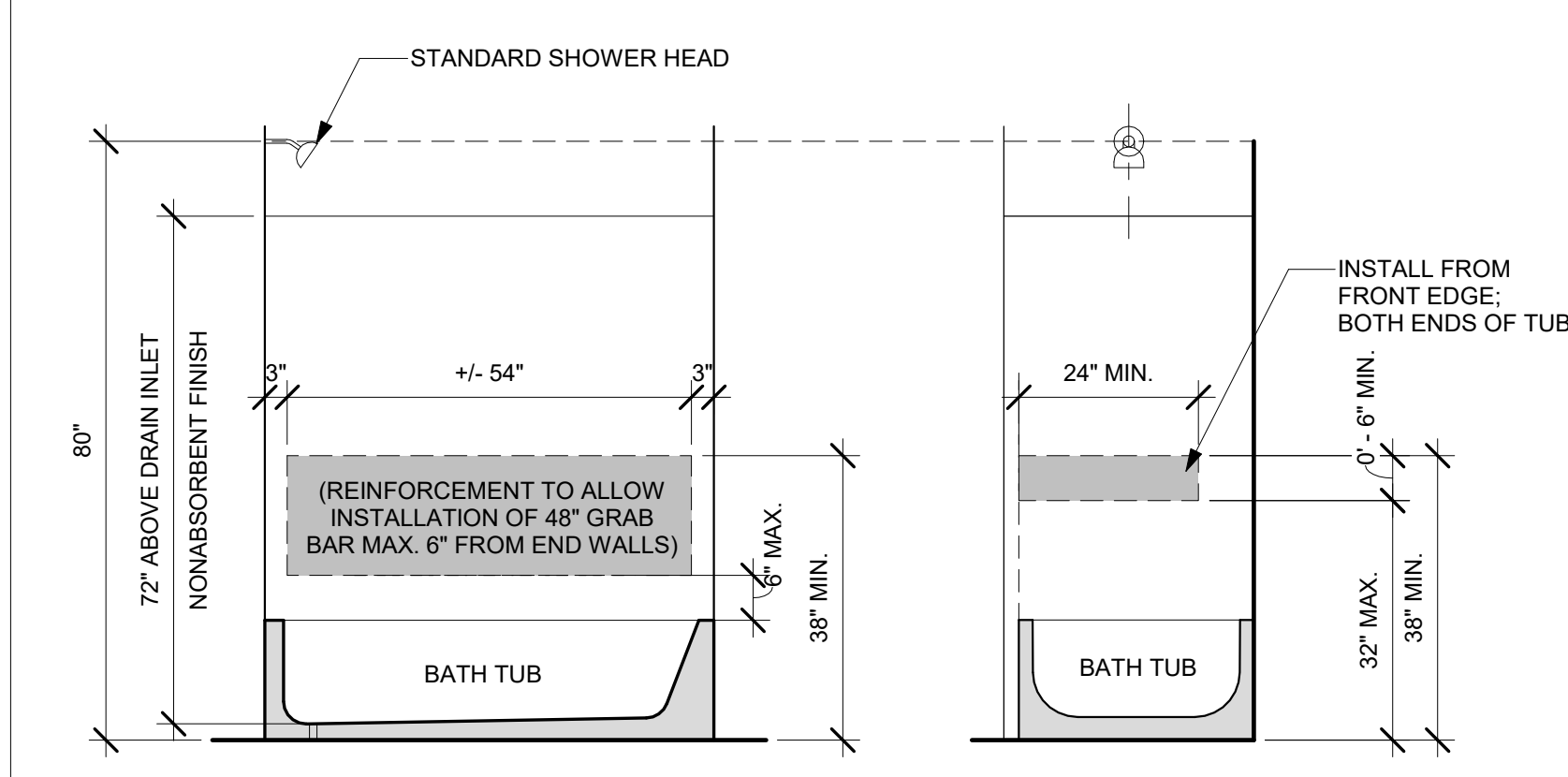
**33 11A ADP. DWELLING UNIT TOILET**

SCALE: 1/2" = 1'-0"



**44 11A ADP. TUB COMPLIANCE**

SCALE: 1/2" = 1'-0"



CONSULTANT

AGENCY

**MONO COUNTY ADU  
PROTOTYPES  
MONO COUNTY**

**ADAPTABILITY DETAILS**

NO.	REVISION	DATE

**PROJECT MANAGER**  
RR

**DRAWN BY**      **CHECKED BY**

**DATE**  
6/30/2022

**PROJECT NUMBER**  
2340-01-CU21

**SHEET**

**AD-931**



## WOOD (GENERAL)

- PRESERVATIVE TREATMENT:
  - WOOD MEMBERS SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH AITC 109-07, STANDARD FOR PRESERVATIVE TREATMENT, BASED ON THE SERVICE CONDITION PER THE USE CATEGORIES (UC) SPECIFIED IN AWP4 U1-06.
    - UC1 - INTERIOR CONSTRUCTION, ABOVE GROUND, DRY - NO PRESERVATIVE TREATMENT REQUIRED
    - UC2 - INTERIOR CONSTRUCTION, ABOVE GROUND, WET - PRESERVATIVE TREATMENT REQUIRED IF THE HUMIDITY OR MOISTURE CONDENSATION IS 20% OR GREATER.
    - UC3 - EXTERIOR CONSTRUCTION ABOVE GROUND - PRESERVATIVE TREATMENT REQUIRED.
- FOR ALL TREATED WOOD MEMBERS, ALL CUTS, HOLES AND INJURIES SUCH AS ABRASIONS OR HOLES FROM REMOVAL OF NAILS AND SPIKES WHICH MAY PENETRATE THE TREATED ZONE SHALL BE FIELD REPAIRED IN ACCORDANCE WITH AWP4 M4-06. THE FOLLOWING FIELD TREATMENTS SHALL BE USED:
  - BORED HOLES: HOLES FOR CONNECTORS OR BOLTS MAY BE TREATED BY PUMPING COAT TAR ROOFING CEMENT MIXTURES ASTM D5648 INTO HOLES USING A GREASE GUN OR SIMILAR DEVICE
  - EXTERIOR, COPPER NAPHTHENATE
  - INTERIOR, INORGANIC BORON PRESERVATIVES LIMITED TO USE IN APPLICATIONS NOT IN CONTACT WITH GROUND AND CONTINUOUSLY PROTECTED FROM LIQUID WATER

## SAWN LUMBER

1. FRAMING LUMBER SHALL MEET THE FOLLOWING MINIMUM STANDARDS EXCEPT WHERE OTHERWISE NOTED:

SAWN LUMBER PROPERTIES				
USE	SIZE	SPECIES	GRADE	REFERENCE
MUDDSIS	2 X 4	D.F.	STANDARD OR BETTER PRESSURE TREATED	2019 CBC 2303.1.9
	2 X 6 AND LARGER	D.F.	NO. 2 OR BETTER PRESSURE TREATED	
	2 X	REDWOOD	FOUNDATION GRADE	
HORIZONTAL FRAMING LUMBER				
FLOOR JOISTS AND RAFTERS	2 x	D.F.	NO. 2	
FLOOR JOISTS	2 X	D.F.	NO. 2	
HEADERS AND BEAMS	4 X	D.F.	NO. 2	WCLB & WHPA
ANY OTHER HORIZONTAL	4 X 4 AND SMALLER	D.F.	NO. 2	
	6 X 6 AND LARGER	D.F.	NO. 1	
VERTICAL FRAMING LUMBER				
TOP PLATES	2 X	D.F.	NO. 2	
STUDS	2 X 4 & 3 X 4	D.F.	STUD	WCLB & WHPA
	2 X 6 & 2 X 8	D.F.	NO. 2	
	4 X 4 & 4 X 6 POSTS	D.F.	NO. 2	
POSTS	6 X 6 & LARGER POSTS	D.F.	NO. 1	
ALL OTHER FRAMING LUMBER				
ALL OTHER FRAMING LUMBER UNO	ALL SIZES	D.F.	STANDARD & BETTER	WCLB & WHPA

- FLOOR JOISTS SHALL BE GRADE STAMPED "S-DRY" WHICH INDICATES A MOISTURE CONTENT NOT EXCEEDING 19 PERCENT.
- ALL SOLE PLATES AND TOP PLATES SHALL BE GRADE STAMPED "KD" WHICH INDICATES KILN DRIED WITH A MOISTURE CONTENT NOT EXCEEDING 15 PERCENT.
- STUD WALLS SHOWN ON PLANS ARE NONBEARING PARTITIONS WALLS, BEARING WALLS OR SHEAR WALLS BELOW THE FRAMING LEVEL, UNLESS NOTED OTHERWISE. STUDS SHALL BE SIZE AND SPACING AS NOTED IN THE DRAWINGS, SEE PLANS AND ARCHITECTURAL DRAWINGS, UNLESS OTHERWISE NOTED.
- MINIMUM FRAMING NAILING SHALL CONFORM TO CBC TABLE 2304.10.1. ALL NAILS SHALL BE COMMON WIRE NAILS. PREDRILL NAIL HOLES TO 70% OF NAIL SHANK DIAMETER WHERE NAILING TENDS TO SPLIT WOOD.
- UNLESS OTHERWISE NOTED, ALL WOOD SILL PLATES UNDER BEARING, EXTERIOR, OR SHEAR WALLS IN CONTACT WITH CONCRETE OR MASONRY SHALL BE BOLTED TO THE CONCRETE OR MASONRY WITH 5/8" Ø X 12" BOLTS W/ 0.229" X 3" X 3" PLATE WASHER (GALV) AT 4'-0" O.C. BEGINNING AT 9" O.C. MAXIMUM FROM EACH END OF THE PLATES. THE BOLTS SHALL EXTEND A MINIMUM OF 7" INTO THE CONCRETE OR MASONRY. (POWDER DRIVEN NAILS AT 1/3 OF THE BOLT SPACING OR 24" O.C. MAXIMUM MAY BE SUBSTITUTED FOR THE ANCHOR BOLTS AT INTERIOR NON-SHEAR WALLS ONLY).
- ALL LUMBER IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED LUMBER WITH AWP4 TREATMENT C2 USING EITHER ALKALINE QUAT (ACQ TYPE B AND D), COPPER AZOLE (CBA-A, CA-B), OR SODIUM BORATES (SBK), ANCHOR BOLTS, FASTENERS, AND METAL FRAMING CONNECTORS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT-DIPPED GALVANIZED TO A RATING OF G-185 PER ASTM A653.
- PROVIDE 2 STUDS UNDER ALL 4 X 10 AND LARGER BEAMS OR HEADERS AT SPANS 6 FEET OR LONGER, UNLESS OTHERWISE NOTED. WHERE POSTS OR MULTIPLE STUDS UNDER BEAMS OR HEADERS ARE CALLED FOR ON DRAWINGS THOSE POSTS OR MULTIPLE STUDS SHALL BE CARRIED TO THE FOUNDATION/PODIUM LEVEL.
- PROVIDE THE FOLLOWING BLOCKING AS A MINIMUM, UNLESS SHOWN OTHERWISE:
  - 2" X FULL DEPTH SOLID BLOCKING BETWEEN JOISTS OVER SUPPORT.
  - 2" X FULL DEPTH SOLID BLOCKING BETWEEN JOISTS OVER AND BELOW PARTITION WALLS.
- DOUBLE JOISTS UNDER PARTITIONS RUNNING PARALLEL TO JOISTS, UNLESS SUPPORTED BY A WALL BELOW OR SHOWN OTHERWISE. NAIL DOUBLED JOISTS WITH 16d AT 12" O.C., STAGGERED.
- BRIDGING SHALL BE 2 X SOLID BLOCKS, INSTALLED AS FOLLOWS:
  - ROOF JOISTS MORE THAN 10' DEPTH, 8'-0" O.C. MAXIMUM, NOT MORE THAN 8'-0" FROM SUPPORT.
  - FLOOR JOISTS MORE THAN 10' DEPTH, 8'-0" O.C. MAXIMUM, NOT MORE THAN 8'-0" FROM SUPPORT.
- JOIST HANGERS AND OTHER METAL FRAMING ACCESSORIES ARE REFERRED TO ON PLANS BY PARTICULAR TYPE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, STOCKTON, CALIFORNIA. ACCESSORIES OF OTHER MANUFACTURE WITH EQUIVALENT LOAD CARRYING CHARACTERISTICS MAY BE USED.
- FIRE STOPPING, BACKING FOR INTERIOR FINISHES, NONBEARING WALLS, AND OTHER NON-STRUCTURAL FRAMING ARE NOT NECESSARILY SHOWN ON STRUCTURAL DRAWINGS.

## HARDWARE AND CONNECTORS

GENERAL:  
USE ALL SPECIFIED FASTENERS AS SPECIFIED ON PLANS. IF NOT INDICATED ON PLANS PROVIDE FASTENERS PER MFRS APPROVED ICC-ESR REPORT OR PRODUCT LITERATURE.

### HOLD-DOWNS:

- DO NOT OVER TIGHTEN NUTS ON THE DOWN ANCHOR RODS OR BOLTS. TIGHTEN ANCHOR ROD NUTS ONE-THIRD TO ONE HALF TURN BEYOND FINGER TIGHT
- INSTALL ALL HOLD-DOWNS TIGHT TO END STUDS/POST. DO NOT USE FILLER BLOCKS. FOR MISALIGNED ANCHOR BOLTS, EXTEND THE ANCHOR ROD AT A 1:4 (HORIZONTAL) USING A COUPLER WITH EQUIVALENT ANCHOR ROD AND INSTALL THE HOLD-DOWN HIGHER ON END STUD / POST
- FOR HOLD-DOWNS THAT BOLT TO END POSTS, INSTALL THE HEAD OF THE BOLT TO THE BRACKET SIDE, AND ON THE SIDE OPPOSITE THE BRACKET, INSTALL A WASHER BETWEEN THE NUT AND THE STUD / POSTS

### THE DOWN & COLLECTOR STRAPS:

- THE DOWN AND COLLECTOR STRAPS SHALL BE INSTALLED STRAIGHT AND TRUE. DO NOT FOLD, BEND, KINK OR OTHERWISE ALTER CONNECTOR STRAPS
- INSTALL THE DOWN STRAPS DIRECT TO POST IN LIEU OF COVER SHEATHING. STRAPS MAY BE INSTALLED ON THE UNSHEATHED SIDE OF THE END STUDS / POSTS

## REINFORCING STEEL

- REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 19 OF THE CODE AND WITH THE PROVISIONS OF ACI 318-14, ASTM A706, GRADE 40 UNO, ASTM A615 GR 60 STEEL, MAY BE SUBSTITUTED FOR ASTM A706 GRA60 STEEL PER ACI 318-14 SECTION 20.2.2.5 PROVIDED THE FOLLOWING CONDITIONS ARE MET:
  - THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18.000 PSL.
  - THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRESS TO THE ACTUAL YIELD STRENGTH IS NOT LESS THAN 1.25.
  - WHERE REINFORCEMENT COMPLYING WITH ASTM A615 IS TO BE WELDED, CHEMICAL TESTS SHALL BE PERFORMED TO DETERMINE WELDABILITY IN ACCORDANCE WITH SECTION 26.4 OF ACI 318-14.
- BARs SHALL BE CLEAN OF RUST, GREASE, OR OTHER MATERIALS LIKELY TO IMPAIR BOND. ALL REINFORCING BAR ENDS SHALL BE MADE COLD.
- WELDED WIRE REINFORCEMENT (WWR), PLAIN OR DEFORMED, SHALL CONFORM TO ASTM A185. WELDED DEFORMED WIRE REINFORCEMENT (WWR) SHALL CONFORM TO ASTM A1034. ALL WWR FOR STAIR PANS AND ALL WWR FOR CONCRETE FILL ON METAL DECK TO BE PLAIN WWR. PROVIDE LAPS PER ACI 318-14 SECTION 25.5.3 OR 25.5.4 MINIMUM. WWR SHALL BE SUPPORTED ON APPROVED CHAIRS.
- REINFORCING BAR LAP SPICES SHALL BE MADE AS INDICATED ON THE DRAWINGS. LAP ALL HORIZONTAL BARS AT CORNERS AND INTERSECTIONS. STAGGER ALL SPICES UNLESS NOTED OTHERWISE ON PLANS.
  - MINIMUM LAP SPICE LENGTH FOR REINFORCING STEEL BARS IN CONCRETE SHALL BE PER ACI 318-14 SECTION 25.5.2 AND THE REINFORCING SCHEDULE ON THE DRAWINGS.
  - MINIMUM LAP SPICE LENGTH FOR REINFORCING STEEL BARS IN MASONRY SHALL BE PER ACI 530-13 SECTION 8.1.6.7.1 OR 9.3.3.4 AND THE REINFORCING SCHEDULE ON THE DRAWINGS.
- ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE. ALL REINFORCING CONFORMING TO DIFFERING ASTM SPECIFICATIONS AND/OR OF DIFFERING GRADES SHALL BE CLEARLY MARKED TO DIFFERENTIATE THEM FROM OTHER REINFORCING STEEL IF CONCURRENTLY PRESENT ON SITE.
- WHERE WELDING OF REINFORCING IS APPROVED BY THE STRUCTURAL ENGINEER, IT SHALL BE DONE BY AWS CERTIFIED WELDERS USING 6010X OR APPROVED ELECTRODES. WELDING PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF STRUCTURAL WELDING CODE: REINFORCING STEEL, AWS-D1.4-15. REINFORCING BARS TO BE WELDED SHALL CONFORM TO THE REQUIREMENTS OF ASTM A706.
- REINFORCING STEEL SHALL BE ACCURATELY PLACED AND ADEQUATELY SUPPORTED BEFORE THE CONCRETE IS PLACED AND SHALL BE SECURED AGAINST DISPLACEMENT DURING CONSTRUCTION WITHIN PERMITTED TOLERANCES. ADEQUATE SUPPORTS ARE ALSO NECESSARY TO KEEP THE REINFORCING STEEL AT THE PROPER DISTANCE FROM THE FORMS. USE WIRE BAR SUPPORTS, PRECAST CONCRETE SUPPORTS, SPACERS, BOLSTERS, REINFORCEMENT OR OTHER MEANS OF SUPPORT PER THE CRSI MANUAL OF STANDARD PRACTICE, LATEST EDITION.
- REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE "CRSI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION.
- COMPLETE AND DETAILED REINFORCING PLACEMENT DRAWINGS SHALL BE PREPARED AND SUBMITTED TO THE ARCHITECT FOR APPROVAL BY THE SEOR PRIOR TO FABRICATION IN ACCORDANCE WITH THE SPECIFICATIONS AND APPLICABLE CODES. THESE DRAWINGS SHALL BE AVAILABLE ON THE JOB SITE PRIOR TO PLACING OF CONCRETE. THE REINFORCING PLACEMENT DRAWINGS SHALL INCLUDE ALL PRIMARY REINFORCEMENT, LAP SPICES, TIES, DOWELS, HEADED U-DOWELS, EMBED PLATES, ANCHOR BOLTS, ETC. AREAS OF CONGESTION SHALL BE DETAILED SUFFICIENTLY TO DEMONSTRATE THAT PLACEMENT OF REBAR MEETS SPACING REQUIREMENTS OF ACI 318-14.
- WHEN REQD., INSPECTION OF CONCRETE SHALL INCLUDE INSPECTION DURING INSTALLATION OF REINFORCING STEEL. INSPECTION SHALL BE SCHEDULED SO THAT PLACEMENT OF REINFORCING STEEL, CONDUIT, SLEEVES, AND EMBEDDED ITEMS MAY BE CORRECTED PRIOR TO PLACEMENT OF OVERLYING GRIDS OR REINFORCING STEEL.
- CONCRETE PROTECTION FOR REINFORCEMENT

THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT IN CAST-IN-PLACE CONCRETE (NON-PRESTRESSED):	MINIMUM COVER, IN.
A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3
B. CONCRETE EXPOSED TO EARTH OR WEATHER: NO. 6 THROUGH NO. 18 BAR NO. 5 BAR, W31 OR D31 WIRE & SMALLER	2 1 1/2
C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS, WALLS, JOISTS: NO. 14 AND NO. 18 BARS NO. 11 BAR & SMALLER BEAMS, COLUMNS: PRIMARY REINFORCEMENT TIES, STIRRUPS, SPIRALS	1 1/2 3/4 1 1/2

- MECHANICAL BAR SPICE CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-14 SECTION 25.5.7. USE OF MECHANICAL CONNECTIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. SPICES MUST BE TESTED AS INDICATED IN THE CONCRETE REINFORCEMENT SPECIFICATION. ACCEPTABLE PRODUCTS INCLUDE:

LENTON STANDARD COUPLERS (APMO-ES 0129)  
LENTON FORM SAVERS, TYPE SA (APMO-ES 0129)  
LENTON WELDABLE HALF COUPLERS (APMO-ES 0129)  
LENTON LOCK COUPLERS PER (APMO-ES 0129)

NOTE THAT REBAR ATTACHED TO PLATE USING LENTON WELDABLE HALF COUPLERS SHALL BE ASTM A706 PER APMO-ES 0129.

ALL MECHANICAL BAR SPICE CONNECTIONS IN SPECIAL STRUCTURAL WALLS, SPECIAL MOMENT FRAMES AND CONCRETE DIAPHRAGMS SHALL BE TYPE 2 CONFORMING TO THE REQUIREMENTS OF ACI 318-14 SECTION 18.2.7 & 18.12.7.4

- GEOTECHNICAL INFORMATION AND FOUNDATION DESIGN IS BASED ON THE FOLLOWING:
  - DESIGN LATERAL SOIL LOADS ARE IN ACCORDANCE WITH 2019 CBC TABLE 1601.0
  - ALLOWABLE FOUNDATION BEARING AND LATERAL PRESSURES ARE IN ACCORDANCE WITH 2019 CBC TABLE 1806.2
- SPREAD OR CONTINUOUS FOOTINGS:

ELEMENT	ALLOWABLE BEARING CAPACITY (PSF) <sup>A</sup>	PASSIVE RESISTANCE (PSF/FT BELOW GRADE) <sup>E</sup>	COHESION (PSF)
CONTINUOUS FOOTINGS	1,500	100	120

NOTES:
  - THE ALLOWABLE CAPACITY MAY BE INCREASED BY ONE-THIRD WHEN CONSIDERING LOADS OF SHORT DURATION SUCH AS WIND OR SEISMIC FORCES.
  - THE ALLOWABLE LATERAL RESISTANCE CAN BE TAKEN AS THE SUM OF THE FRICTIONAL RESISTANCE AND PASSIVE RESISTANCE.
  - THE UPPER FOOT OF SOIL NOT PROTECTED BY PAVEMENT SHALL BE NEGLECTED WHEN CALCULATING PASSIVE RESISTANCE.
  - COMPACTED FILL SHOULD BE PREPARED AS FOLLOWS: A MIN OF 12" OF COMPACTED FILL SHALL BE PROVIDED, COMPACTED TO A MIN OF 90 PERCENT MODIFIED PROCTOR IN ACCORDANCE WITH ASTM D 1557 (2019 CBC 1804.6)
  - MAY BE DOUBLED FOR ISOLATED POLES PER 2019 CBC 1806.3.4
- WHERE NOT SHOWN ON THE DRAWINGS, CONTRACTOR TO PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED AND SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STRUCTS, AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.
- CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER AND/OR SEEPAGE.
- ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE OR GROUT HAS ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS AND INSTALLATION OF SUCH BRACING.
- EXCAVATIONS SHALL BE CUT SQUARE AND SMOOTH, WITH LEVEL BOTTOMS.
- FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS.
- ALL ABANDONED FOOTINGS, UTILITIES, ETC. SHALL BE REMOVED. NEW FOOTINGS MUST EXTEND INTO UNDISTURBED SOILS.

## CONCRETE

- ALL CONCRETE CONSTRUCTION SHALL CONFORM WITH CHAPTER 19 OF THE CODE AND WITH THE PROVISIONS OF ACI 318-14.
- CONCRETE MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS:

MATERIAL	ASTM STANDARD
PORTLAND CEMENT (TYPE I) <sup>A</sup>	C150
CONCRETE AGGREGATES (HARDROCK)	C33
WATER <sup>B</sup>	C1602
COAL FLY ASH OR POZZOLAN (CLASS F)	C618
NATURAL OR MANUFACTURED SAND	C33
SLAG	C989

  - FOR SOILS WITH HIGH CONCENTRATIONS OF SULFATES (EXPOSURES S2 OR S3 PER ACI 318-14 TABLE 19.3.2.1) PORTLAND CEMENT SHALL BE TYPE V. VERIFY WITH PROJECT GEOTECHNICAL REPORT.
  - WATER SHOULD ONLY BE ADDED AT THE BATCH PLANT. IN NO CASE SHALL THE DESIGN WATER/CEMENT RATIO BE EXCEEDED.
- CONCRETE MIXES SHALL BE PROPORTIONED BASED ON SECTION 26.4.3 OF ACI 318-14, WHICH REFERENCES ACI 301-10 ARTICLE 4.2.3. MIX DESIGNS SHALL INCLUDE DOCUMENTATION OF MIX AVERAGE COMPRESSIVE STRENGTH THROUGH FIELD TEST DATA OR TREATIMENTS IN ACCORDANCE WITH ACI 301-10 ARTICLE 4.2.3.4. SCHEDULE OF STRUCTURAL CONCRETE STRENGTHS AND LOCATIONS (UNO):

LOCATION IN STRUCTURE	MINIMUM STRENGTH (PSI) <sup>A</sup>	DENSITY (PCF)	MAX SLUMP (IN) <sup>B</sup>	MAX WATER/CEMENT RATIO	SLAG/FLY ASH <sup>C</sup> (MAX)
CONCRETE FOUNDATIONS, GRADE BEAMS, TIE BEAMS	2,500	150	4	0.5	0.15
CONCRETE BASEMENT WALLS/STEM WALLS	2,500	150	4	0.5	0.15
CONCRETE SLAB ON GRADE	2,500	150	4	0.45	0.15
STAIRS ON GRADE, CURBS AND OTHER NON-STRUCTURAL CONCRETE	2,500	150	4	0.5	0.15
SITE WALLS	2,500	150	4	0.5	0.15

  - AS MEASURED BY CEMENTITIOUS WEIGHT
  - IF FOOTINGS ARE EXPOSED TO FROST CYCLES, INCREASE STRENGTH TO 4,500 PSI.
- READY MIXED CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM C94 OF C685.
- DEPOSITING AND CONVEYING OF CONCRETE SHALL CONFORM TO SECTION 26.5 OF ACI 318-14 AND PROJECT SPECIFICATIONS.
- ALL CONCRETE SURFACES AGAINST WHICH NEW CONCRETE IS TO BE PLACED SHALL BE CLEANED AND ROUGHENED TO 1/4" AMPLITUDE.
- ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
- PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CORING IN CONCRETE IS NOT PERMITTED WITHOUT SEOR APPROVAL. NOTIFY THE SEOR IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS. SEE THE DRAWINGS FOR ADDITIONAL RESTRICTIONS ON THE PLACEMENT OF OPENINGS IN SLABS AND WALLS.
- PIPES EMBEDDED IN CONCRETE:
  - CONCRETE
    - PIPES LARGER THAN 1-1/2" DIAMETER SHALL NOTE BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY SEOR.
    - PIPES SHALL NOT DISPLACE OR INTERRUPT REINFORCING BARS.
    - DO NOT STACK CONDUITS, SPACE EMBEDDED PIPES AND CONDUITS AT A MINIMUM OF 3 DIAMETERS CLEAR FROM OTHER EMBEDDED PIPES/CONDUITS AND REBAR.

LOCATION IN STRUCTURE	MINIMUM STRENGTH (PSI) <sup>A</sup>	DENSITY (PCF)	MAX SLUMP (IN) <sup>B</sup>	MAX WATER/CEMENT RATIO	SLAG/FLY ASH <sup>C</sup> (MAX)
CONCRETE FOUNDATIONS, GRADE BEAMS, TIE BEAMS	2,500	150	4	0.5	0.15
CONCRETE BASEMENT WALLS/STEM WALLS	2,500	150	4	0.5	0.15
CONCRETE SLAB ON GRADE	2,500	150	4	0.45	0.15
STAIRS ON GRADE, CURBS AND OTHER NON-STRUCTURAL CONCRETE	2,500	150	4	0.5	0.15
SITE WALLS	2,500	150	4	0.5	0.15

- CONCRETE PROTECTION FOR REINFORCEMENT

## FOUNDATION

- GEOTECHNICAL INFORMATION AND FOUNDATION DESIGN IS BASED ON THE FOLLOWING:
  - DESIGN LATERAL SOIL LOADS ARE IN ACCORDANCE WITH 2019 CBC TABLE 1601.0
  - ALLOWABLE FOUNDATION BEARING AND LATERAL PRESSURES ARE IN ACCORDANCE WITH 2019 CBC TABLE 1806.2
- SPREAD OR CONTINUOUS FOOTINGS:

ELEMENT	ALLOWABLE BEARING CAPACITY (PSF) <sup>A</sup>	PASSIVE RESISTANCE (PSF/FT BELOW GRADE) <sup>E</sup>	COHESION (PSF)
CONTINUOUS FOOTINGS	1,500	100	120

NOTES:
  - THE ALLOWABLE CAPACITY MAY BE INCREASED BY ONE-THIRD WHEN CONSIDERING LOADS OF SHORT DURATION SUCH AS WIND OR SEISMIC FORCES.
  - THE ALLOWABLE LATERAL RESISTANCE CAN BE TAKEN AS THE SUM OF THE FRICTIONAL RESISTANCE AND PASSIVE RESISTANCE.
  - THE UPPER FOOT OF SOIL NOT PROTECTED BY PAVEMENT SHALL BE NEGLECTED WHEN CALCULATING PASSIVE RESISTANCE.
  - COMPACTED FILL SHOULD BE PREPARED AS FOLLOWS: A MIN OF 12" OF COMPACTED FILL SHALL BE PROVIDED, COMPACTED TO A MIN OF 90 PERCENT MODIFIED PROCTOR IN ACCORDANCE WITH ASTM D 1557 (2019 CBC 1804.6)
  - MAY BE DOUBLED FOR ISOLATED POLES PER 2019 CBC 1806.3.4
- WHERE NOT SHOWN ON THE DRAWINGS, CONTRACTOR TO PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED AND SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STRUCTS, AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.
- CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM SURFACE WATER, GROUND WATER AND/OR SEEPAGE.
- ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE OR GROUT HAS ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS AND INSTALLATION OF SUCH BRACING.
- EXCAVATIONS SHALL BE CUT SQUARE AND SMOOTH, WITH LEVEL BOTTOMS.
- FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS.
- ALL ABANDONED FOOTINGS, UTILITIES, ETC. SHALL BE REMOVED. NEW FOOTINGS MUST EXTEND INTO UNDISTURBED SOILS.

## DESIGN INFORMATION

- ROOF LIVE LOADS (2019 CBC SECTION 1603.1.2)

ROOF LIVE LOADS			
OCCUPANCY OR USE	UNIFORM (PSF)	CONC. (LBS)	REFERENCE
ROOF ORDINARY FLAT, PITCHED AND CURVED ROOFS (THAT ARE NOT OCCUPYABLE)	20	---	2019 CBC TABLE 1607.1
- ROOF SNOW LOADS (2019 CBC SECTION 1603.1.3):

SNOW DESIGN DATA		
PARAMETER	VALUE	REFERENCE
GROUND SNOW LOAD	P <sub>g</sub> = PROVIDED BY OWNER BASED ON PROJECT LOCATION	ASCE 7-16 7.2
- WIND DESIGN DATA (2019 CBC SECTION 1603.1.4):

WIND DESIGN DATA		
PARAMETER	VALUE	REFERENCE
ULTIMATE DESIGN WIND SPEED (3-SEC GUST)	V <sub>ult</sub> = 115 MPH	2019 CBC FIG. 1609.3
NOMINAL DESIGN WIND SPEED (3-SEC GUST)	V <sub>add</sub> = 90 MPH	2019 CBC 1609.3.1
EXPOSURE CATEGORY	C	2019 CBC 1609.4.3
INTERNAL PRESSURE COEFFICIENT:	G <sub>Cpi</sub> = ± 0.18	ASCE 7-16 TABLE 26.13-1

WIND DESIGN DATA			
PARAMETER	VALUE	REFERENCE	
ULTIMATE DESIGN WIND SPEED (3-SEC GUST)	V <sub>ult</sub> = 115 MPH	2019 CBC FIG. 1609.3	
NOMINAL DESIGN WIND SPEED (3-SEC GUST)	V <sub>add</sub> = 90 MPH	2019 CBC 1609.3.1	
EXPOSURE CATEGORY	C	2019 CBC 1609.4.3	
INTERNAL PRESSURE COEFFICIENT:	G <sub>Cpi</sub> = ± 0.18	ASCE 7-16 TABLE 26.13-1	

COMPONENTS & CLADDING WIND PRESSURES (PSF)				
LOCATION	COMPONENT TRIBUTARY AREA (SQ FT)	WIND DIRECTION		
		10	100	
ROOF	ZONE 1	-48.4	-23.9	-23.9
	ZONE 2a	-48.4	-23.9	-23.9
	ZONE 2b	-53.3	-33.7	-28.8
	ZONE 2c	-48.4	-23.9	-23.9
	ZONE 3a	-65.5	-41.0	-28.8
OVERHANG	ZONE 1	-53.3	-33.7	-28.8
	ZONE 2a	-67.9	-43.5	-43.3
	ZONE 2b	-67.9	-43.5	-43.3
	ZONE 2c	-72.8	-53.3	-48.4
	ZONE 3a	-72.8	-53.3	-48.4
WALL	ZONE 4	-31.3	-27.1	-23.9
	ZONE 5	-38.6	-30.0	-23.9

SITE AND OCCUPANCY PARAMETERS		
PARAMETER	VALUE	REFERENCE
RISK CATEGORY	II	2019 CBC TABLE 1604.5
SEISMIC IMPORTANCE FACTOR	I = 1.0	ASCE 7-16 TABLE 1.5-2
MAPPED SPECTRAL RESPONSE ACCELERATIONS:	S <sub>1</sub> = 2.00 S <sub>2</sub> = 0.65	2019 CBC 1613.2.1
SITE CLASS	D	2019 CBC 1613.2.2
SPECTRAL RESPONSE COEFFICIENTS:	S <sub>DS</sub> = 1.60 S <sub>DI</sub> = 0.737	2019 CBC 1613.2.4

BUILDING PARAMETERS		
PARAMETER	VALUE	REFERENCE
SEISMIC DESIGN CATEGORY	SDC = D	2019 CBC 1613.2.5
BASIC SEISMIC FORCE RESISTING SYSTEM	LIGHT FRAME (WOOD) WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE	ASCE 7-16 TABLE 12.2-1
RESPONSE MODIFICATION FACTOR	R = 6 1/2	
SYSTEM OVERSTRENGTH FACTOR	O <sub>o</sub> = 3	
DEFLECTION AMPLIFICATION FACTOR	C <sub>d</sub> = 4	
DESIGN BASE SHEAR	V = 11.7	ASCE 7-16 12.8.1
SEISMIC RESPONSE COEFFICIENTS	C <sub>s</sub> = 0.246	ASCE 7-16 12.8.1.1
ANALYSIS PROCEDURE USED	EQUIVALENT LATERAL FORCE PROCEDURE	ASCE 7-16 12.8

DEAD LOADS			
LOCATION	MAX UNIFORM (PSF)	CONC. (LBS)	REFERENCE
ROOF (ASPHALT SHINGLES) *INCLUDES 4 PSF ALLOWANCE FOR SOLAR PANELS	26*	---	
WALL (SIDING)	11	---	

## EXISTING UNDERGROUND UTILITIES

- THE ARCHITECT AND ENGINEERS ARE NOT RESPONSIBLE FOR THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES WHETHER OR NOT SHOWN ON THE DRAWINGS. DRAWINGS, IF ANY, IS APPROXIMATE. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THE SITE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND/OR STRUCTURAL ENGINEER SHOULD ANY SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES WHICH MAY RESULT FROM HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ALL EXISTING UNDERGROUND UTILITIES.
- AN UNDERGROUND SERVICE ALERT INQUIRY IDENTIFICATION NUMBER MUST BE OBTAINED AT LEAST TWO WORKING DAYS BEFORE STARTING WORK WITH THIS PERMIT.
  - FOR PROJECTS IN SOUTHERN CALIFORNIA TELEPHONE NO. 1-800-422-4133.
  - FOR PROJECTS IN NORTHERN CALIFORNIA TELEPHONE NO. 1-800-227-2600.

## GENERAL

- ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES AND STANDARDS:
  - 2019 CALIFORNIA BUILDING CODE, PART 2, VOLUME 2 OF 2, AND TITLE 24 C.C.R., 2019 EDITION AND LATEST REVISIONS (INCLUDING SUPPLEMENTS AND ERRATA) HEREN REFERRED TO AS "THE CODE".
  - ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (CAL/OSHA).
  - CODES & STANDARDS REFERENCED IN THE CODE OR LISTED IN THESE NOTES AND SPECIFICATIONS.
- ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
- NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS, WHERE NO DETAILS ARE GIVEN. CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES. IN NO INSTANCE SHALL DIMENSIONS BE SCALED FROM THE DRAWINGS.
- SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
  - SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS, EXCEPT AS NOTED
  - SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NON-BEARING PARTITIONS UNLESS NOTED AND/OR DETAILED ON THE STRUCTURAL DRAWINGS
  - SIZE AND LOCATION OF ALL CONCRETE CURBS, EQUIPMENT PADS, PITS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHANGE IN LEVEL, CHAMFERS, GROOVES, INSERTS, ETC.
  - SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS EXCEPT AS SHOWN
  - FLOOR AND ROOF FINISHES
  - MISCELLANEOUS DRAINAGE AND WATERPROOFING
  - ALL FIREPROOFING REQUIREMENTS INCLUDING FIREPROOFING OF STRUCTURAL STEEL
  - DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS
- SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:
  - PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED.
  - ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.
  - CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.
  - SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS.
- THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT ETC. THE CONTRACTOR IS RESPONSIBLE FOR

**SHOP FABRICATION**

- SHOP FABRICATION REQUIRES SPECIAL INSPECTION IN ACCORDANCE WITH CODE SECTION 1704.2.5. EXCEPTION: SHOP SPECIAL INSPECTIONS ARE NOT REQUIRED WHEN WORK IS DONE ON THE PREMISES OF FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK IN ACCORDANCE WITH CODE SECTION 1704.2.5.1. THE FOLLOWING ACCREDITATIONS MEET THE REQUIREMENTS OF THIS EXCEPTION:
  - WOOD BUILDING
    - WOOD STRUCTURAL PANELS (SHEATHING) SHALL BE IDENTIFIED BY THE APA TRADEMARK.
    - TRUSS MANUFACTURER SHALL BE FABRICATED IN A SHOP WITH CURRENT FABRICATOR COMPLIANCE CERTIFICATES PER CBC SECTION 1704.2.5.1.

**REQUIRED VERIFICATION AND INSPECTIONS**

CONCRETE CONSTRUCTION CODE TABLE 1705.3			
SPECIAL INSPECTION OR TEST	CONTINUOUS	PERIODIC	CBC REFERENCE
1. INSPECT REINFORCEMENT AND VERIFY PLACEMENT.	—	X	ACI 318: CH 20, 25.2, 25.3, 26.6.1-26.6.3
2. REINFORCING BAR WELDING: <ol style="list-style-type: none"> <li>VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706</li> <li>INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 3/16" AND</li> <li>INSPECT ALL OTHER WELDS</li> </ol>	—	X	AWS D1.4 ACI 318: 26.6.4
3. INSPECT ANCHORS CAST IN CONCRETE	—	X	ACI 318: 17.8.2
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS (P) <ol style="list-style-type: none"> <li>ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS</li> <li>MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.c.</li> </ol>	X	—	ACI 318: 17.8.2.4 ACI 318: 17.8.2
5. VERIFY USE OF REQUIRED MIX DESIGN	—	X	ACI 318: CH. 19, 26.4.3, 26.4.4
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	—	ASTM C 172 ASTM C 31 ACI 318: 26.5, 26.12
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	—	X	ACI 318: 26.5.3-26.5.5
12. INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	—	X	ACI 318: 26.11.1.2 (b)

SPECIAL INSPECTIONS LISTED FOR CONCRETE ALSO APPLY TO GROUTING OPERATIONS.

- INDICATES INSPECTION REQ'D FOR ALL CONCRETE WORK
- INDICATES INSPECTION REQ'D FOR 3,000 PSI AND GREATER CONCRETE WORK ONLY

WOOD CODE CHAPTER 17 AND REFERENCED 2018 NDS AND AWC SDPWS-2015			
SPECIAL INSPECTION OR TEST	CONTINUOUS	PERIODIC	CBC REFERENCE
1. HIGH LOAD DIAPHRAGM WOOD STRUCTURAL PANELS - VERIFY THE FOLLOWING: <ul style="list-style-type: none"> <li>GRADE</li> <li>THICKNESS</li> <li>NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES</li> <li>NAIL OR STAPLE DIAMETER AND LENGTH</li> <li>NUMBER OF FASTENER LINES</li> <li>SPACING BETWEEN FASTENERS IN EACH LINE</li> <li>SPACING BETWEEN FASTENERS AT EDGE MARGINS</li> </ul>	—	X	1705.5.1 2306.2
3. WOOD LATERAL FORCE-RESISTING SYSTEM WITH FASTENER SPACING OF THE SHEATHING LESS THAN OR EQUAL TO 4" OC. <ul style="list-style-type: none"> <li>WOOD SHEAR WALLS</li> <li>WOOD DIAPHRAGMS</li> <li>DRAG STRUTS</li> <li>SHEAR PANELS</li> <li>HOLD-DOWNS</li> </ul>	—	X	1705.12.2
4. WOOD LATERAL FORCE-RESISTING SYSTEM WITH FASTENER SPACING OF THE SHEATHING GREATER THAN 4" OC (NOT REQUIRED) <ul style="list-style-type: none"> <li>WOOD SHEAR WALLS</li> <li>WOOD DIAPHRAGMS</li> <li>DRAG STRUTS</li> <li>SHEAR PANELS</li> <li>HOLD-DOWNS</li> </ul>	—	—	1705.12.2

SOILS CODE TABLE 1705.6			
SPECIAL INSPECTION OR TEST	CONTINUOUS	PERIODIC	
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	—	X	
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	—	X	
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	—	X	
4. VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X	—	
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	—	X	

**STRUCTURAL COMPOSITE LUMBER**

- STRUCTURAL COMPOSITE LUMBER SHALL HAVE STRUCTURAL CAPACITIES AND DESIGN PROVISIONS ESTABLISHED AND MONITORED IN ACCORDANCE WITH ASTM D5456 PER CODE SECTION 2303.1.10
- STRUCTURAL COMPOSITE LUMBER SHALL BE IDENTIFIED WITH THE MANUFACTURER'S NAME AND/OR LOGO, THE NAME AND/OR LOGO OF THE INSPECTION AGENCY (PFS CORP., INTERTEK, OR APA-EWS) AND THE EVALUATION REPORT NUMBER, THE PLANT NUMBER, PRODUCT DESIGNATION OR TYPE, PRODUCTION DATE, AND GRADE.
- INSTALLATION, FABRICATION, IDENTIFICATION AND CONNECTION DETAILS SHALL BE IN ACCORDANCE WITH THE APPLICABLE ICC REPORT.
- LAMINATED VENEER LUMBER (LVL)
  - LAMINATED VENEER LUMBER SHALL BE ONE OF THE FOLLOWING:
    - MICROLLAM LAMINATED VENEER LUMBER GRADE 2.0E-2750F, WS, MANUFACTURED BY WEYERHAEUSER IN ACCORDANCE WITH ICC-ESR 1387.
    - REDLAM LAMINATED VENEER LUMBER GRADE 2.0E DF/AP/WH, MANUFACTURED BY REDBUILT IN ACCORDANCE WITH ICC-ESR 2993.
  - IDENTIFICATION: IN ADDITION TO THE IDENTIFICATION LISTED FOR STRUCTURAL COMPOSITE LUMBER ABOVE, LVL SHALL BE IDENTIFIED WITH THE SPECIES OR SPECIES GROUP.
- PARALLEL STRAND LUMBER (PSL)
  - PARALLEL STRAND LUMBER SHALL BE PARALLAM PARALLEL STRAND LUMBER GRADE 2.0E DF, MANUFACTURED BY WEYERHAEUSER IN ACCORDANCE WITH ICC-ESR 1387.
- LAMINATED STRAND LUMBER (LSL)
  - LAMINATED STRAND LUMBER SHALL BE TIMBERSTRAND LAMINATED STRAND LUMBER GRADE 1.5SE, MANUFACTURED BY WEYERHAEUSER IN ACCORDANCE WITH ICC-ESR 1387.
- PRODUCTS FROM OTHER MANUFACTURERS MAY BE USED WITH EQUAL OR GREATER CAPACITIES. REQUESTS FOR PRODUCT SUBSTITUTION SHALL FOLLOW THE REQUIREMENTS LISTED IN THE SUBMITTALS SECTION.

**PRE-FABRICATED WOOD TRUSS NOTES**

- THE DESIGN OF METAL PLATE CONNECTED WOOD TRUSSES SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
  - CODES AND STANDARDS:
    - THE GOVERNING CODE LISTED IN THE PROJECT GENERAL NOTES
    - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ASCE 7-16)
    - NATIONAL DESIGN STANDARD FOR WOOD CONSTRUCTION AND SUPPLEMENT (ANSI/AWC NDS-2018)
    - SPECIAL DESIGN PROVISIONS FOR WIND & SEISMIC (AWC SDPWS-2015)
    - THE NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION (ANSI/TPI 1-2014)
  - DESIGN CRITERIA:
    - TRUSSES SHALL BE DESIGNED FOR THE FOLLOWING MINIMUM VERTICAL LOADS AND OTHER LOADS INDICATED ON THE CONSTRUCTION DOCUMENTS (ATTIC MECHANICAL UNITS, ETC.)
 

ROOF TRUSS LOADING:		
TOP-CHORD DEAD LOAD:	17.2 PSF	(15.8 PSF SUPERIMPOSED)
ROOF CHORD DEAD LOAD:	6.5 PSF	(5.4 PSF SUPERIMPOSED)
ROOF - LIVE LOAD:	20 PSF	
TOP CHORD - SNOW LOAD:	PER PLAN AND SPECIFIC LOCATION	
	OWNER/CONTRACTOR TO PROVIDE TO TRUSS MANUF.	
    - DEFLECTION CRITERIA:
 

DEAD + LIVE LOAD	L/240
LIVE LOAD ONLY	L/360
- [ ] INDICATES HORIZONTAL SEISMIC/WIND LOAD ON COLLECTOR TRUSSES. THE TRUSS DESIGNER SHALL DESIGN FOR THE TRUSSES FOR THE INDICATED HORIZONTAL LOAD ACTING IN BOTH THE TOP AND BOTTOM TRUSS CHORDS AND FOR THE TRANSFER OF THE FORCE TO THE CHORDS THROUGH THE WEB.
- CONTRACTOR REQUIREMENTS:
  - THE CONTRACTOR SHALL MEET ALL THE REQUIREMENTS LISTED IN SECTION 2.3.4 OF ANSI/TPI 1-2014 INCLUDING THE FOLLOWING:
    - MEANS AND METHODS: THE CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, PROGRAMS AND SAFETY IN CONNECTION WITH THE RECEIPT, STORAGE, HANDLING, INSTALLATION, RESTRAINING, AND BRACING OF THE TRUSSES. REFER TO THE GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES (BCSI-81)
    - TRUSS INSTALLATION SHALL COMPLY WITH INSTALLATION TOLERANCES SHOWN IN BCSI-81
    - TEMPORARY INSTALLATION RESTRAINT/BRACING FOR THE TRUSS SYSTEM AND THE PERMANENT TRUSS SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH BCSI-82.
    - CONSTRUCTION LOADING ON TRUSSES SHALL BE DONE IN ACCORDANCE WITH BCSI-84.
    - TRUSS DAMAGE, JOBSITE MODIFICATIONS & INSTALLATION ERRORS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE EOR AND THE TRUSS DESIGNER. REFERENCE BCSI-85.
    - SUBMIT THE DRAWINGS FROM THE TRUSS DESIGNER/MANUFACTURER TO THE BUILDING DEPARTMENT PRIOR TO FABRICATION FOR APPROVAL. A COPY OF THIS SUBMITTAL SHALL BE PROVIDED TO THE COUNTY BUILDING DEPARTMENT OF RECORD FOR REVIEW OF GENERAL CONFORMANCE TO THE DESIGN INTENT. THE CONTRACTOR SHALL INCORPORATE THE TIME REQUIRED FOR THE SUBMITTAL TO BE REVIEWED, STAMPED AND APPROVED BY ALL PARTIES AND SHALL HAVE THE APPROVED TRUSS PLANS ON THE JOB SITE PRIOR TO FOUNDATION INSPECTION.
  - TRUSS DESIGNER REQUIREMENTS:
    - THE TRUSS DESIGNER SHALL MEET ALL THE REQUIREMENTS LISTED IN SECTION 2.3.5 OF ANSI/TPI 1-2014 INCLUDING THE FOLLOWING:
      - TRUSS DESIGNER SHALL SUPERVISE THE PREPARATION OF THE TRUSS DESIGN DRAWINGS WHICH SHALL CONTAIN THE INFORMATION LISTED IN SECTION 2.3.5.5 OF ANSI/TPI 1-2014. THIS INCLUDES ALL TRUSS TO TRUSS CONNECTIONS, AND DETAILS FOR THE "CALIFORNIA FILL" AREAS.
      - TRUSS DESIGNER SHALL COMPLY WITH THE REFERENCED CODE AND DESIGN CRITERIA ABOVE.
      - TRUSS DESIGNER SHALL SHOW ALL HANGERS, BRACING AND RESTRAINTS AS WELL AS METHOD OF RESTRAINT/BRACING ON THE TRUSS PLANS TO MEET ANY SEISMIC AND WIND REQUIREMENTS OF THE CODE.
      - SUBMIT TRUSS DESIGN DRAWINGS INCLUDING ALL RELEVANT DETAILS FOR THE FABRICATION OF THE TRUSSES AND PREPARE CALCULATIONS. ALL PLANS/DETAILS AND CALCULATIONS FOR THE TRUSSES SHALL BE STAMPED AND SIGNED BY A LICENSED PROFESSIONAL ENGINEER (CIVIL OR STRUCTURAL), LICENSED TO PRACTICE IN THE STATE OF CALIFORNIA.

