

LAGUNA NIGUEL PRE-APPROVED ADU - PLAN 1



CALIFORNIA RANCH



MODERN FARMHOUSE



MEDITERRANEAN

ALL PLAN USERS MUST SUBMIT A COMPLETED
USER LICENSE AGREEMENT AT THE TIME OF
APPLICATION SUBMITTAL. STAFF INITIALS: _____

PROJECT ADDRESS:

(TO BE PROVIDED BY OWNER / APPLICANT)

UTILITIES

OWNER / APPLICANT TO LIST SERVICE PROVIDERS IN SPACES BELOW (SEE SITE
PLAN, SHEET AS101 FOR INFORMATION AND LOCATIONS OF ALL UTILITIES)

WATER AND SEWER SERVICE _____
ELECTRICAL SERVICE _____
GAS SERVICE _____
SEWER SERVICE _____
GARBAGE SERVICE _____
CABLE SERVICE _____

WASTE WATER

(SELECTIONS TO BE PROVIDED BY APPLICANT OR OWNER)

THE ADU AND PRIMARY DWELLING UNIT SHALL HAVE SEPARATE, INDEPENDENT
WATER SUPPLY AND SANITARY SEWER SYSTEMS.

NOTE: A NEW SEPTIC SYSTEM IS ONLY PERMITTED WHEN NO PUBLIC SEWER IS
DEEMED AVAILABLE; A PERCOLATION REPORT AND SEPTIC DESIGN ARE REQ.)

☐ NO NEW SEPTIC SYSTEM.

☐ NEW SEPTIC SYSTEM; PROVIDE STAMPED DEH EXHIBIT.

IF NO, SELECT ONE OF THE FOLLOWING:

☐ NEW SEWER LINES CONNECTED DIRECTLY TO PUBLIC RIGHT OF WAY.

☐ NEW SEWER LINES BRANCHED OFF EXISTING MAIN LINES ON THE PROPERTY.

NOTE: SEE SITE PLAN CHECKLIST ON AS-101 AND SITEPLAN ON AS-102 FOR
MORE INFORMATION AND LOCATIONS.

WATER SUPPLY

(SELECTIONS TO BE PROVIDED BY APPLICANT OR OWNER)

☐ NEW WATER SUPPLY CONNECTED DIRECTLY TO PUBLIC RIGHT OF WAY.

☐ NEW WATER SUPPLY BRANCHED OFF EXISTING MAIN LINES ON THE PROPERTY.

NOTE: ADU AND PRIMARY DWELLING UNIT SHALL HAVE SEPARATE, INDEPENDENT
WATER SUPPLY/SEE SITE PLAN CHECKLIST ON AS-101 AND SITEPLAN ON AS-102 FOR
MORE INFORMATION AND LOCATIONS.

ELECTRICAL PANEL

ELECTRICAL PANEL (SEE PLANS & SITE PLAN FOR LOCATION)

NOTE: SPECIFY IF THE ADU WILL HAVE ITS OWN SEPARATE UTILITY SERVICE
INSTALLED OR IF THE ADU WILL BE SUB-FED FROM AN EXISTING ADEQUATE SERVICE.
PROVIDE COMPLETE ELECTRICAL LOAD CALCULATIONS FOR REVIEW. IF SUB-FED,
PLEASE PROVIDE A SECOND AND SEPARATE LOAD CALCULATION OF THE EXISTING
SERVICE TO JUSTIFY IT IS ADEQUATE FOR THE ADDITIONAL LOADS.

- ☐ (A) NEW ELEC. MAIN PANEL OF 200 AMP WITH 225 AMP MIN. BUSBAR RATING
☐ (B) A NEW ELEC. SUBPANEL CONNECTS TO THE ELEC. MAIN PANEL OF 220 AMP
ON THE PRIMARY HOME WITH A 225 AMP MIN. BUSBAR RATING
☐ (C) NEW ELEC. MAIN PANEL MIN. 400 AMP DUAL METER AT PRIMARY HOUSE
WITH A NEW ELEC. SUB-PANEL AT ADU THAT CONNECTS TO THE MAIN PANEL

PROJECT DIRECTORY

(TO BE PROVIDED BY OWNER / APPLICANT)

APPLICANT:

ADDRESS:

PHONE:

EMAIL:

CONTACT:

OWNER:

ADDRESS:

PHONE:

EMAIL:

CONTACT:

ARCHITECT

RRM DESIGN GROUP

ADDRESS: 3765 S HIGUERA ST., SUITE 102

SAN LUIS OBISPO, CA 93401

CONTACT: RANDY RUSSOM

EMAIL: RWRUSSOM@RRMDESIGN.COM

PHONE: P: (805) 543-1794

ENERGY COMPLIANCE

PREPARED BY:

CARSTAIRS ENERGY

DATE PREPARED:

JANUARY 04, 2025

JOB NUMBER:

25-01046

HERS QII REQUIRED

STAFF INITIALS

SEE SHEET S-103 FOR REQUIRED SPECIAL INSPECTIONS

A REGISTERED DESIGN PROFESSIONAL SHALL COMPLETE THE CITY OF LAGUNA
NIGUEL STATEMENT OF REQUIRED SPECIAL INSPECTIONS CERTIFICATE (FORM
PLG-240) PRIOR TO PERMIT ISSUANCE. IDENTIFY THE TYPE OF WORK REQUIRING
SPECIAL INSPECTIONS IN THE PLANS AND THE INDIVIDUALS OR FIRMS RESPONSIBLE
FOR THE SPECIAL INSPECTION ELEMENT(S). FOR FURTHER INSTRUCTIONS SEE S-103.

OWNER/APPLICANT HAS COMPLETED SPECIAL INSPECTION FORM

OWNER/APPLICANT SIGNATURE: _____

HERS VCHP: HERS RATER WILL NEED TO FOLLOW THE VERIFICATION AND TESTING
PROTOCOL FOR THE VARIABLE CAPACITY HEAT PUMP CREDIT REQUIREMENTS,
INCLUDING BUT NOT LIMITED TO: VERIFIED REFRIGERANT CHARGE, VERIFIED MINIMUM
HSPF AND EER/SEER, AND CAPACITY; DUCTLESS INDOOR UNITS AND THE
COMPONENTS ARE WITHIN THE CONDITIONED ENVELOPE, AND AIRFLOW PROVIDED TO
ALL HABITABLE SPACES (BEDROOMS AND LIVING SPACE).

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 OF THIS COMPUTER ANALYSIS. REGISTERED CF2RS AND CF3RS ARE
REQUIRED TO BE COMPLETED IN THE HERS REGISTRY.

- INDOOR AIR QUALITY VENTILATION
- KITCHEN RANGE HOOD TABLE 150.0-G160
- VERIFIED EER / EER2
- VERIFIED SEER / SEER2
- AIRFLOW IN HABITABLE ROOMS (SC3.1.4.1.7)
- VERIFIED HSPF
- 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 (SC3.1.4.1.8)
- BATHROOM, KITCHEN, AND WHOLE HOUSE VENTILATION

OWNER/APPLICANT SIGNATURE: _____

ADDITIONAL INFORMATION:

1. ANY PROPOSED ENERGY STORAGE SYSTEM (ESS) SHALL FOLLOW **SINGLE-FAMILY
RESIDENTIAL MANDATORY REQ. SUMMARY SECTION 150.0(s)** AND WILL REQUIRE A
SEPARATE PERMIT TO BE PULLED BY APPLICANT.
2. VARIABLE CAPACITY HEAT PUMP COMPLIANCE OPTION VERIFICATION DETAILS
FROM VCHP STAFF REPORT, APPENDIX B, AND RA3) (PER TITLE 24).
3. THIS PLAN IS INTENDED FOR FLAT LOTS (SLOPING LESS THAN 10° ACROSS
THE LONGEST BUILDING DIMENSION), WITHOUT HIGHLY EXPANSIVE OR LIQUEFIABLE
SOILS, WHERE THE MAIN DWELLING UNIT IS SUPPORTED IN SHALLOW FOOTINGS
WITH SLABS ON GRADE CONSTRUCTION. IF THE PROJECT SITE DEVIATES FROM ANY
OF THE AFOREMENTIONED QUALITIES, AS DETERMINED BY THE BUILDING OFFICIAL,
THERE PRE-APPROVED ADU FOUNDATION PLANS AND DETAILS ARE NOT
APPLICABLE.
4. SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED
TO THE BUILDING OFFICIAL. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE
INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN
APPROVED BY THE BUILDING OFFICIAL.
5. COMPLIANCE WITH THE DOCUMENTATION REQUIREMENTS OF THE 2022 ENERGY
EFFICIENCY STANDARDS IS NECESSARY FOR THIS PROJECT. REGISTERED, SIGNED,
AND DATED COPIES OF THE APPROPRIATE CF1R, CF2R, AND CF3R FORMS SHALL BE
MADE AVAILABLE AT NECESSARY INTERVALS FOR BUILDING INSPECTOR REVIEW.
FINAL COMPLETED FORMS WILL BE AVAILABLE FOR THE BUILDING OWNER.