**WOOD STRUCTURAL PANELS (SHEATHING)**

- WOOD STRUCTURAL PANELS SHALL MEET THE FOLLOWING MINIMUM STANDARDS EXCEPT WHERE OTHERWISE NOTED:

WOOD STRUCTURAL PANEL PROPERTIES						
USE	PLY	BOND CLASSIFICATION <sup>c</sup>	SHEATHING GRADE	PERFORMANCE RATING	SPAN RATING	REFERENCE <sup>d</sup>
ROOF	5	EXPOSURE 1	REFER TO TYPICAL DIAPHRAGM SCHEDULE			APA 2019 CBC 2303.1.5 (DOC PS 1-09 OR PS 2-10)
FLOOR	5	EXPOSURE 1				APA
WALL <sup>b</sup>	5	EXPOSURE 1	REFER TO TYPICAL SHEAR WALL SCHEDULE			APA

- TABLE NOTES:
- WOOD STRUCTURAL PANELS SHALL CONFORM TO THE REQUIREMENTS FOR THEIR TYPE IN ACCORDANCE WITH THE FOLLOWING VOLUNTARY STANDARDS BY THE ENGINEERED WOOD ASSOCIATION (APA):
    - VOLUNTARY PRODUCT STANDARD, STRUCTURAL PLYWOOD, PS 1-09
    - VOLUNTARY PRODUCT STANDARD, PERFORMANCE STANDARD FOR WOOD-BASED STRUCTURAL-USE PANELS, PS 2-10
  - WOOD STRUCTURAL PANELS SHALL BE IDENTIFIED BY THE APA TRADEMARK INDICATING CONFORMANCE TO THE APPLICABLE VOLUNTARY STANDARD
    - WHERE PANELS ARE EXPOSED TO REPEATED WETTING AND REDRYING, LONG-TERM EXPOSURE TO WEATHER, OR CONDITIONS OF SIMILAR SEVERITY, "EXTERIOR" APA RATED PLYWOOD SHEATHING SHALL BE USED. C-D "EXPOSURE 1" APA RATED PLYWOOD SHEATHING (CDX) SHALL NOT BE USED FOR CONDITIONS INVOLVING LONG-TERM EXPOSURE TO WEATHER.
      - EXCEPTION: WOOD STRUCTURAL PANEL ROOF SHEATHING EXPOSED TO THE OUTDOORS ON THE UNDERSIDE IS PERMITTED TO BE "EXPOSURE 1" TYPE.
      - WOOD STRUCTURAL PANELS TO BE USED AS SIDING SHALL COMPLY WITH ANS/APA PRP-210.
  - ORIENTED STRAND BOARD (OSB) WITH EQUIVALENT CLASSIFICATION AND RATINGS MAY BE USED IN LIEU OF PLYWOOD FOR WOOD STRUCTURAL PANEL WALL SHEATHING.

- TRANSPORTATION, STORAGE, AND HANDLING:
  - TRANSPORTATION
    - IN TRANSPORTING PANELS ON OPEN TRUCK BEDS, COVER THE BUNDLES WITH A TARP.
  - STORAGE
    - ALWAYS STORE THE PANELS UNDER COVER WHENEVER POSSIBLE
    - WHEN STORING PANELS OUTSIDE STACK THEM ON A LEVEL SURFACE ON TOP OF STRINGERS OR OTHER BLOCKING, THREE STRINGERS MINIMUM.
    - NEVER LEAVE PANELS IN CONTACT WITH THE GROUND
    - COVER THE STACK WITH A PLASTIC TARP, ENSURING THAT THE BUNDLE IS WELL VENTILATED TO PREVENT MILDEW.
    - IF MOISTURE ABSORPTION IS EXPECTED, CUT THE STEEL BAND TO PREVENT DAMAGE
    - KEEP SANDED OR OTHER APPEARANCE GRADE PLYS AWAY FROM HIGH TRAFFIC AREAS
  - HANDLING
    - ALWAYS PROTECT ENDS AND EDGES, ESPECIALLY TONGUE AND GROOVE PRODUCTS, FROM PHYSICAL DAMAGE.
    - ACCLIMATE THE PANELS FOR 24 HOURS MINIMUM BEFORE INSTALLATION BY STANDING THE PANELS ON EDGE WITH A GAP BETWEEN EACH TO ALLOW FOR AIR CIRCULATION OR PER MANUFACTURER'S RECOMMENDATIONS.
- PLYWOOD ORIENTATION
  - ROOF AND FLOOR SHEATHING SHALL BE LAID WITH THE GRAIN OF THE OUTER PILES PERPENDICULAR TO THE FRAMING MEMBERS. SHALL BE CONTINUOUS OVER 2 JOIST BAYS MINIMUM AND END JOINTS SHALL BE JOINED OVER FRAMING AND STAGGERED. LEAVE A 1/8" GAP BETWEEN PANELS TO ALLOW FOR PANEL EXPANSION UNLESS RECOMMENDED OTHERWISE BY THE PANEL MANUF. REFER TO SPECIFIC DETAILS IN THE DRAWINGS FOR FURTHER PARAMETERS.
  - PLYWOOD OR OSB WALL SHEATHING MAY BE APPLIED VERTICALLY OR HORIZONTALLY. ALL END JOINTS BE JOINED OVER FRAMING AND STAGGERED.
  - BLOCKING:
    - ROOF: ALL ROOF SHEATHING SHALL BE BLOCKED UNLESS SPECIFICALLY ALLOWED ON PLANS, WHERE PERMITTED TO BE UNBLOCKED. ALL UNBLOCKED EDGES SHALL BE TONGUE AND GROOVE.
    - FLOOR SHEATHING SHALL BE BLOCKED UNLESS SPECIFICALLY ALLOWED ON PLANS, WHERE PERMITTED TO BE UNBLOCKED. ALL UNBLOCKED EDGES SHALL BE TONGUE AND GROOVE.
    - WALLS: ALL SHEAR WALLS SHALL BE FULLY BLOCKED AT PLYWOOD EDGES.
  - FASTENERS
    - USE SHEATHING NAILS SAME GAUGE AS COMMON WIRE NAILS WITH LENGTHS AT LEAST EQUAL TO SHEATHING THICKNESS PLUS REQUIRED PENETRATION PER AWS SDPWS TABLE 4.2A OR 4.3A (AS REQUIRED).
    - EQUIVALENT PNEUMATIC DRIVE NAILS OR STAPLES MAY BE USED IF FASTENER MANUFACTURER HAS RECEIVED ICC OR IAPMO APPROVAL FOR THE INTENDED USE. FASTENERS TO BE SUBSTITUTED SHALL BE EQUIVALENT IN LATERAL AND WITHDRAWAL STRENGTH TO THE SIZE OF COMMON NAIL SPECIFIED.
    - USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOB SITE DEMONSTRATION FOR EACH PROJECT AND THE APPROVAL BY THE PROJECT ARCHITECT OR STRUCTURAL ENGINEER. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. MACHINE NAILING WILL NOT BE APPROVED IN 5/16" PLYWOOD OR OSB SHEATHING. IF NAIL HEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMER OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED, THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY.
    - TYPICAL NAILING SHALL BE 10D AT 6" O.C. AT ALL SUPPORTED EDGES AND OVER SHEAR WALLS, AND 10D AT 12" O.C. AT ALL INTERMEDIATE SUPPORTS, UNLESS OTHERWISE NOTED. SEE PLANS AND REFER TO SHEAR WALL SCHEDULE.



CONSULTANT

AGENCY

**MONO COUNTY ADU  
PROTOTYPES  
MONO COUNTY**

**GENERAL NOTES,  
SPECIAL INSPECTION & TESTS**

NO.	REVISION	DATE
△		
△		
△		
△		
△		
△		

PROJECT MANAGER J. MEADOWS	
DRAWN BY A. LOPEZ	CHECKED BY M. DOREMUS
DATE AUGUST 18, 2022	
PROJECT NUMBER 2340-01-CU21	
SHEET	

**S-103**



CONSULTANT

AGENCY

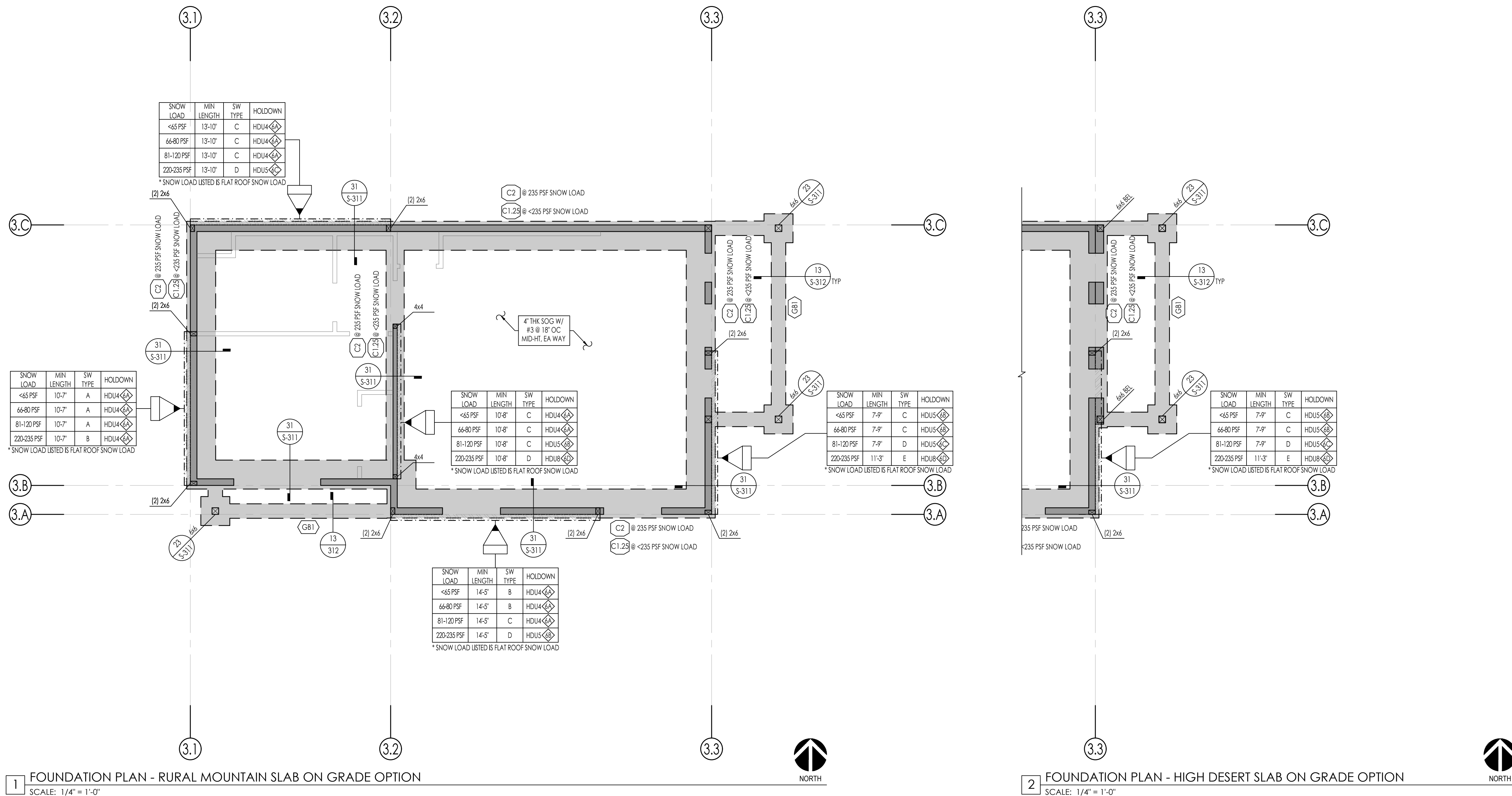
**MONO COUNTY ADU  
PROTOTYPES**  
MONO COUNTY  
FOUNDATION PLANS -  
SLAB ON GRADE

CONSTRUCTION DOCUMENTS

NO.	REVISION	DATE

PROJECT MANAGER  
J. MEADOWS  
DRAWN BY  
A. LOPEZ  
CHECKED BY  
M. DOREMUS  
DATE  
AUGUST 18, 2022  
PROJECT NUMBER  
2340-01-CU21  
SHEET

**S3-201A**



**1 FOUNDATION PLAN - RURAL MOUNTAIN SLAB ON GRADE OPTION**  
SCALE: 1/4" = 1'-0"

**2 FOUNDATION PLAN - HIGH DESERT SLAB ON GRADE OPTION**  
SCALE: 1/4" = 1'-0"

**FOUNDATION PLAN NOTES**

- REFER TO THE FOLLOWING SHEETS FOR TYPICAL DETAILS:

DESCRIPTION	SHEET (S)
SYMBOLS AND ABBREVIATIONS	S-101
STRUCTURAL GENERAL NOTES	S-102 - S-103
TESTING AND INSPECTION	S-103
TYPICAL CONCRETE DETAILS	S-301
TYPICAL WOOD DETAILS	S-401 - S-404
- SEE ARCHITECTURAL DRAWINGS FOR FINISHED FLOOR ELEVATIONS. REFERENCE FINISHED FLOOR ELEVATION - 0'-0" COORDINATES TO FINISHED FLOOR ELEVATION.
- ALL DIMENSIONS SHOWN ARE FROM FACE OF CONCRETE/MASONRY, FACE OF SHEATHING, OR CENTERLINE OF COLUMN. ALL COLUMNS ARE CENTERED IN STUD WALLS, UNO.
- FOR ANY DIMENSIONAL INFORMATION NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
- SEE ARCHITECTURAL DRAWINGS FOR ANY EMBEDDED ITEMS AND ALL EXTERIOR CONCRETE PAVE
- SEE PLANS AND ARCHITECTURAL DRAWINGS FOR DEPRESSIONS AND/OR SLOPES IN CONCRETE SLABS.
- SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS IN BEARING AND NON-BEARING WALLS.
- SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF INTERIOR NON-BEARING PARTITIONS.
- SEE ARCHITECTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL EMBEDDED ITEMS AND SLAB PENETRATIONS.
- FOR TYPICAL SLAB-ON-GRADE REQUIREMENTS, INCLUDING SLAB JOINTS, SEE DETAIL 31/S-301.
- ALL POSTS IN 4" WALLS SHALL BE 4x4, UNLESS NOTED OTHERWISE. ALL POSTS IN 6" WALLS SHALL BE 6x6, UNLESS NOTED OTHERWISE.
- PLATE WASHERS ARE REQUIRED FOR ALL SILL PLATE ANCHOR BOLTS. REFER TO 34/S-402 FOR PLATE WASHER REQUIREMENTS AT SHEAR WALLS.
- ALL HOLD-DOWN ANCHOR NUTS SHALL BE TIGHTENED JUST PRIOR TO COVERING.
- ALL BOLT HOLES IN WOOD MEMBERS, SHALL BE DRILLED A MAXIMUM OF 1/16" OVERSIZE. INSPECTOR TO VERIFY.
- THE BUILDING PAD SHALL BE PREPARED AS OUTLINED IN DETAIL S3/S-301. THE BUILDING OFFICIAL SHALL REQUIRE PAD CERTIFICATION BY A GEOTECHNICAL ENGINEER AT THEIR DISCRETION.
- BOTTOM OF FOOTING SHALL BE, UNLESS DEEPER FOUNDATIONS ARE REQUIRED BY THE BUILDING OFFICIAL:
  - 18" BELOW PAD OR ADJACENT GRADE AT PERIMETER, WHICHEVER IS DEEPER, UNO.
  - 18" BELOW PAD OR ADJACENT GRADE AT INTERIOR GRADE BEAMS, WHICHEVER IS DEEPER, UNO.

NOTE: FOOTING MUST BE DEEPENED LOCALLY PER DETAIL 32/S-301 TO ACCOMMODATE ANCHOR BOLT HOLD-DOWN EMBED DEPTHS, OR FROST DEPTHS AS INDICATED BY THE BUILDING OFFICIAL.
- DIAPHRAGM TYPE: ALL FLOOR DIAPHRAGMS SHALL BE TYPE D, UNO. REFER TO 12/S-403.
- OWNER MAY SELECT EITHER SLAB ON GRADE FOUNDATION OR THE RAISED FLOOR FOUNDATION, TO SUIT THE SPECIFIC SITE.
- WHERE RAISED FLOOR FOUNDATION IS SELECTED, OWNER HAS THE OPTION TO USE CRIPPLE STUD WALLS IN LIEU OF THE SPECIFIED CONCRETE STEM WALLS BELOW THE FLOOR FRAMING. CRIPPLE STUDS ARE TO MATCH TYPICAL WALL FRAMING, AND TO BE SHEATHED TO MATCH SHEARWALLS ABOVE. HOLD-DOWNS SPECIFIED SHALL BE INSTALLED ACROSS THE FLOOR FRAMING PER DETAIL 12/S-405 AND THEN INTO THE CONCRETE STEM WALL PER DETAILS 22/S-311 AND 24/S-311.
- REFER TO ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF UNDERFLOOR ACCESS HOLE.
- REFER TO ARCHITECTURAL DRAWINGS FOR UNDERFLOOR HEIGHT ALLOWANCE.
- ALL SNOW LOADS LISTED ARE THE FLAT ROOF SNOW LOAD. TO FIND THE FLAT ROOF SNOW LOAD, FOLLOW THIS EQUATION: FLAT ROOF SNOW = 0.77 x GROUND SNOW LOAD.
- LOCATION OF CRAWL SPACE ACCESS IS SPECIFIC TO SITE. REFER TO DETAIL 33/S-313 FOR OPENING AT CONC WALL FOOTING.

**SYMBOL LEGEND**

- INDICATES SHEAR WALL TYPE AND LENGTH. SEE SCHEDULE ON 13/S-402.
- INDICATES CONCRETE WALL PER DETAIL 22/S-311

**SCHEDULES**

HOLD-DOWN SCHEDULE			
SPECIFIES HOLD-DOWN/STRAP DETAIL	INDICATES HOLD-DOWN/STRAP TYPE	DETAIL	
	INDICATES SIMPSON SSB HOLD-DOWN TO: CONC FOUNDATION: CONC STEM WALL:	12/S-311 22/S-311	
	INDICATES SIMPSON SB HOLD-DOWN TO: CONC FOUNDATION: CONC STEM WALL:	14/S-311 24/S-311	

CONTINUOUS FOOTING SCHEDULE					
MARK	WIDTH	MIN EMBED BELOW LOWEST PAD GRADE	LONG REIN	TRANS REIN	DETAIL
C1.29	1'-3"	SEE NOTE 16	(2) #5 T&B	#3 @ 12" OC, BOT	31/S-311
C2	2'-0"	SEE NOTE 16	(3) #5 T&B	#3 @ 12" OC, BOT	31/S-311

GRADE BEAM SCHEDULE						
TYPE	WIDTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	LONG REIN	TRANS REIN	DETAIL
GB1	1'-0"	1'-0"	SEE NOTE 16	(2) #4 @ TOP (2) #4 @ BOT	#3 @ 24" OC	13/S-312

I-FOOTING SCHEDULE						
TYPE	WIDTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	LONG REIN	TRANS REIN	DETAIL
I1.29	1'-3"	1'-0"	SEE NOTE 16	(2) #4 @ TOP (2) #4 @ BOT	#3 @ 24" OC	13/S-312
I2	2'-0"	1'-0"	SEE NOTE 16	(3) #4 @ TOP (3) #4 @ BOT	#3 @ 24" OC	13/S-312

PAD FOOTING SCHEDULE							
TYPE	WIDTH	LENGTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	TOP REIN	BOT REIN	DETAIL
F1.5	1'-6"	1'-6"	1'-6"	SEE NOTE 16	(2) #5, EW	(2) #5, EW	11/S-312
F2	2'-0"	2'-0"	1'-6"	SEE NOTE 16	(3) #5, EW	(3) #5, EW	11/S-312

NOTE: FOOTING MUST BE DEEPENED LOCALLY PER DETAIL 32/S-301 TO ACCOMMODATE AS HOLD-DOWN EMBED DEPTHS



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AGENCY

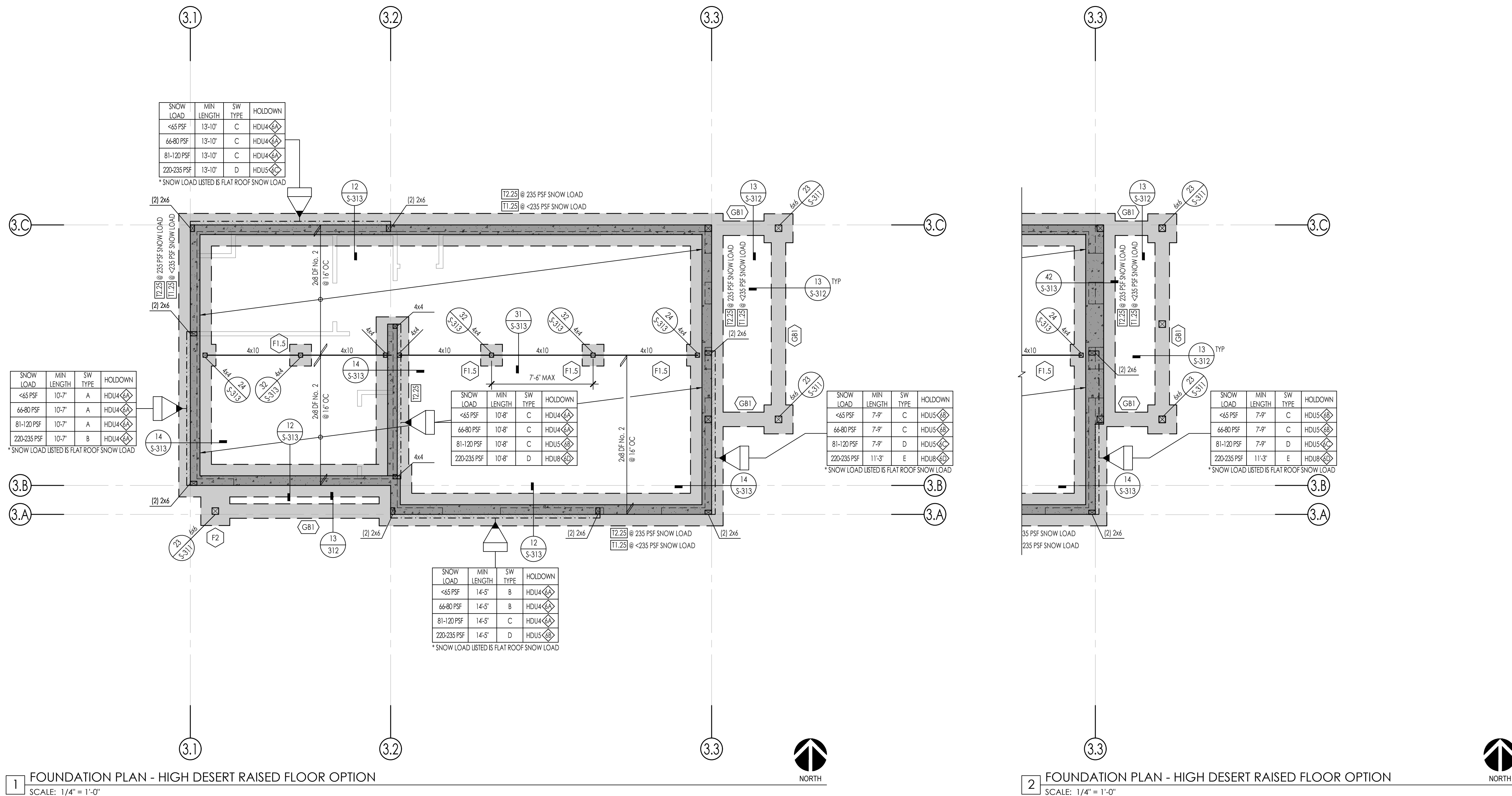
**MONO COUNTY ADU  
PROTOTYPES  
MONO COUNTY  
FOUNDATION PLANS -  
RAISED FLOOR**

CONSTRUCTION DOCUMENTS

NO.	REVISION	DATE

**PROJECT MANAGER**  
J. MEADOWS  
**DRAWN BY**  
A. LOPEZ  
**CHECKED BY**  
M. DOREMUS  
**DATE**  
AUGUST 18, 2022  
**PROJECT NUMBER**  
2340-01-CU21  
**SHEET**

**S3-201B**



**1 FOUNDATION PLAN - HIGH DESERT RAISED FLOOR OPTION**  
SCALE: 1/4" = 1'-0"

**2 FOUNDATION PLAN - HIGH DESERT RAISED FLOOR OPTION**  
SCALE: 1/4" = 1'-0"

**FOUNDATION PLAN NOTES**

- REFER TO THE FOLLOWING SHEETS FOR TYPICAL DETAILS:

DESCRIPTION	SHEET (S)
SYMBOLS AND ABBREVIATIONS	S-101
STRUCTURAL GENERAL NOTES	S-102 - S-103
TESTING AND INSPECTION	S-103
TYPICAL CONCRETE DETAILS	S-301
TYPICAL WOOD DETAILS	S-401 - S-404
- SEE ARCHITECTURAL DRAWINGS FOR FINISHED FLOOR ELEVATIONS. REFERENCE FINISHED FLOOR ELEVATION - 0'-0" COORDINATES TO FINISHED FLOOR ELEVATION.
- ALL DIMENSIONS SHOWN ARE FROM FACE OF CONCRETE/MASONRY, FACE OF SHEATHING, OR CENTERLINE OF COLUMN. ALL COLUMNS ARE CENTERED IN STUD WALLS, UNO.
- FOR ANY DIMENSIONAL INFORMATION NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
- SEE ARCHITECTURAL DRAWINGS FOR ANY EMBEDDED ITEMS AND ALL EXTERIOR CONCRETE PAVE
- SEE PLANS AND ARCHITECTURAL DRAWINGS FOR DEPRESSIONS AND/OR SLOPES IN CONCRETE SLABS.
- SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS IN BEARING AND NON-BEARING WALLS.
- SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF INTERIOR NON-BEARING PARTITIONS.
- SEE ARCHITECTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL EMBEDDED ITEMS AND SLAB PENETRATIONS.
- FOR TYPICAL SLAB-ON-GRADE REQUIREMENTS, INCLUDING SLAB JOINTS, SEE DETAIL 31/S-301.
- ALL POSTS IN 4" WALLS SHALL BE 4x4, UNLESS NOTED OTHERWISE. ALL POSTS IN 6" WALLS SHALL BE 6x6, UNLESS NOTED OTHERWISE.
- PLATE WASHERS ARE REQUIRED FOR ALL SILL PLATE ANCHOR BOLTS. REFER TO 34/S-402 FOR PLATE WASHER REQUIREMENTS AT SHEAR WALLS.
- ALL HOLD-DOWN ANCHOR NUTS SHALL BE TIGHTENED JUST PRIOR TO COVERING.
- ALL BOLT HOLES IN WOOD MEMBERS, SHALL BE DRILLED A MAXIMUM OF 1/16" OVERSIZED. INSPECTOR TO VERIFY.
- THE BUILDING PAD SHALL BE PREPARED AS OUTLINED IN DETAIL S3/S-301. THE BUILDING OFFICIAL SHALL REQUIRE PAD CERTIFICATION BY A GEOTECHNICAL ENGINEER AT THEIR DISCRETION.
- BOTTOM OF FOOTING SHALL BE, UNLESS DEEPER FOUNDATIONS ARE REQUIRED BY THE BUILDING OFFICIAL:
  - 18" BELOW PAD OR ADJACENT GRADE AT PERIMETER, WHICHEVER IS DEEPER, UNO.
  - 18" BELOW PAD OR ADJACENT GRADE AT INTERIOR GRADE BEAMS, WHICHEVER IS DEEPER, UNO.

NOTE: FOOTING MUST BE DEEPENED LOCALLY PER DETAIL 32/S-301 TO ACCOMMODATE ANCHOR BOLT HOLD-DOWN EMBED DEPTHS, OR FROST DEPTHS AS INDICATED BY THE BUILDING OFFICIAL.
- DIAPHRAGM TYPE:  
ALL FLOOR DIAPHRAGMS SHALL BE TYPE D, UNO.  
REFER TO 12/S-403
- OWNER MAY SELECT EITHER SLAB ON GRADE FOUNDATION OR THE RAISED FLOOR FOUNDATION, TO SUIT THE SPECIFIC SITE.
- WHERE RAISED FLOOR FOUNDATION IS SELECTED, OWNER HAS THE OPTION TO USE CRIPPLE STUD WALLS IN LIEU OF THE SPECIFIED CONCRETE STEM WALLS BELOW THE FLOOR FRAMING. CRIPPLE STUDS ARE TO MATCH TYPICAL WALL FRAMING, AND TO BE SHEATHED TO MATCH SHEARWALLS ABOVE. HOLD-DOWNS SPECIFIED SHALL BE INSTALLED ACROSS THE FLOOR FRAMING PER DETAIL 12/S-405 AND THEN INTO THE CONCRETE STEM WALL PER DETAILS 22/S-311 AND 24/S-311.
- REFER TO ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF UNDERFLOOR ACCESS HOLE.
- REFER TO ARCHITECTURAL DRAWINGS FOR UNDERFLOOR HEIGHT ALLOWANCE.
- ALL SNOW LOADS LISTED ARE THE FLAT ROOF SNOW LOAD. TO FIND THE FLAT ROOF SNOW LOAD, FOLLOW THIS EQUATION: FLAT ROOF SNOW = 0.77 x GROUND SNOW LOAD.
- LOCATION OF CRAWL SPACE ACCESS IS SPECIFIC TO SITE. REFER TO DETAIL 33/S-313 FOR OPENING AT CONC WALL FOOTING.

**SYMBOL LEGEND**

- INDICATES SHEAR WALL TYPE AND LENGTH. SEE SCHEDULE ON 13/S-402
- INDICATES CONCRETE WALL PER DETAIL 22/S-311

**SCHEDULES**

HOLD-DOWN SCHEDULE			
SPECIFIES HOLD-DOWN/STRAP DETAIL	INDICATES HOLD-DOWN/STRAP TYPE	CONC FOUNDATION:	DETAIL
	INDICATES SIMPSON SSTB HOLD-DOWN TO:	CONC FOUNDATION:	12/S-311
	CONC STEM WALL:	22/S-311	
	INDICATES SIMPSON SB HOLD-DOWN TO:	CONC FOUNDATION:	14/S-311
	CONC STEM WALL:	24/S-311	

CONTINUOUS FOOTING SCHEDULE					
MARK	WIDTH	MIN EMBED BELOW LOWEST PAD GRADE	LONG REIN	TRANS REIN	DETAIL
	1'-3"	SEE NOTE 16	(2) #5 T&B	#3 @ 12" OC, BOT	31/S-311
	2'-0"	SEE NOTE 16	(3) #5 T&B	#3 @ 12" OC, BOT	31/S-311

I-FOOTING SCHEDULE						
TYPE	WIDTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	LONG REIN	TRANS REIN	DETAIL
	1'-3"	1'-0"	SEE NOTE 16	(2) #4 @ TOP (2) #4 @ BOT	#3 @ 24" OC	13/S-312
	2'-0"	1'-0"	SEE NOTE 16	(3) #4 @ TOP (3) #4 @ BOT	#3 @ 24" OC	13/S-312

GRADE BEAM SCHEDULE						
TYPE	WIDTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	LONG REIN	TRANS REIN	DETAIL
	1'-0"	1'-0"	SEE NOTE 16	(2) #4 @ TOP (2) #4 @ BOT	#3 @ 24" OC	13/S-312

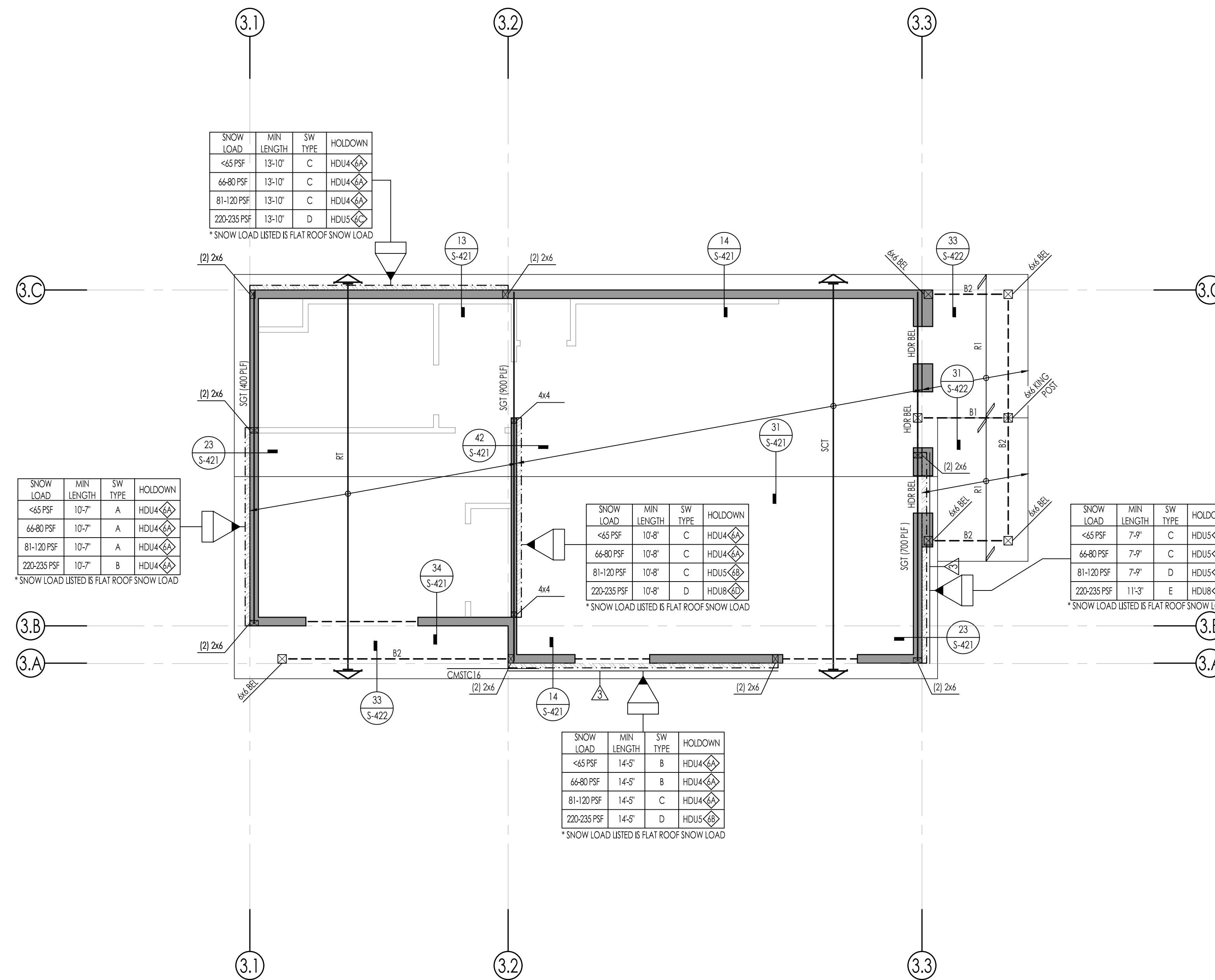
PAD FOOTING SCHEDULE							
TYPE	WIDTH	LENGTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	TOP REIN	BOT REIN	DETAIL
	1'-6"	1'-6"	1'-6"	SEE NOTE 16	(2) #5, EW	(2) #5, EW	11/S-312
	2'-0"	2'-0"	1'-6"	SEE NOTE 16	(3) #5, EW	(3) #5, EW	11/S-312

NOTE: FOOTING MUST BE DEEPENED LOCALLY PER DETAIL 32/S-301 TO ACCOMMODATE AS HOLD-DOWN EMBED DEPTHS



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**1** ROOF FRAMING PLAN - HIGH DESERT  
SCALE: 1/4" = 1'-0"

**ROOF FRAMING PLAN NOTES**

- SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AND ELEVATIONS INCLUDING, BUT NOT LIMITED TO THE FOLLOWING. ALL DIMENSIONS TO BE VERIFIED PRIOR TO CONSTRUCTION:
  - GRID DIMENSIONS AND HORIZONTAL CONTROL
  - ALL DIMENSIONS, ELEVATIONS, FINISH SURFACE, SLOPES, DRAINS, SLAB DEPRESSIONS, ETC
  - LOCATION AND EXTENT OF EXTERIOR WALL ASSEMBLIES AND OPENINGS
  - ALL NON STRUCTURAL WALLS
- REFER TO THE FOLLOWING SHEETS FOR TYPICAL DETAILS:
 

DESCRIPTION	SHEET (S)
SYMBOLS AND ABBREVIATIONS	S-101
STRUCTURAL GENERAL NOTES	S-102 - S-103
TESTING AND INSPECTION	S-103
TYPICAL CONCRETE DETAILS	S-301
TYPICAL WOOD DETAILS	S-401 - S-405
- SEE ARCHITECTURAL DRAWINGS FOR ALL TOP OF SHEATHING AND TOP OF WALL ELEVATIONS.
- SEE ARCHITECTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF PIPES, DUCTS AND OTHER ROOF PENETRATIONS. FOR ROOF PENETRATIONS NOT SHOWN ON ROOF FRAMING PLAN, SEE DETAIL 23/S-403 FOR TYPICAL OPENINGS, UNO.
- ALL POSTS IN 4" WALLS SHALL BE 4x4, UNLESS NOTED OTHERWISE. ALL POSTS IN 6" WALLS SHALL BE 6x6, UNLESS NOTED OTHERWISE.  
TYPICAL WALL FRAMING SHALL BE:  
2x6 @ 16" OC @ ALL EXTERIOR WALLS, UNO  
2x6 @ 16" OC @ ALL INTERIOR BEARING WALLS, UNO  
2x4 @ 16" @ ALL INTERIOR NON-BEARING WALLS, UNO
- ALL INTERIOR WALLS NOT SHOWN ON THE STRUCTURAL FRAMING PLANS BUT SHOWN ON THE ARCHITECTURAL DRAWINGS SHALL BE CONSTRUCTED PER NON-BEARING PARTITION WALL DETAIL 43/S-401, UNO.
- DIAPHRAGM TYPES:  
< 65 PSF SNOW LOAD, ROOF DIAPHRAGM, TYPE A  
66-80 PSF SNOW LOAD, ROOF DIAPHRAGM, TYPE A  
81-120 PSF SNOW LOAD, ROOF DIAPHRAGM, TYPE B  
220-235 PSF SNOW LOAD, ROOF DIAPHRAGM, TYPE C  
REFER TO 12/-403
- ALL LINES AND/OR MEMBERS INDICATED AS 'STRU' SHALL RECEIVE (2) ROWS OF BOUNDARY NAILING (BN), STGR.
- TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED OR OTHERWISE ALTERED IN ANY WAY WITHOUT WRITTEN CONCURRENCE AND APPROVAL OF A REGISTERED DESIGN PROFESSIONAL.
- ALTERATIONS RESULTING IN THE ADDITION OF LOADS TO ANY MEMBER (E.G. HVAC EQUIPMENT, WATER HEATER) SHALL NOT BE PERMITTED WITHOUT VERIFICATION THAT THE TRUSS IS CAPABLE OF SUPPORTING SUCH ADDITIONAL LOADING.
- TRUSSES ARE TO BE DESIGNED FOR THE PROPER SITE SPECIFIC SNOW LOAD. TRUSS DRAWINGS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. FOR OTHER TRUSSES DESIGN CRITERIA REFER TO SHEET S-103 PRE-FABRICATED WOOD TRUSSES I.B.G.
- TRUSSES SHALL INCLUDE PROPER ICE DAMM LOADING AT EAVES, SLIDING SNOW AND SNOW DRIFTS PER ASCE 7-16 WHERE APPLICABLE BASED ON THE ROOF CONFIGURATION.
- WHERE THE OWNER WOULD LIKE TO SUBSTITUTE TRUSSES IN PLACE OF SPECIFIED RAFTERS THAT IS STRUCTURALLY ACCEPTABLE, THESE TRUSSES SHALL BE INCLUDED IN THE SUBMITTAL TO THE BUILDING DEPARTMENT.
- ALL LUMBER EXPOSED TO THE ELEMENTS SHALL BE SELECT STRUCTURAL GRADE.
- SHEARWALL CONSTRUCTION, HOLDOWNS, RAFTERS AND HEADERS SHALL BE SELECTED FROM THE TABLES BASED ON THE SNOW LOADING FOR THE SPECIFIC SITE.
- SHEARWALL LENGTHS LISTED IN THE TABLES ABOVE ARE CONSIDERED THE MINIMUMS. THE SHEARWALL CAN BE PLACED ANYWHERE ALONG THE BUILDING LINE AS LONG AS IT IS NOT INTERRUPTED BY A DOORWAY OR WINDOW.
- ALL SNOW LOADS LISTED ARE THE FLAT ROOF SNOW LOAD. TO FIND THE FLAT ROOF SNOW LOAD, FOLLOW THIS EQUATION: FLAT ROOF SNOW = 0.77 x GROUND SNOW LOAD.

**SYMBOL LEGEND**

- INDICATES SHEAR WALL TYPE AND LENGTH. SEE SCHEDULE ON 13/S-402
- INDICATES BLOCKING & STRAPPING ABOVE & BELOW WINDOW OPENINGS PER DETAIL 44/S-402
- INDICATES HEADER @ OPENING. REFER TO 32/S-401 FOR HEADER SIZE, UNO ON PLANS
- INDICATES TOP PLATE SPLICE NAILING PER 33/S-403 NOTE THAT NAILING APPLIES TO ENTIRE LENGTH OF TOP PLATE. PROVIDE TYPE (C) SPLICE, UNO
- INDICATES CONT BLK & STRAP PER 24/S-405 @ ROOF, UNO
- INDICATES STRAP PER 34/S-405, UNO
- INDICATES DRAG TRUSS CONNECTOR PER 31/S-405, UNO

**SCHEDULES**

HOLDOWN SCHEDULE		
SPECIFIES HOLDOWN/STRAP DETAIL	INDICATES HOLDOWN/STRAP TYPE	DETAIL
	INDICATES SIMPSON SSTB HOLDDOWN TO: CONC FOUNDATION: CONC STEM WALL:	12/S-311 22/S-311
	INDICATES SIMPSON SB HOLDDOWN TO: CONC FOUNDATION: CONC STEM WALL:	14/S-311 24/S-311

ROOF RAFTER SCHEDULE			
MARK	SNOW LOAD	SIZE	REMARKS
R1	<235 PSF	2x8 @ 16" OC	
	235 PSF	2x10 @ 16" OC	

BEAM SCHEDULE			
MARK	SNOW LOAD	SIZE	REMARKS
B1	<80 PSF	4x6	
	81-120 PSF	4x8	
	121-235 PSF	4x10	
B2	<80 PSF	6x8	
	81-120 PSF	6x10	
	121-235 PSF	6x12	

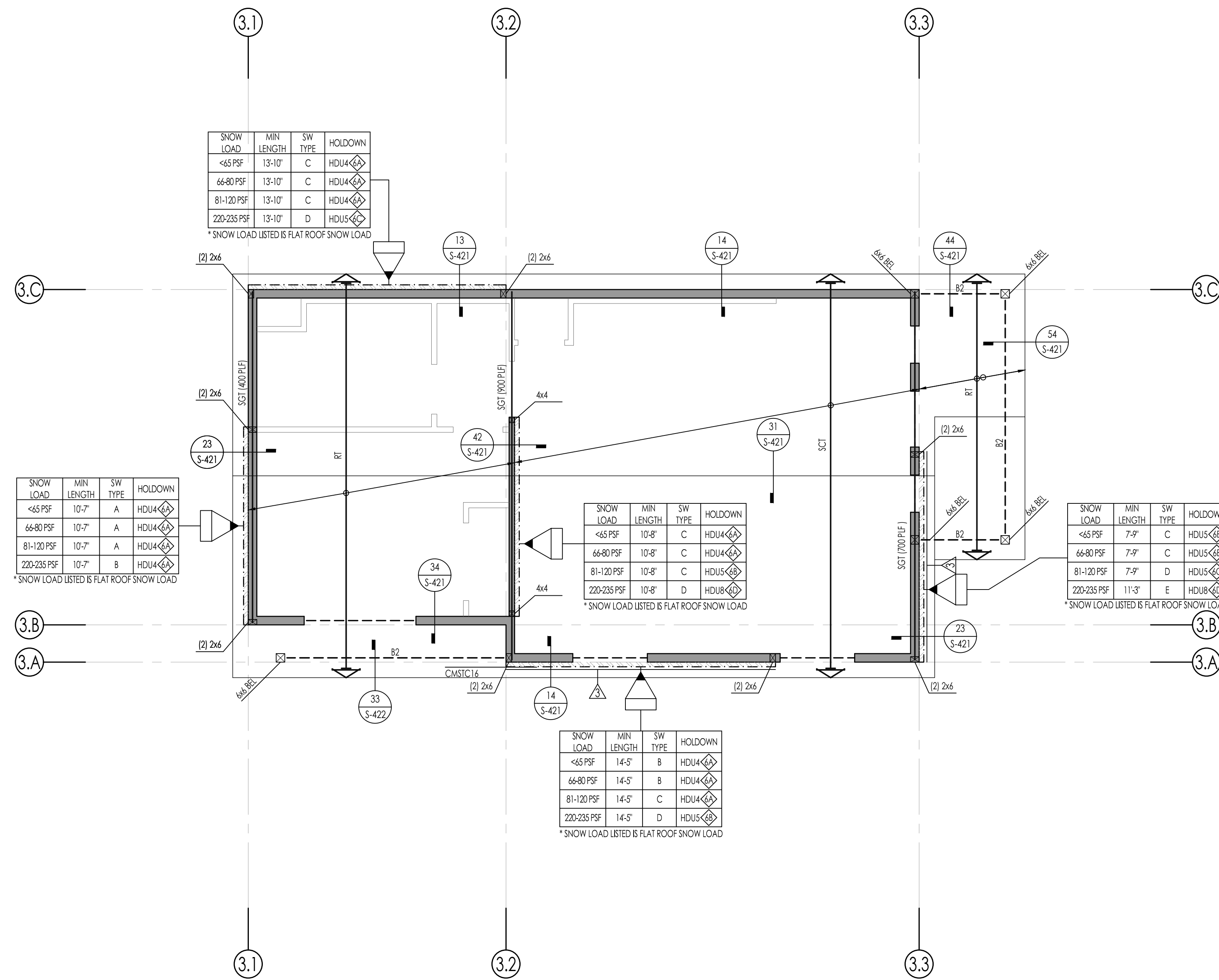
NO.	REVISION	DATE

<b>PROJECT MANAGER</b> J. MEADOWS	
<b>DRAWN BY</b> A. LOPEZ	<b>CHECKED BY</b> M. DOREMUS
<b>DATE</b> AUGUST 18, 2022	
<b>PROJECT NUMBER</b> 2340-01-CU21	
<b>SHEET</b> S3-202A	



CONSULTANT

AGENCY



**1** ROOF FRAMING PLAN - RURAL MOUNTAIN  
SCALE: 1/4" = 1'-0"

**ROOF FRAMING PLAN NOTES**

- SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AND ELEVATIONS INCLUDING, BUT NOT LIMITED TO THE FOLLOWING. ALL DIMENSIONS TO BE VERIFIED PRIOR TO CONSTRUCTION:
  - GRID DIMENSIONS AND HORIZONTAL CONTROL
  - ALL DIMENSIONS, ELEVATIONS, FINISH SURFACE, SLOPES, DRAINS, SLAB DEPRESSIONS, ETC
  - LOCATION AND EXTENT OF EXTERIOR WALL ASSEMBLIES AND OPENINGS
  - ALL NON STRUCTURAL WALLS
- REFER TO THE FOLLOWING SHEETS FOR TYPICAL DETAILS:
 

DESCRIPTION	SHEET (S)
SYMBOLS AND ABBREVIATIONS	S-101
STRUCTURAL GENERAL NOTES	S-102 - S-103
TESTING AND INSPECTION	S-103
TYPICAL CONCRETE DETAILS	S-301
TYPICAL WOOD DETAILS	S-401 - S-404
- SEE ARCHITECTURAL DRAWINGS FOR ALL TOP OF SHEATHING AND TOP OF WALL ELEVATIONS.
- SEE ARCHITECTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF PIPES, DUCTS AND OTHER ROOF PENETRATIONS. FOR ROOF PENETRATIONS NOT SHOWN ON ROOF FRAMING PLAN, SEE DETAIL 23/S-403 FOR TYPICAL OPENINGS, UNO.
- ALL POSTS IN 4" WALLS SHALL BE 4x4, UNLESS NOTED OTHERWISE. ALL POSTS IN 6" WALLS SHALL BE 6x6, UNLESS NOTED OTHERWISE.  
TYPICAL WALL FRAMING SHALL BE:  
2x6 @ 16" OC @ ALL EXTERIOR WALLS, UNO  
2x6 @ 16" OC @ ALL INTERIOR BEARING WALLS, UNO  
2x4 @ 16" @ ALL INTERIOR NON-BEARING WALLS, UNO
- ALL INTERIOR WALLS NOT SHOWN ON THE STRUCTURAL FRAMING PLANS BUT SHOWN ON THE ARCHITECTURAL DRAWINGS SHALL BE CONSTRUCTED PER NON-BEARING PARTITION WALL DETAIL 43/S-401, UNO.
- DIAPHRAGM TYPES:  
< 65 PSF SNOW LOAD, ROOF DIAPHRAGM, TYPE A  
66-80 PSF SNOW LOAD, ROOF DIAPHRAGM, TYPE A  
81-120 PSF SNOW LOAD, ROOF DIAPHRAGM, TYPE B  
220-235 PSF SNOW LOAD, ROOF DIAPHRAGM, TYPE C  
REFER TO 12/-403
- ALL LINES AND/OR MEMBERS INDICATED AS 'STRU' SHALL RECEIVE (2) ROWS OF BOUNDARY NAILING (BN), STGR.
- TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED OR OTHERWISE ALTERED IN ANY WAY WITHOUT WRITTEN CONCURRENCE AND APPROVAL OF A REGISTERED DESIGN PROFESSIONAL.
- ALTERATIONS RESULTING IN THE ADDITION OF LOADS TO ANY MEMBER (E.G. HVAC EQUIPMENT, WATER HEATER) SHALL NOT BE PERMITTED WITHOUT VERIFICATION THAT THE TRUSS IS CAPABLE OF SUPPORTING SUCH ADDITIONAL LOADING.
- TRUSSES ARE TO BE DESIGNED FOR THE PROPER SITE SPECIFIC SNOW LOAD. TRUSS DRAWINGS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. FOR OTHER TRUSSES DESIGN CRITERIA REFER TO SHEET S-103 PRE-FABRICATED WOOD TRUSSES I.B.D.
- TRUSSES SHALL INCLUDE PROPER ICE DAMM LOADING AT EAVES, SLIDING SNOW AND SNOW DRIFTS PER ASCE 7-16 WHERE APPLICABLE BASED ON THE ROOF CONFIGURATION.
- WHERE THE OWNER WOULD LIKE TO SUBSTITUTE TRUSSES IN PLACE OF SPECIFIED RAFTERS THAT IS STRUCTURALLY ACCEPTABLE, THESE TRUSSES SHALL BE INCLUDED IN THE SUBMITTAL TO THE BUILDING DEPARTMENT.
- ALL LUMBER EXPOSED TO THE ELEMENTS SHALL BE SELECT STRUCTURAL GRADE.
- SHEARWALL CONSTRUCTION, HOLDOWNS, RAFTERS AND HEADERS SHALL BE SELECTED FROM THE TABLES BASED ON THE SNOW LOADING FOR THE SPECIFIC SITE.
- SHEARWALL LENGTHS LISTED IN THE TABLES ABOVE ARE CONSIDERED THE MINIMUMS, THE SHEARWALL CAN BE PLACED ANYWHERE ALONG THE BUILDING LINE AS LONG AS IT IS NOT INTERRUPTED BY A DOORWAY OR WINDOW.
- ALL SNOW LOADS LISTED ARE THE FLAT ROOF SNOW LOAD. TO FIND THE FLAT ROOF SNOW LOAD, FOLLOW THIS EQUATION: FLAT ROOF SNOW = 0.77 x GROUND SNOW LOAD.

**SYMBOL LEGEND**

- INDICATES SHEAR WALL TYPE AND LENGTH, SEE SCHEDULE ON 13/S-402
- INDICATES BLOCKING & STRAPPING ABOVE & BELOW WINDOW OPENINGS PER DETAIL 44/S-402
- INDICATES HEADER @ OPENING. REFER TO 32/S-401 FOR HEADER SIZE, UNO ON PLANS
- INDICATES TOP PLATE SPICE NAILING PER 33/S-403 NOTE THAT NAILING APPLIES TO ENTIRE LENGTH OF TOP PLATE. PROVIDE TYPE (C) SPICE, UNO
- INDICATES CONT BLK & STRAP PER 24/S-405 @ ROOF, UNO
- INDICATES STRAP PER 34/S-405, UNO
- INDICATES DRAG TRUSS CONNECTOR PER 31/S-405, UNO

**SCHEDULES**

HOLDOWN SCHEDULE		
SPECIFIES HOLDOWN/STRAP DETAIL	INDICATES HOLDOWN/STRAP TYPE	DETAIL
6x	INDICATES SIMPSON SSTB HOLDOWN TO: CONC FOUNDATION: CONC STEM WALL:	12/S-311 22/S-311
7x	INDICATES SIMPSON SB HOLDOWN TO: CONC FOUNDATION: CONC STEM WALL:	14/S-311 24/S-311

**PREFABRICATED ROOF TRUSS**

1. FOR PREFABRICATED ROOF TRUSS NOTES SEE NOTES ON SHEET S-103

MARK	DESCRIPTION	REMARKS
RT	ROOF TRUSS (COMMON)	24' OC MAX
SGT	STRUCTURAL GABLE TRUSS	
SCT	SCISSOR TRUSS	
MT	MONO PITCH TRUSS	24' OC MAX
JT	JACK TRUSS	24' OC MAX
VJT	VALLEY JACK TRUSS	24' OC MAX
CJT	CORNER JACK TRUSS	
GT	GIRDER TRUSS	
MGT	MONO PITCH GIRDER TRUSS	
DT (#*)	DRAG TRUSS	
CGT	CALIFORNIA GIRDER TRUSS	
HR	HIP RAFTER / JACK RAFTER	
CHT	CALIFORNIA HIP TRUSS	24' OC MAX

(#\*) - EQUALS DRAG FORCE IN LBS. DRAG FORCES AT A FACTORED LEVEL (0.7E) DRAG FORCES CALCULATED IN ACCORDANCE WITH ASCE 7-16 12.10.1.1. IN STRUCTURES ENTIRELY BRACED BY LIGHT FRAME SHEAR WALLS, OR PORTIONS THEREOF, DRAG MEMBERS SHALL BE DESIGNED TO RESIST FORCES USING THE LOAD COMBINATIONS OF ASCE 7-16 SECTION 12.4.2.3 IN ALL OTHER STRUCTURES DRAGS SHALL INCLUDE THE EFFECT OF OVER STRENGTH PER ASCE 7-16 12.4.3.2

**MONO COUNTY ADU PROTOTYPES**  
MONO COUNTY

**ROOF PLANS - RURAL MOUNTAIN**

NO.	REVISION	DATE

**CONSTRUCTION DOCUMENTS**

PROJECT MANAGER  
J. MEADOWS

DRAWN BY  
A. LOPEZ

CHECKED BY  
M. DOREMUS

DATE  
AUGUST 18, 2022

PROJECT NUMBER  
2340-01-CU21

SHEET  
**S3-202B**





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CONSULTANT

AGENCY

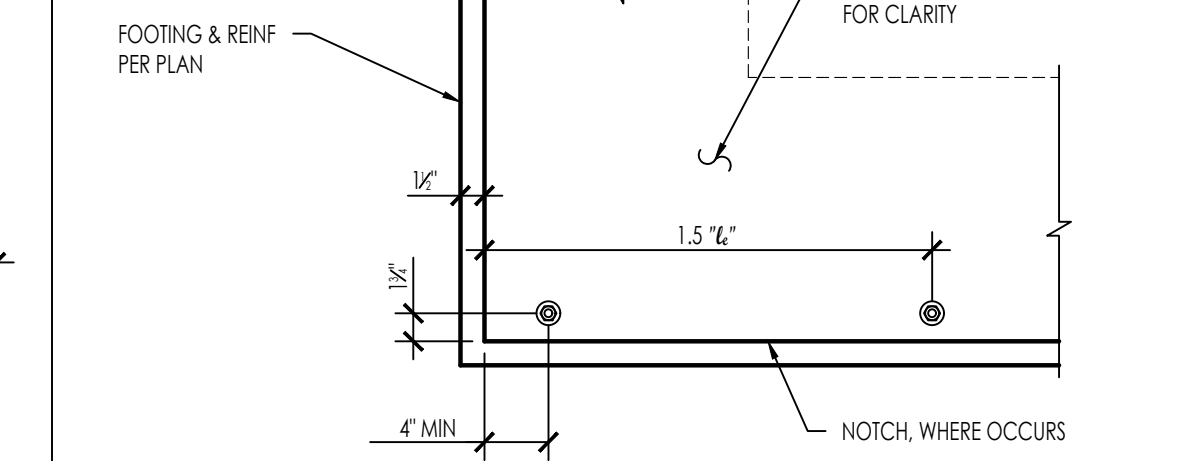
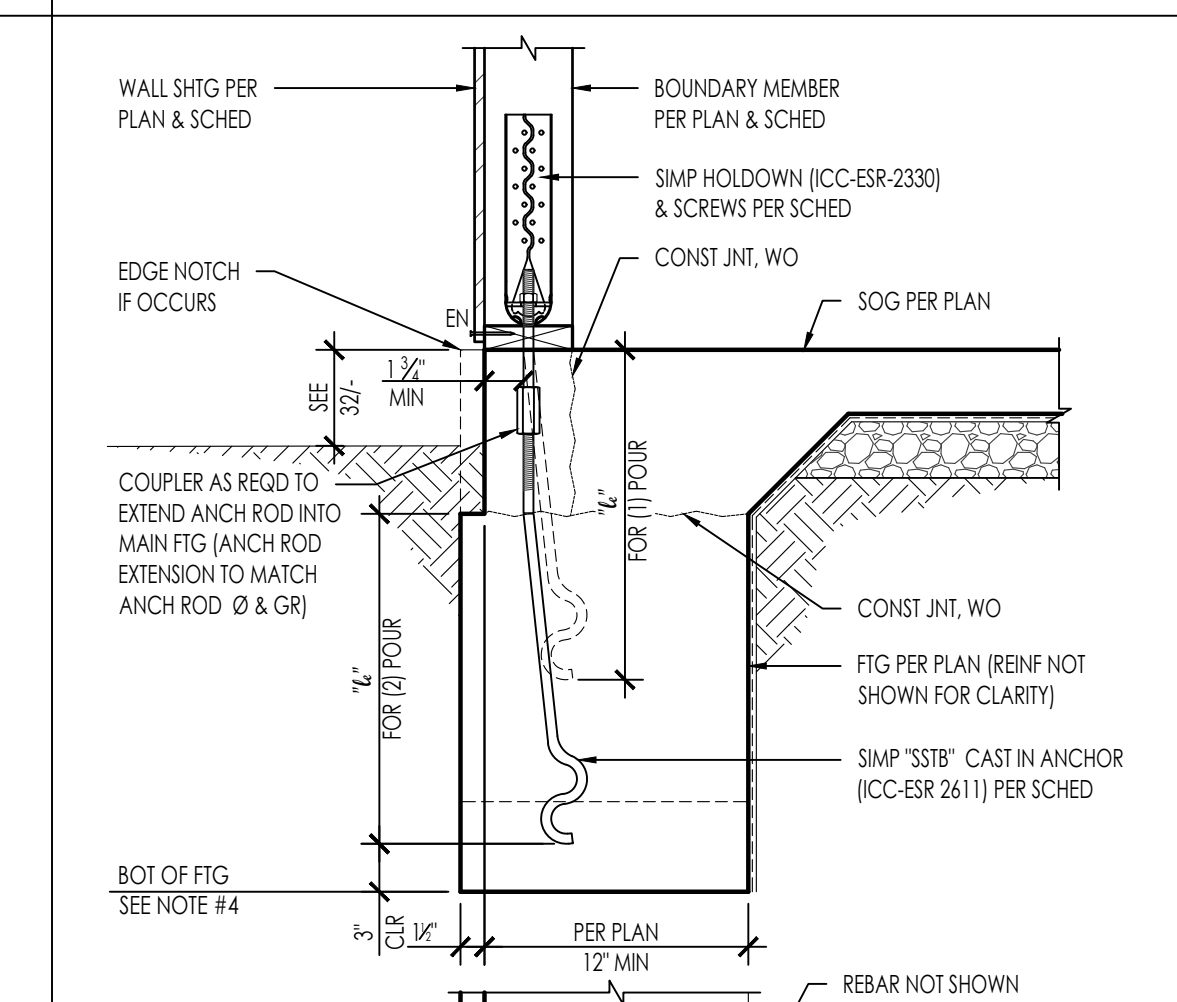
**MONO COUNTY ADU PROTOTYPES**  
 MONO COUNTY  
**CONCRETE DETAILS**

CONSTRUCTION DOCUMENTS

NO.	REVISION	DATE

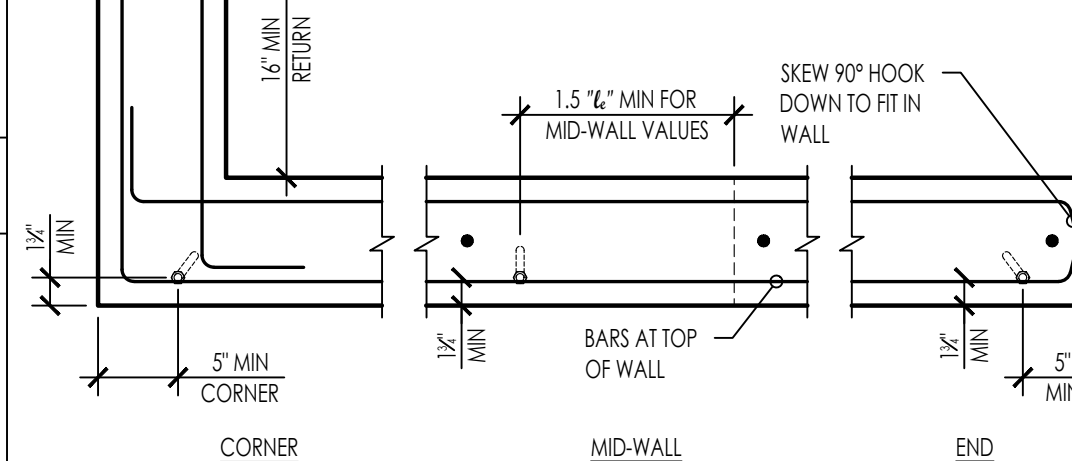
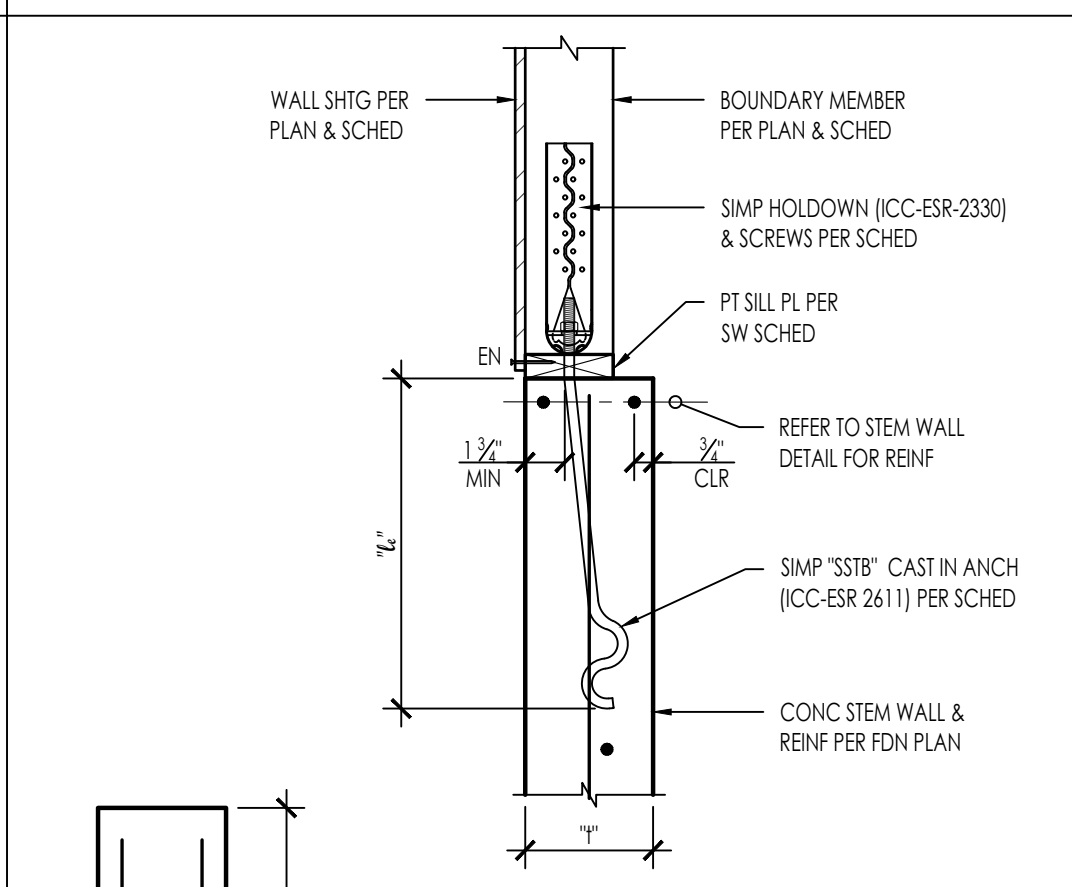
PROJECT MANAGER  
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 SHEET

**S-311**



TYPE	HOLDOWN	ANCHOR	DIA (IN)	FASTENERS	BOUNDARY MEMBER MIN THICKNESS (IN)	MIN EMBED (IN)	ALLOWABLE LOADS (KIP)		
							CORNER	MIDWALL	END
6A	HDU4-SDS2.5	SS1B16	1/2	10-SDS 1/2" x 2 1/2"	3	12 3/4	2,550	2,550	2,550
6B	HDU4-SDS2.5	SS1B20	3/4	14-SDS 1/2" x 2 1/2"	3	16 1/2	2,960	3,145	2,960
6C	HDU4-SDS2.5	SS1B24	1	14-SDS 1/2" x 2 1/2"	3	20 1/2	3,325	3,740	3,325
6D	HDU8-SDS2.5	SS1B28	1 1/4	20-SDS 1/2" x 2 1/2"	4 1/2	24 1/4	7,315	7,870*	6,395

- MINIMUM EDGE DISTANCE IS SHOWN ABOVE. ANCHOR LOCATIONS PER PLAN
- MINIMUM ANCHOR TO ANCHOR SPACING IS 3L
- \* = CAPACITY LIMITED BY HOLDOWN
- DEEPEN FOOTING AT HOLDOWN ANCHOR AS REQ'D PER DETAIL 32/3-

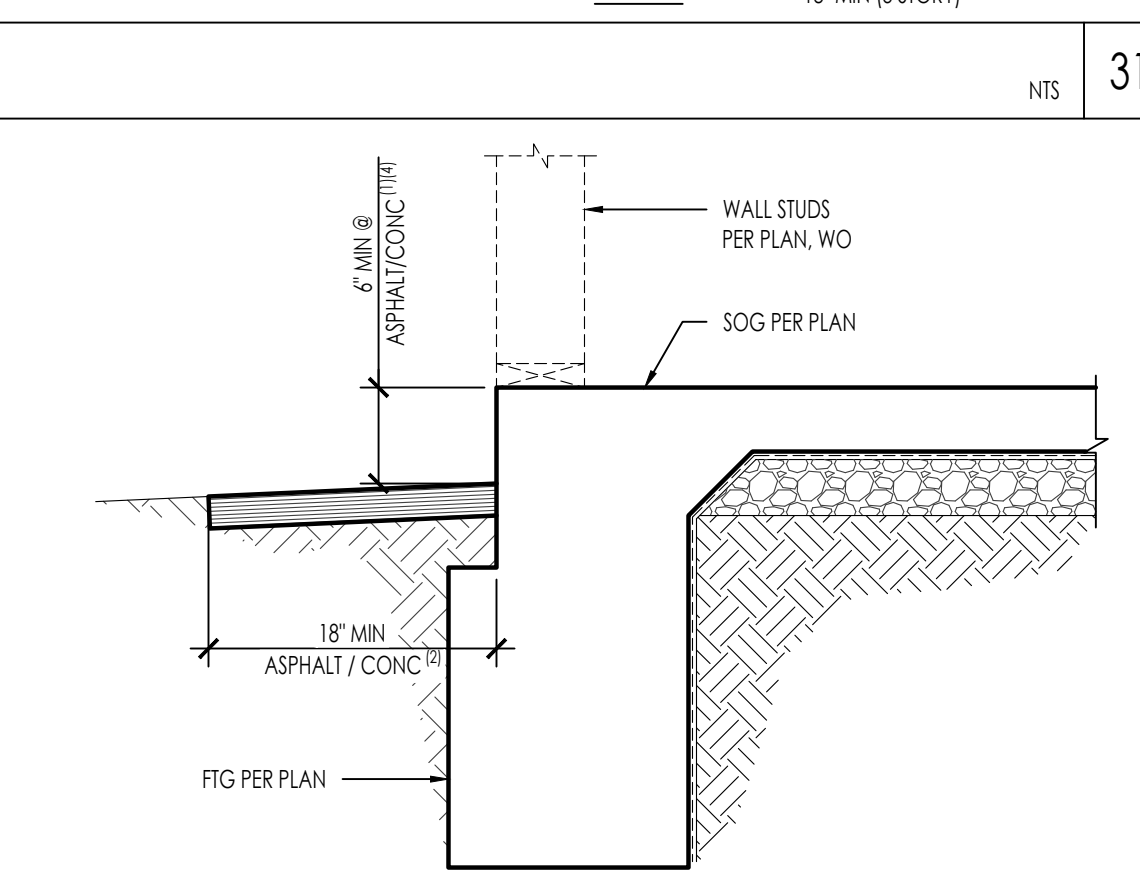
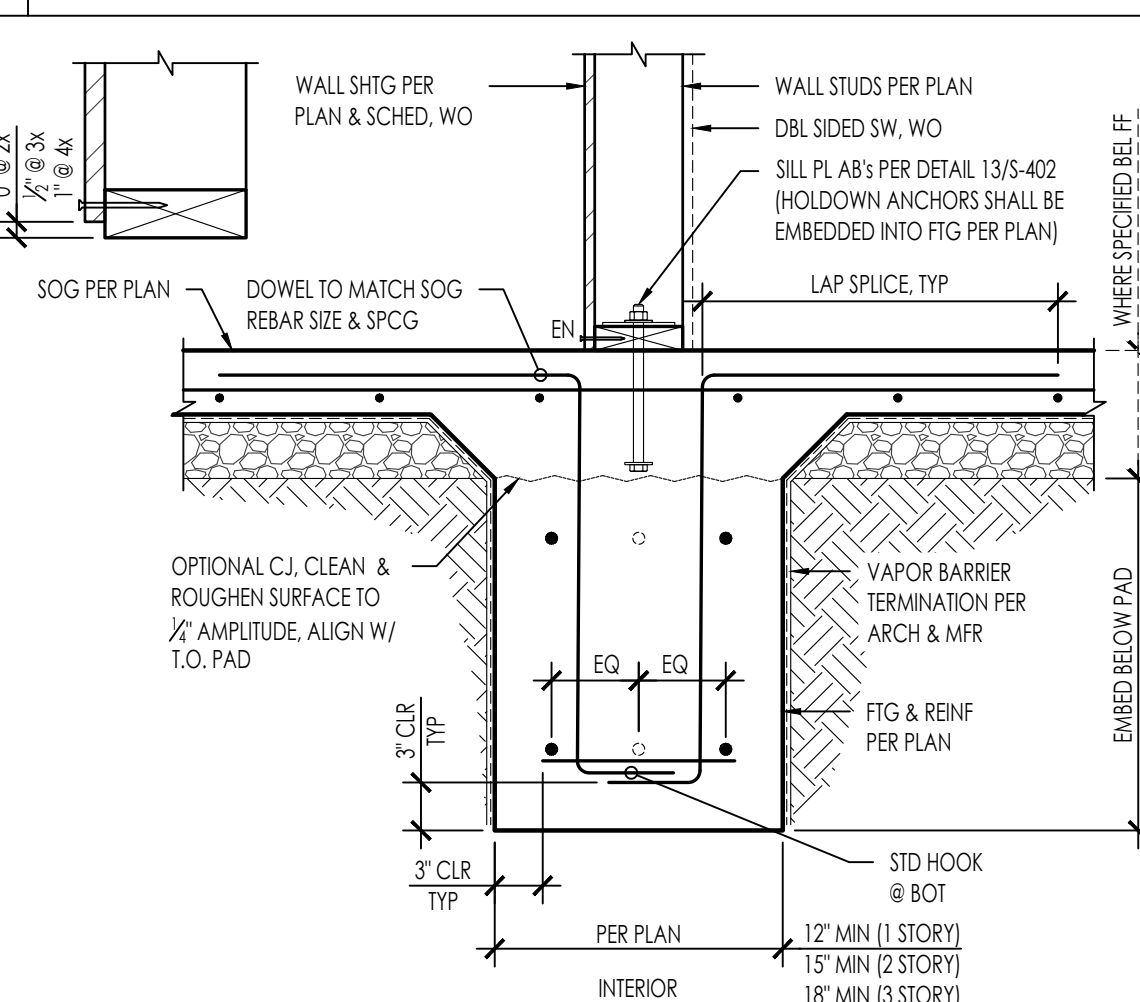


TYPE	HOLDOWN	ANCHOR	MIN STEM WALL WIDTH (1" MIN)	DIA (IN)	FASTENERS	BOUNDARY MEMBER MIN THICKNESS (IN)	MIN EMBED (IN)	ALLOWABLE LOADS (KIP)		
								CORNER	MIDWALL	END
6A	HDU2-SDS2.5	SS1B16	1 1/4	1/2	6-SDS 1/2" x 2 1/2"	3	12 3/4	2,550	2,550	2,550
6B	HDU4-SDS2.5	SS1B20	6	3/4	10-SDS 1/2" x 2 1/2"	3	16 1/2	2,960	3,145	2,960
6C	HDU4-SDS2.5	SS1B24	6	1	10-SDS 1/2" x 2 1/2"	3	20 1/2	3,325	3,740	3,325
6D	HDU8-SDS2.5	SS1B28	8	1 1/4	20-SDS 1/2" x 2 1/2"	4 1/2	24 1/4	7,315	7,870*	6,395

- MINIMUM EDGE DISTANCE IS SHOWN ABOVE. ANCHOR LOCATIONS PER PLAN
- MINIMUM ANCHOR TO ANCHOR SPACING IS 3L
- \* = CAPACITY LIMITED BY HOLDOWN

SB ANCHOR & HOLDOWN @ STEM WALL

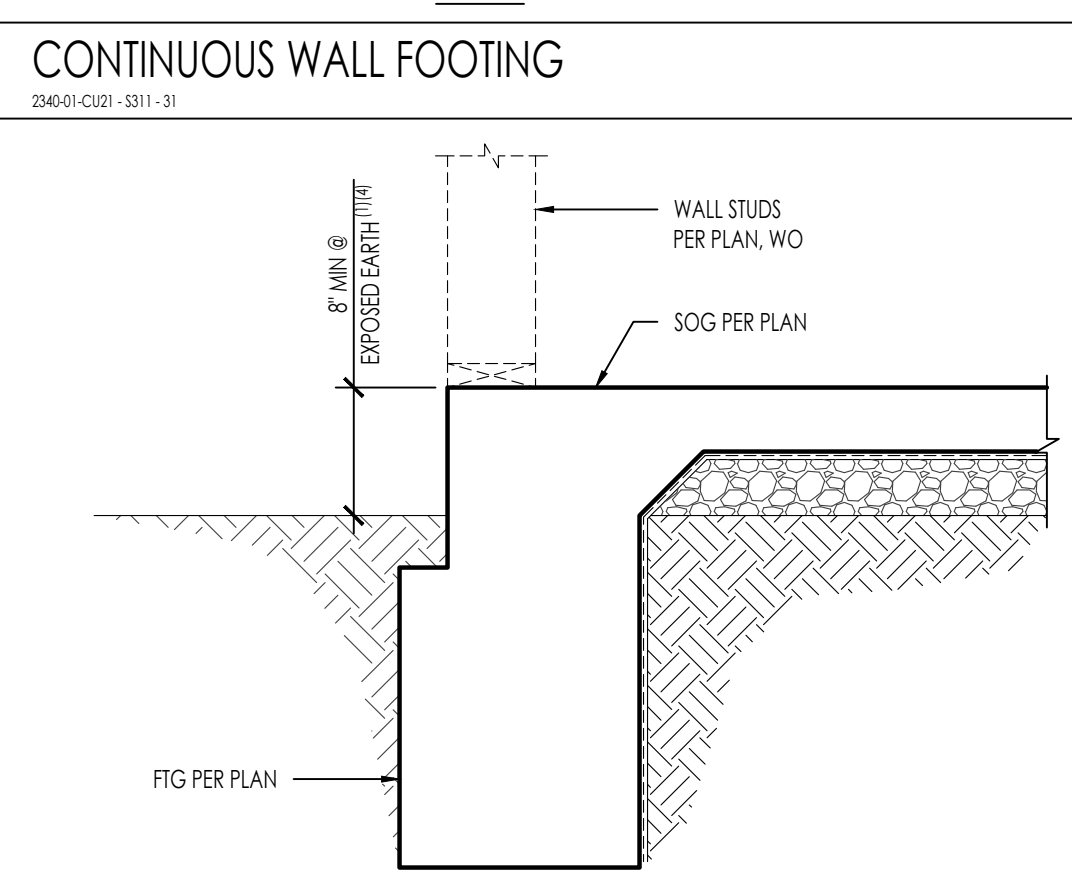
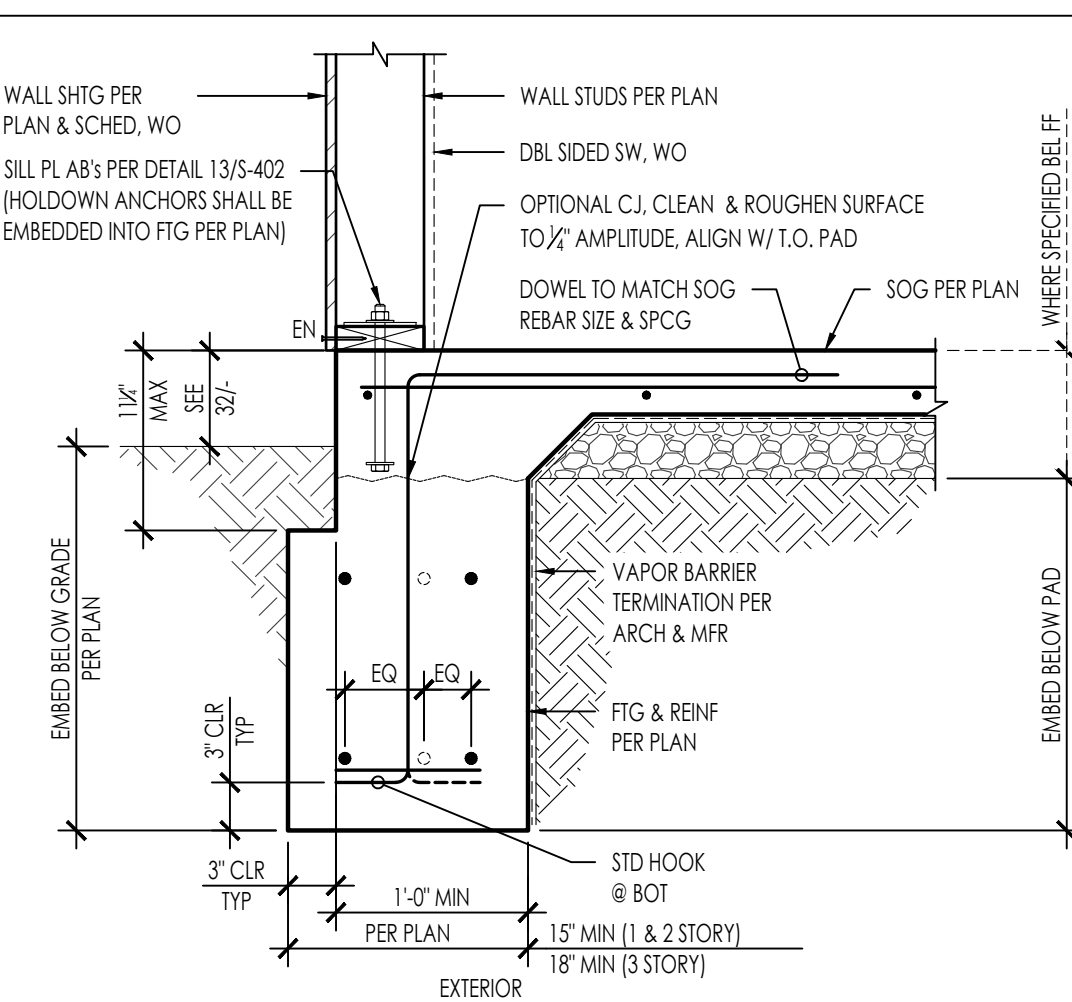
SB ANCHOR & HOLDOWN @ FOUNDATION



- MIN DISTANCE TO EXPOSED EARTH APPLIES TO BOTH TURNED DOWN AND STEM WALL FOOTINGS
- CONCRETE OR IMPERVIOUS SURFACE WITH ADEQUATE DRAINAGE AWAY FROM FOUNDATION (2% MIN SLOPE)
- FOR BALANCE OF FOOTING INFO NOT SHOWN, SEE DETAIL 31/-
- WHERE MINIMUM DISTANCE TO EXTERIOR FINISHED GRADE OR SURFACE CANNOT BE ACHIEVED, PROVIDE CONCRETE CURB PER DETAIL 33/-

CONTINUOUS WALL FOOTING

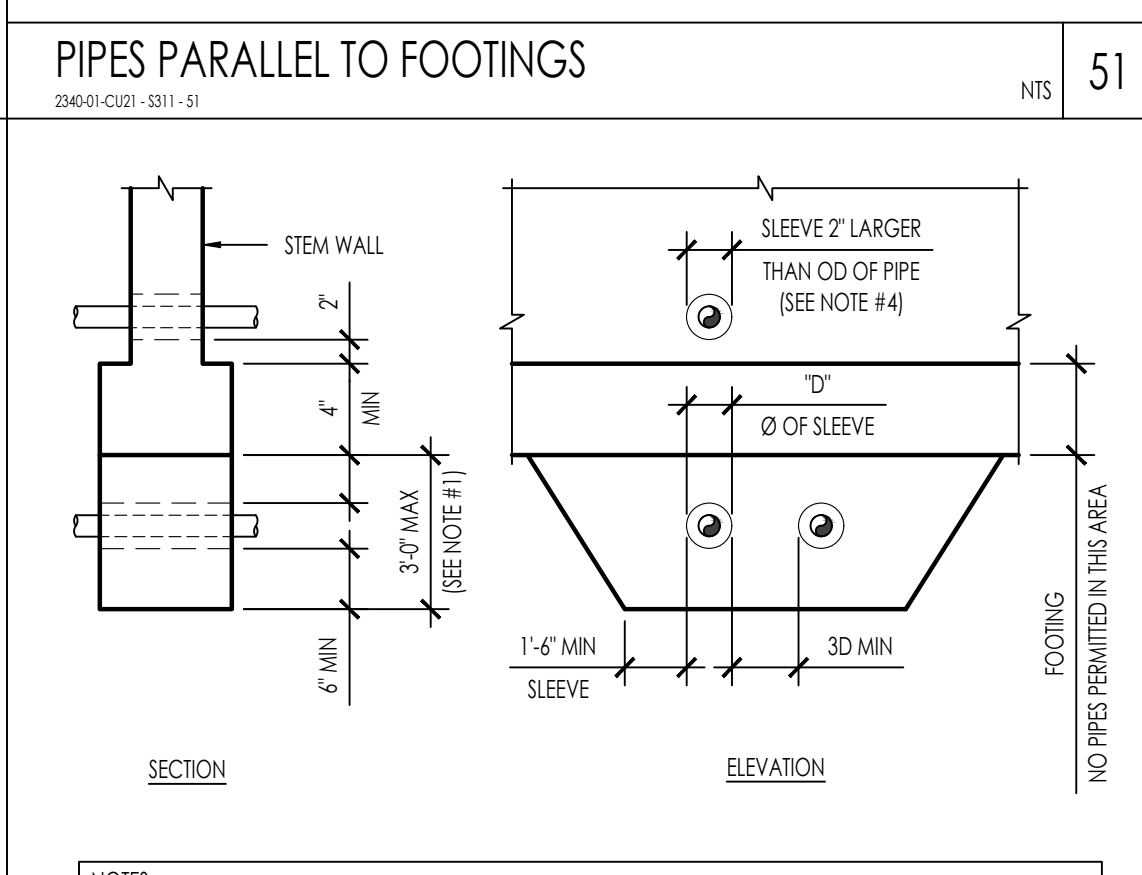
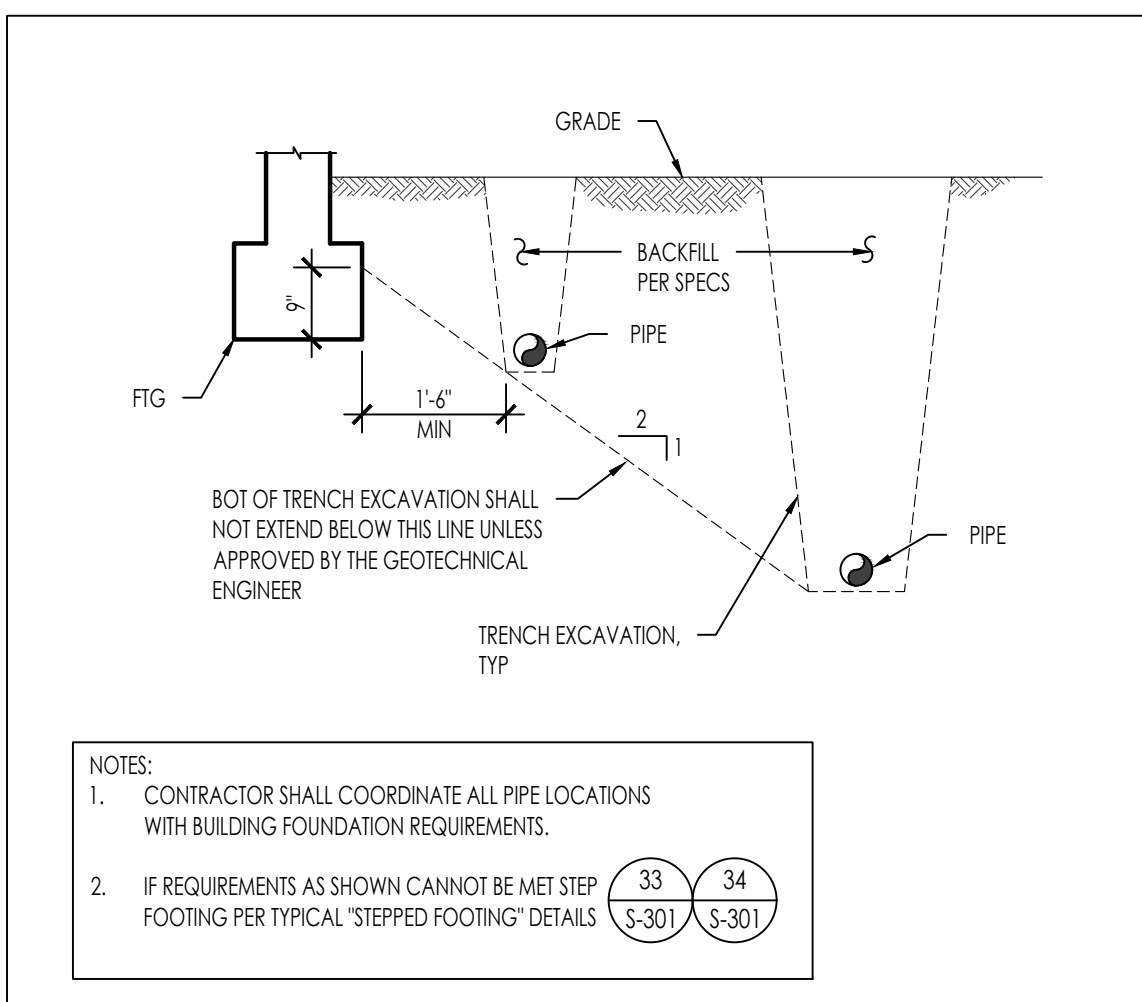
MINIMUM DISTANCE FROM GRADE TO WOOD FRAMING



- FOOTINGS SHALL BE STEPPED PER DETAIL 33/ & 34/5-301 SO THAT THIS DIMENSION DOES NOT EXCEED 3'-0"
- CONTRACTOR SHALL COORDINATE ALL PIPE LOCATIONS WITH BUILDING FOUNDATION REQUIREMENTS
- TRENCH BELOW FOOTING SHALL BE FILLED WITH CONCRETE OR 3-SACK SLURRY BEFORE POURING FOOTING. CONCRETE FILL SHALL BE SAME WIDTH AS FOOTING AND FULL WIDTH OF PIPE TRENCH.
- PIPES MAY BE WRAPPED IN 1" THICK LOOSE FOAM IN LIEU OF SLEEVING.
- CONDUIT MAY BE RUN THRU STEM OR ENCASEMENT UNDER FOOTING WITHOUT SLEEVES OR FOAM WRAP.

PIPES PARALLEL TO FOOTINGS

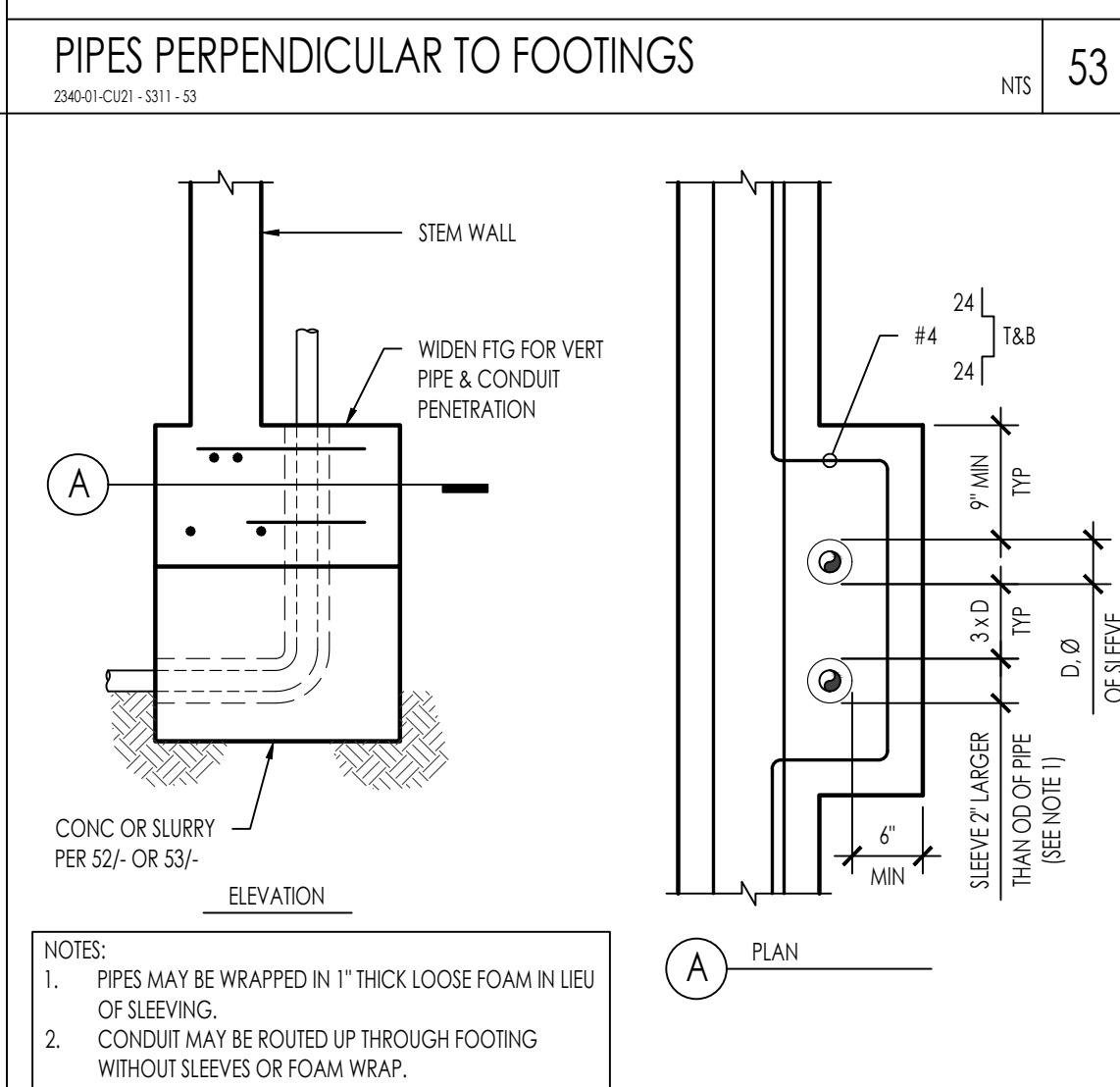
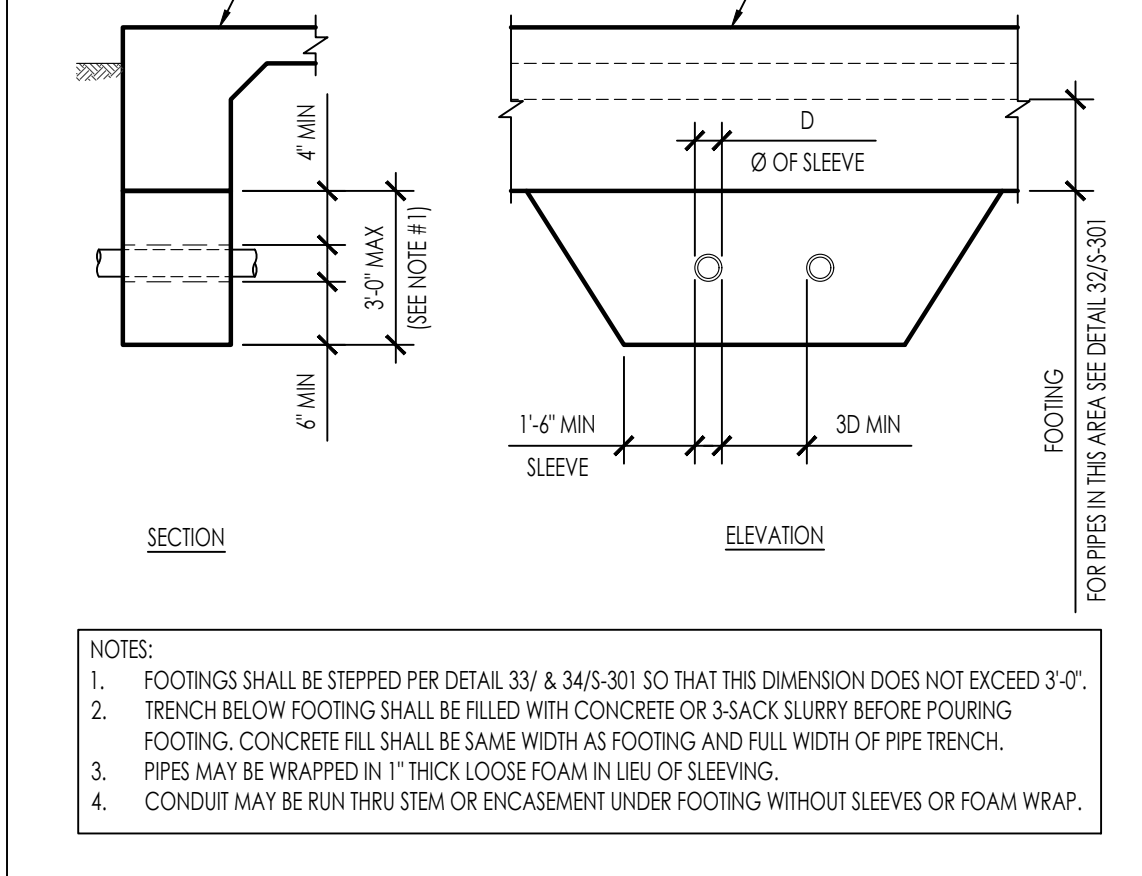
PIPES PERPENDICULAR TO FOOTINGS W/ STEM WALL



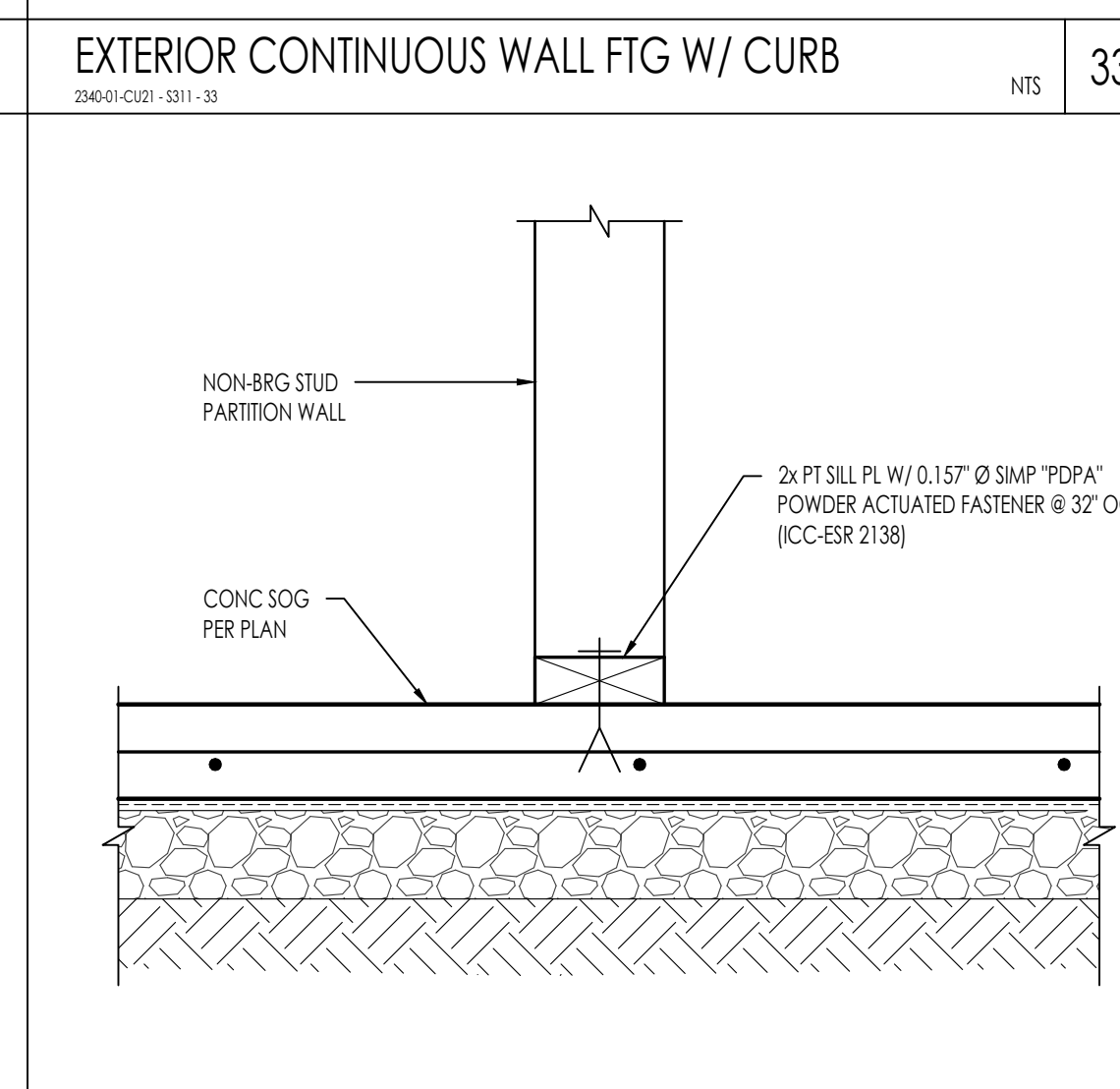
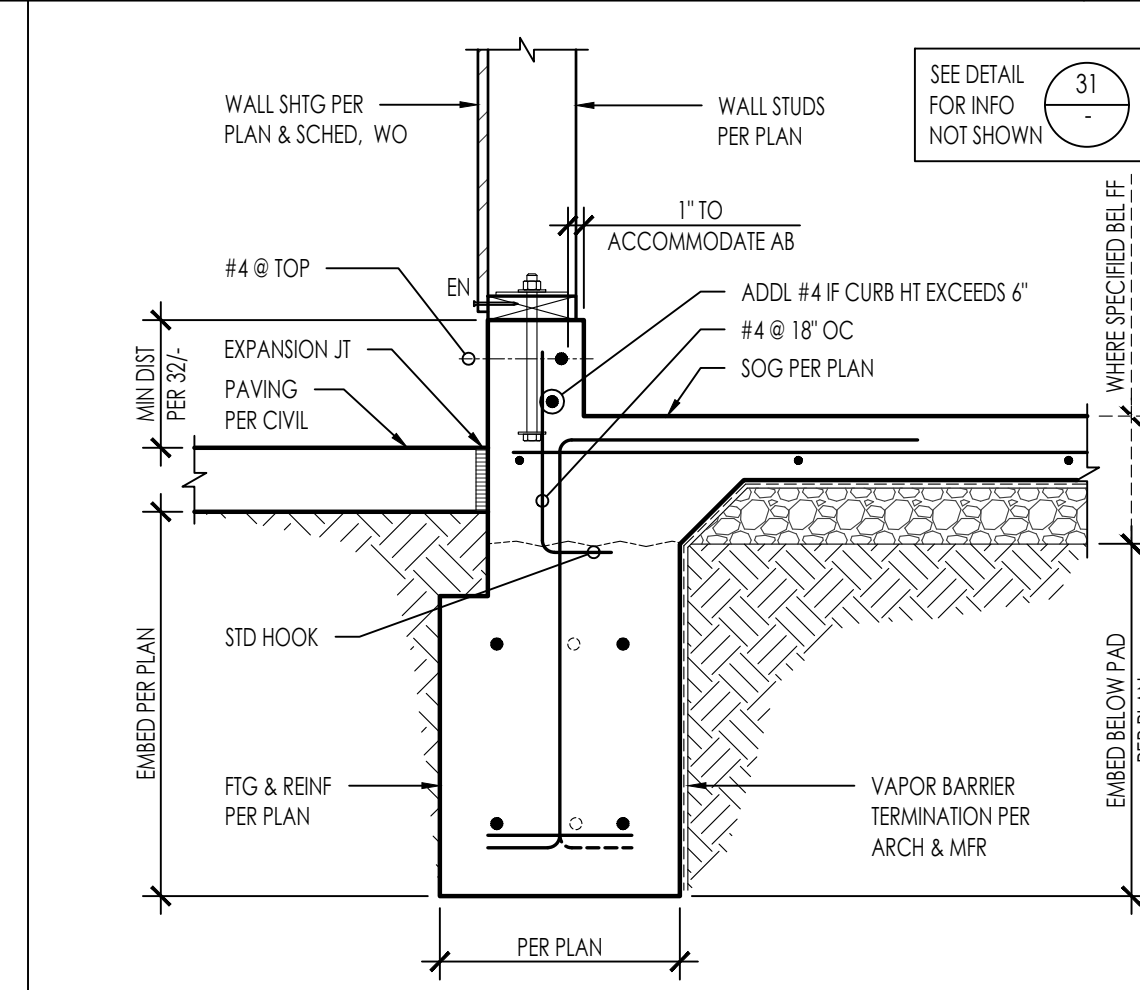
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PIPES PERPENDICULAR TO FOOTINGS W/ STEM WALL

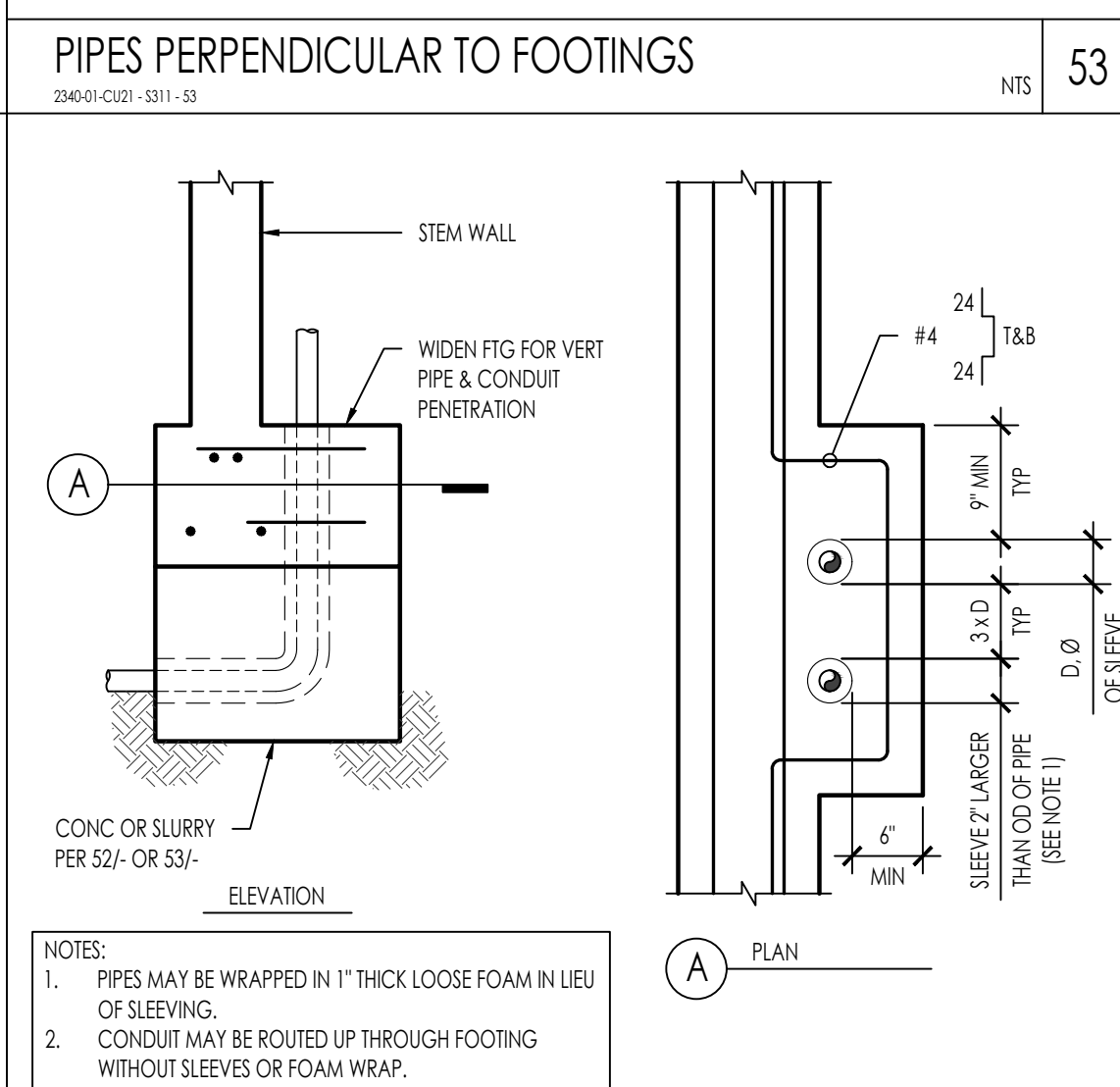
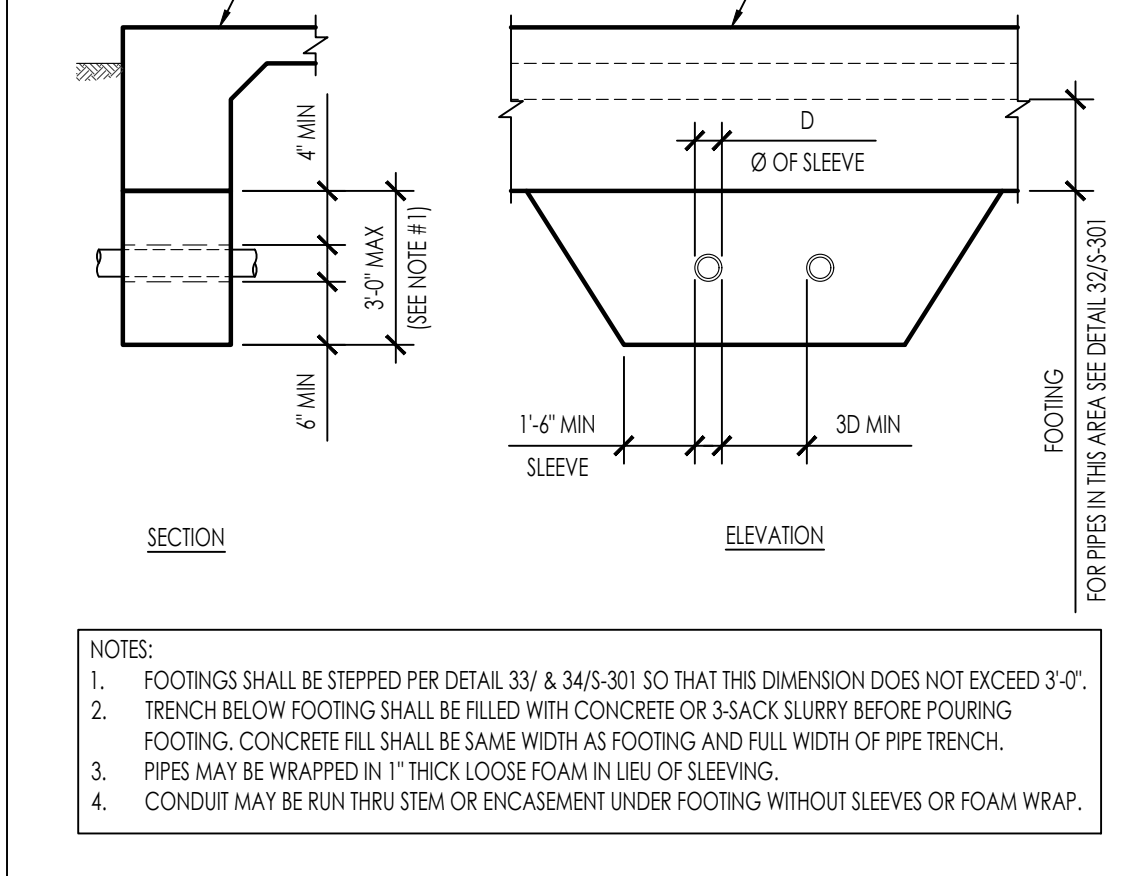
MINIMUM DISTANCE FROM GRADE TO WOOD FRAMING



MINIMUM DISTANCE FROM GRADE TO WOOD FRAMING



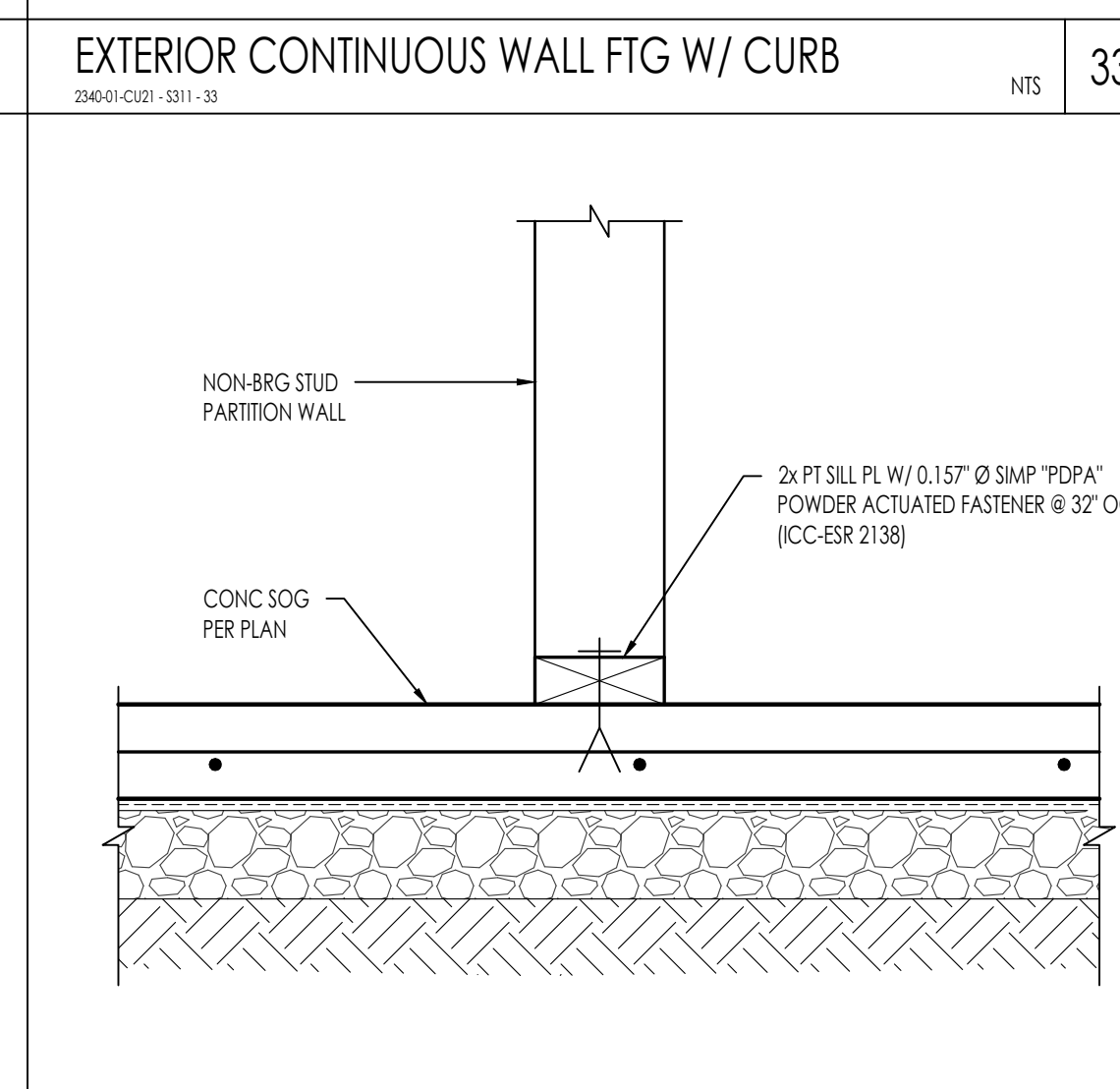
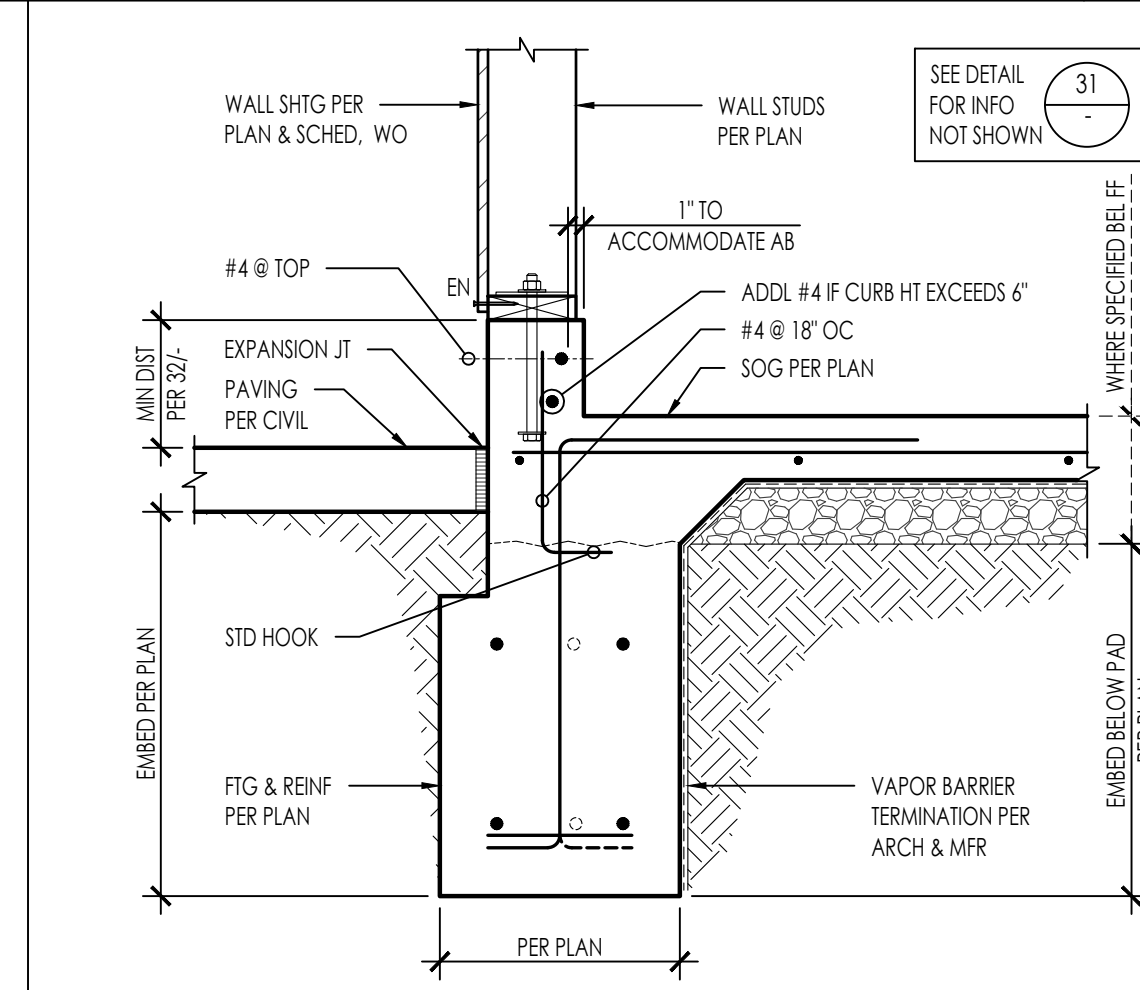
EXTERIOR CONTINUOUS WALL FTG W/ CURB



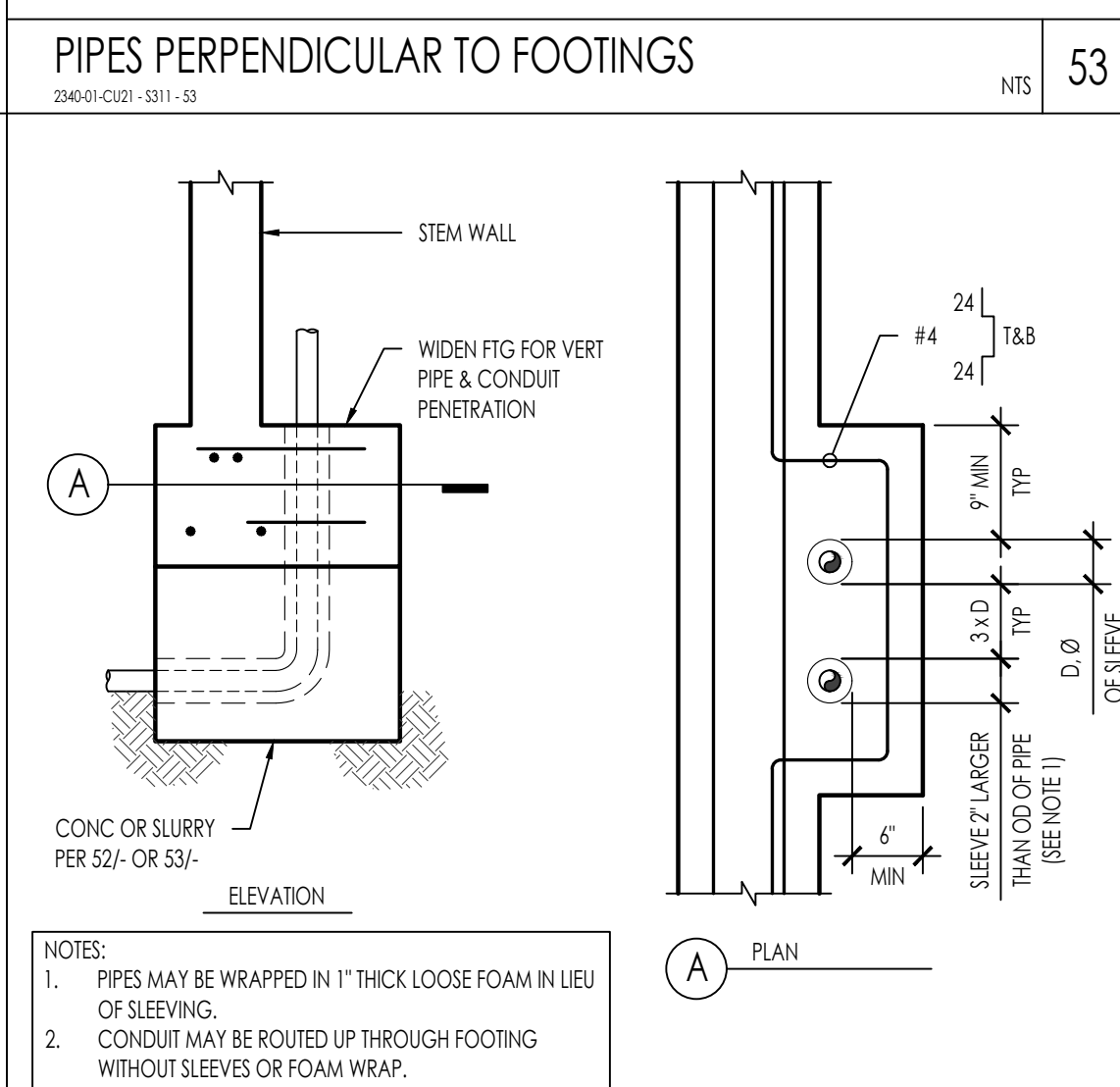
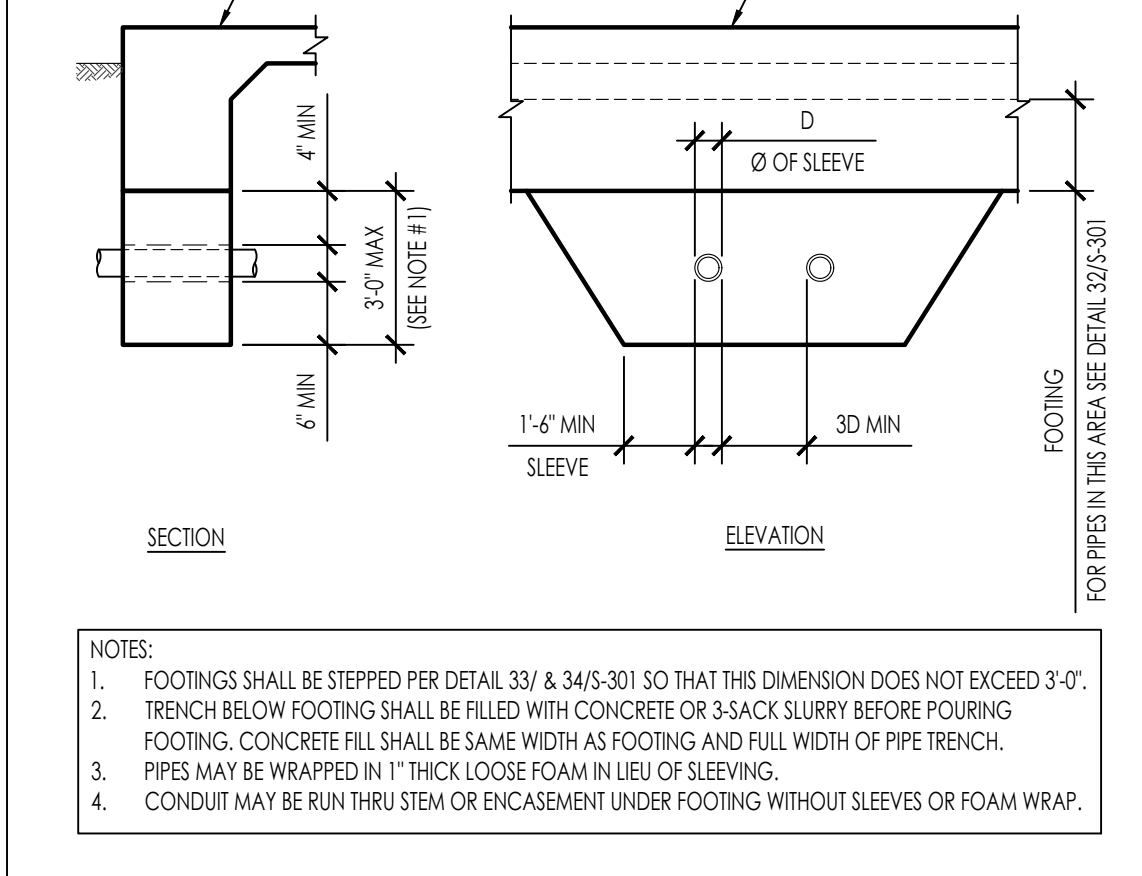
PIPES PERPENDICULAR TO FOOTINGS



TYPICAL VERT PIPES OR COND THROUGH FOOTING



NON-BEARING WALL ANCHORAGE @ SOG

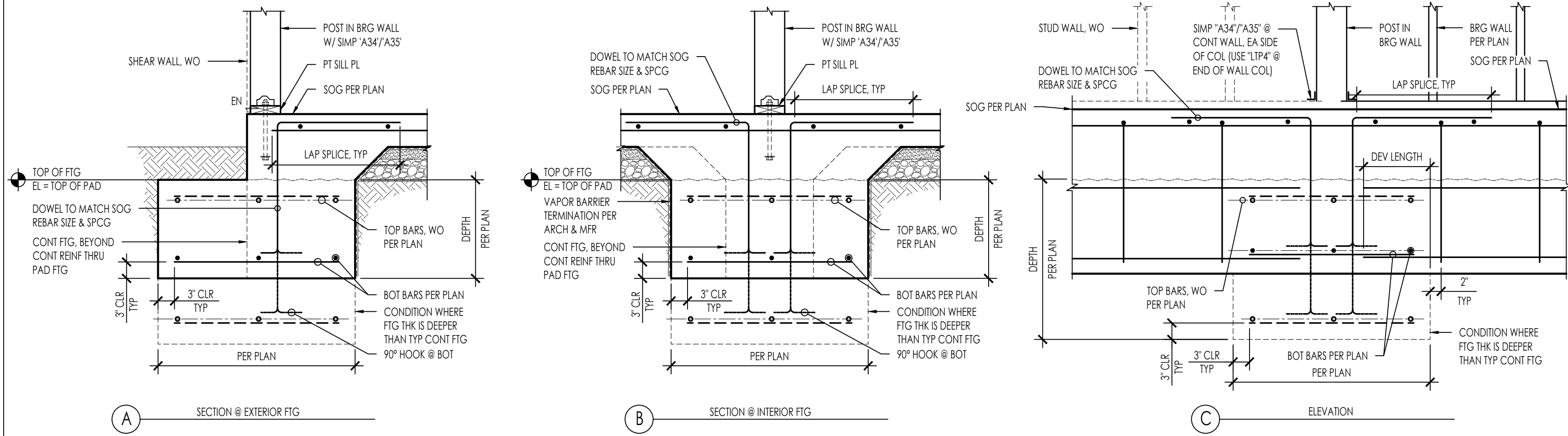


SB ANCHOR & HOLDOWN @ STEM WALL



SB ANCHOR & HOLDOWN @ FOUNDATION

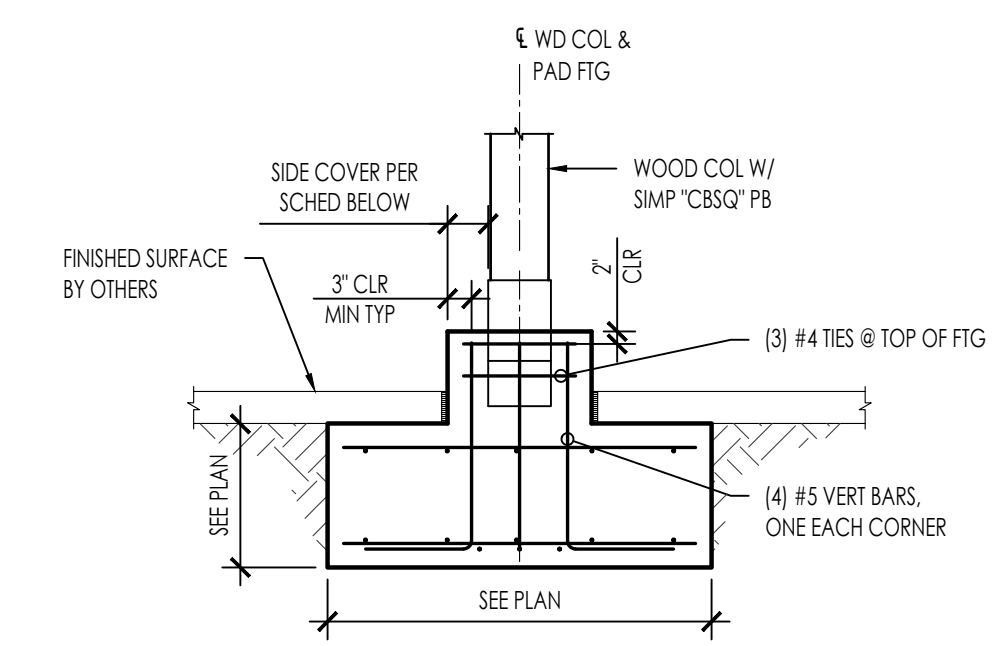
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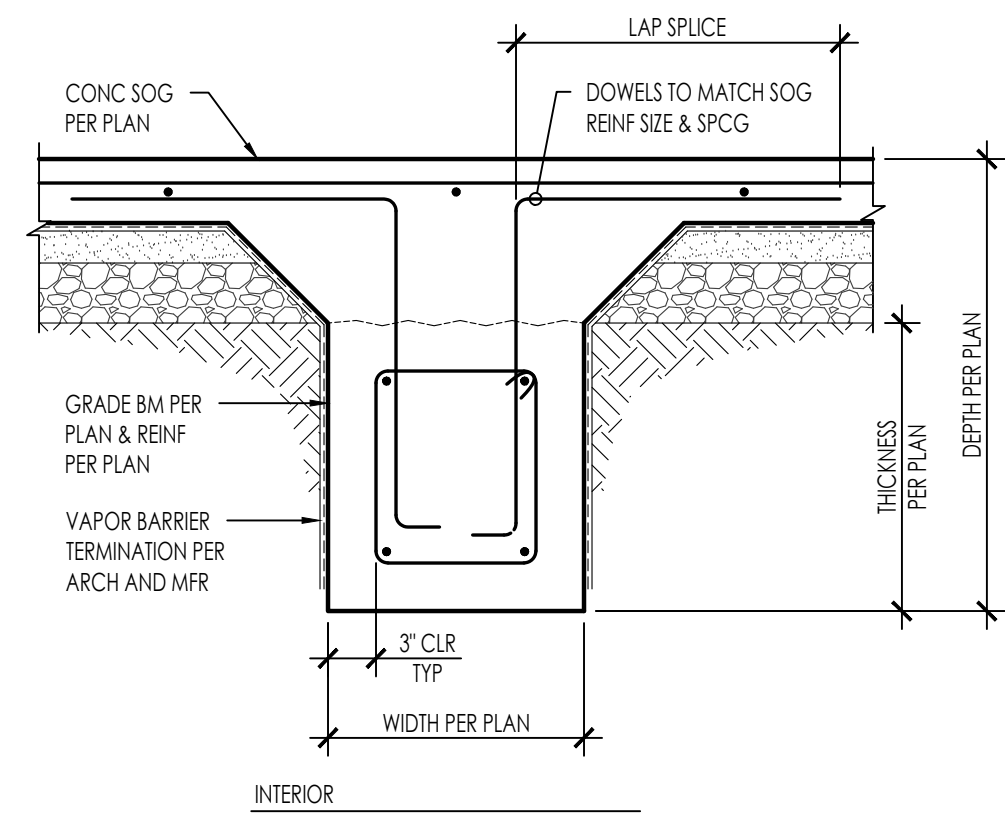
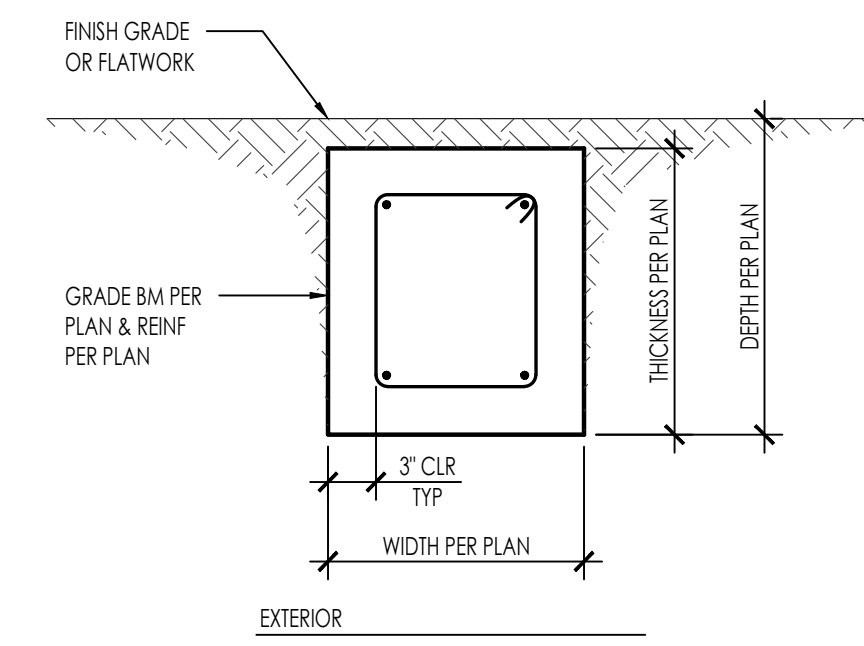
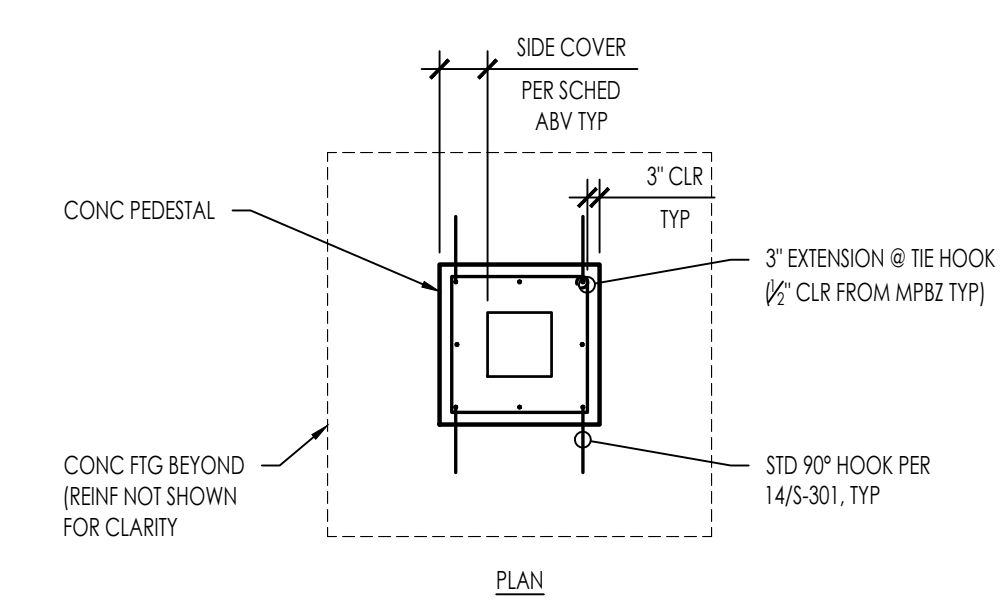
51

41 SPREAD FOOTING @ BEARING WALL POST

11



POST SIZE	MIN. SIDE COVER
4x4	0'-3"
6x6	0'-3"
8x8	0'-3"



52

42

32

53

43

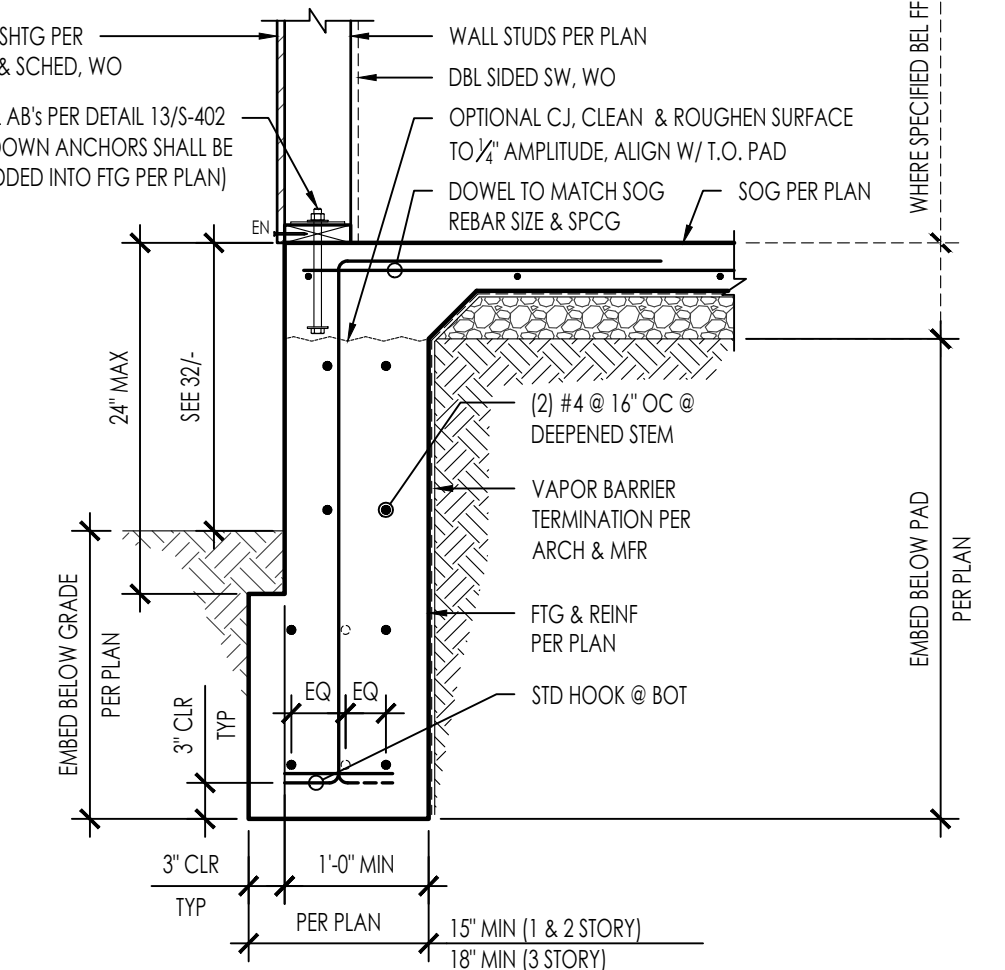
33

PORCH PAD FOOTING

1/2" = 1'-0"

GRADE BEAM

13



54

44

34

DEEPEND EXTERIOR FOOTING

3/4" = 1'-0"

CONSTRUCTION DOCUMENTS

**MONO COUNTY ADU  
PROTOTYPES**  
MONO COUNTY  
CONCRETE DETAILS

NO.	REVISION	DATE
△		
△		
△		
△		
△		

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DRAWN BY  
A. LOPEZ

CHECKED BY  
M. DOREMUS

DATE  
AUGUST 18, 2022

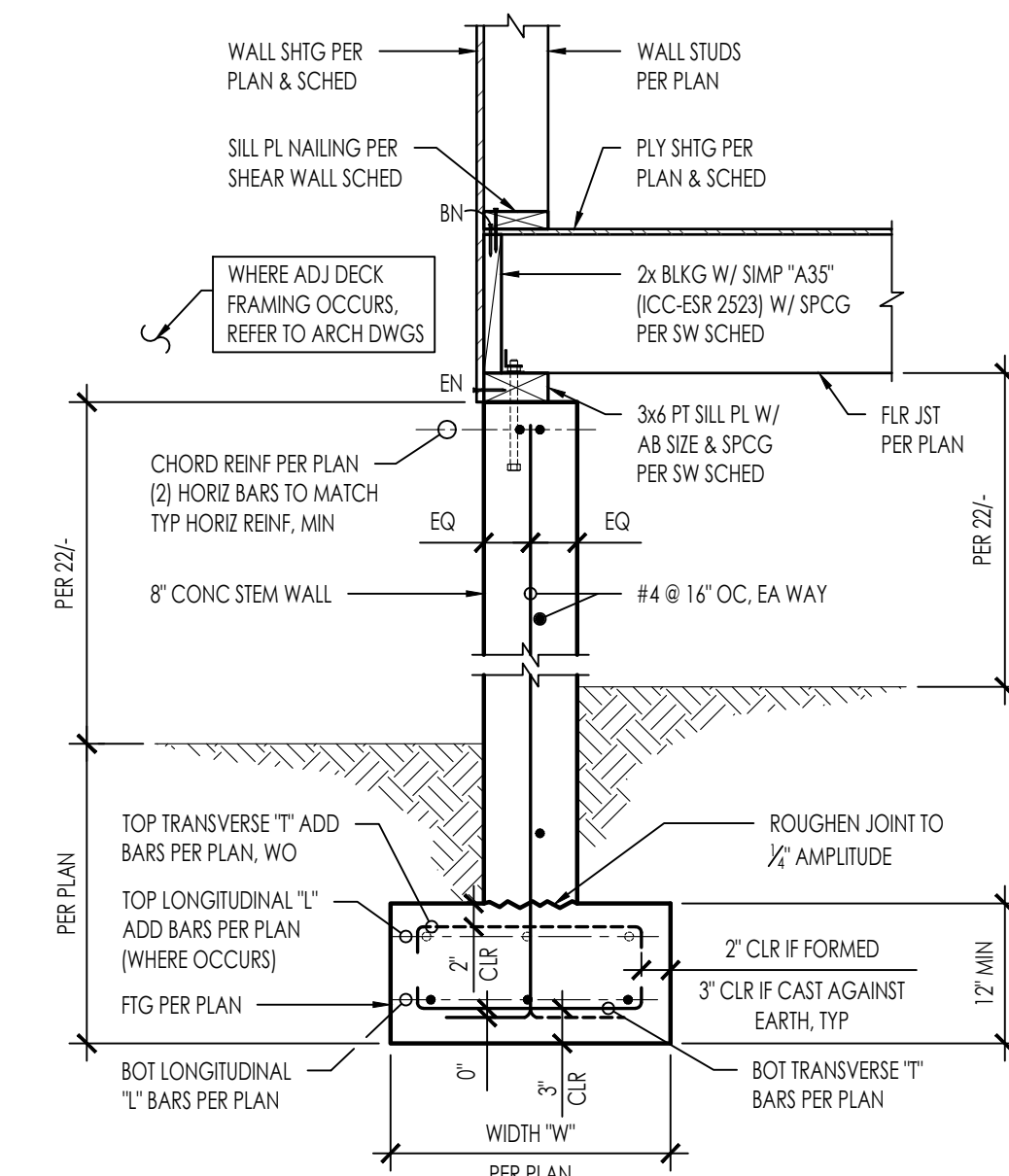
PROJECT NUMBER  
2340-01-CU21

SHEET

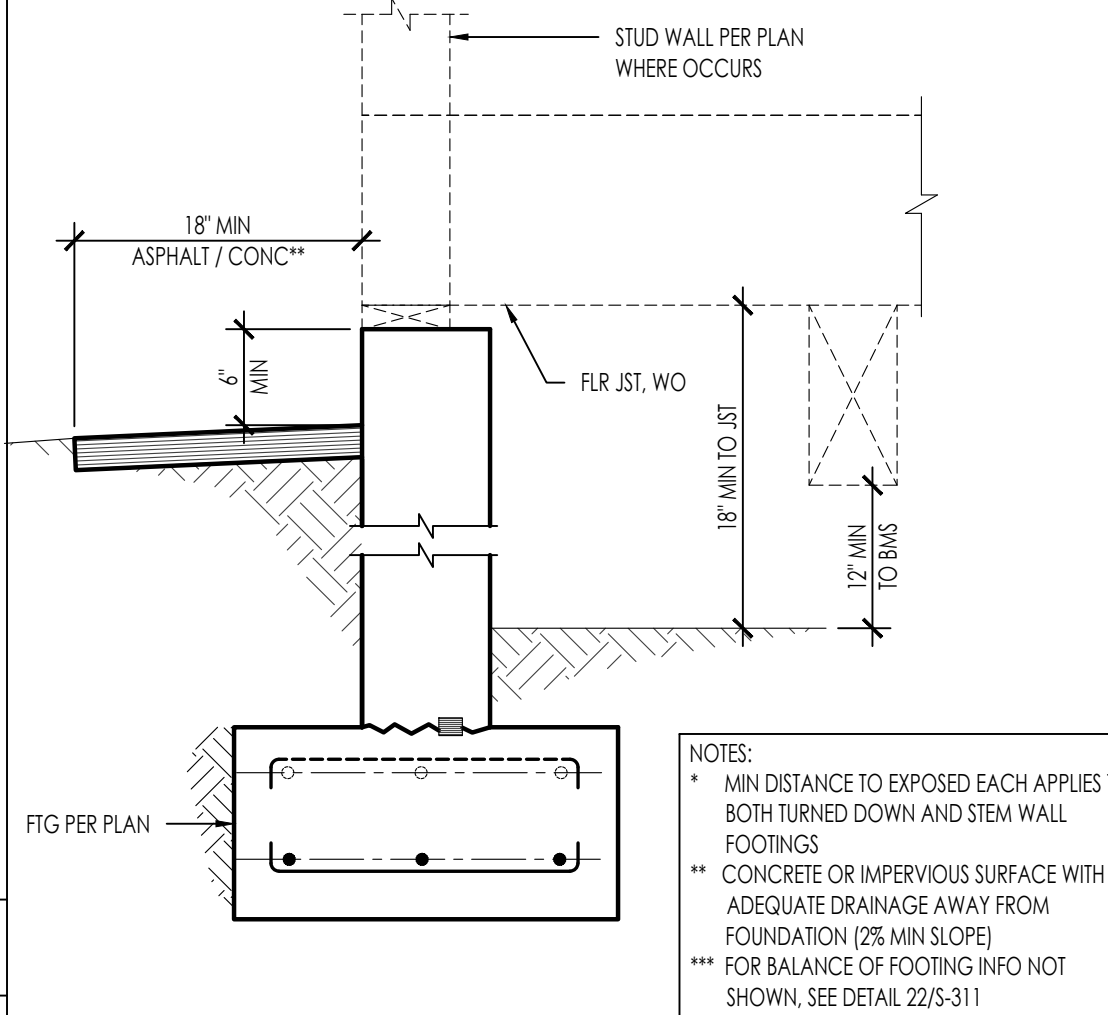
**S-312**

NO.	REVISION	DATE
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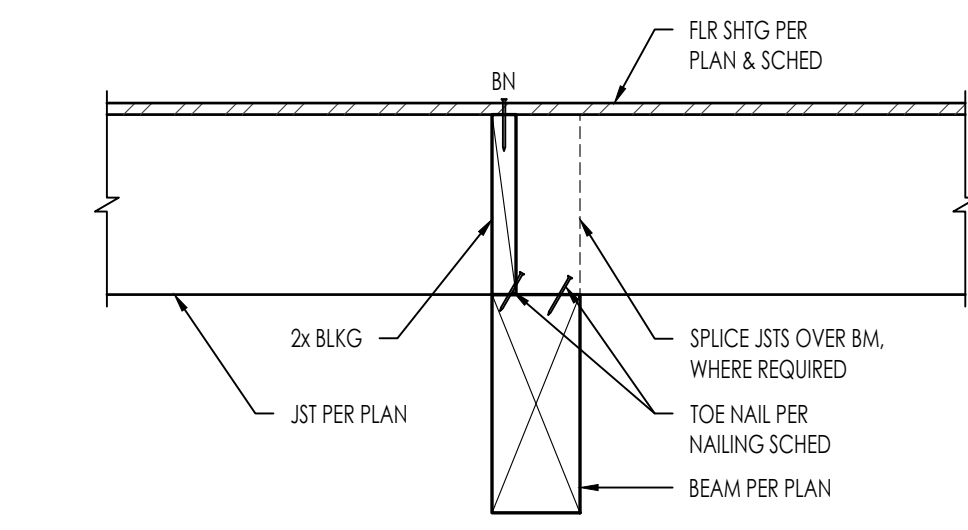
PROJECT MANAGER J. MEADOWS	
DRAWN BY A. LOPEZ	CHECKED BY M. DOREMUS
DATE AUGUST 18, 2022	
PROJECT NUMBER 2340-01-CU21	
SHEET	



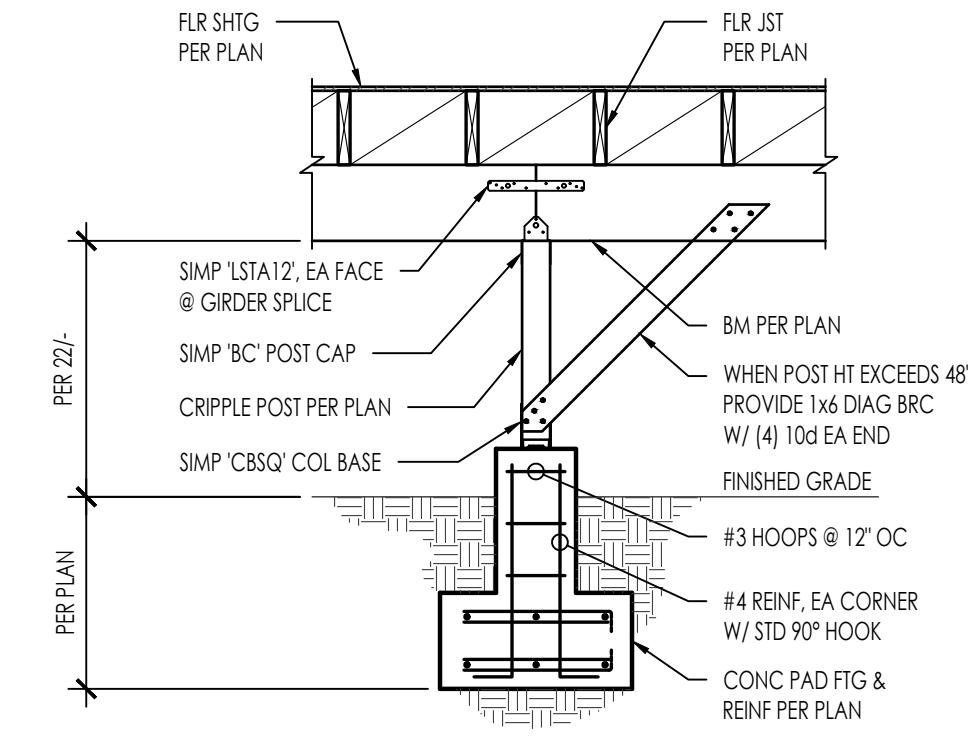
CONC WALL FOUNDATION 3/4" = 1'-0" 12



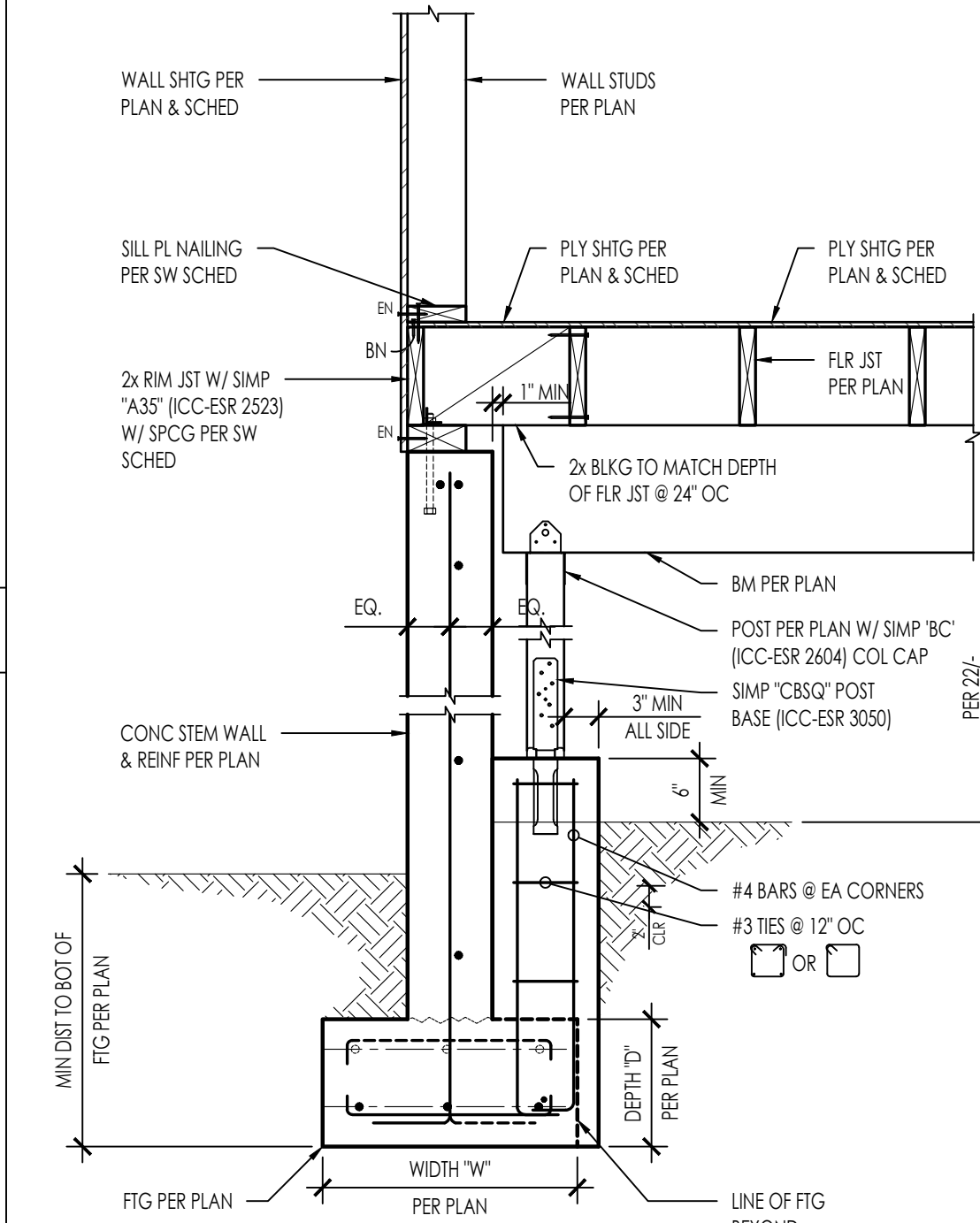
MIN DISTANCE FROM GRADE TO WOOD FRAMING 1/2" = 1'-0" 22



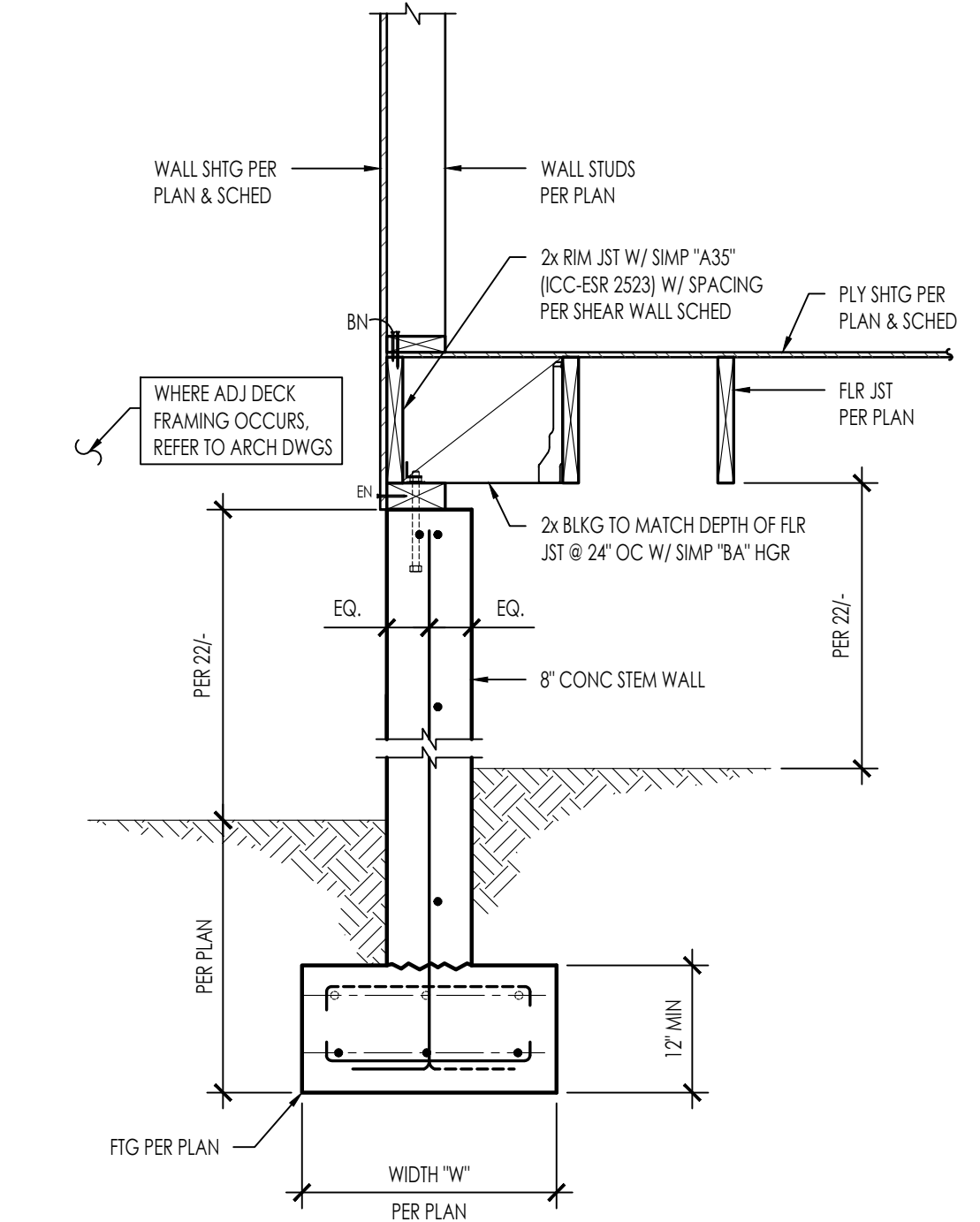
DROPPED BEAM @ PERP JOIST 1" = 1'-0" 31



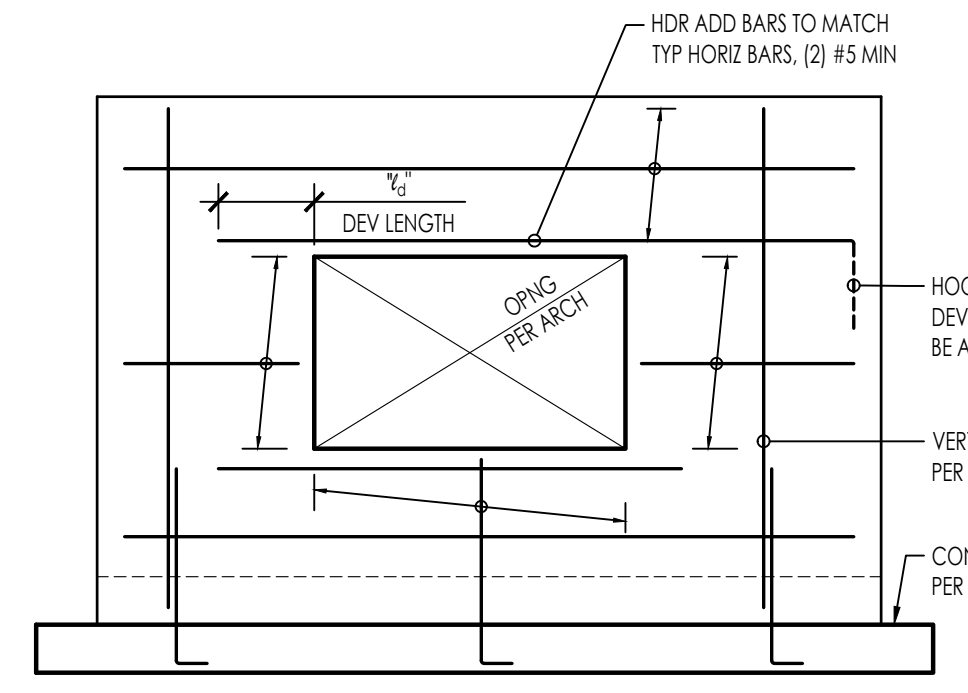
PIER FOOTING 1/2" = 1'-0" 32



CONC WALL FOOTING @ OPENING NTS 33



CONC WALL FOUNDATION 3/4" = 1'-0" 14



CONC WALL FOOTING @ OPENING NTS 33

CONC WALL FOUNDATION 3/4" = 1'-0" 24

CONC WALL FOUNDATION 3/4" = 1'-0" 14

51 41

52 42

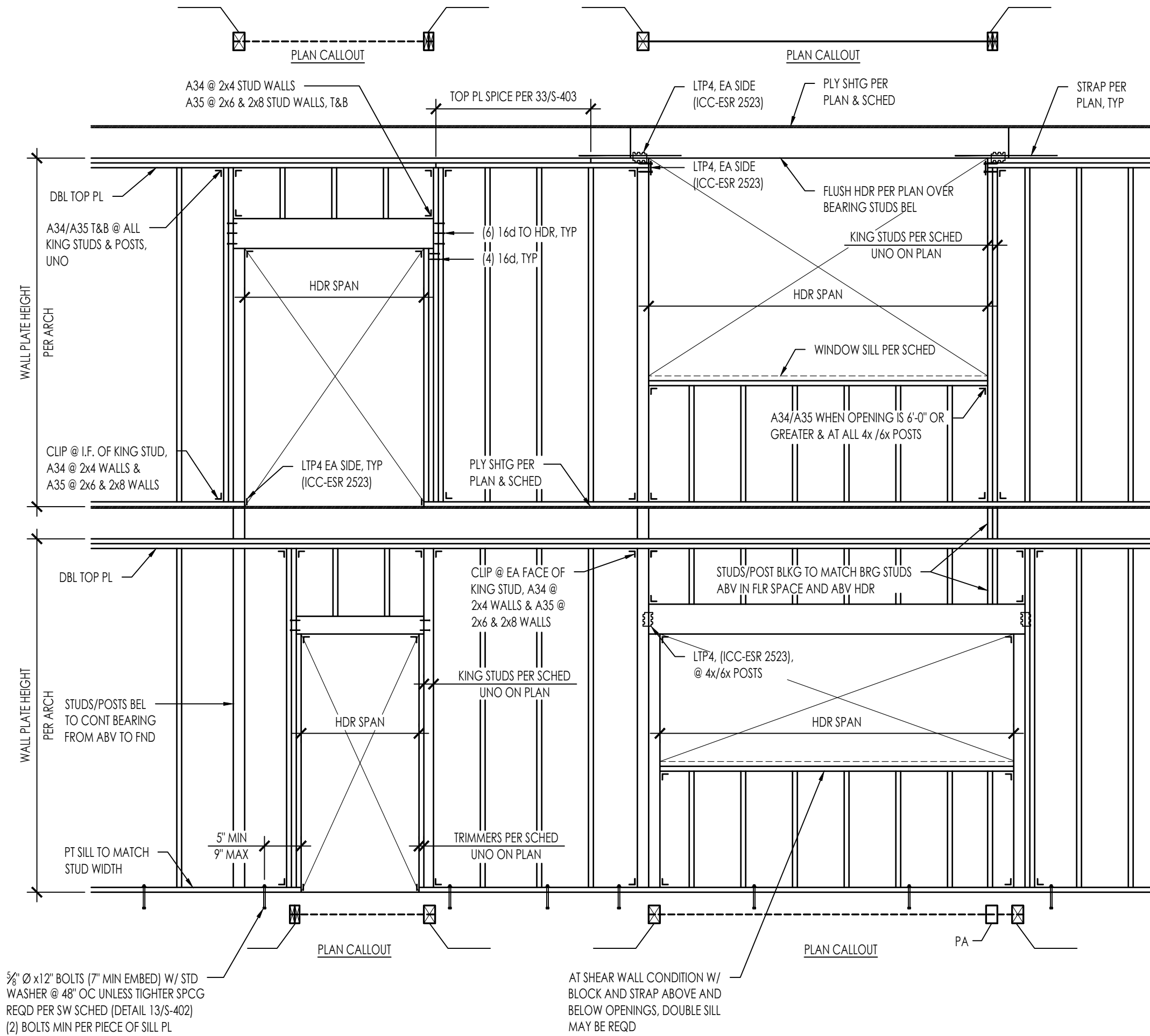
53 43

54 44

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SEE DETAIL FOR INFO NOT SHOWN 12

BEARING/SHEAR WALL HEADER SCHEDULE					
SNOW LOAD	6 INCH WALLS				
1-STORY	OPENING WIDTH	6x HEADER	SILL AT WINDOW	POST / TRIMMER	KING STUDS
<65 PSF	UP TO 3'-0"	6x4	2x	2x6	2x6
	3'-0" - 4'-0"	6x6	2x	2x6	2x6
	4'-0" - 5'-6"	6x8	(2) 2x	2x6	(2) 2x6
1-STORY	OPENING WIDTH	6x HEADER	SILL AT WINDOW	POST / TRIMMER	KING STUDS
66-80 PSF	UP TO 3'-0"	6x6	2x	2x6	2x6
	3'-0" - 4'-0"	6x8	2x	2x6	2x6
	4'-0" - 5'-6"	6x12	(2) 2x	(2) 2x6	(2) 2x6
1-STORY	OPENING WIDTH	6x HEADER	SILL AT WINDOW	POST / TRIMMER	KING STUDS
81-120 PSF	UP TO 3'-0"	6x6	2x	2x6	2x6
	3'-0" - 4'-0"	6x10	2x	2x6	2x6
	4'-0" - 5'-6"	6x12	(2) 2x	(2) 2x6	(2) 2x6
1-STORY	OPENING WIDTH	6x HEADER	SILL AT WINDOW	POST / TRIMMER	KING STUDS
220-235 PSF	UP TO 3'-0"	6x6	2x	(2) 2x6	2x6
	3'-0" - 4'-0"	6x10	2x	(2) 2x6	2x6
	4'-0" - 5'-6"	6x12	(2) 2x	4x6	(2) 2x6



- NOTES:**
- THIS DETAIL APPLIES AT ALL EXT WALLS AND INT LOAD BEARING WALLS AND ALSO APPLIES TO SHEAR WALL FRAMING.
    - FOR SHEAR WALLS SEE 3415-402 FOR ADD'L REQUIREMENTS.
    - FOR INTERIOR NON-BEARING PARTITIONS SEE DETAIL 431.
  - HEADERS, KING STUDS AND OTHER REFERENCES ON PLAN GOVERN OVER THIS TYPICAL SCHED/DETAILS.
  - PROVIDE A34 @ 4" WALLS & A35 @ 6" OR GREATER WALLS (ICC-ESR 2353).

FASTENING SCHEDULE PER 2019 CBC 2304.10.1		
CONNECTION	FASTENING	LOCATION
1. BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW	3-8d COMMON	EACH END, TOENAIL
2. BLOCKING BETWEEN RAFTERS OR TRUSSES NOT AT THE WALL TO TOP PLATE, TO RAFTER OR TRUSS	2-8d COMMON	EACH END, TOENAIL
3. FLAT BLOCKING TO TRUSS AND WEB FILER	2-16d COMMON	END NAIL
4. CEILING JOIST TO TOP PLATE	1-6d COMMON @ 6" OC	FACE NAIL
5. CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS	3-8d COMMON	EACH JOIST, TOENAIL
6. CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT)	3-16d COMMON	FACE NAIL
7. COLLAR TIE TO RAFTER	3-10d COMMON	FACE NAIL
8. RAFTER OR ROOF TRUSS TO PLATE	3-10d COMMON	TOENAIL <sup>3</sup>
9. ROOF RAFTER TO RIDGE VALLEY OR HIP RAFTER; OR ROOF RAFTER TO 2-INCH RIDGE BEAM	2-16d COMMON	END NAIL
10. STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS	3-10d COMMON	TOENAIL
11. BUILT-UP HEADER (2" TO 2" HEADER)	1-6d COMMON	1/4" OC EACH EDGE, FACE NAIL
12. CONTINUOUS HEADER TO STUD	4-10d COMMON	TOENAIL
13. TOP PLATE TO TOP PLATE	1-6d COMMON	1/4" OC FACE NAIL
14. TOP PLATE TO TOP PLATE, AT END JOINTS	8-16d COMMON	EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPURCE LENGTH EACH SIDE OF END JOINT)
15. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING	2-16d COMMON	1/4" OC FACE NAIL
16. STUD TO TOP OR BOTTOM PLATE	4-8d COMMON	TOENAIL
17. TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	2-16d COMMON	END NAIL
18. JOIST TO SILL, TOP PLATE, OR GIRDER	3-8d COMMON	FACE NAIL
20. RIM JOIST, BAND JOIST, OR BLOCKING TO TOP PLATE, SILL OR OTHER FRAMING BELOW	8d COMMON	TOENAIL
21. 1x6" SUBFLOOR OR LESS TO EACH JOIST	2-8d COMMON	FACE NAIL
22. 2" SUBFLOOR TO JOIST OR GIRDER	2-16d COMMON	FACE NAIL
23. BUILT-UP GIRDER AND BEAMS, 2" LUMBER LAYERS	20d COMMON (4" x 0.192)	3/2" OC FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDE
24. LEDGER STRIP SUPPORTING JOIST OR RAFTERS	3-16d COMMON	EACH JOIST OR RAFTER, FACE NAIL
26. JOIST TO BAND JOIST OR RIM JOIST	3-16d COMMON	END NAIL
27. BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS	2-8d COMMON	EACH END, TOENAIL

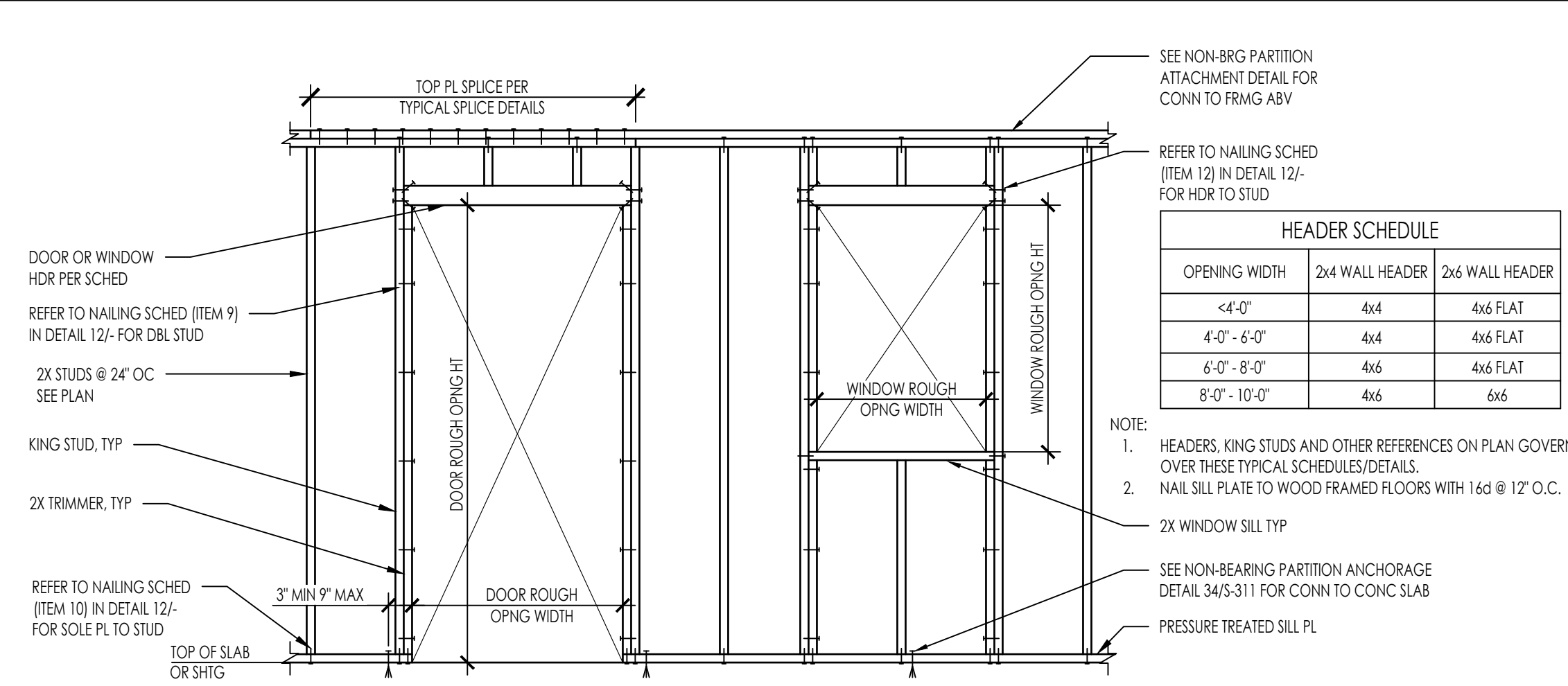
- NOTES:**
- THIS NAILING SCHEDULE SHALL ONLY BE USED IF CONDITION IS NOT OTHERWISE DETAILED OR SPECIFIED ON THE CONSTRUCTION DOCUMENTS. COMMON NAILS SHALL BE USED EXCEPT WHERE OTHERWISE STATED.
  - WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE AND THE CEILING JOIST IS FASTENED TO THE TOP PLATE IN ACCORDANCE WITH THIS SCHEDULE, THE NUMBER OF TOENAILS IN THE RAFTER SHALL BE PERMITTED TO BE REDUCED BY ONE NAIL.

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AGENCY

**EXTERIOR WALL / INTERIOR WALL BEARING WALL FRAMING**

2340-01-CU21 - 5401 - 32

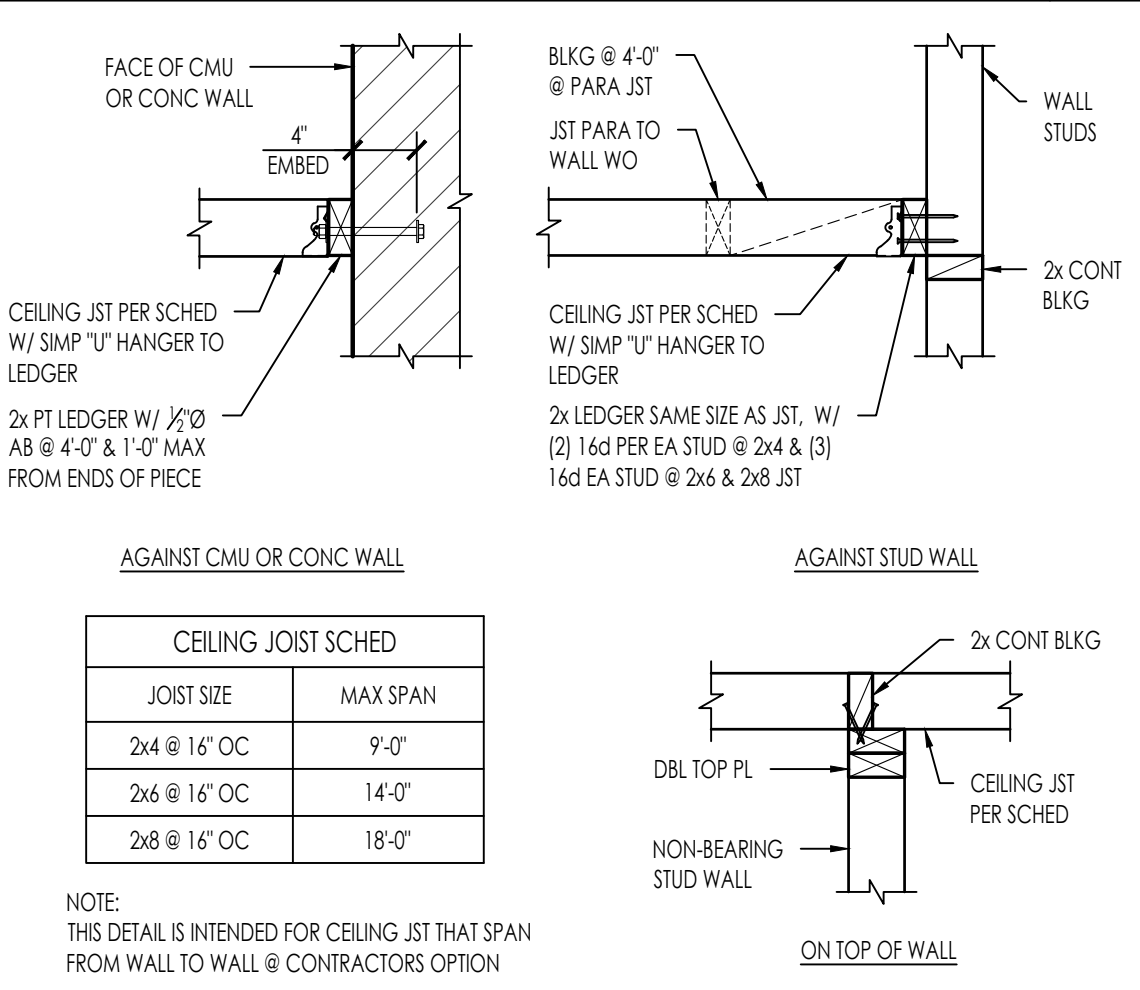


HEADER SCHEDULE		
OPENING WIDTH	2x4 WALL HEADER	2x6 WALL HEADER
<4'-0"	4x4	4x6 FLAT
4'-0" - 6'-0"	4x4	4x6 FLAT
6'-0" - 8'-0"	4x6	4x6 FLAT
8'-0" - 10'-0"	4x6	4x6

- NOTE:**
- HEADERS, KING STUDS AND OTHER REFERENCES ON PLAN GOVERN OVER THESE TYPICAL SCHEDULES/DETAILS.
  - NAIL SILL PLATE TO WOOD FRAMED FLOORS WITH 1-6d @ 12" O.C.
- SEE NON-BRG PARTITION ATTACHMENT DETAIL FOR CONN TO FRMG ABV  
REFER TO NAILING SCHED (ITEM 12) IN DETAIL 121- FOR HDR TO STUD  
2x WINDOW SILL TYP  
SEE NON-BEARING PARTITION ANCHORAGE DETAIL 3415-311 FOR CONN TO CONC SLAB  
PRESSURE TREATED SILL PL

**INTERIOR NON-BEARING PARTITION WALL FRAMING**

2340-01-CU21 - 5401 - 43



CEILING JOIST SCHED	
JOIST SIZE	MAX SPAN
2x4 @ 16" OC	9'-0"
2x6 @ 16" OC	14'-0"
2x8 @ 16" OC	18'-0"

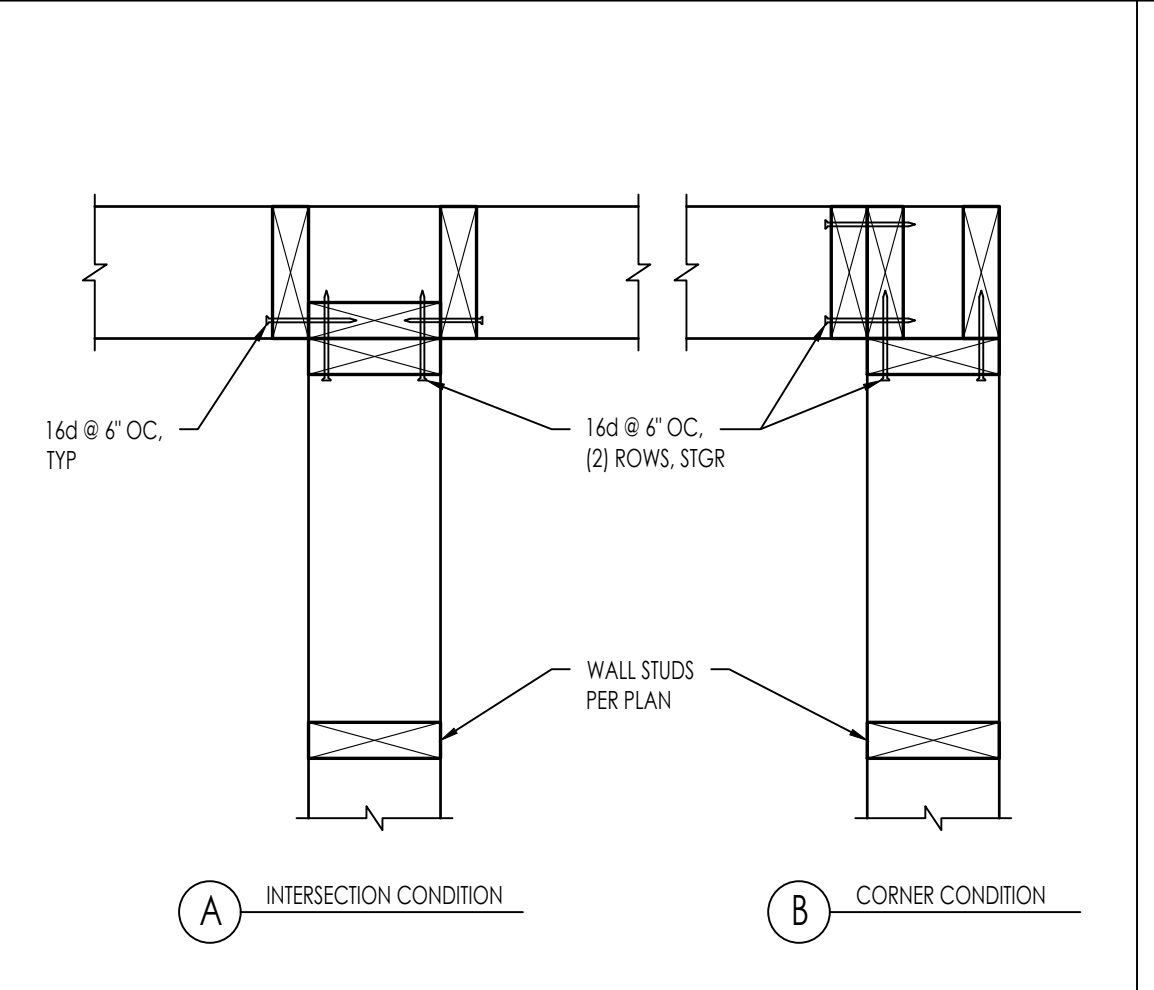
- NOTE:** THIS DETAIL IS INTENDED FOR CEILING JOIST THAT SPAN FROM WALL TO WALL @ CONTRACTORS OPTION

**CEILING JOIST SCHED & DETAILS**

2340-01-CU21 - 5401 - 33

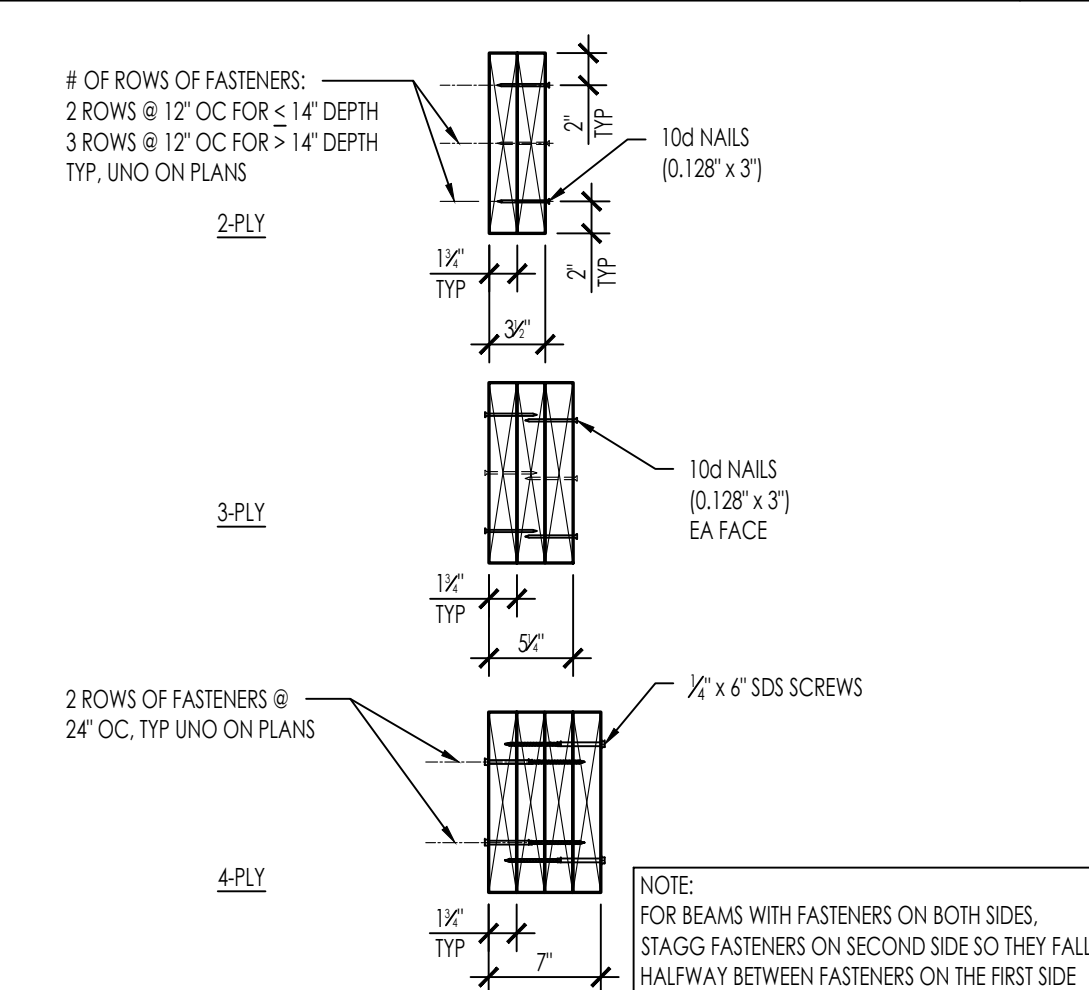
**NAILING SCHEDULE**

2340-01-CU21 - 5401 - 12



**TYPICAL WOOD STUD INTERSECTIONS**

2340-01-CU21 - 5401 - 23



**MULTI-PLY MEMBER CONNECTION**

2340-01-CU21 - 5401 - 13

**LEDGER DETAIL**

2340-01-CU21 - 5401 - 24

54

NTS

**ANCHOR BOLT AT WOOD STUD**

2340-01-CU21 - 5401 - 14

44

NTS

**LEDGER DETAIL**

2340-01-CU21 - 5401 - 24

34

NTS

**ANCHOR BOLT AT WOOD STUD**

2340-01-CU21 - 5401 - 14

24

NTS

**ANCHOR BOLT AT WOOD STUD**

2340-01-CU21 - 5401 - 14

14

NTS

**MONO COUNTY ADU  
PROTOTYPES  
MONO COUNTY**

**TYPICAL WOOD DETAILS**

NO.	REVISION	DATE

**CONSTRUCTION DOCUMENTS**

PROJECT MANAGER  
J. MEADOWS

DRAWN BY  
A. LOPEZ

CHECKED BY  
M. DOREMUS

DATE  
AUGUST 18, 2022

PROJECT NUMBER  
2340-01-CU21

SHEET  
S-401

CONSULTANT

AGENCY

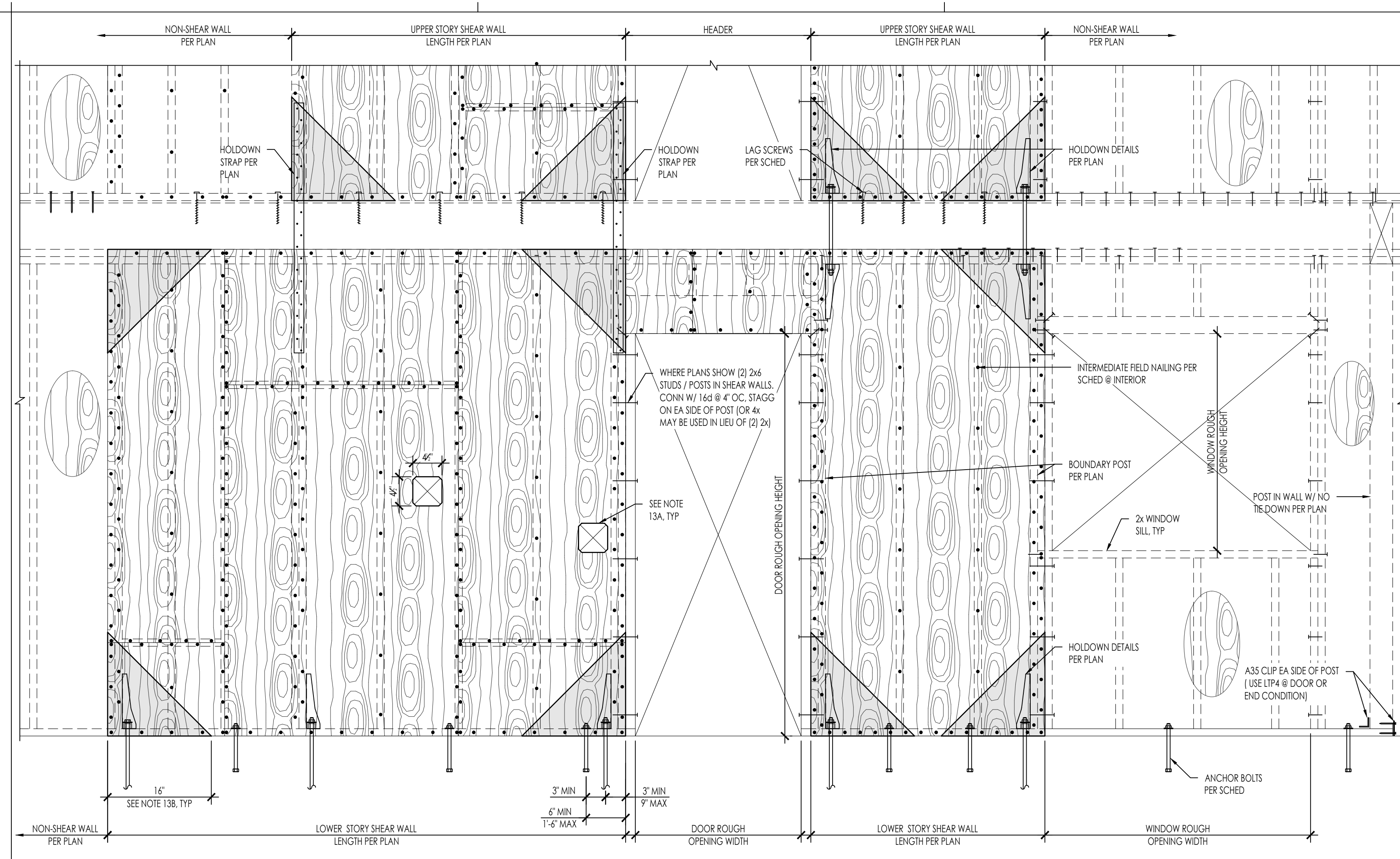
**MONO COUNTY ADU PROTOTYPES**  
 MONO COUNTY  
 TYPICAL WOOD DETAILS

CONSTRUCTION DOCUMENTS

NO.	REVISION	DATE

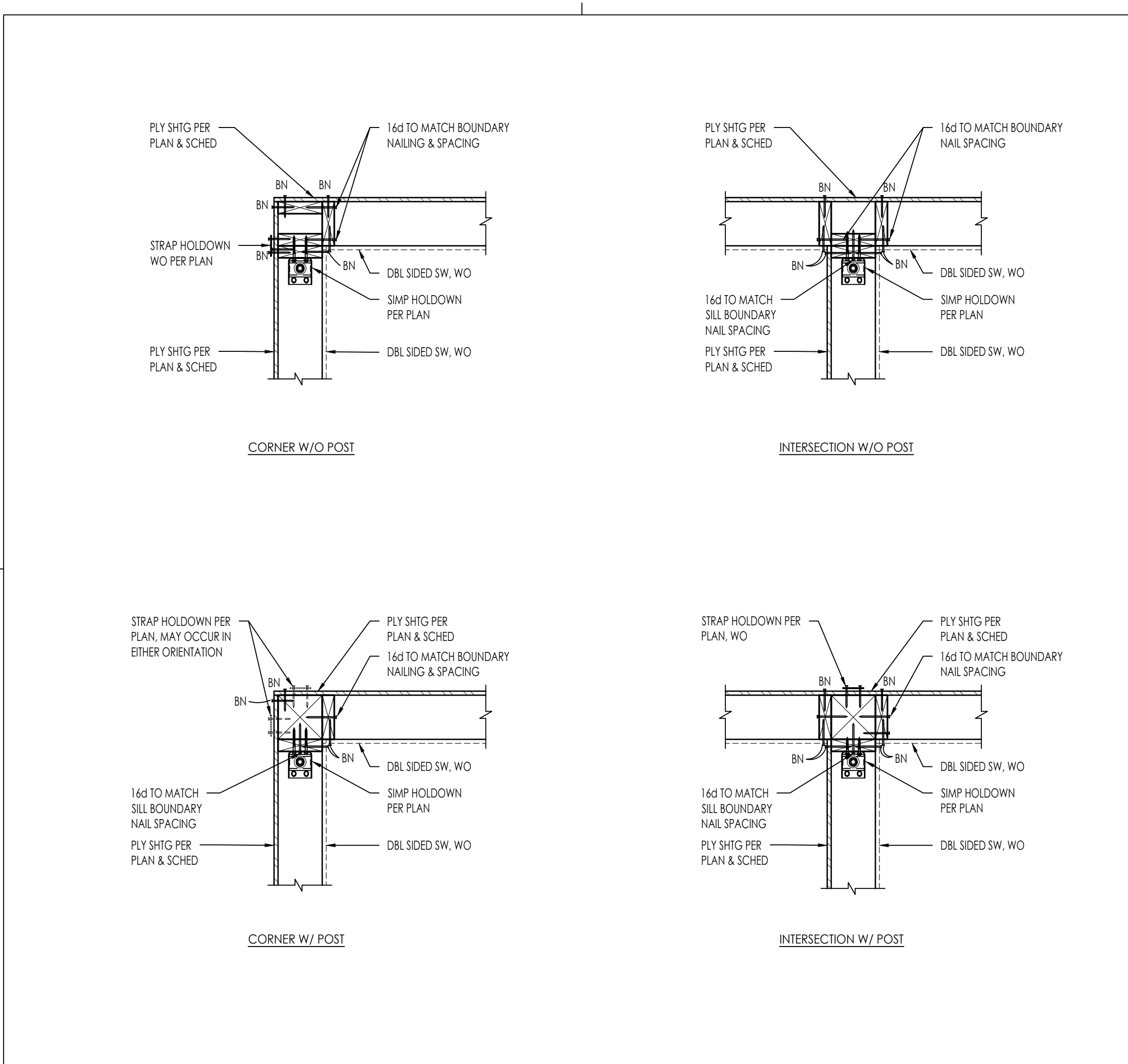
PROJECT MANAGER  
**J. MEADOWS**  
 DRAWN BY  
**A. LOPEZ**  
 CHECKED BY  
**M. DOREMUS**  
 DATE  
**AUGUST 18, 2022**  
 PROJECT NUMBER  
**2340-01-CU21**  
 SHEET

**S-402**

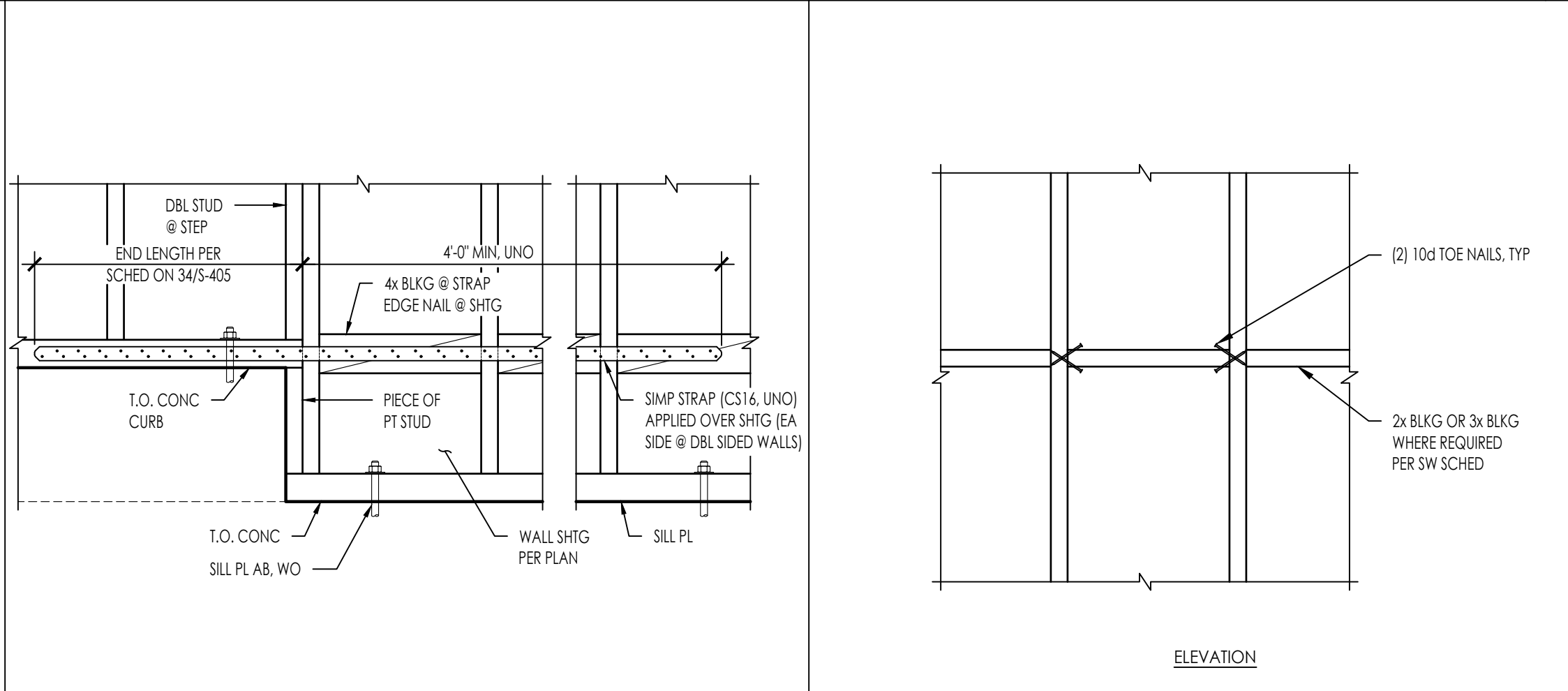


WALL SYMBOL	STRUCT SHEATHING	1,12 FRAMING SIZE	NAILING		SILL NAILING		A35s	ANCHOR BOLTING	CAPACITY PER 2015 AWC SDPWS
			EDGE	INTERMEDIATE SUPPORTS	NAILS / LAG SCREWS	SDS SCREWS OPTION			
△	15/32" STRUCT 1 PLYWOOD	2x	8d @ 6" OC	8d @ 12" OC	16d @ 6" OC	12" OC	24" OC	5/8" DIA @ 48" OC	280 PLF
△	15/32" STRUCT 1 PLYWOOD	3x	10d @ 6" OC	10d @ 12" OC	5/8" LAG SCREWS @ 16" OC	12" OC	16" OC	5/8" DIA @ 48" OC	340 PLF
△	15/32" STRUCT 1 PLYWOOD	3x	10d @ 4" OC	10d @ 12" OC	5/8" LAG SCREWS @ 16" OC	8" OC	12" OC	5/8" DIA @ 32" OC	510 PLF
△	15/32" STRUCT 1 PLYWOOD	3x	10d @ 3" OC	10d @ 12" OC	5/8" LAG SCREWS @ 16" OC	6" OC	8" OC	5/8" DIA @ 32" OC	665 PLF
△	15/32" STRUCT 1 PLYWOOD	3x	10d @ 2" OC	10d @ 12" OC	5/8" LAG SCREWS @ 8" OC	4" OC	8" OC	5/8" DIA @ 24" OC	860 PLF
△	15/32" STRUCT 1 PLYWOOD (EACH FACE OF WALL)	3x	10d @ 4" OC	10d @ 12" OC	5/8" LAG SCREWS @ 8" OC	(2) @ 8" OC *	6" OC	5/8" DIA @ 16" OC	1020 PLF
△	15/32" STRUCT 1 PLYWOOD (EACH FACE OF WALL)	3x	10d @ 3" OC	10d @ 8" OC	5/8" LAG SCREWS @ 8" OC	(2) @ 6" OC *	A34 @ 4" OC	5/8" DIA @ 16" OC	1330 PLF
△	15/32" STRUCT 1 PLYWOOD (EACH FACE OF WALL)	3x	10d @ 2" OC	10d @ 6" OC	5/8" LAG SCREWS @ 6" OC	(2) @ 4" OC *	LTP4 @ 4" OC	5/8" DIA @ 8" OC	1740 PLF

- NOTES:
- ALL PLYWOOD SHALL BE 5 PLY MINIMUM WITH A SPAN RATING OF 32/16 AND ALL PANEL EDGES SHALL BE BLOCKED. PROVIDE 1/8" GAP AT ALL PANEL JOINTS.
  - ALL NAILS SHALL BE COMMON NAILS.
  - PROVIDE E.N. AT ALL END STUDS, STUDS/POSTS WITH HOLD-DOWNS OR THE DOWN STRAPS, SILL PLATES AND TOP PLATES.
  - WHERE 10d NAILS ARE 3 INCHES ON CENTER OR LESS, NAILS SHALL BE STAGGERED.
  - NAILS SHALL BE 1/2" INCH MINIMUM FROM PLYWOOD PANEL EDGE AND 3/8" INCH MINIMUM FROM CONNECTING MEMBER EDGE WHERE SHEAR EXCEEDS 300 PLF.
  - USE 3x FRAMING AT BOTTOM SILL PLATES, BLOCKING AND ALL STUDS AT ADJACENT PANEL EDGES WHERE SHEAR EXCEEDS 300 PLF. STRUCTURALLY ACCEPTABLE TO USE (2) 2x INSTEAD OF 3x FRAMING AT BOTTOM SILL PLATES.
  - WHERE SILL SHEAR TRANSFER IS THROUGH LAG SCREWS, SILL PLATE SHALL BE A MINIMUM OF 2 1/2" THICK.
  - LAG SCREWS SHALL BE 6 INCHES LONG AND HOLES ARE TO BE PRE-DRILLED AS TO NOT SPLIT BLOCKING/RIM.
  - SEE ELEVATION ABOVE FOR TYPICAL CONSTRUCTION.
  - REFER TO PLATE WASHER DETAIL FOR REQUIREMENTS.
  - LENGTHY ANCHOR BOLTS AS REQUIRED FOR EMBEDMENT AND SILL PLATE THICKNESS.
  - ORIENTED STRAND BOARD (OSB) MAY BE SUBSTITUTED FOR PLYWOOD NOTED ABOVE PROVIDED IT IS RATED BY APA'S PERFORMANCE STANDARD RATING AND IS OF THE SAME NUMBER OF LAYERS AS PLYWOOD PLY INDICATED.
  - LIMITATIONS OF MECHANICAL PENETRATIONS IN SHEAR WALLS:
    - A. 4 1/2" MAX PENETRATION.
    - B. NO CUTS OR HOLES IN SHEATHING WITHIN 16" OF CORNERS. SQUARE PENETRATIONS SHALL RADIUS EDGES. DO NOT OVER CUT HOLE WITH SAW.
  - ASSUMES A 1 1/4" MIN LSI RIM BOARD. FASTENER EDGE DIST IS 5/8" MIN & 6" END DISTANCE MIN. 2" MIN PENETRATION INTO RIM BOARD.
  - \* WALL W/ DOUBLE SIDED PLYWOOD REQUIRE (2) RIM BOARDS.
  - SIMPSON LTP4 CLIP SHALL BE INSTALLED IN A HORIZONTAL ORIENTATION. IF CLIP IS INSTALLED OVER THE SHEATHING, 0.131" x 2 1/2" NAILS SHALL BE USED.

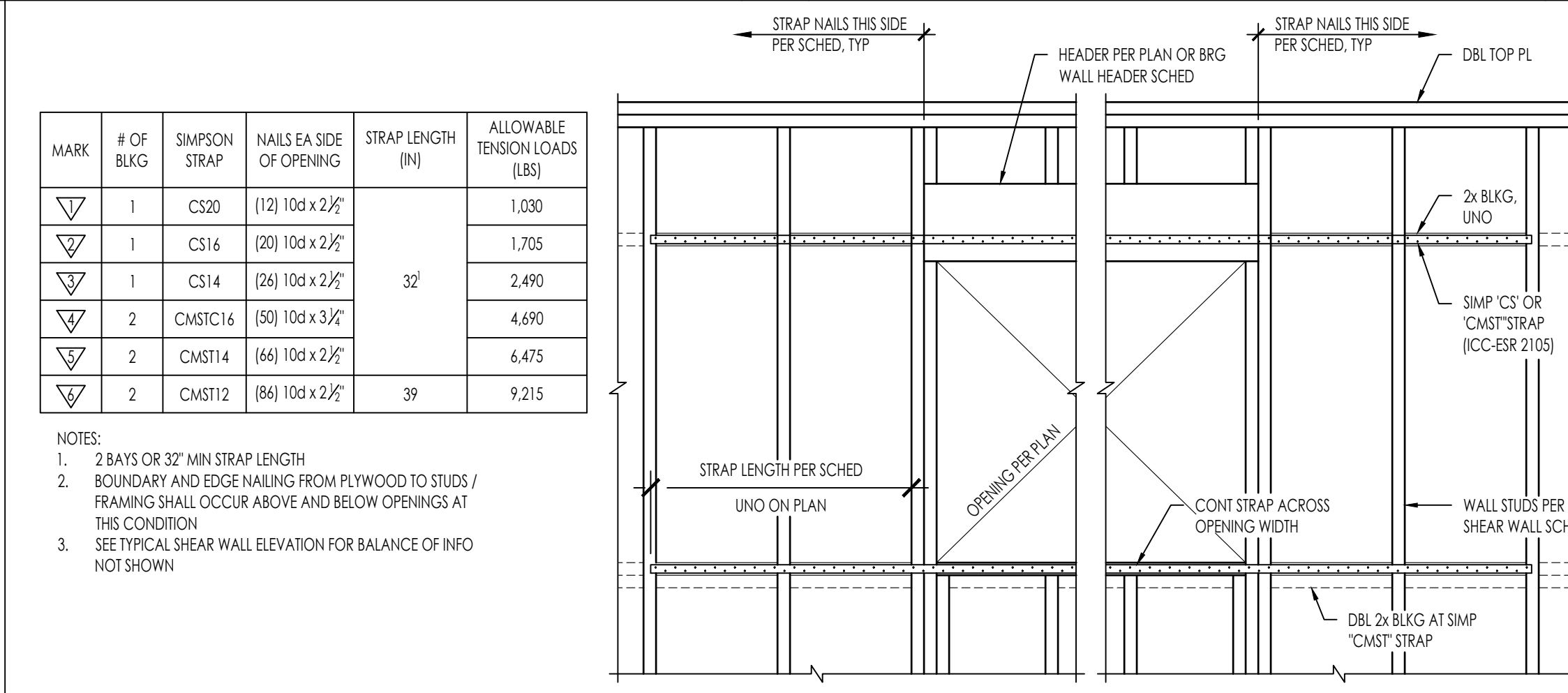


**SHEAR WALL INTERSECTION** NTS 42

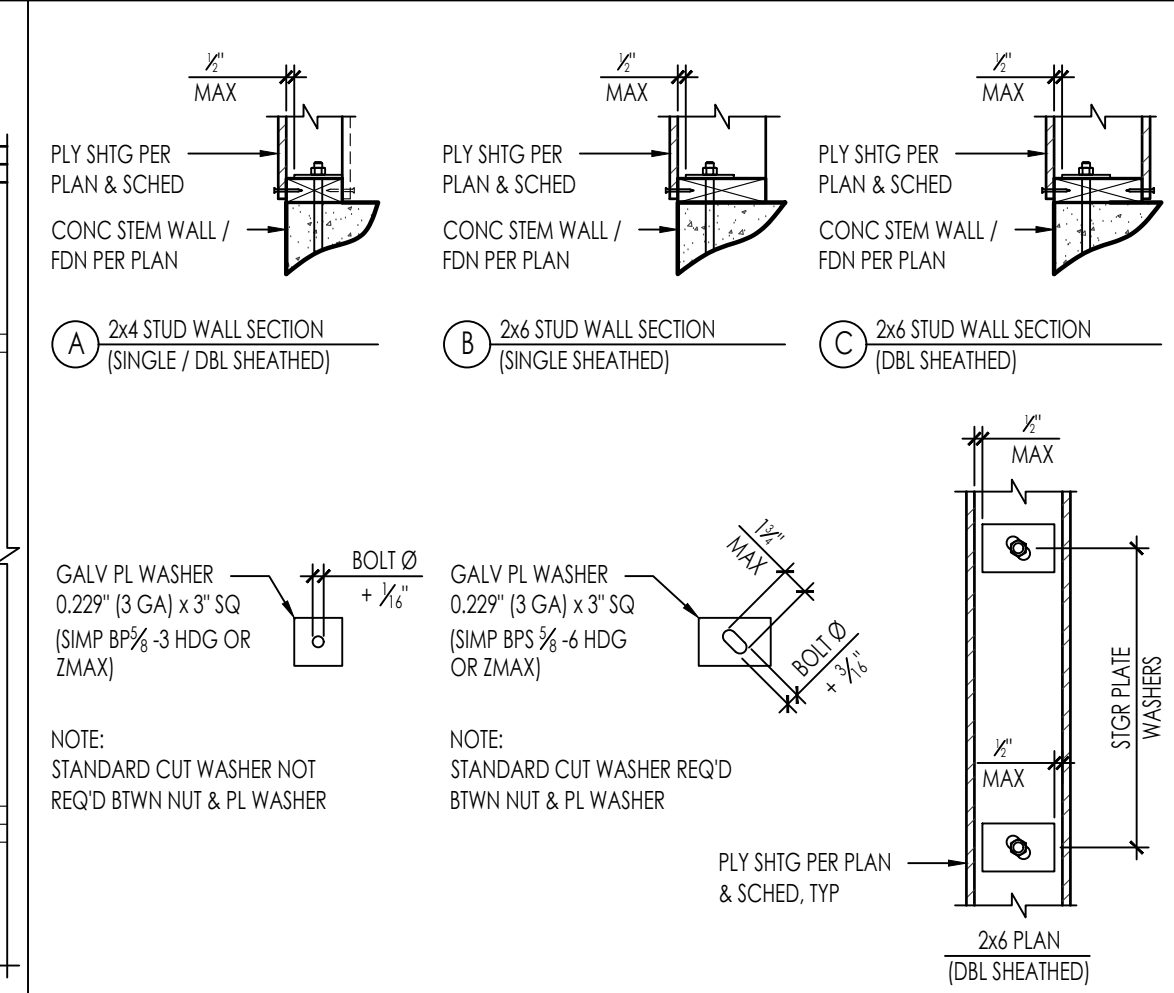


**STRAP AT STEP IN SHEAR WALL SILL PLATE** NTS 53 **TYPICAL BLOCKING DETAIL** NTS 43

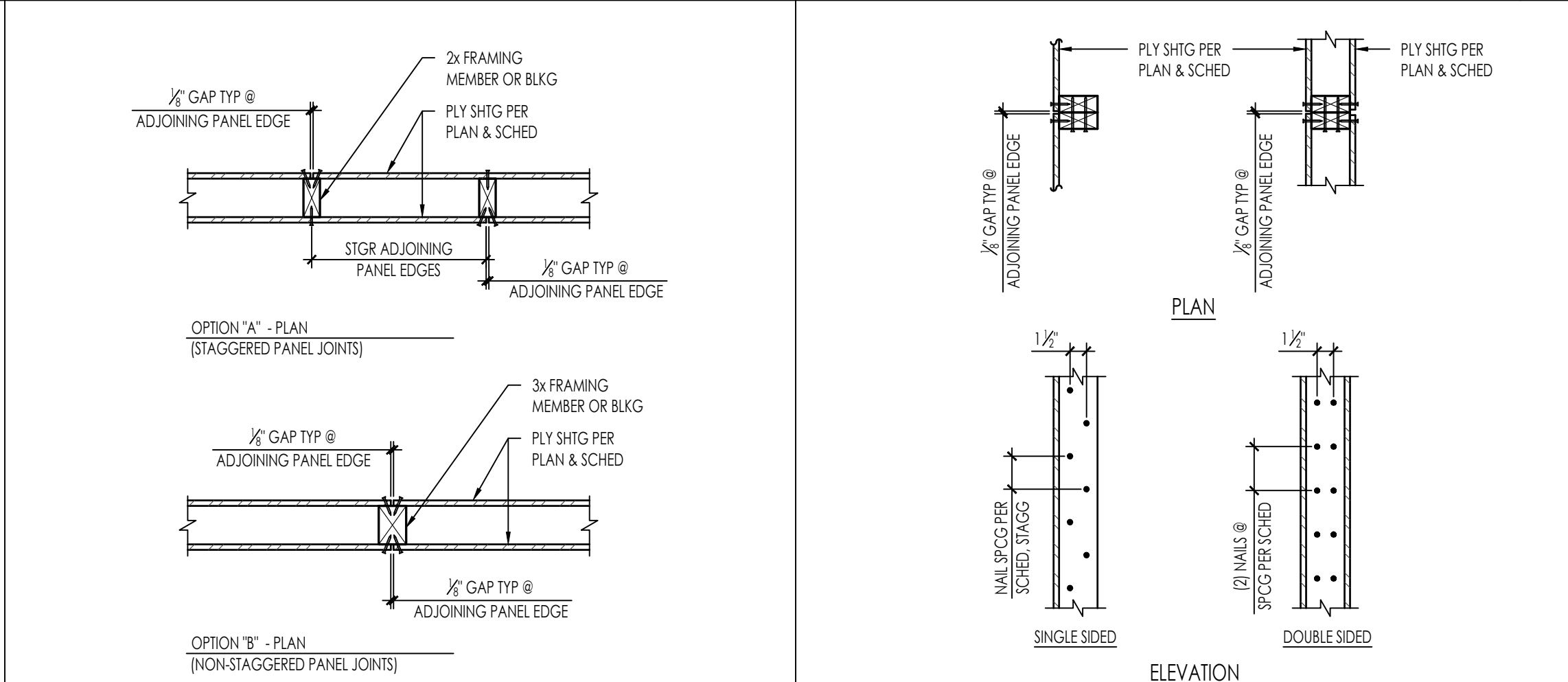
**TYPICAL SHEAR WALL ELEVATION AND SCHEDULE** NTS 13



**FORCE TRANSFER AROUND OPENINGS** NTS 44

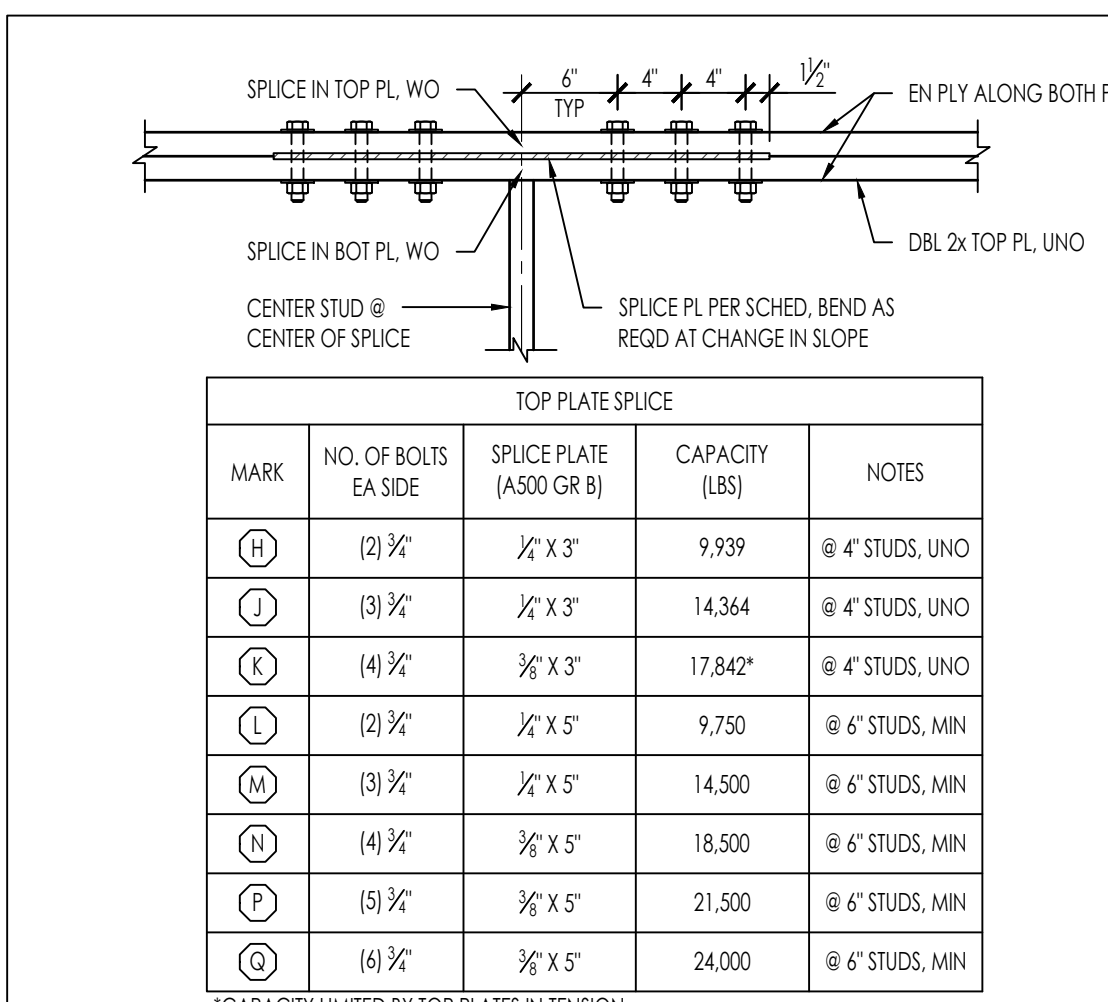


**PLATE WASHER DETAIL** NTS 34



**DOUBLE SIDED SHEAR WALL** NTS 24 **2x STUD NAILING @ ADJOINING PANEL EDGES** NTS 14

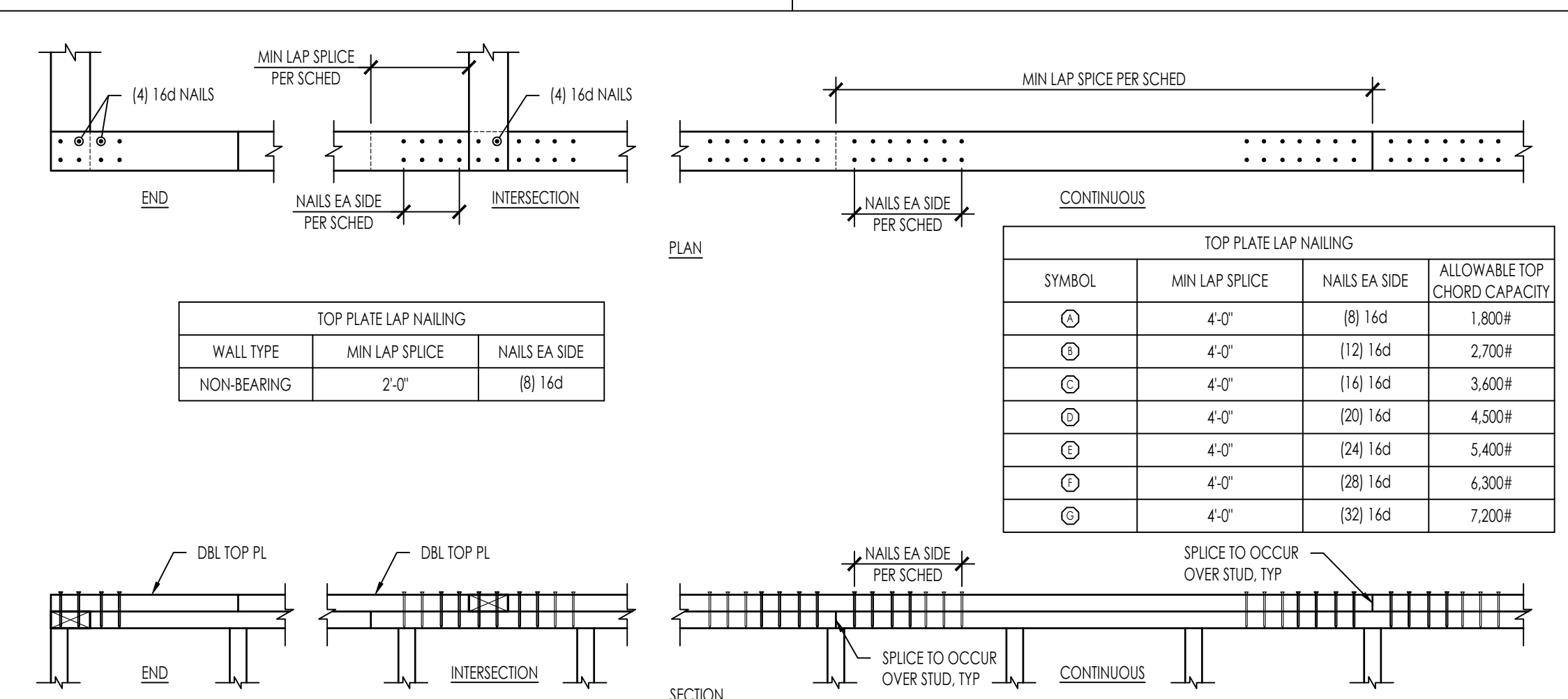
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TOP PLATE SPICE				
MARK	NO. OF BOLTS EA SIDE	SPICE PLATE (A500 GR B)	CAPACITY (LBS)	NOTES
(H)	(2) 3/4"	1/2" X 3"	9,939	@ 4" STUDS, UNO
(J)	(3) 3/4"	1/2" X 3"	14,364	@ 4" STUDS, UNO
(K)	(4) 3/4"	1/2" X 3"	17,842*	@ 4" STUDS, UNO
(L)	(2) 3/4"	1/2" X 5"	9,750	@ 6" STUDS, MIN
(M)	(3) 3/4"	1/2" X 5"	14,500	@ 6" STUDS, MIN
(N)	(4) 3/4"	1/2" X 5"	18,500	@ 6" STUDS, MIN
(P)	(5) 3/4"	1/2" X 5"	21,500	@ 6" STUDS, MIN
(Q)	(6) 3/4"	1/2" X 5"	24,000	@ 6" STUDS, MIN

\*CAPACITY LIMITED BY TOP PLATES IN TENSION

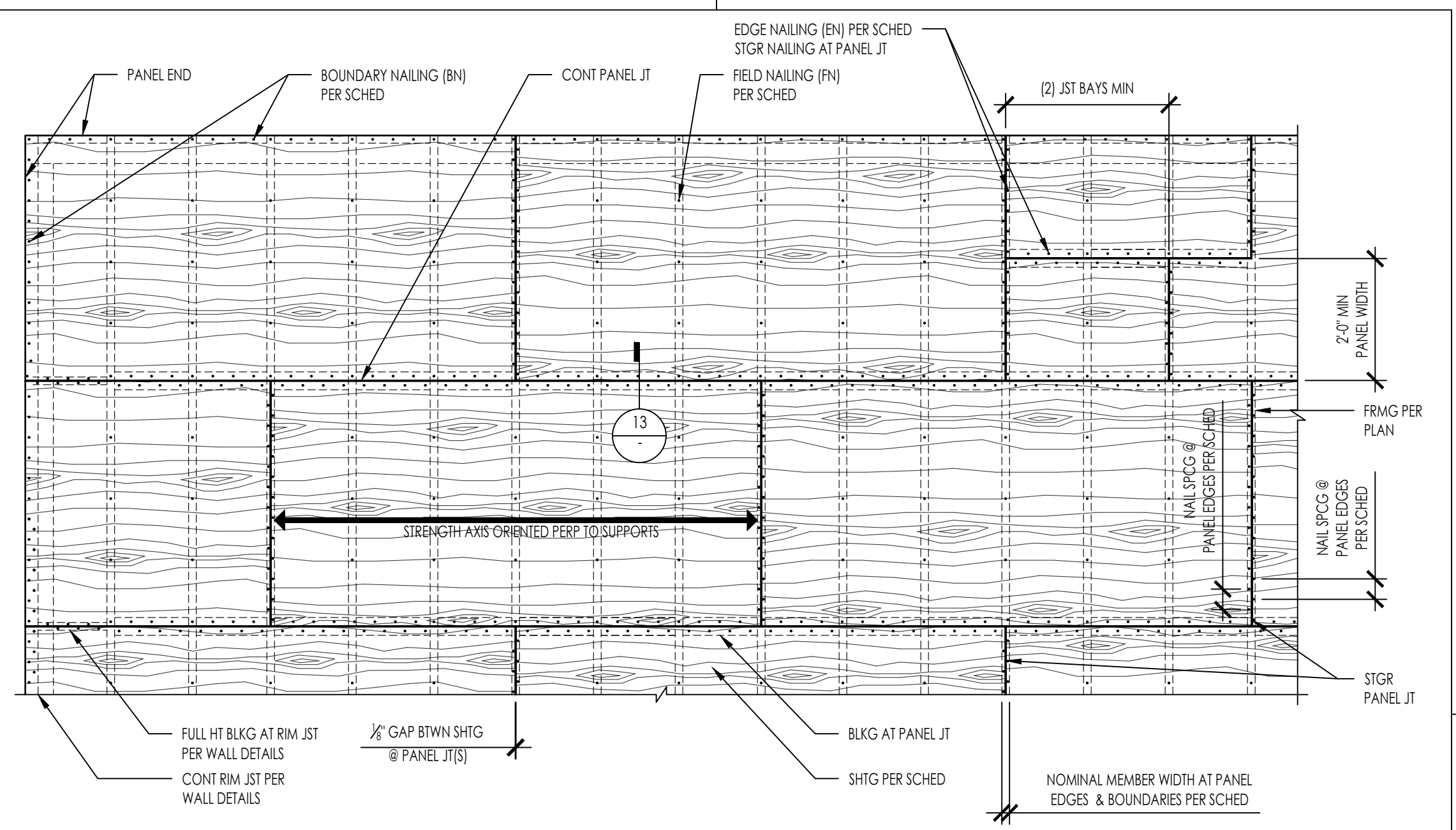
TOP PLATE SPICE W/ STEEL TIE PLATE  
 2340-01-CU21 - 5403 - 31



TOP PLATE LAP NAILING		
WALL TYPE	MIN LAP SPICE	NAILS EA SIDE
NON-BEARING	2'-0"	(8) 16d

TOP PLATE LAP NAILING			
SYMBOL	MIN LAP SPICE	NAILS EA SIDE	ALLOWABLE TOP CHORD CAPACITY
⊙	4'-0"	(8) 16d	1,800#
⊖	4'-0"	(12) 16d	2,700#
⊕	4'-0"	(16) 16d	3,600#
⊗	4'-0"	(20) 16d	4,500#
⦶	4'-0"	(24) 16d	5,400#
⦸	4'-0"	(28) 16d	6,300#
⦺	4'-0"	(32) 16d	7,200#

DBL TOP PLATE SPICE NAILING  
 2340-01-CU21 - 5403 - 31



DIAPHRAGM SCHEDULE												
TYPE	LOCATION	SHEATHING THICKNESS	SHEATHING GRADE	SPAN RATING	BLOCKING	NAILS	BOUNDARY NAILING (BN)	EDGE NAILING AT CONT. PANEL EDGES (EN)	EDGE NAILING AT OTHER PANEL EDGES (EN)	FIELD NAILING (FN)	PANEL EDGE SUPPORT OR NOMINAL MEMBER WIDTH AT PANEL EDGES	LINES OF FASTENERS
A	ROOF	3/4"	SHEATHING	40 / 20	NO	10d	6	-	6	12	H-CLIPS	1
B	ROOF	3/4"	SHEATHING	40 / 20	YES	10d	6	6	6	12	T&G	1
C	ROOF	1"	SHEATHING	54 / 32	YES	10d	4	6	6	12	2x4 FLAT	1
D	FLOOR	2 3/4"	STURD-FLOOR	48 / 24	NO	10d	6	-	6	12	T&G	1

- NOTES:
- DIAPHRAGM SHALL BE GLUED TO FLOOR FRAMING PRIOR TO NAILING. REFER TO PROJECT GENERAL NOTES.
  - MINIMUM EDGE DISTANCE FOR NAILS SHALL BE 3/8" FROM SHEATHING EDGE AND 3/8" FROM LUMBER EDGE.
  - NAILS SHALL BE DRIVEN TIGHT TO TOP OF PLYWOOD SURFACE AND SHALL NOT PENETRATE THE TOP OF PLYWOOD MORE THAN COMMONLY EXPECTED WITH HAMMER DRIVEN NAILS.
  - WHERE H-CLIPS ARE SPECIFIED, THEY SHOULD BE INSTALLED AS FOLLOWS:
    - ONE H-CLIP SHALL BE PLACED BETWEEN ABUTTING PANELS AT A LOCATION MIDWAY BETWEEN EACH PAIR OF TRUSSES, RAFTERS OR JOISTS. HOWEVER, (2) H-CLIPS ARE REQUIRED BETWEEN SUPPORTS WHEN SPACED 48 INCHES ON CENTER.
    - USE THE SAME SIZE PANEL EDGE CLIP AS THE PANEL THICKNESS. H-CLIPS MUST FIT SNUGLY.
    - ABUTTING WOOD STRUCTURAL PANELS BE FITTED AS CLOSELY AS CLIPS PERMIT. OCCASIONAL MISFIT OF ABUTTING SHEETS MAY BE TOLERATED PROVIDING THAT GAPS DO NOT EXCEED MAXIMUM OPENING OF 1/8".

51

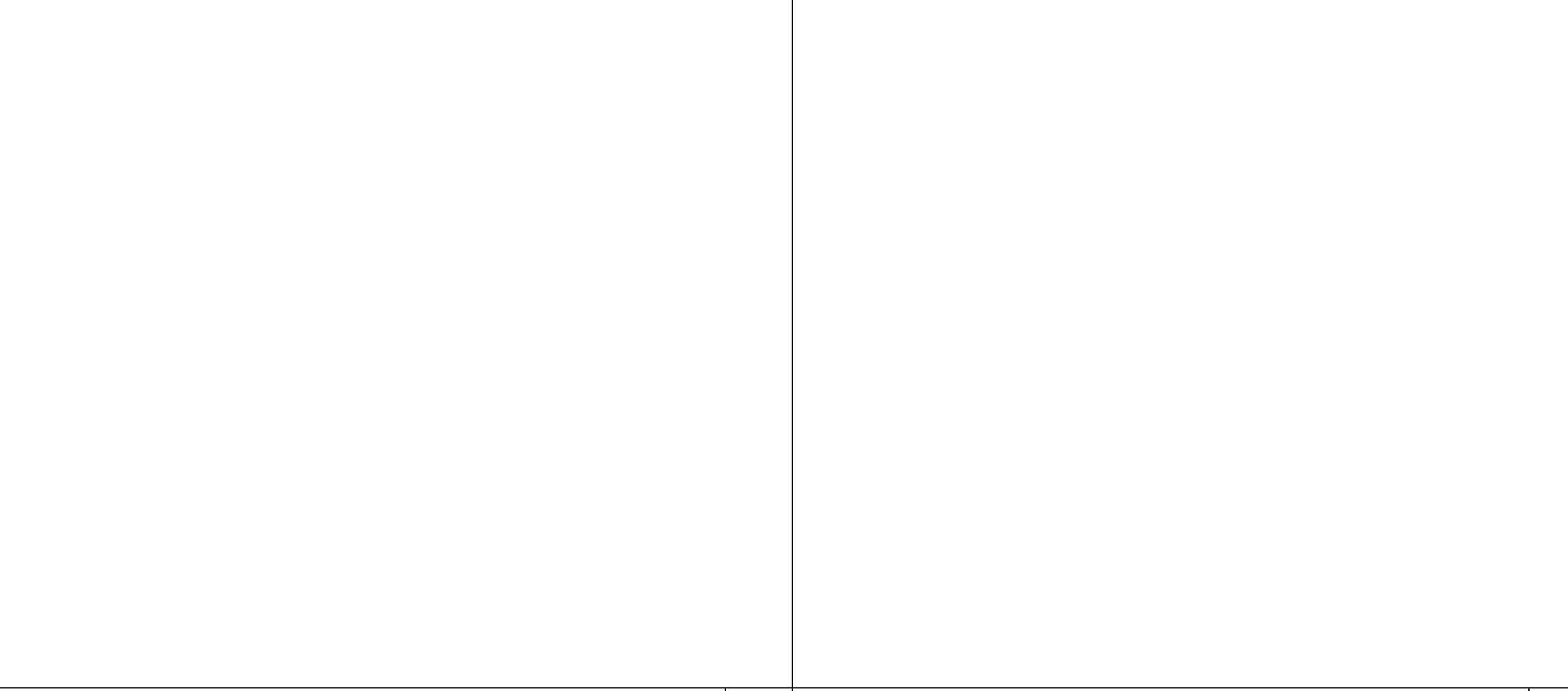
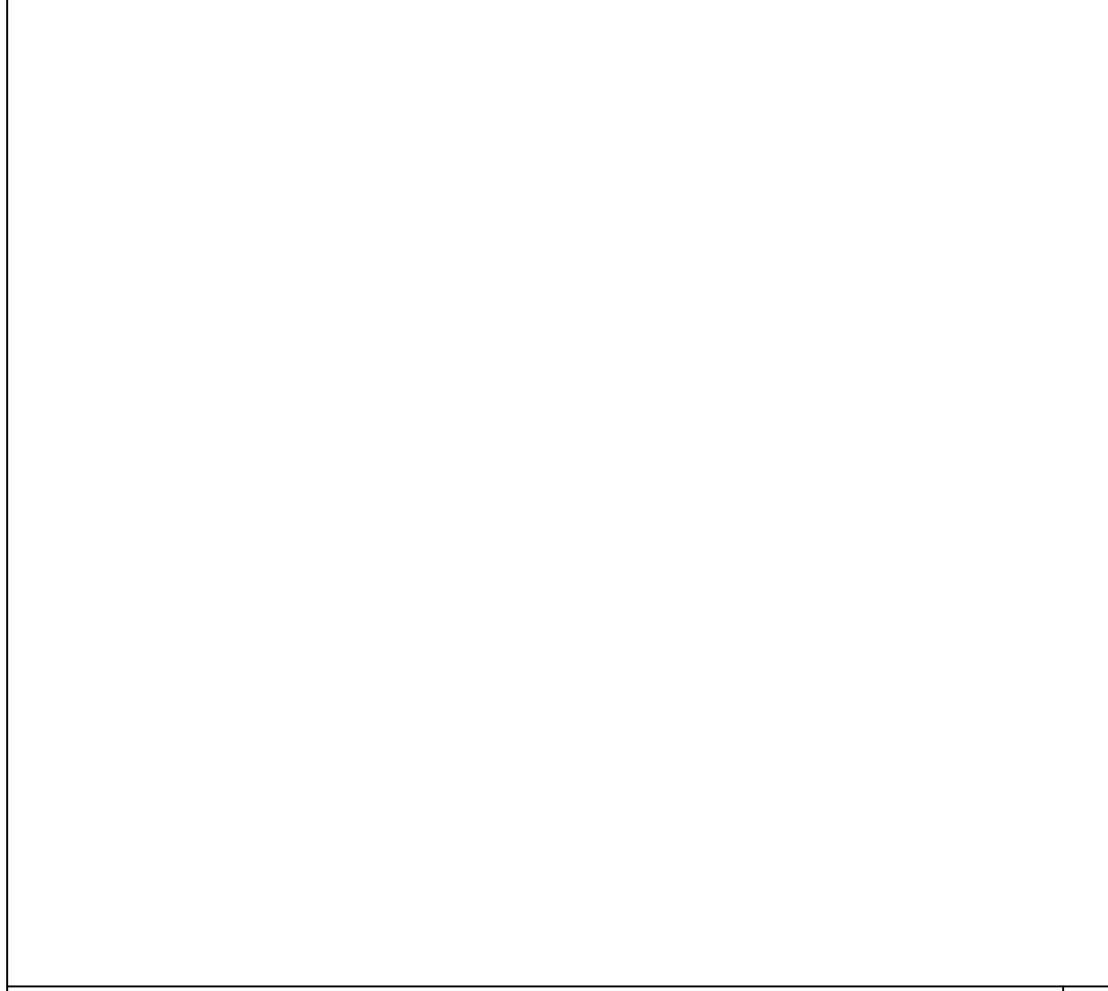
31

DIAPHRAGM SCHEDULE

52

42

PLYWOOD DIAPHRAGM SHEATHING  
 2340-01-CU21 - 5403 - 12

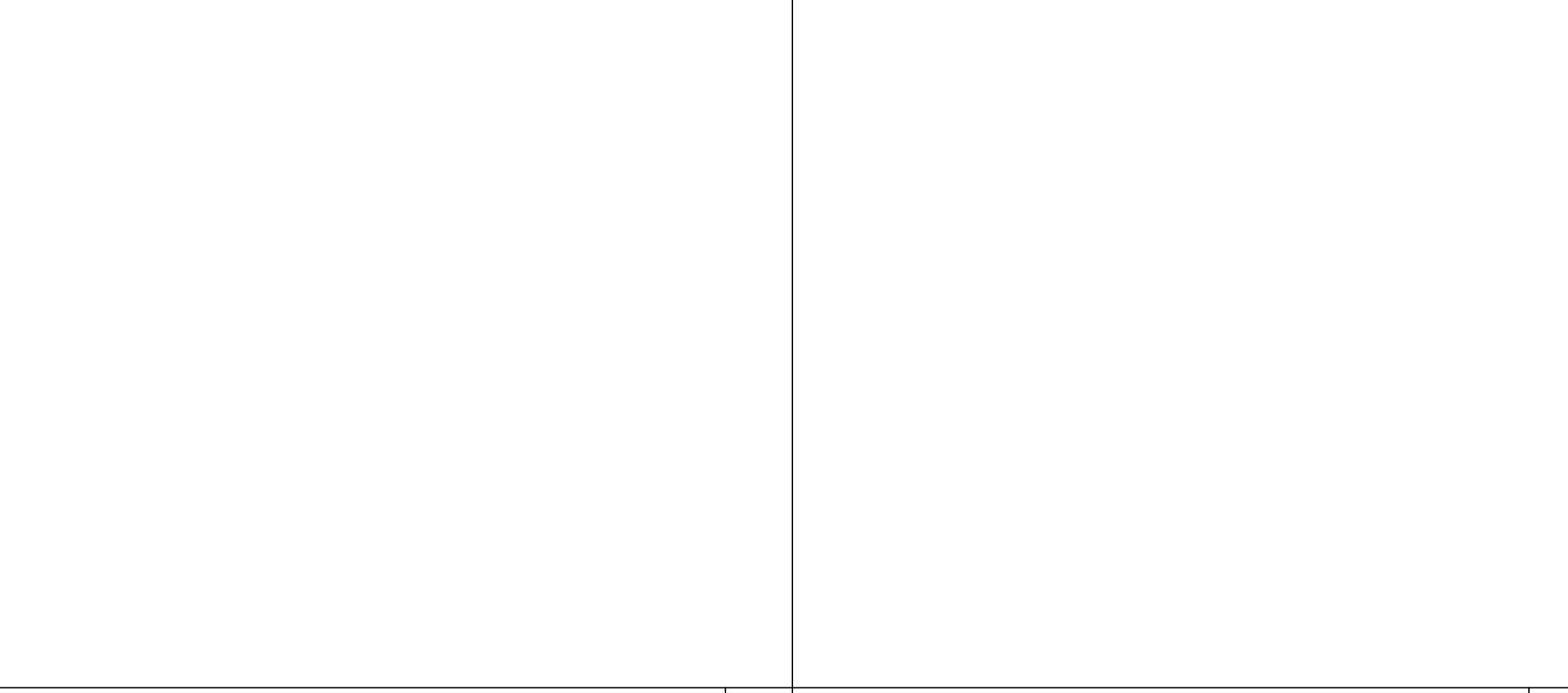
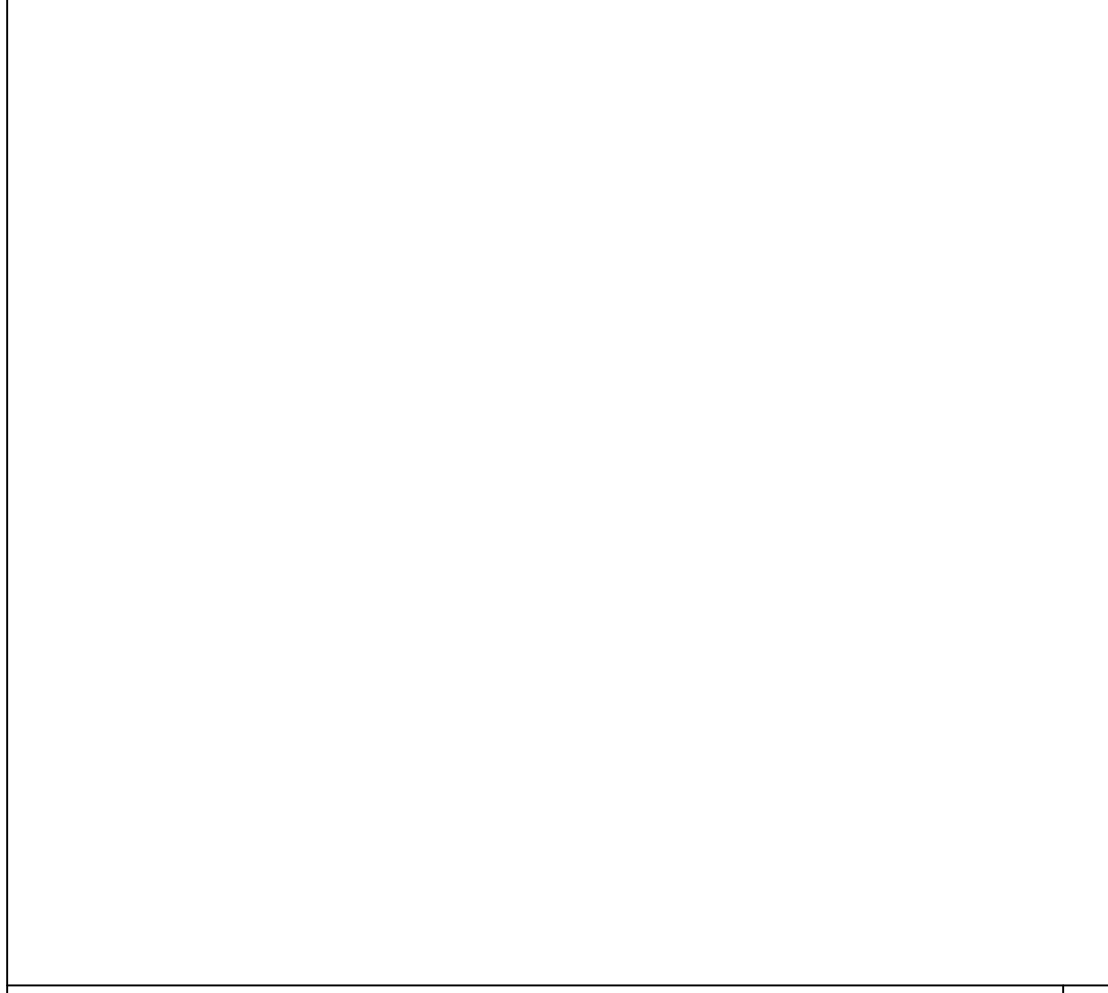


53

43

OPENING AT FRAMING  
 2340-01-CU21 - 5403 - 23

DIAPHRAGM PANEL JOINTS  
 2340-01-CU21 - 5403 - 13



54

34

OPENING AT FRAMING  
 2340-01-CU21 - 5403 - 23

TYP JOIST BLOCKING  
 2340-01-CU21 - 5403 - 14

CONSULTANT

AGENCY

**MONO COUNTY ADU PROTOTYPES**  
 MONO COUNTY

TYPICAL WOOD DETAILS

NO.	REVISION	DATE
△		
△		
△		
△		
△		

PROJECT MANAGER  
 J. MEADOWS

DRAWN BY  
 A. LOPEZ

CHECKED BY  
 M. DOREMUS

DATE  
 AUGUST 18, 2022

PROJECT NUMBER  
 2340-01-CU21

SHEET  
**S-403**

CONSULTANT

AGENCY

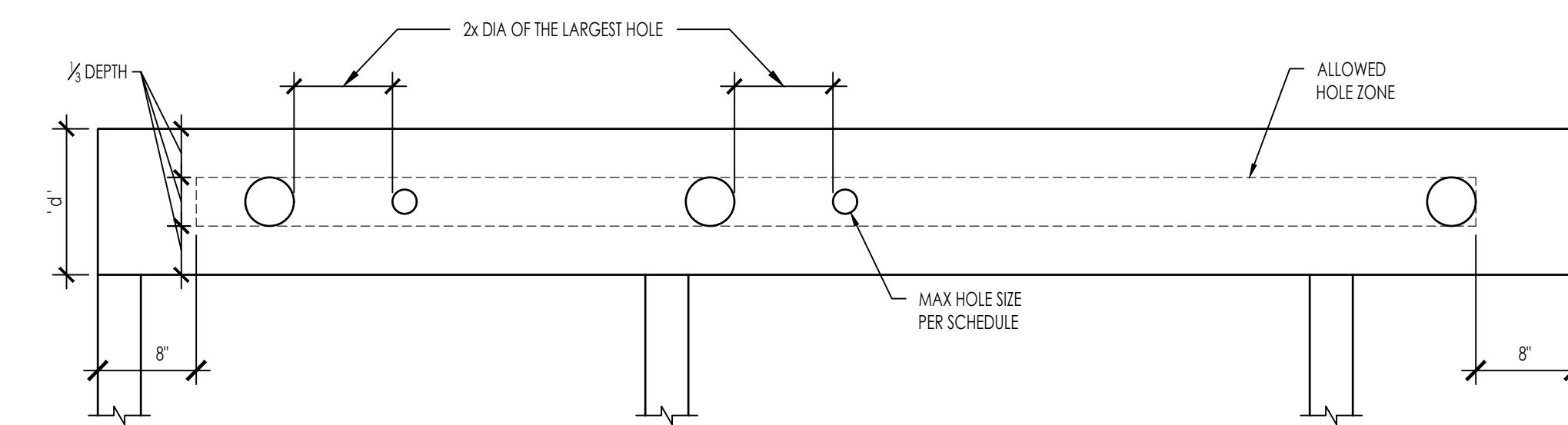
**MONO COUNTY ADU  
PROTOTYPES**  
MONO COUNTY  
TYPICAL WOOD DETAILS

CONSTRUCTION DOCUMENTS

NO.	REVISION	DATE

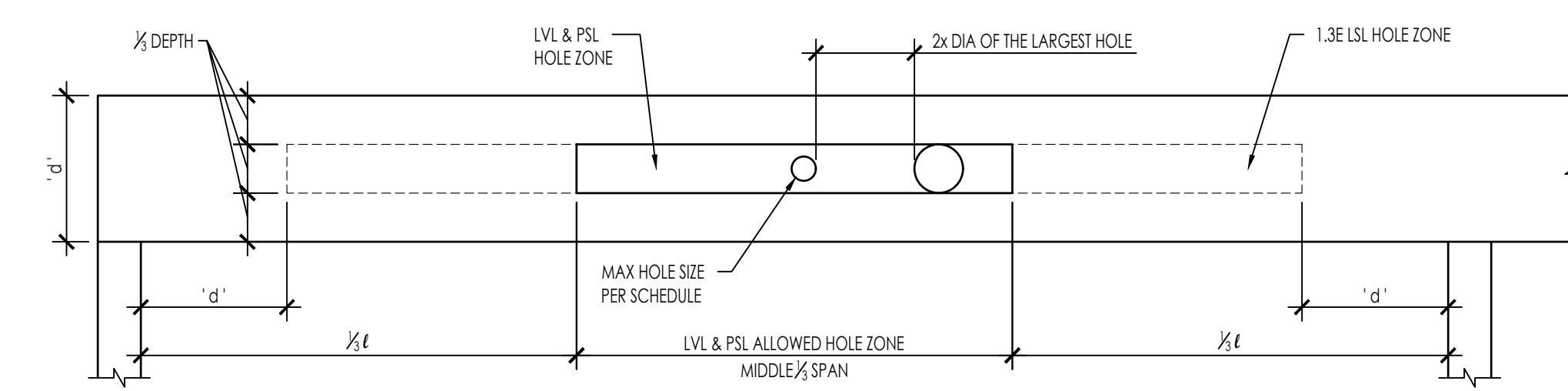
PROJECT MANAGER  
J. MEADOWS  
DRAWN BY  
A. LOPEZ  
CHECKED BY  
M. DOREMUS  
DATE  
AUGUST 18, 2022  
PROJECT NUMBER  
2340-01-CU21  
SHEET

**S-404**



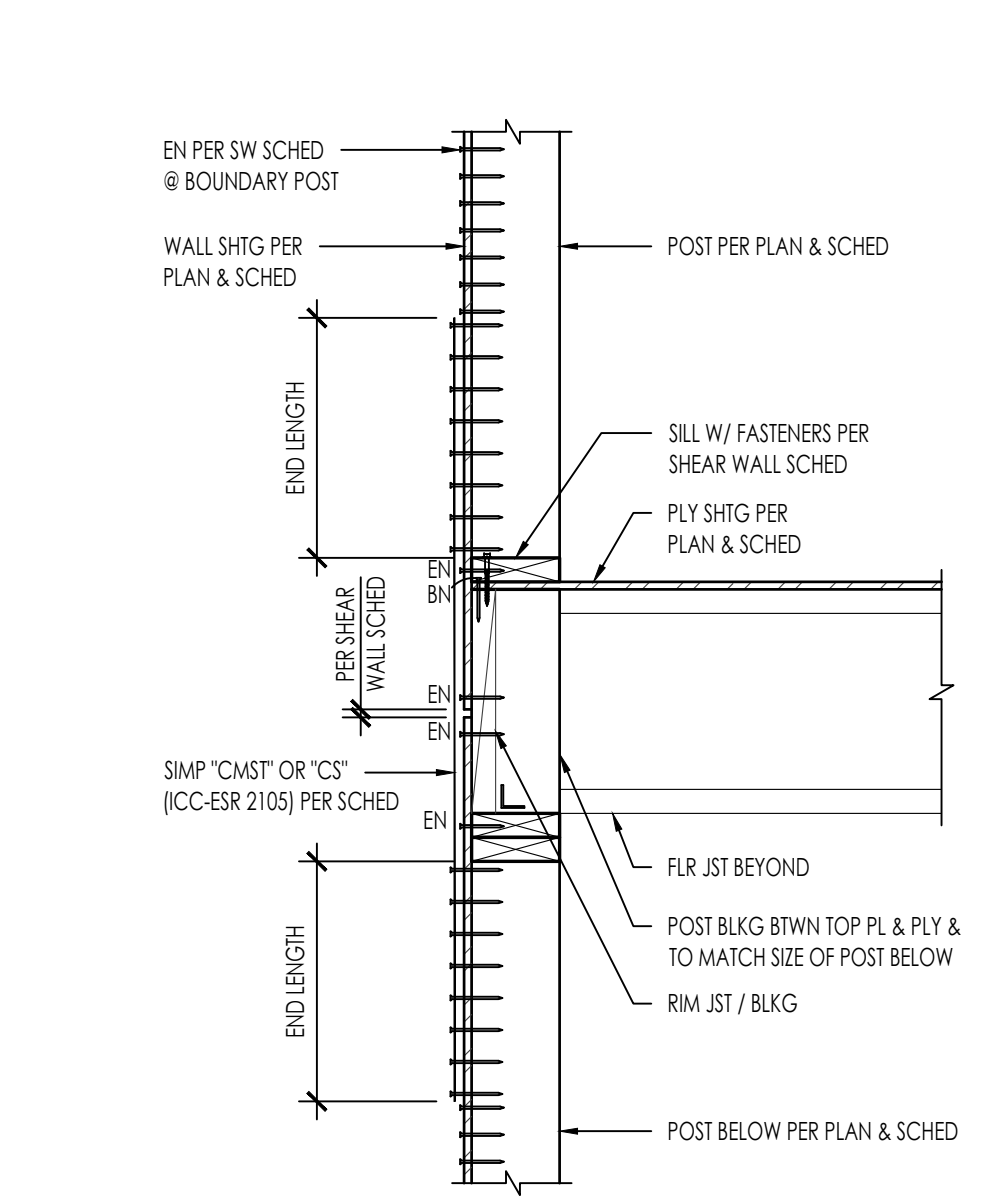
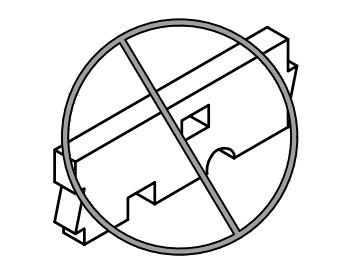
HEADER OR BEAM DEPTH	MAX ROUND HOLE SIZE
9 1/2"	3"
11 7/8"	3 3/8"
14'-16"	4 3/8"

- 1.5SE LSL NOTES:
- ALLOWED HOLE ZONE SUITABLE FOR HEADERS AND BEAMS WITH UNIFORM AND/OR CONCENTRATED LOADS ANYWHERE ALONG THE MEMBER.
  - ROUND HOLES ONLY.
  - NO HOLES IN HEADERS OR BEAMS IN PLANK ORIENTATION.



HEADER OR BEAM DEPTH	MAX ROUND HOLE SIZE
4 3/8"	1"
5 1/2"	1 3/4"
7'-20"	2"

- LVL/PSL/1.3E LSL:
- ALLOWED HOLE ZONE SUITABLE FOR HEADERS AND BEAMS WITH UNIFORM LOADS ONLY.
  - ROUND HOLES ONLY.
  - NO HOLES IN CANTILEVERS.
  - NO HOLES IN HEADERS OR BEAMS IN PLANK ORIENTATION.

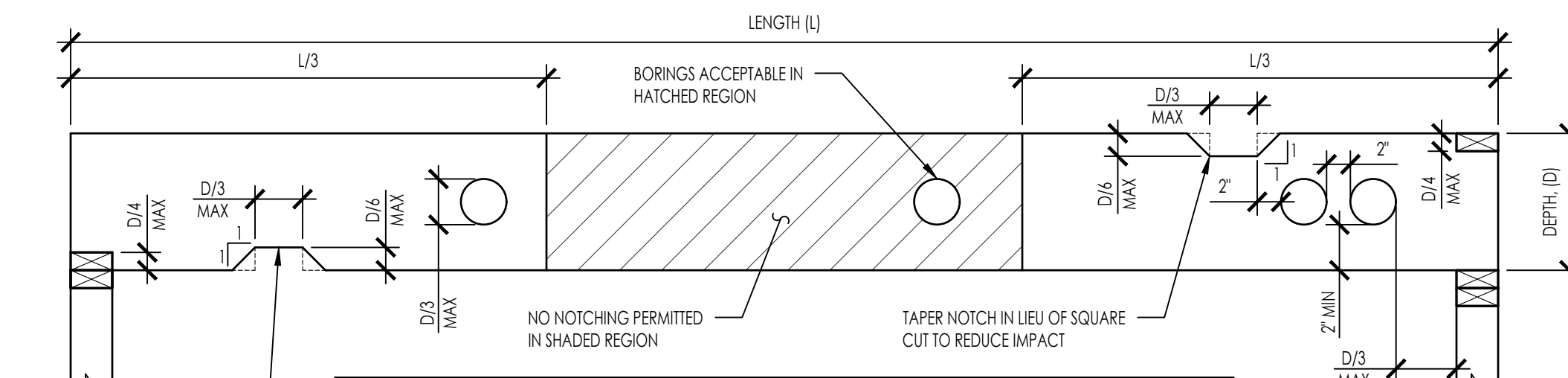


NOTE:  
PLYWOOD FIELD NAILING NOT SHOWN FOR CLARITY, REFER TO DIAPHRAGM AND SHEAR WALL SCHEDULE

MARK	STRAP MODEL	FASTENERS	END LENGTH (IN)	ALLOWABLE TENSION LOADS (LB)
2A	CS16	22-10d	11	1,705
2B	CS14	30-10d	15	2,490
2C	CMSTC16	50-16d SINKER	20	4,585
2D	CMST14	56-10d	26	6,490
		66-10d	30	
2E	CMST12	74-16d	33	9,215
		86-10d	39	

STRAP ACROSS FLOOR NTS 32

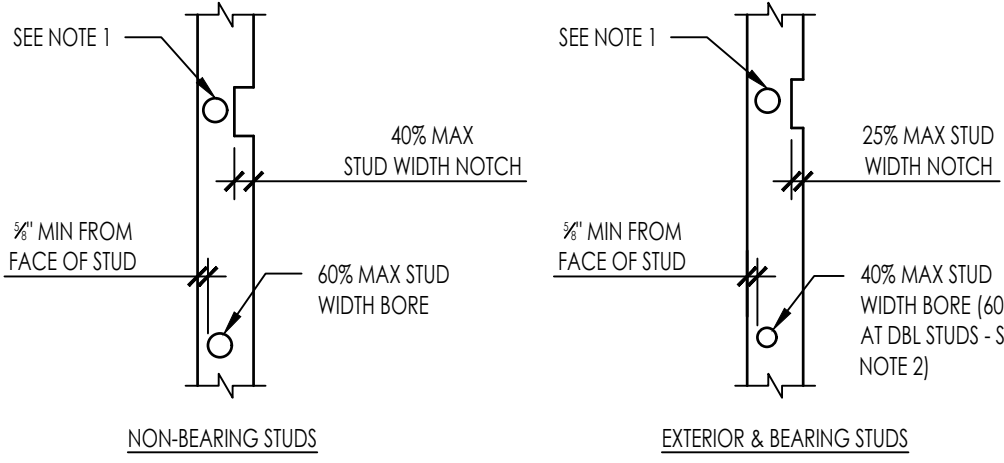
ALLOWABLE HOLES THRU ENGINEERED LUMBER HEADERS & BEAMS NTS 12



- NOTES:
- NOTCHING AND BORING NOT PERMITTED IN THE SAME JOIST CROSS SECTION WITHOUT STRUCTURAL ENGINEER'S APPROVAL.
  - NOTCH WIDTHS GREATER THAN SHOWN IN TABLE NOT PERMITTED WITHOUT STRUCTURAL ENGINEER'S APPROVAL.
  - NO NOTCHES OR HOLES PERMITTED ANYWHERE IN CANTILEVERED ELEMENTS WITHOUT STRUCTURAL ENGINEER'S APPROVAL.

JOIST SIZE	MAX HOLE	MAX NOTCH DEPTH	MAX END NOTCH	MAX NOTCH LENGTH
2X4	NONE	NONE	NONE	NONE
2X6	1 1/2"	1 1/2"	1 1/2"	1 1/2"
2X8	2 3/8"	1 1/2"	1 1/2"	2 3/8"
2X10	3"	1 1/2"	2 3/8"	3"
2X12	3 3/4"	1 1/2"	2 3/8"	3 3/4"

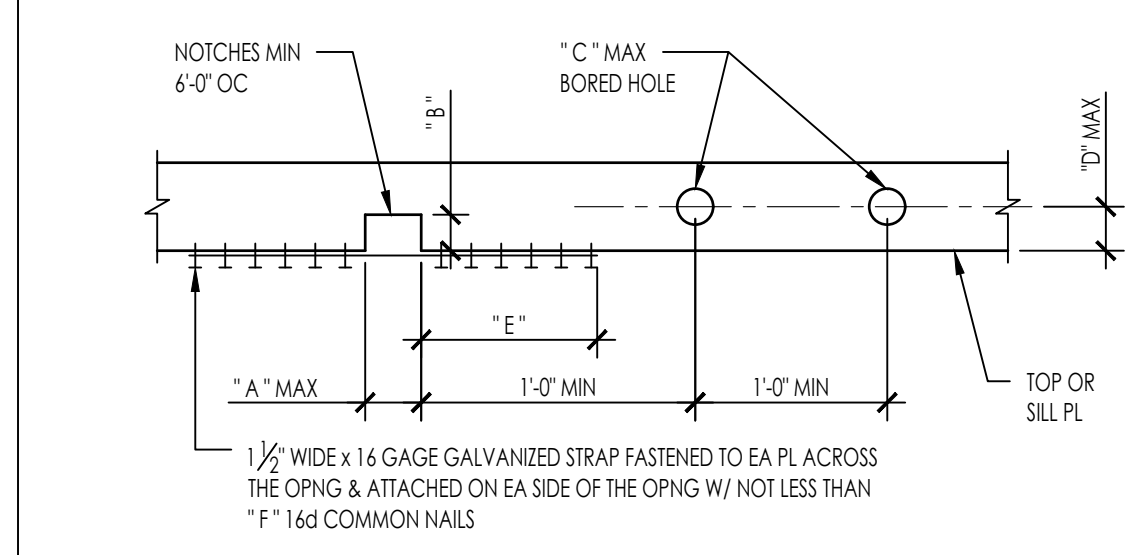
SAWN LUMBER AND RAFTER JOIST NOTCHING AND BORING LIMITATIONS NTS 13



STUD SIZE (IN)	APPLICATION	MAX HOLE DIAMETER (IN)	MAX NOTCH DEPTH (IN)
2X4	NON-BEARING	2 3/8"	1 3/8"
	EXTERIOR/BEARING	1 3/8"	7/8"
2X6	NON-BEARING	3 1/4"	2 3/8"
	EXTERIOR/BEARING	2 3/8"	1 3/8"

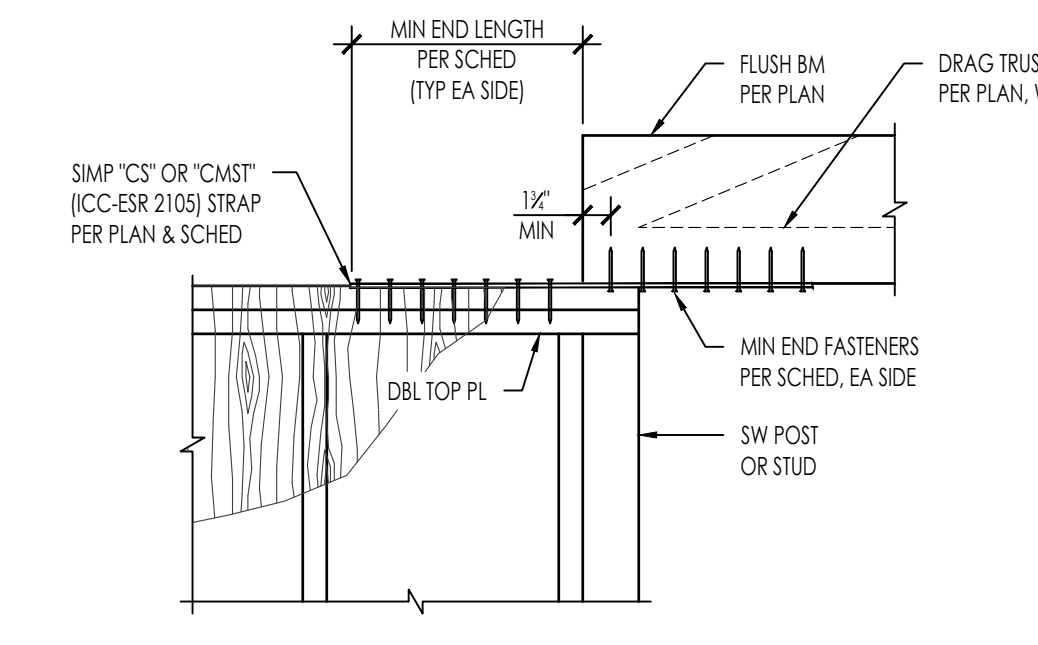
- NOTES:
- NOTCHING AND BORING NOT PERMITTED IN THE SAME STUD SECTION.
  - NO MORE THAN 2 SUCCESSIVE DBL. STUDS ARE PERMITTED TO HAVE 60% MAX BORED HOLES.

TYP WALL NOTCH AND BORING LIMITATIONS NTS 24

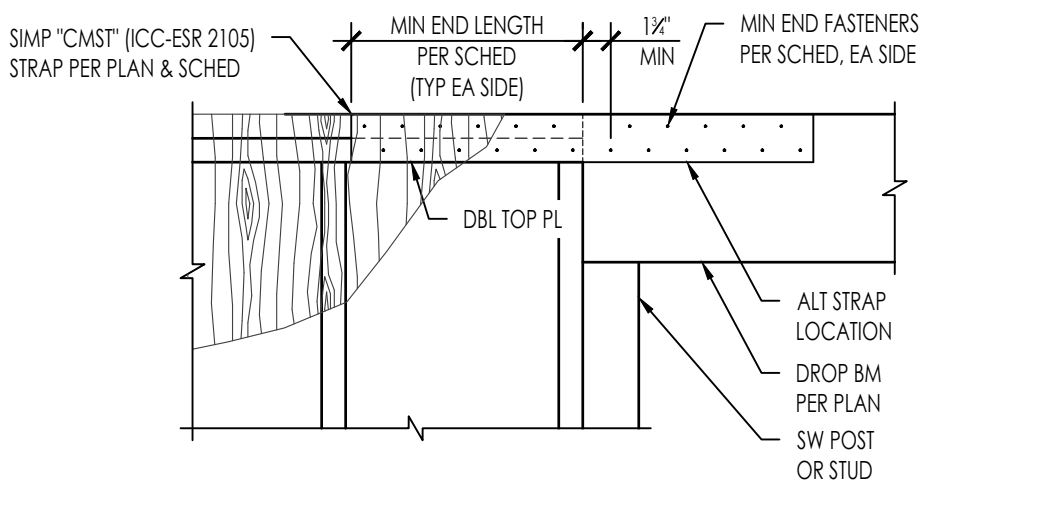


TOP PL OR SILL PL	A	B	C	D	E	F
2X4	3/8"	1/2"	1/2"	1/2"	3/4"	6
2X6	1/2"	3/4"	3/4"	3/4"	5/8"	9
2X8	3/4"	3"	3/4"	3/4"	1 1/4"	12

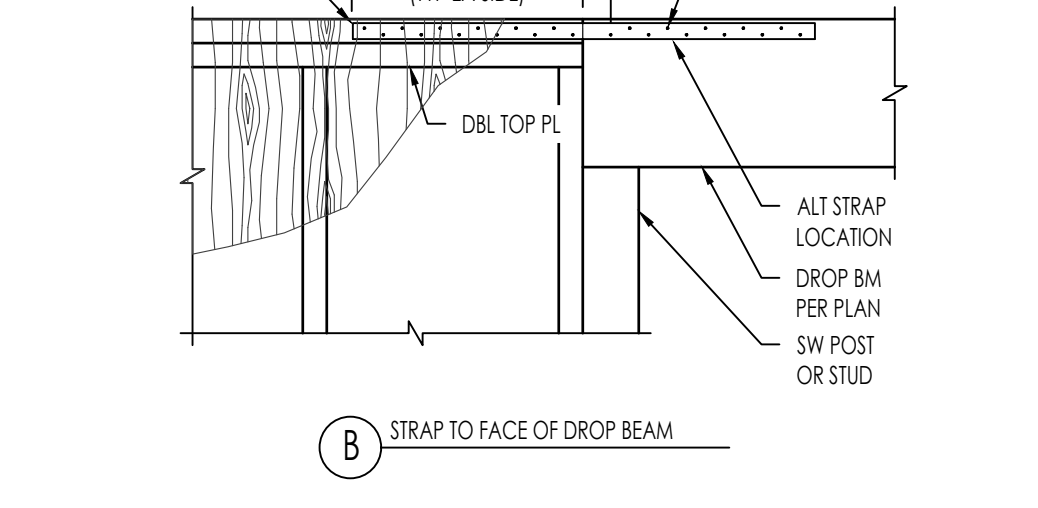
TOP PL AND SILL NOTCH AND BORING LIMITATIONS NTS 14



A STRAP TO BOTTOM OF FLUSH BEAM



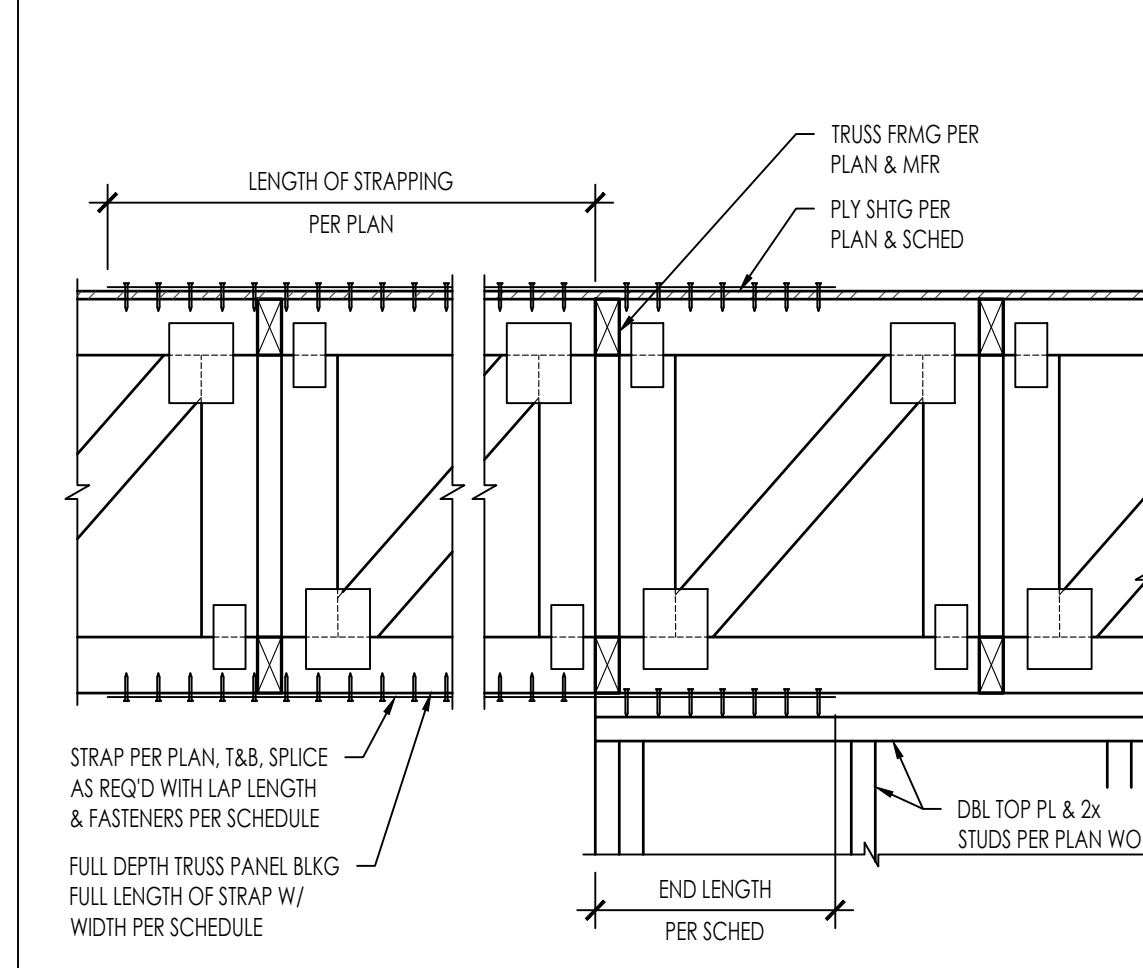
B STRAP TO FACE OF DROP BEAM



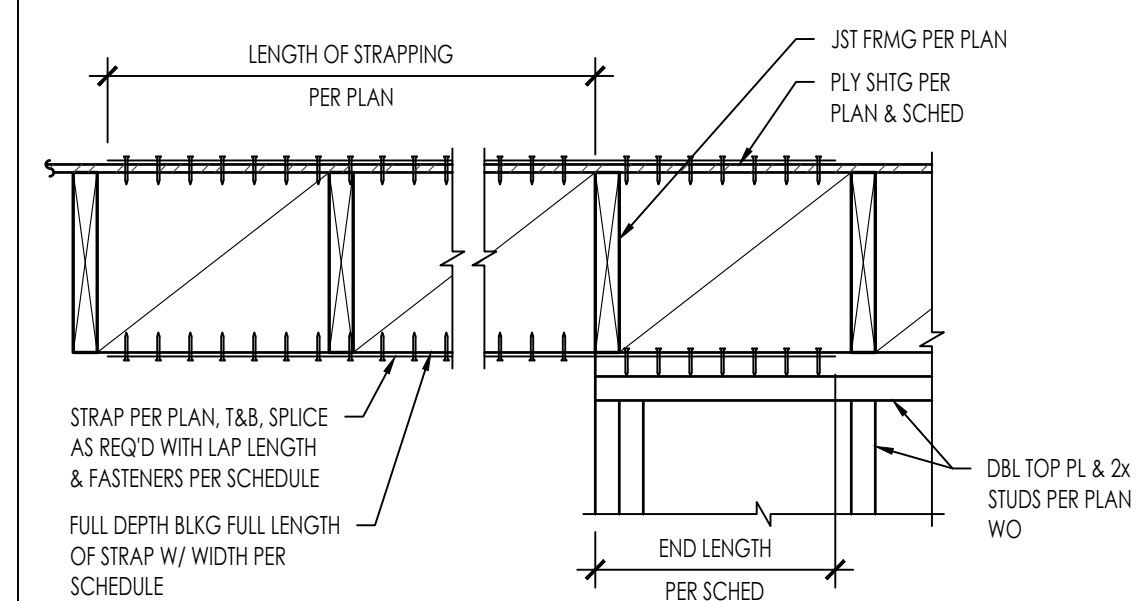
C STRAP TO TOP OF DROP BEAM

STRAP MODEL	END FASTENERS	END LENGTH (IN)	ALLOWABLE TENSION LOADS (LB)
CS16	(20) 10d	11	1,705
	(22) 8d	13	
CS14	(28) 10d	15	2,490
	(30) 8d	16	
CMSTC16	(50) 16d	20	4,690
CMST14	(56) 16d	26	6,475
	(66) 10d	30	
CMST12	(74) 16d	33	9,215
	(86) 10d	39	

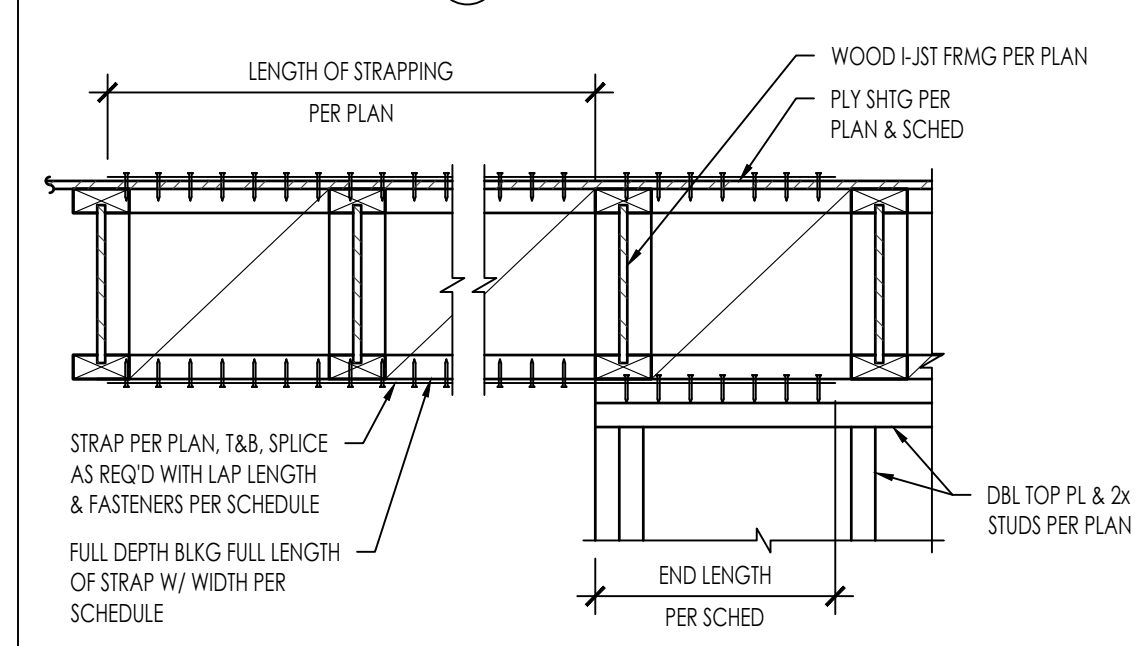
DRAG STRAP AT BEAM-TO-WALL NTS 53



A WOOD TRUSS FRAMING



B SOLID SAWN FRAMING



C TJI FRAMING

STRAP MODEL	END FASTENERS	END LENGTH (IN)	FASTENERS PER SPLICE	SPLICE LENGTH (IN)	MIN BLKG WIDTH	ALLOWABLE TENSION LOADS (LB)
CS16	(20) 10d	11	(5) 10d	8	1/2"	1,705
	(22) 8d	13	(6) 8d	9		
CS14	(28) 10d	15	(6) 10d	9	1/2"	2,490
	(30) 8d	16	(7) 8d	10		
CMSTC16	(50) 16d	20	(11) 16d	10	3/4"	4,690
CMST14	(56) 16d	26	(13) 16d	14	3/4"	6,475
	(66) 10d	30	(15) 10d	15		
CMST12	(74) 16d	33	(18) 16d	18	3/4"	9,215
	(86) 10d	39	(22) 10d	21		

BLOCK & STRAP PERP TO FRMG NTS 43

33

54

44

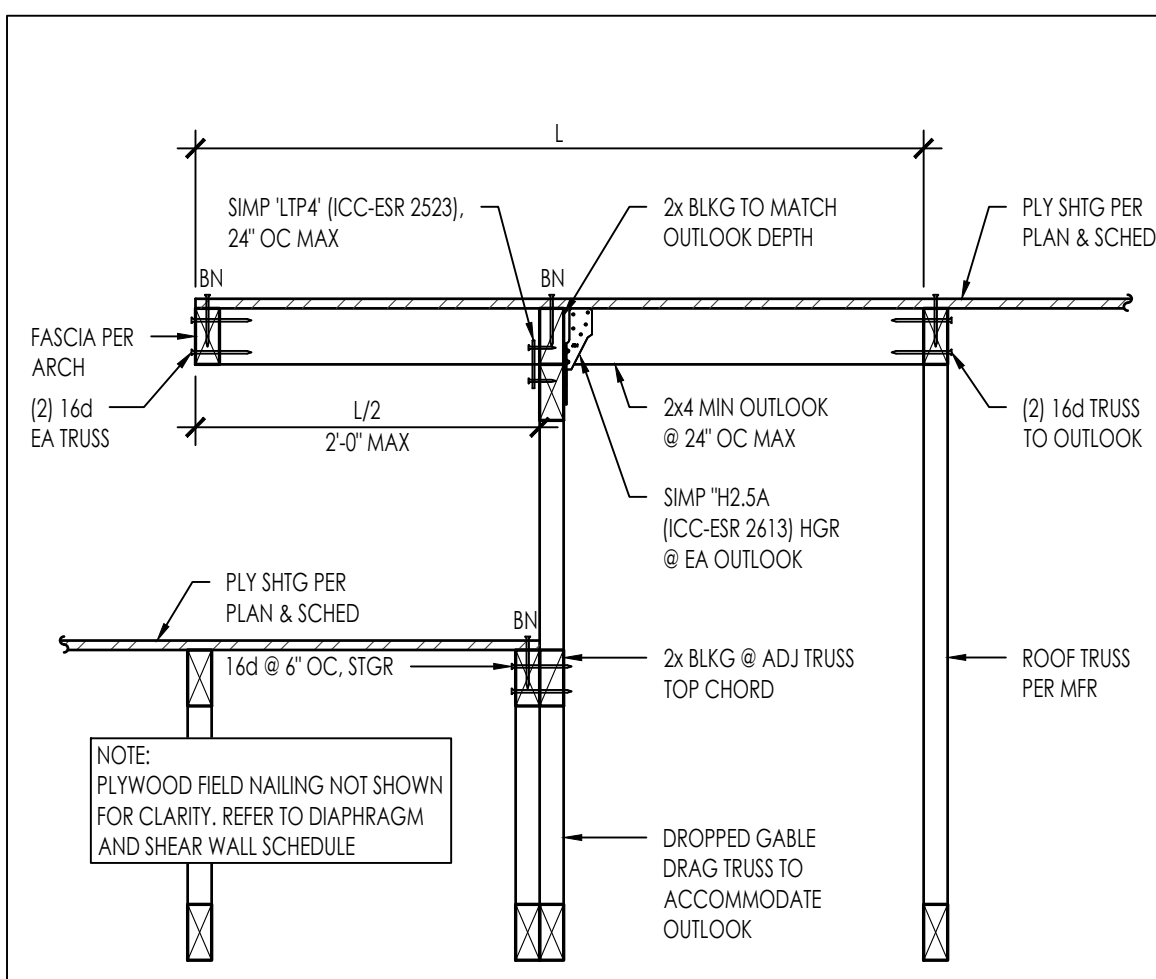
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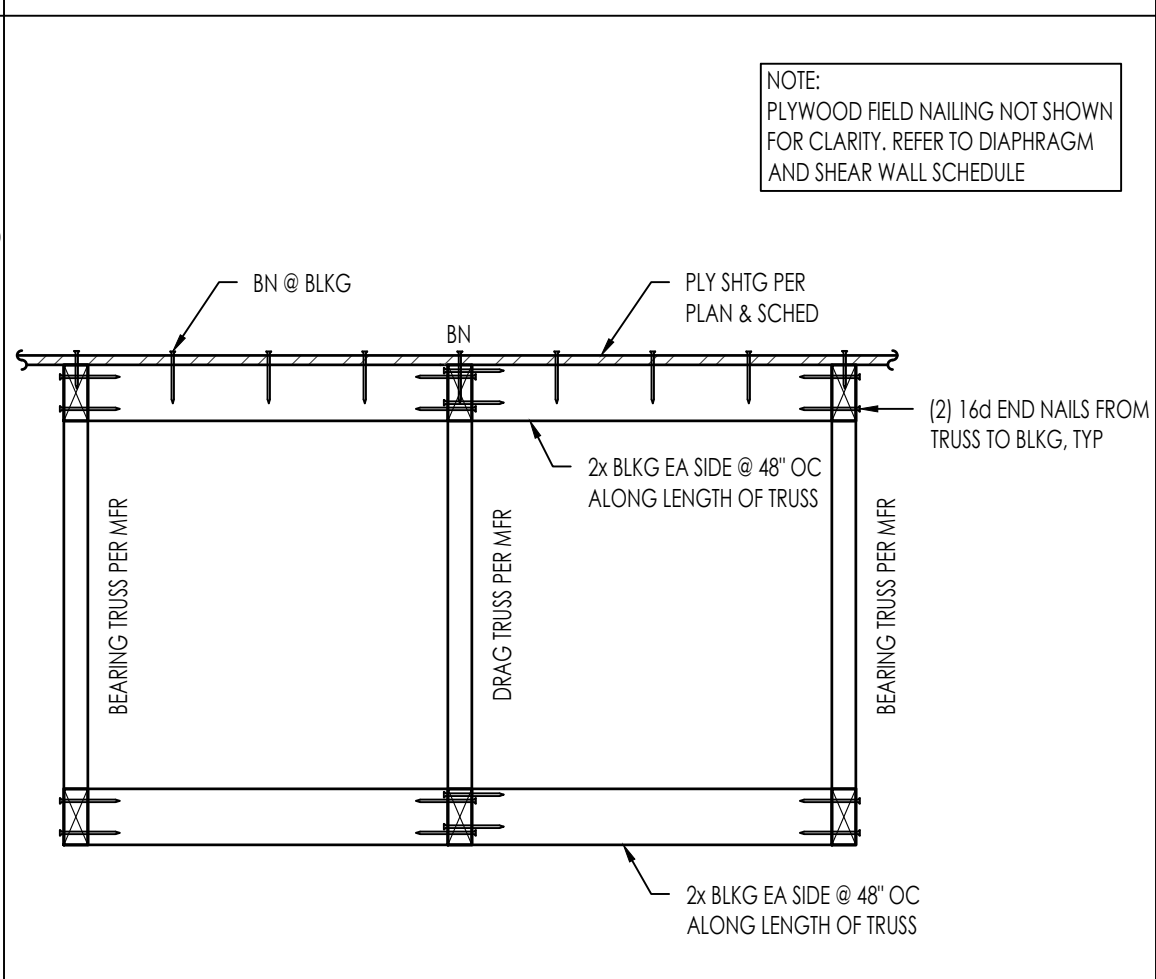
14

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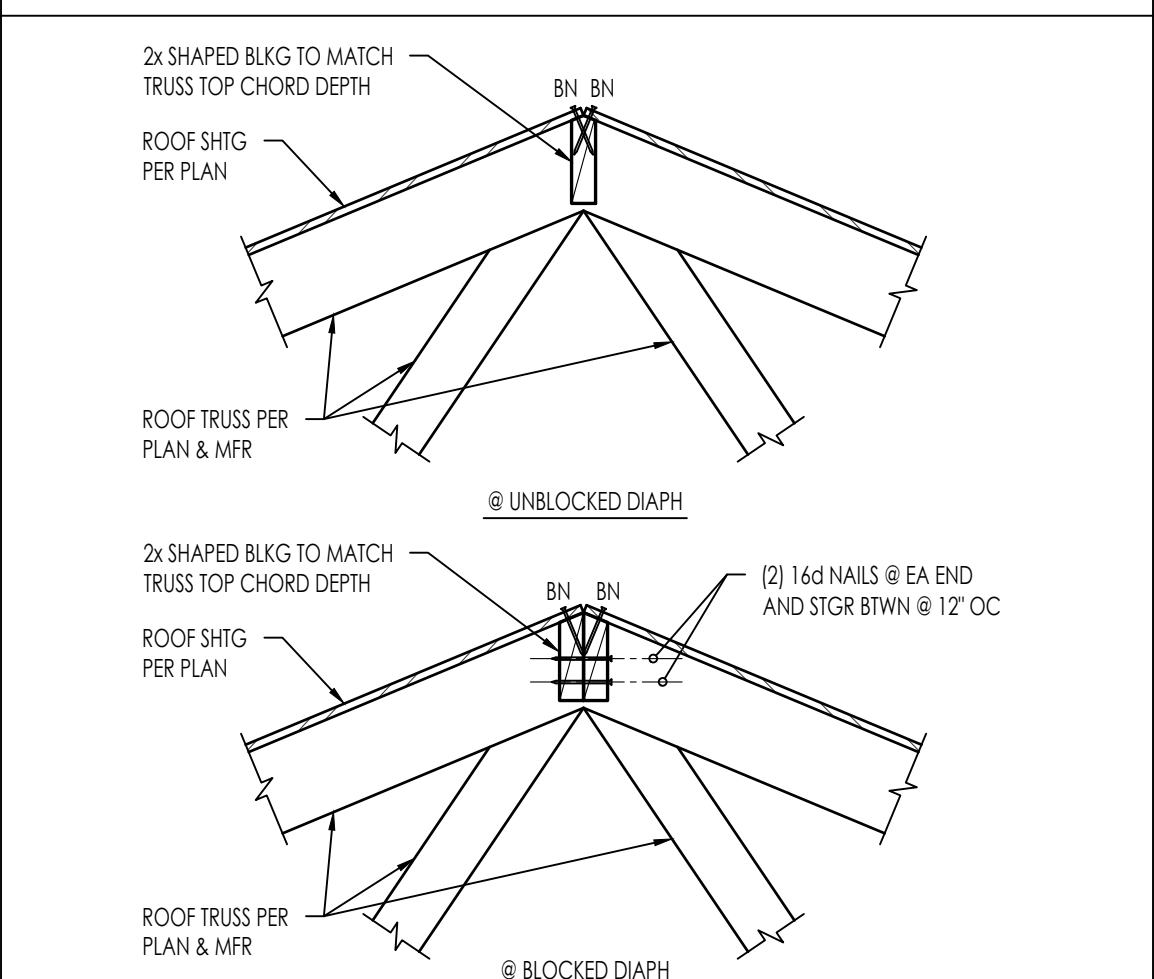




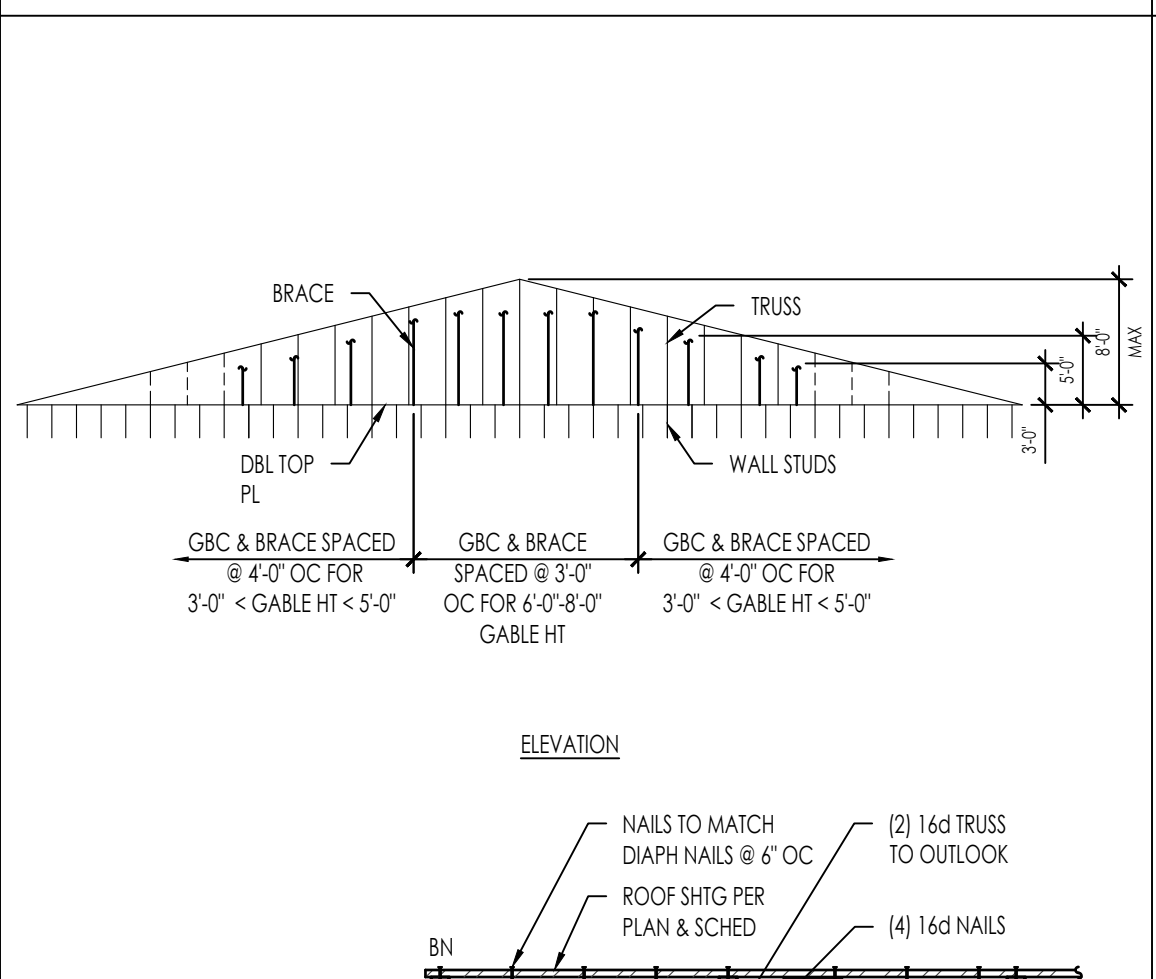
**DIAPH TRANSITION W/ OVERHANG**  
 2340-01-CU21 - 5421 - 51 1" = 1'-0" 51



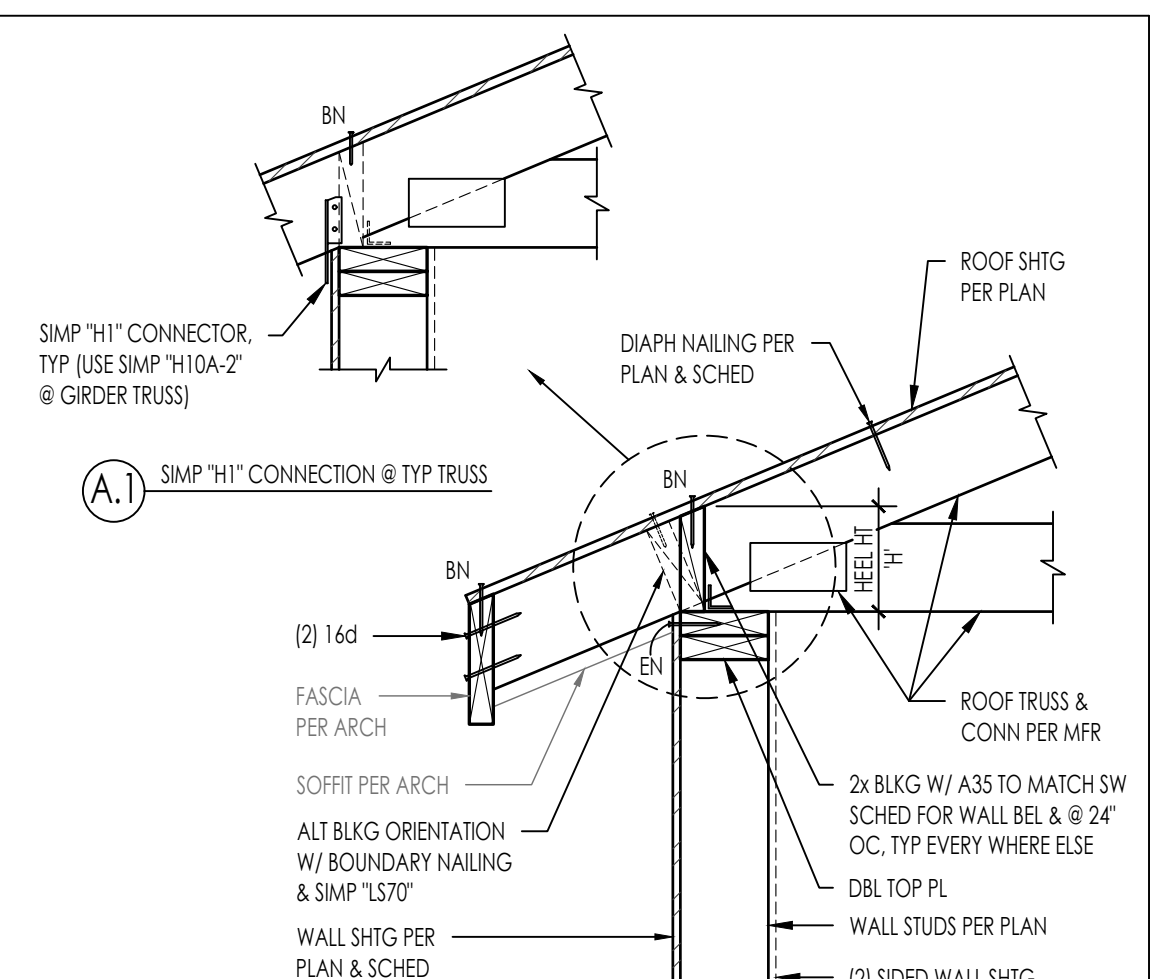
**INTERIOR DRAG TRUSS**  
 2340-01-CU21 - 5421 - 41 1" = 1'-0" 41



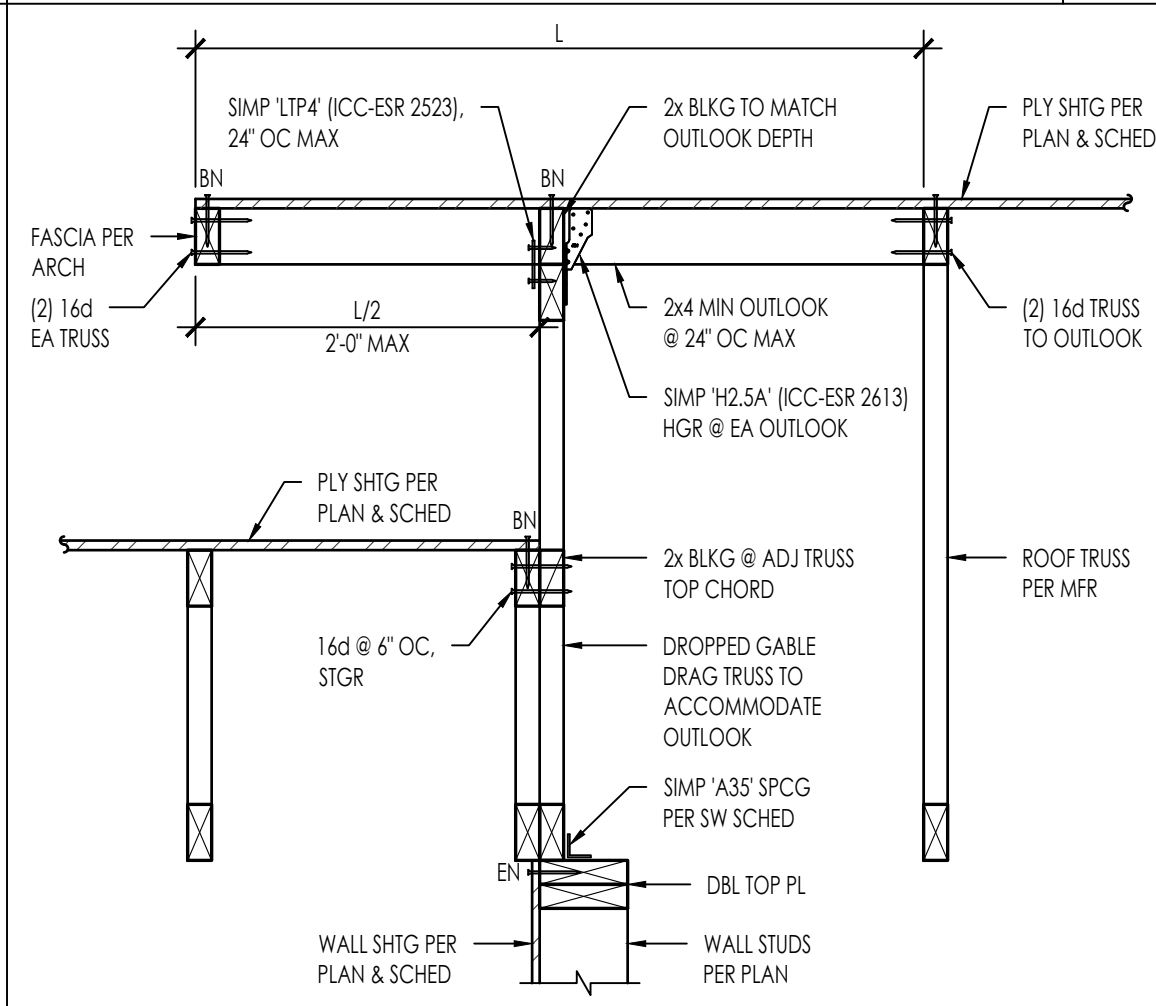
**SHEATHING OVER ROOF RIDGE**  
 2340-01-CU21 - 5421 - 31 1" = 1'-0" 31



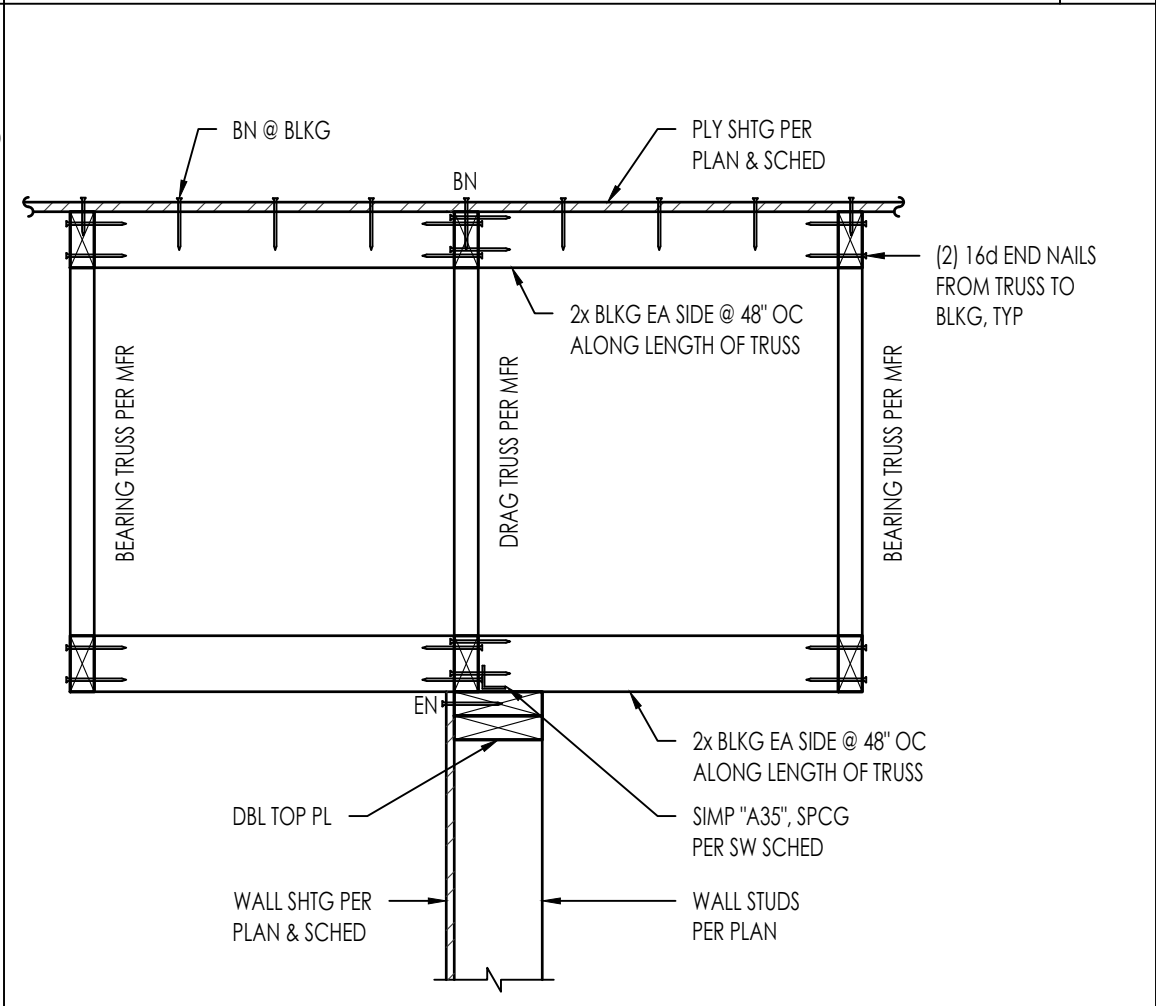
**TRUSS TO GIRDER TRUSS**  
 2340-01-CU21 - 5421 - 32 1" = 1'-0" 32



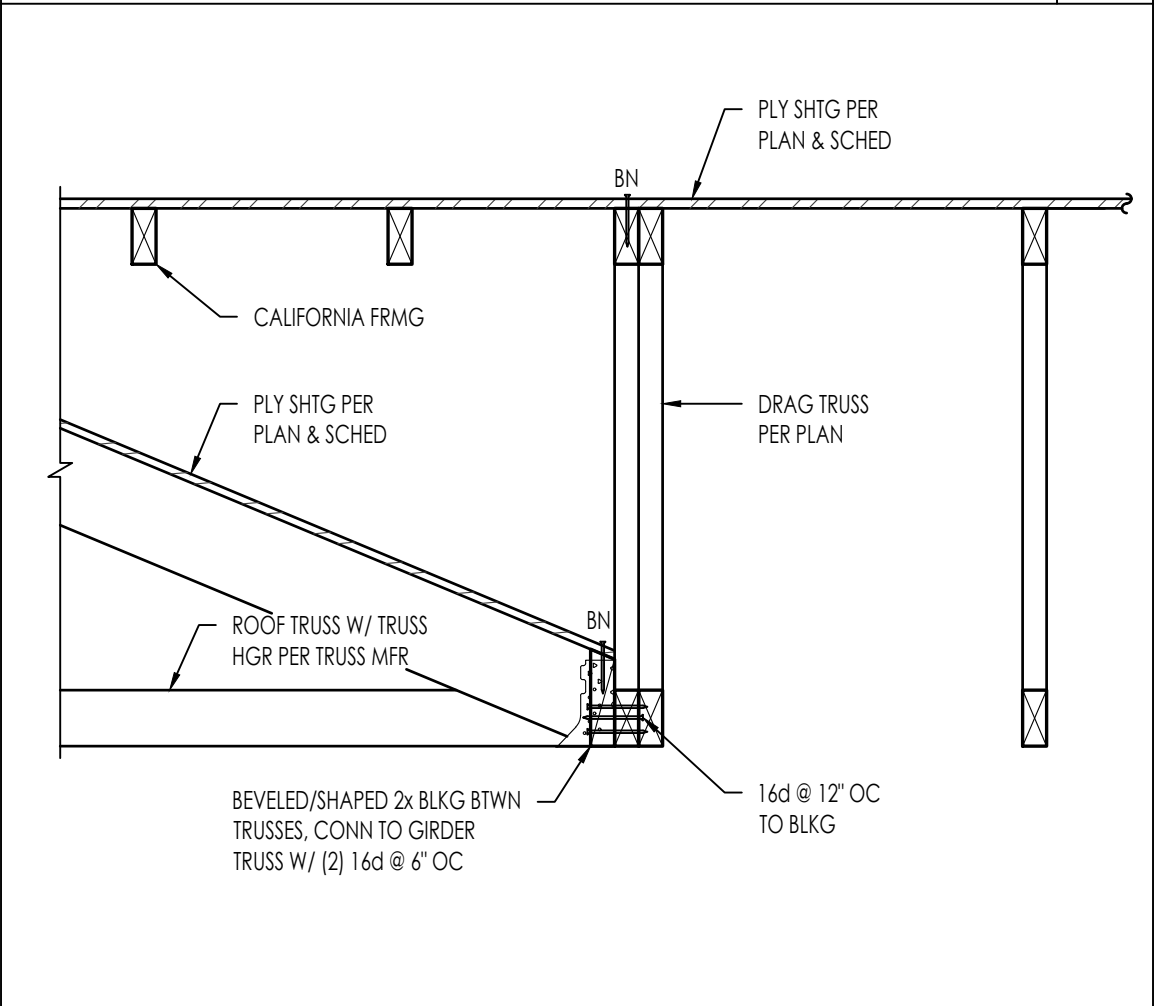
**GABLE END TRUSS**  
 2340-01-CU21 - 5421 - 23 NTS 23



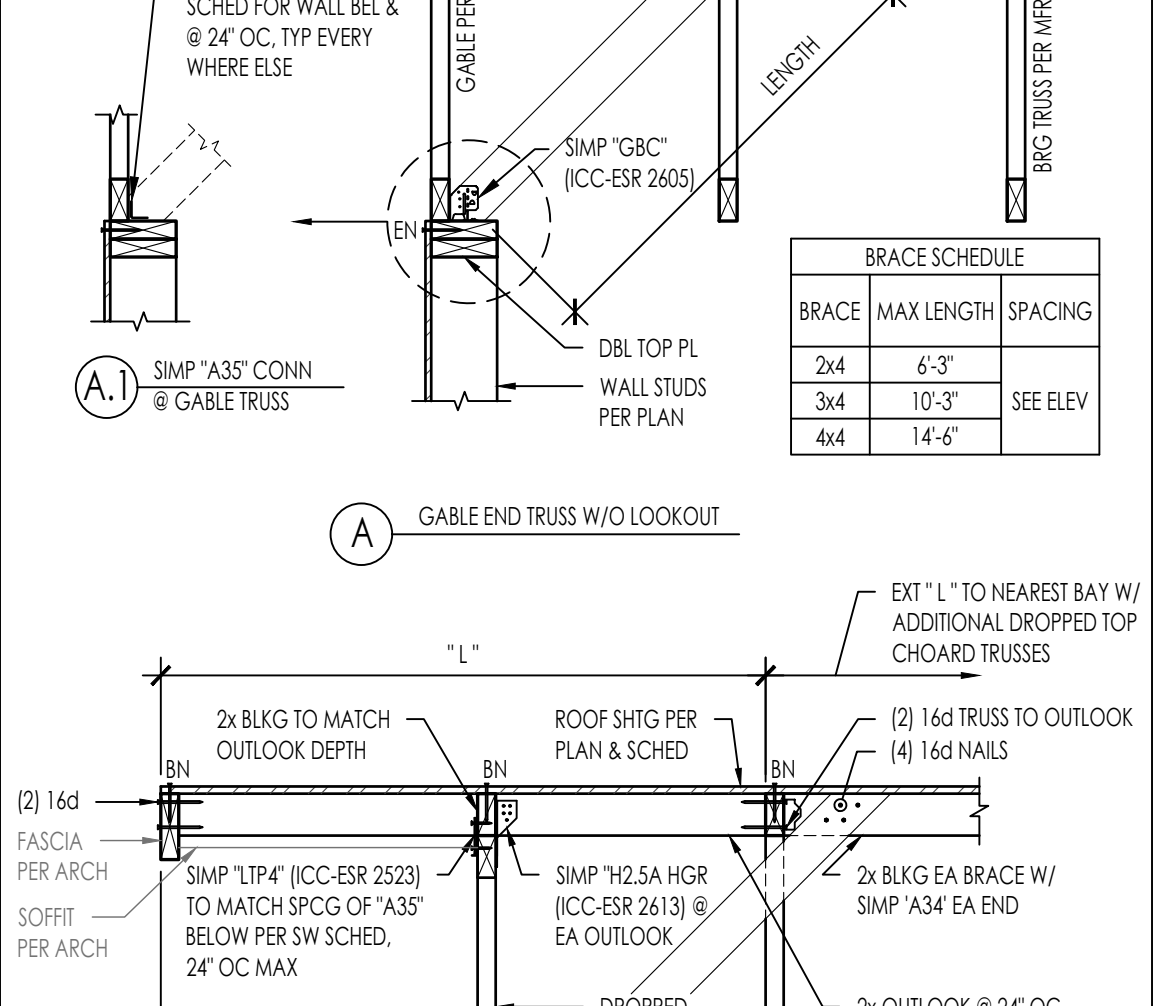
**DIAPH TRANSITION W/ OVERHANG**  
 2340-01-CU21 - 5421 - 52 1" = 1'-0" 52



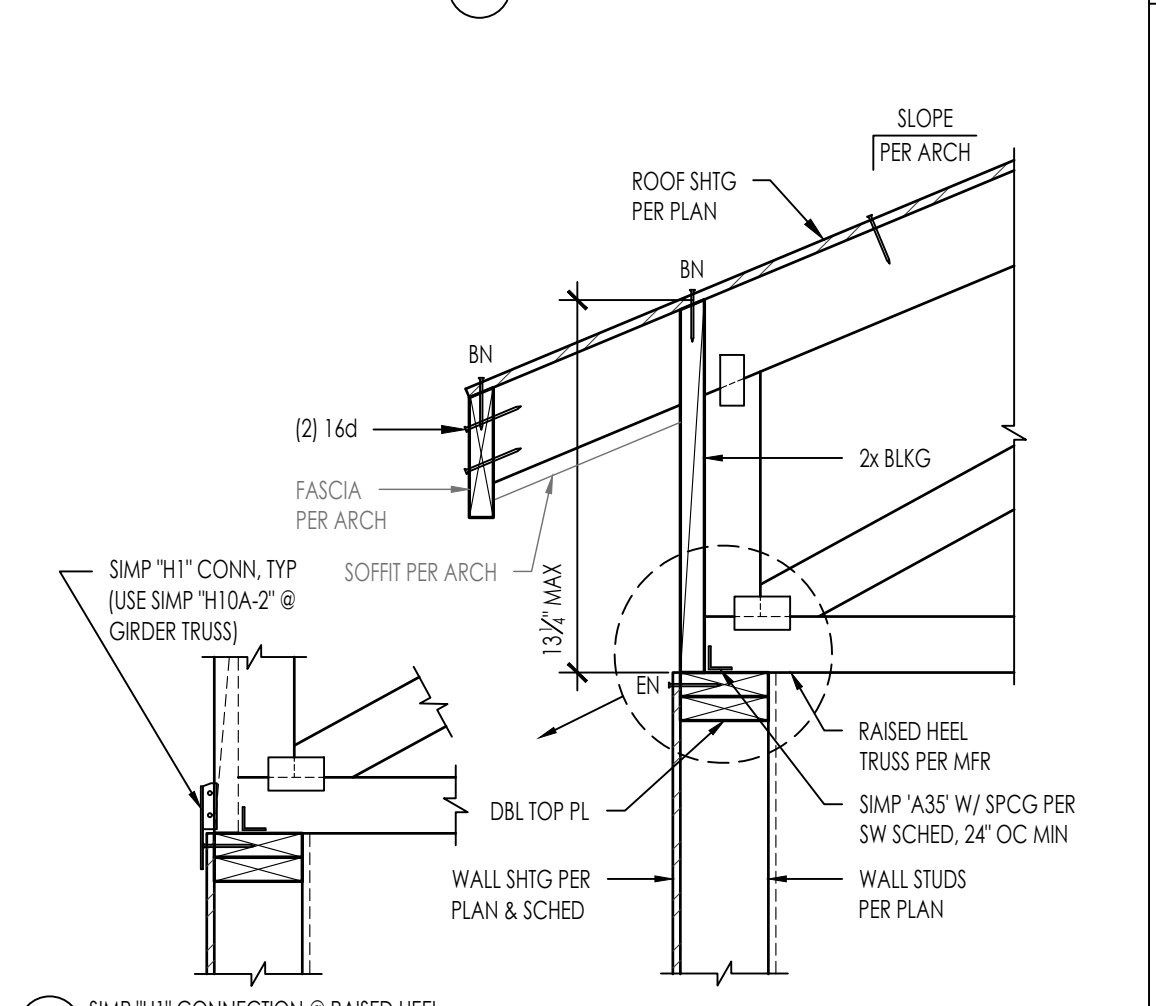
**INTERIOR SHEAR WALL (ROOF TRUSS PARALLEL)**  
 2340-01-CU21 - 5421 - 42 1" = 1'-0" 42



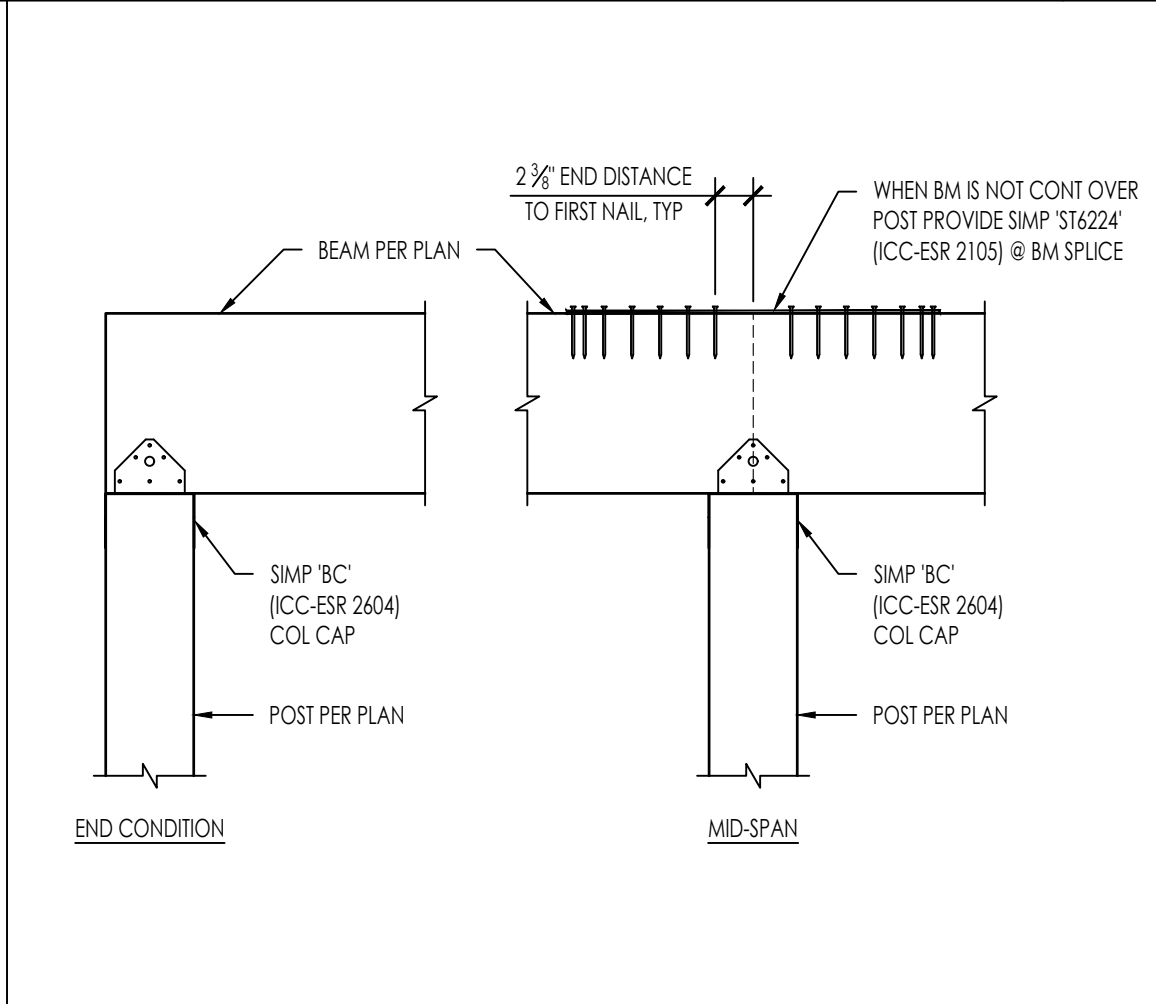
**TRUSS TO GIRDER TRUSS**  
 2340-01-CU21 - 5421 - 33 1" = 1'-0" 33



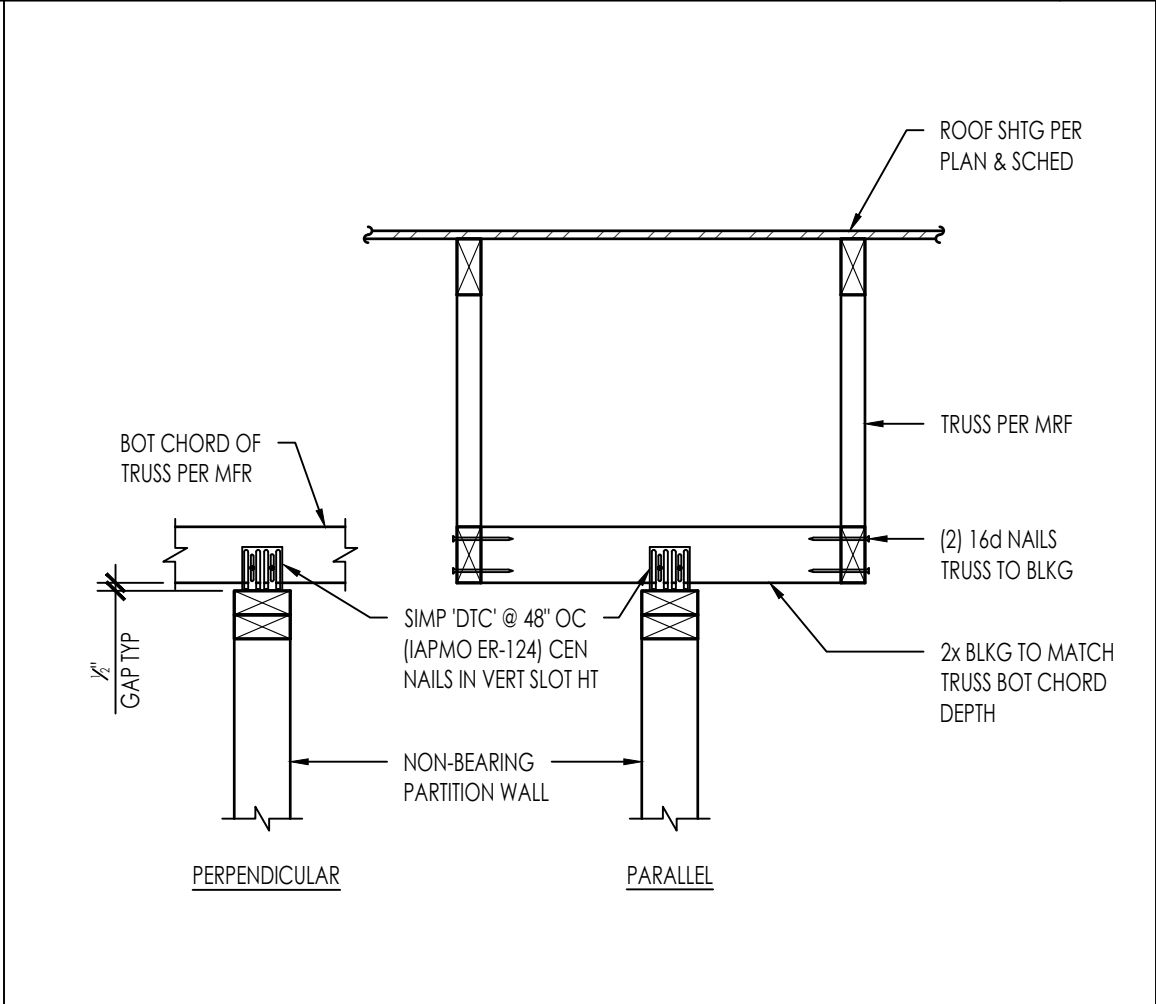
**CALIFORNIA FRAMING SLEEPER**  
 2340-01-CU21 - 5421 - 24 NTS 24



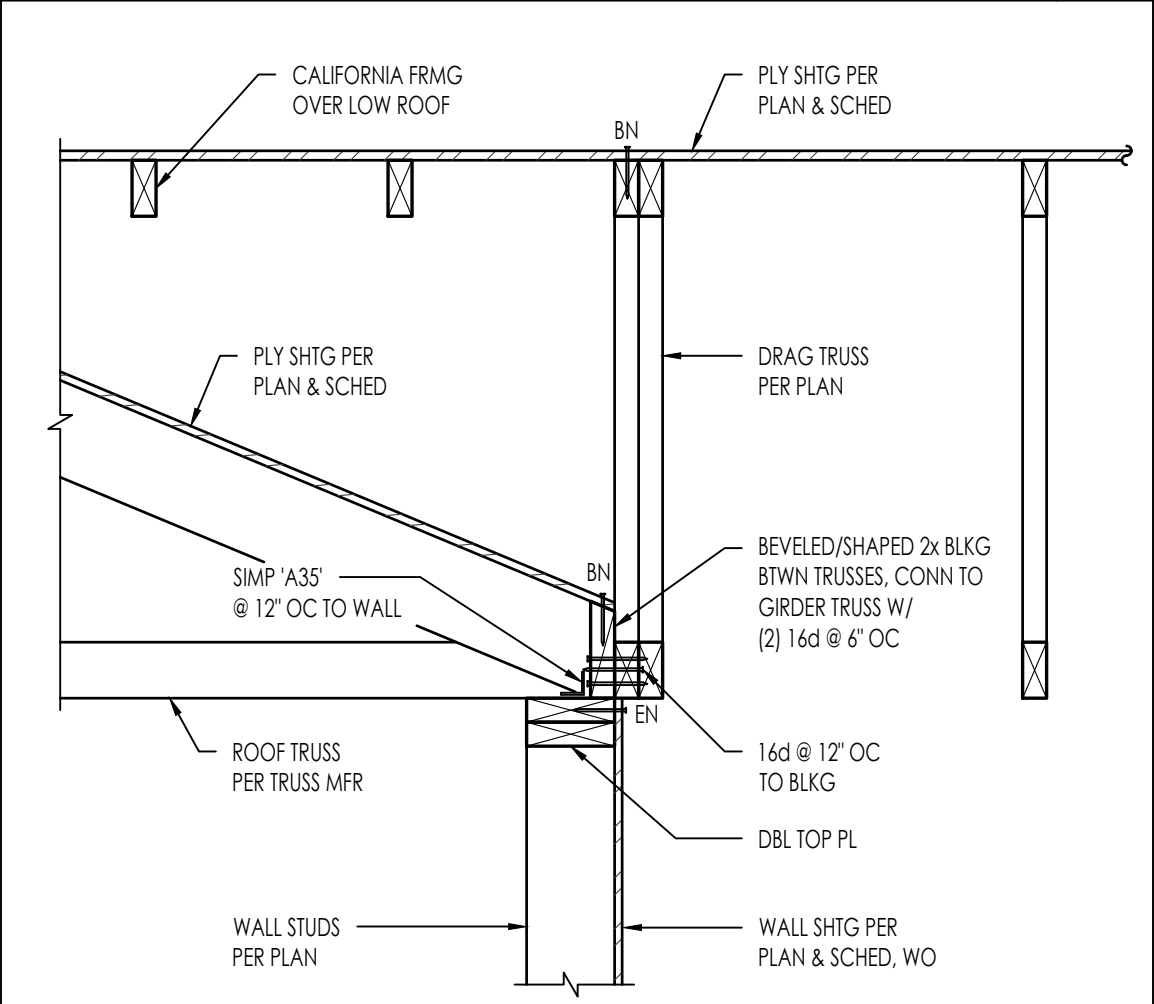
**CALIFORNIA FRAMING SLEEPER**  
 2340-01-CU21 - 5421 - 24 NTS 24



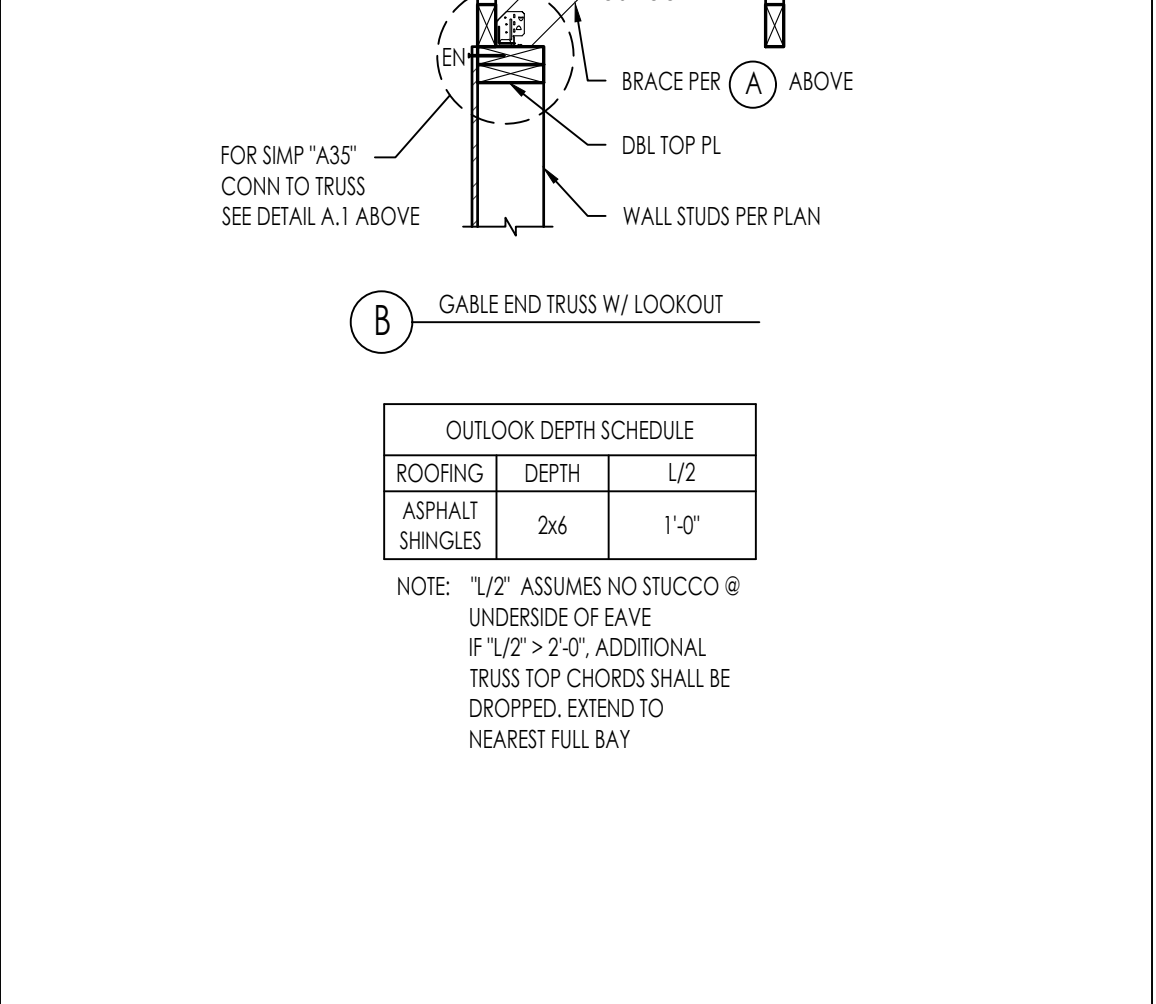
**BEAM TO POST CONNECTION**  
 2340-01-CU21 - 5421 - 53 1" = 1'-0" 53



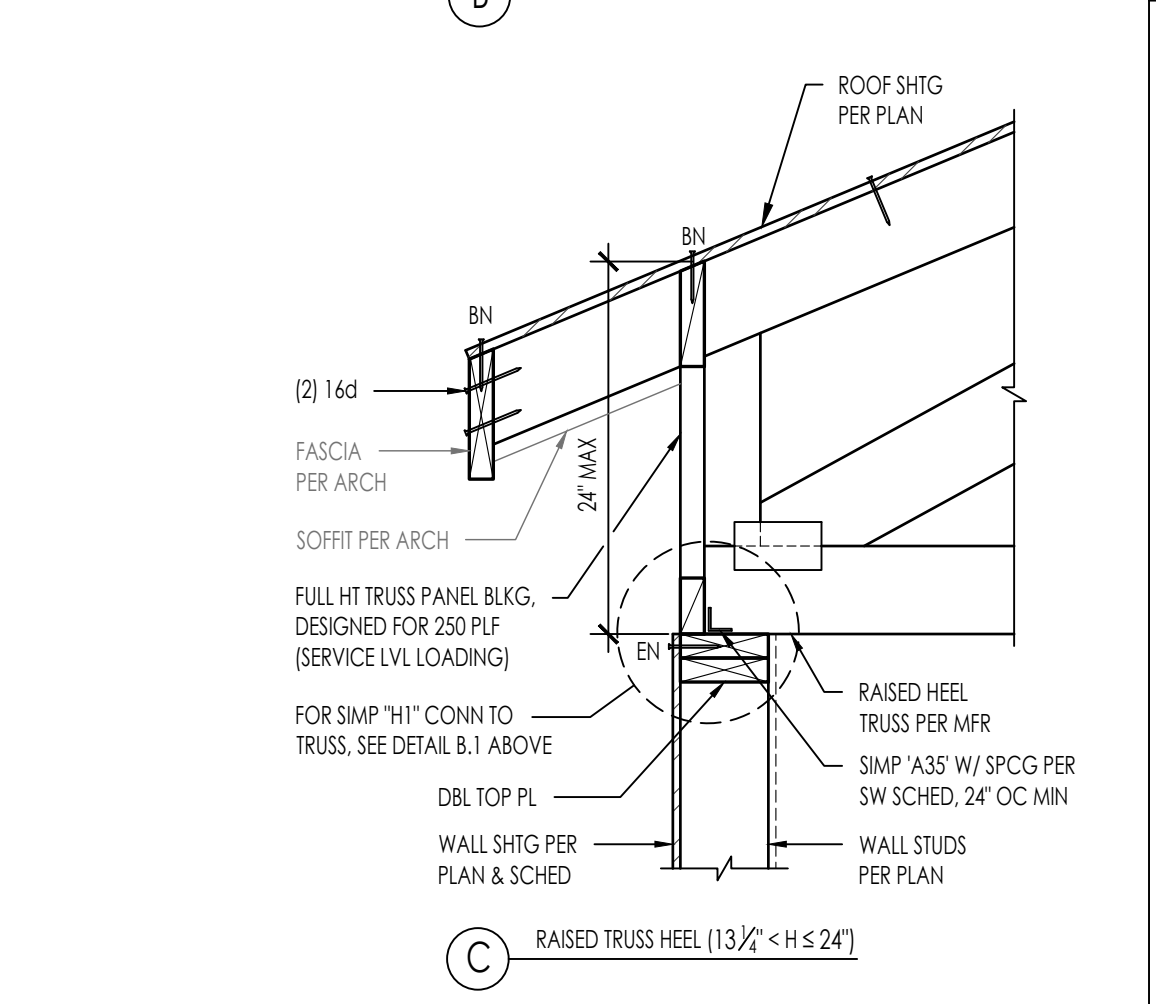
**TRUSS OVER NON-BEARING PARTITION**  
 2340-01-CU21 - 5421 - 43 1" = 1'-0" 43



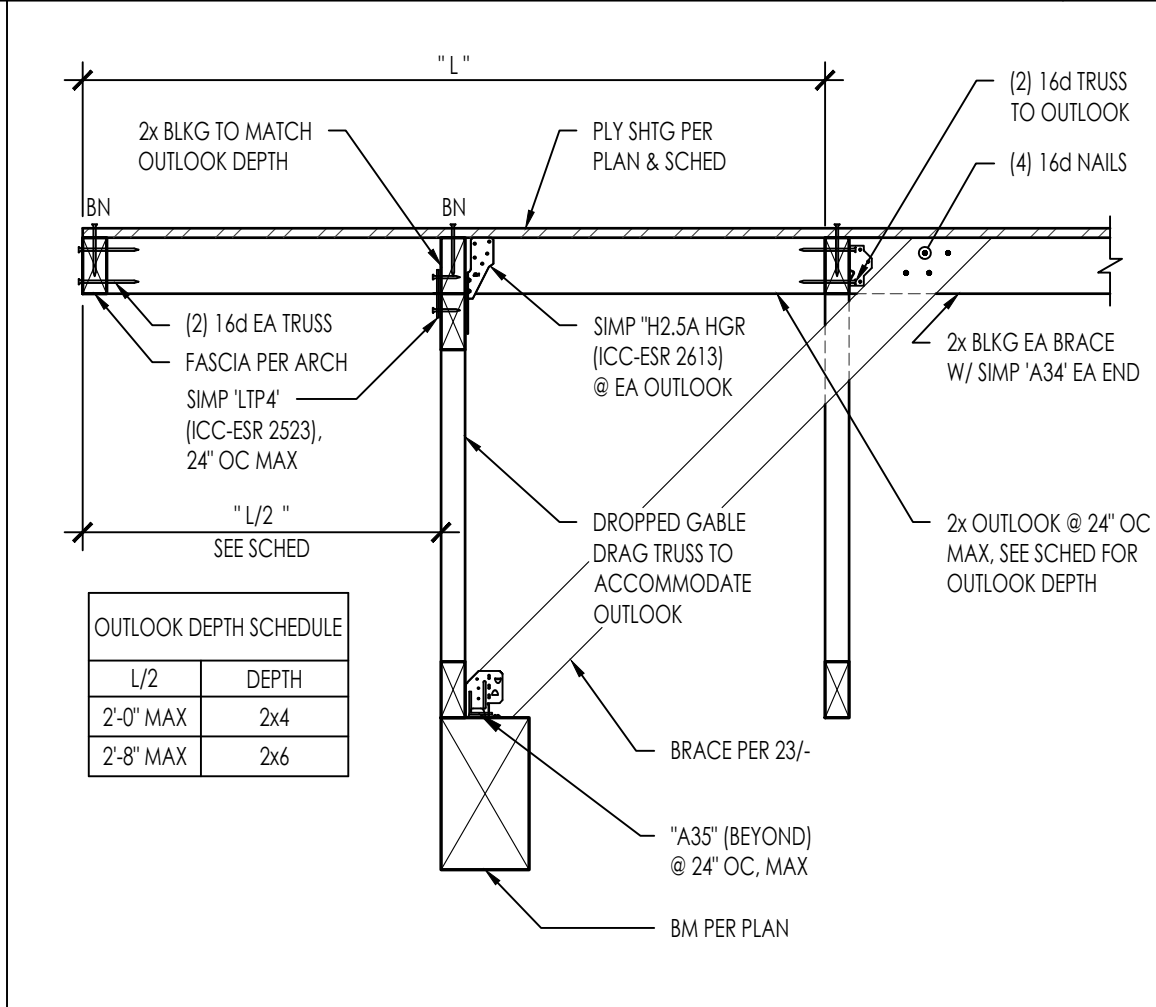
**TRUSS TO GIRDER TRUSS W/ WALL BELOW**  
 2340-01-CU21 - 5421 - 33 1" = 1'-0" 33



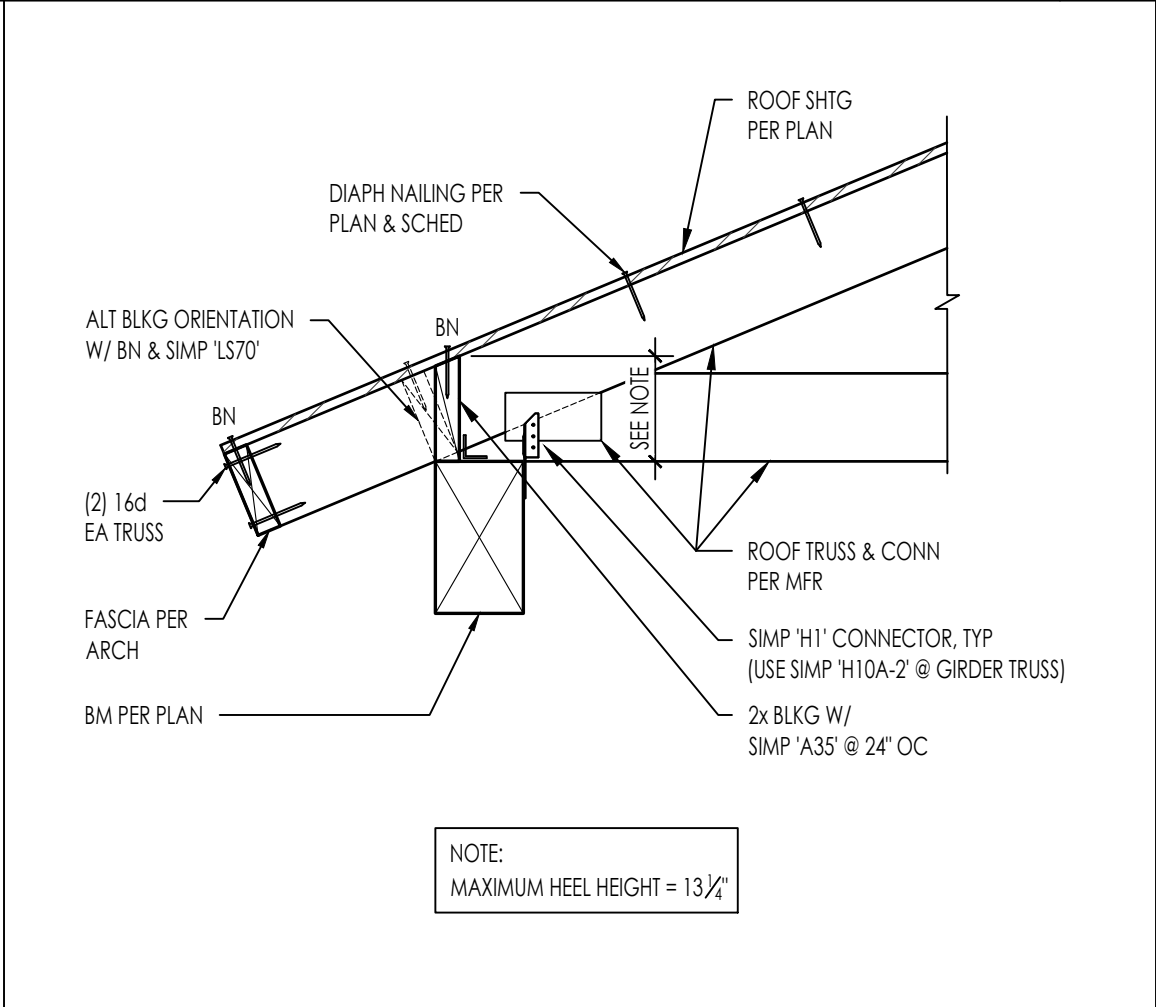
**TRUSS TO GIRDER TRUSS W/ WALL BELOW**  
 2340-01-CU21 - 5421 - 33 1" = 1'-0" 33



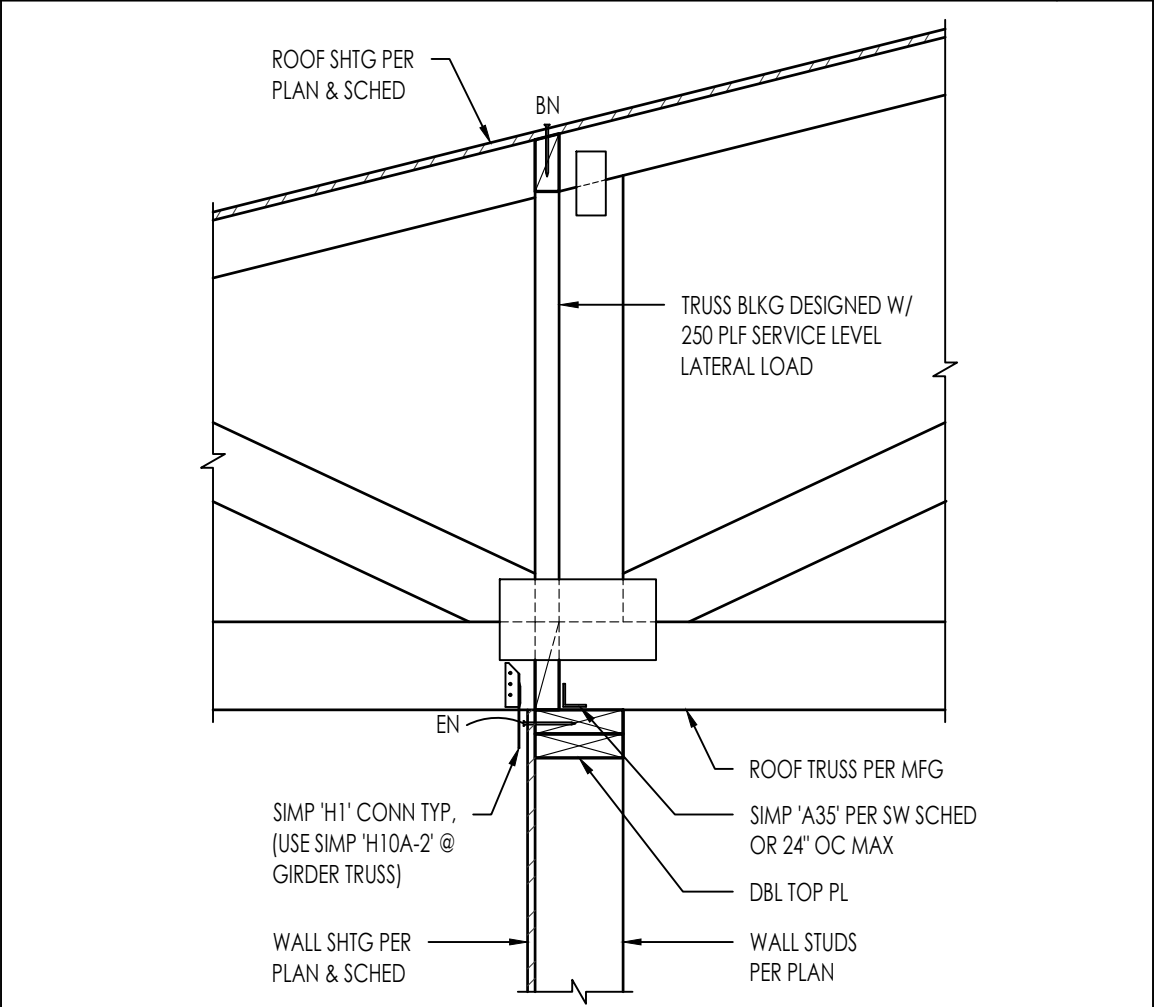
**TRUSS TO GIRDER TRUSS W/ WALL BELOW**  
 2340-01-CU21 - 5421 - 33 NTS 33



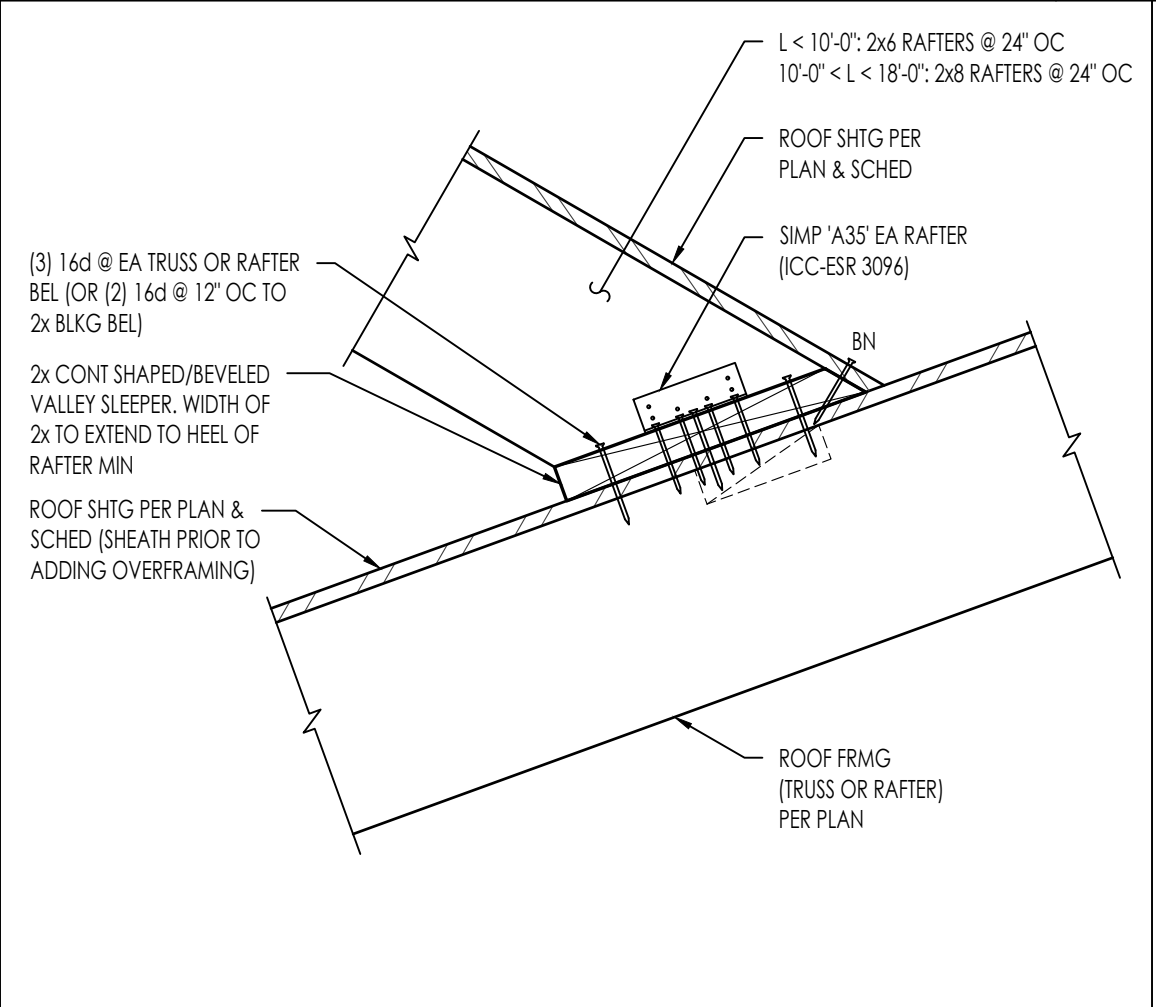
**GABLE END TRUSS W/ LOOKOUT @ BEAM**  
 2340-01-CU21 - 5421 - 54 1" = 1'-0" 54



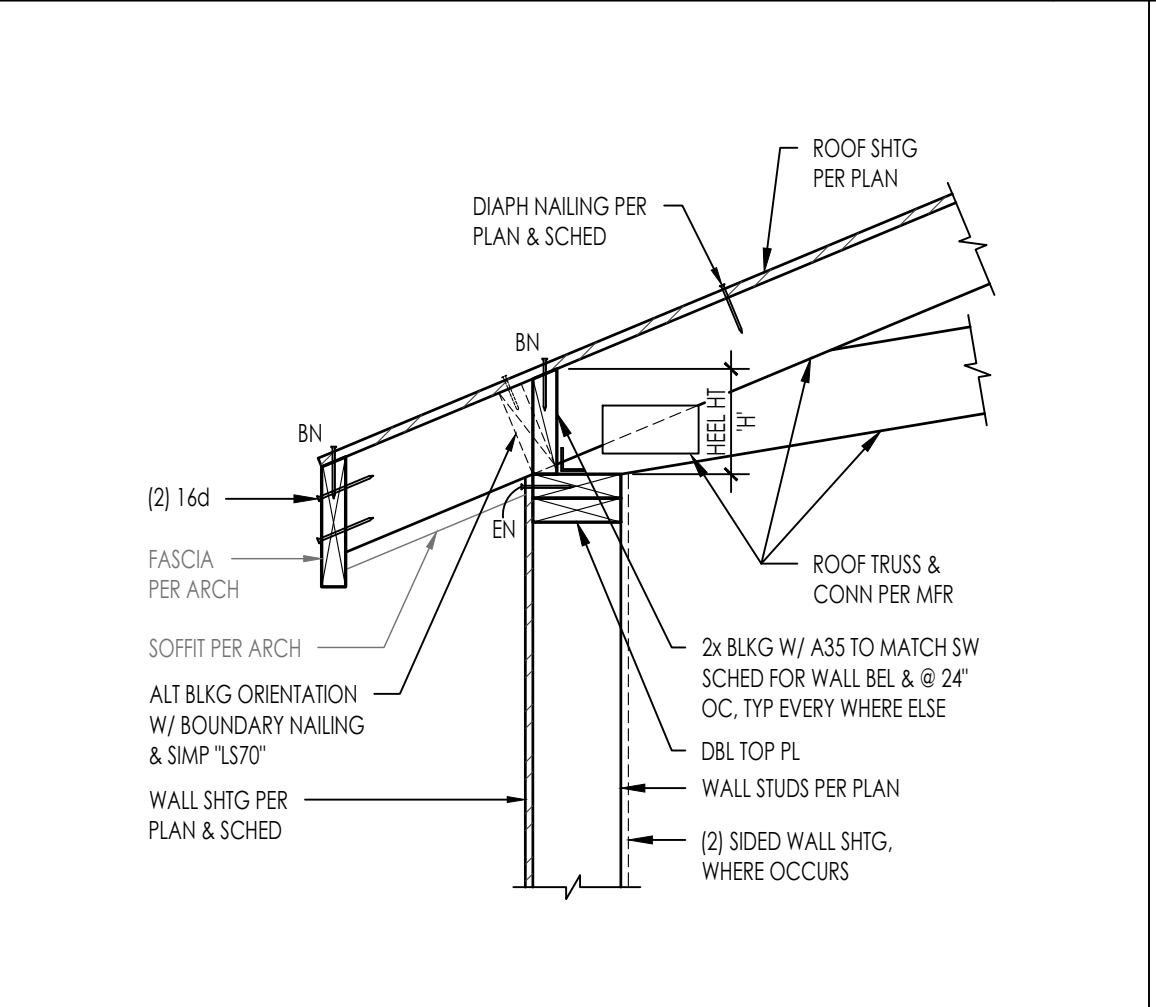
**ROOF TRUSS PERP TO BEAM**  
 2340-01-CU21 - 5421 - 44 1" = 1'-0" 44



**TRUSS INTERIOR BEARING WALL**  
 2340-01-CU21 - 5421 - 34 1" = 1'-0" 34



**CALIFORNIA FRAMING SLEEPER**  
 2340-01-CU21 - 5421 - 24 NTS 24



**ROOF TRUSS PERP TO EXTERIOR WALL**  
 2340-01-CU21 - 5421 - 13 NTS 13

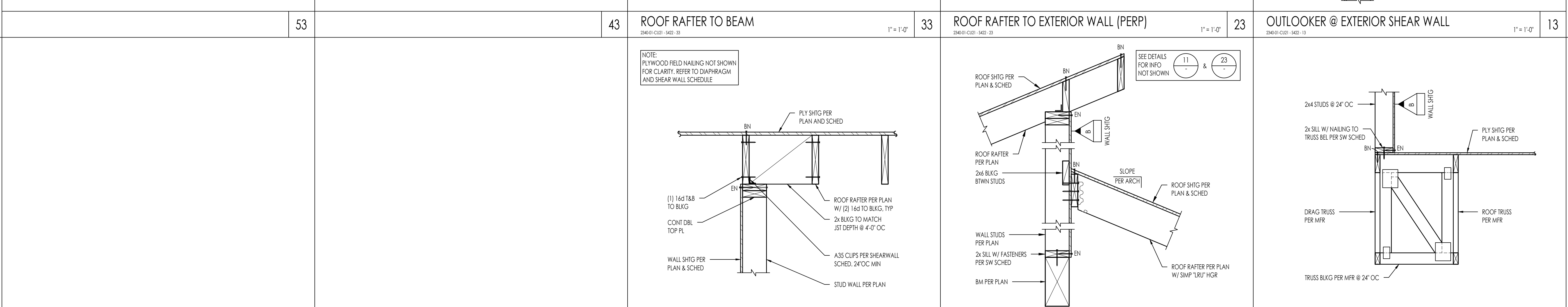
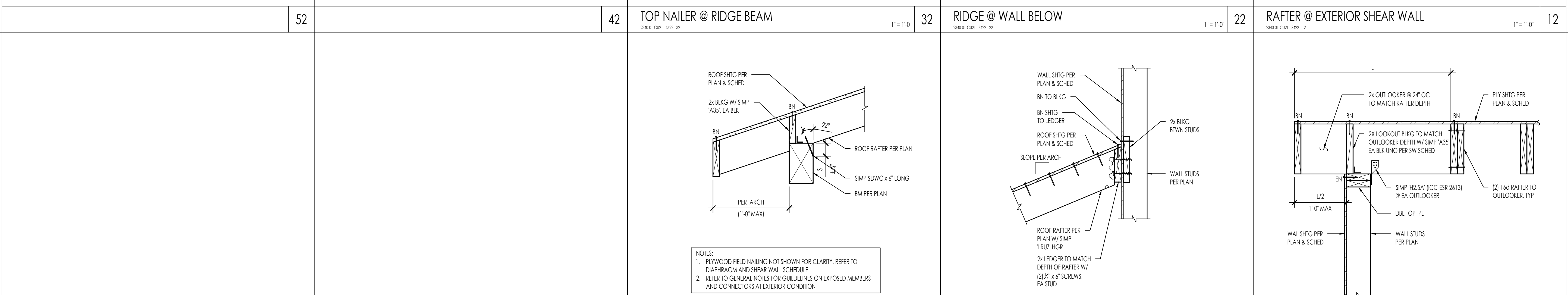
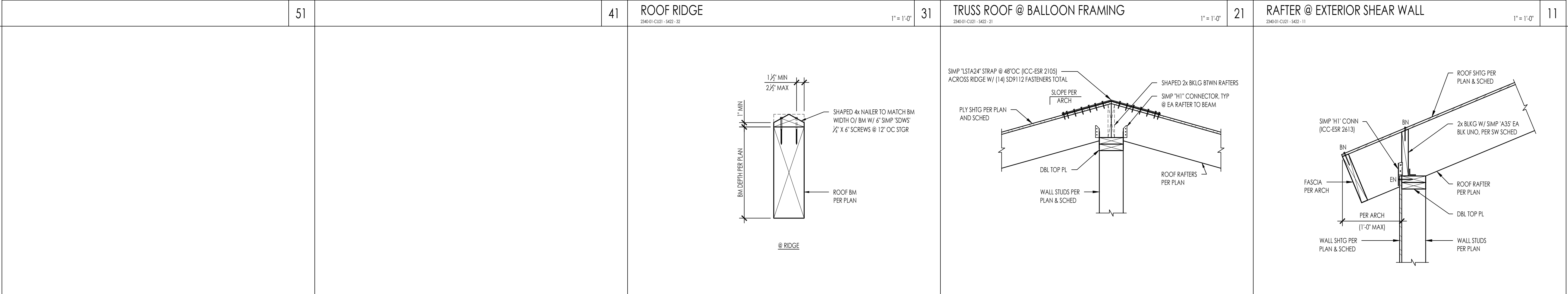
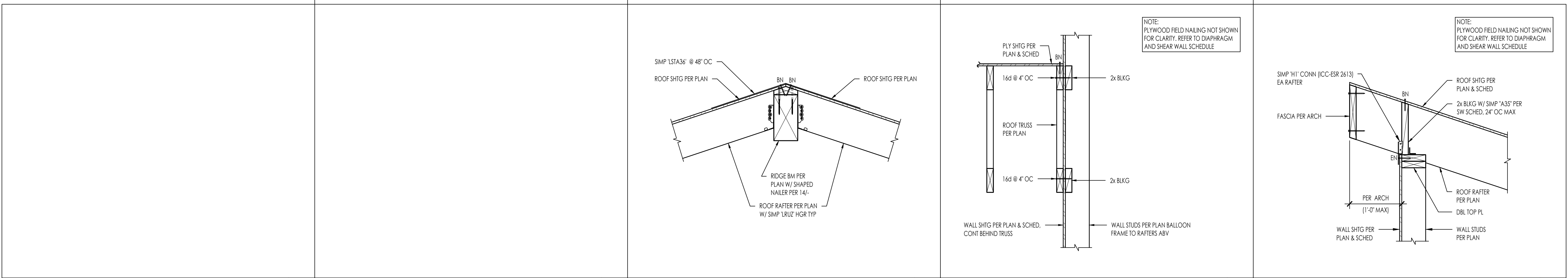
CONSULTANT  
 AGENCY

**MONO COUNTY ADU PROTOTYPES**  
 MONO COUNTY  
**ROOF FRAMING DETAILS**

NO.	REVISION	DATE

PROJECT MANAGER  
 J. MEADOWS  
 DRAWN BY  
 A. LOPEZ  
 CHECKED BY  
 M. DOREMUS  
 DATE  
 AUGUST 18, 2022  
 PROJECT NUMBER  
 2340-01-CU21  
 SHEET  
**S-421**

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CONSULTANT

AGENCY

**MONO COUNTY ADU PROTOTYPES**  
MONO COUNTY

**ROOF FRAMING DETAILS**

NO.	REVISION	DATE

PROJECT MANAGER  
J. MEADOWS

DRAWN BY  
A. LOPEZ

CHECKED BY  
M. DOREMUS

DATE  
AUGUST 18, 2022

PROJECT NUMBER  
2340-01-CU21

SHEET  
S-422

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