PROJECT INFORMATION

STAFF INITIALS

*FOR BUILDING DEPARTMENT REVIEW, INITIAL WHEN SECTION HAS BEEN REVIEWED

PROJECT SCOPE:

1. CONSTRUCTION OF A NEW DETACHED 1 STORY 350 SF ACCESSORY
DWELLING UNIT WITH 1 BEDROOM AND 1 BATH.
2. ALL THE WORK SHOWN IN THE DRAWINGS AND SPECIFICATIONS.

	SQUARE FOOTAGE	INTERIOR/EXTERIOR
PLAN 1	350 SF	CONDITIONED
PLAN 1 - PORCH	70 SF	UNCONDITIONED

BUILDING INFORMATION:

NUMBER OF STORIES:	1	OCCUPANCY GROUP:	R-3
CONSTRUCTION TYPE:	VB	SPRINKLERED:	(SEE FIRE SPRINKLER SECTION ON THIS SHEET)
ZONING:			
MAX HEIGHT ALLOWED:	16' - 0"	PROPOSED HEIGHT:	

SITE INFORMATION:

(TO BE PROVIDED BY APPLICANT OR OWNER)

APN:	LAND USE:
EXISTING USE:	PROPOSED USE:
LOT SIZE (SQ FT):	

LOT COVERAGE	SETBACKS	MIN. REQUIRED:	PROPOSED:
PRIMARY BUILDING SF:	FRONT:		
ACCESSORY STRUCTURE(S) SF:	REAR:	4' - 0"	
LOT COVERAGE SF:	SIDES:	4' - 0"	
FLOOR AREA RATIO:	BETWEEN STRUCTURES:		

SETBACK RESTRICTIONS - FIRE RATINGS:

IS THE ADU 5' - 0" OR LESS TO ANY PROPERTY LINE AND/OR IS THE ADU 10' - 0" OR LESS
FROM ANY ADJACENT BUILDING OR STRUCTURE?

☐ NO

☐ YES; IF YES, FIRE RATED WALL & PROJECTIONS REQUIRED PER 2022 CRC
SECTION R302.1, FIRE RATED WALL DETAIL: 42/A-901
IF YES, FIREBLOCKING IS REQUIRED IN PROJECTIONS, RAKES AND EAVES.
SEE DETAILS: 31/A-911, 32/A-911, 31/A-912, 32/A-912

DEFERRED SUBMITTAL(S)

(TO BE PROVIDED BY APPLICANT OR OWNER, CITY OF
LAGUNA NIGUEL TO CHECK OFF BOXES WHEN
COMPLETE)

☐ TRUSS CALCULATIONS

STAFF INITIALS: _____

☐ FIRE SPRINKLER (IF APPLICABLE, SEE FIRE SPRINKLERS SECTION.)

PHOTOVOLTAIC SYSTEM (PV) (DEFERRED SUBMITTAL)

☐ YES, PV SYSTEM REQUIRED

STAFF INITIALS

- NO, PV NOT REQUIRED (FOR ADUS 728SF OR SMALLER) PER CALIFORNIA ENERGY CODE
SECTION 150.1(C)14 EXCEPTION (IF NO, OWNER/APPLICANT REQ. TO SELECT ONE):
- 1) FOR STEEP SLOPE ROOFS, WITH NORTHERLY AZIMUTH THAT LIES BETWEEN 300
DEGREES AND 90 DEGREES FROM TRUE NORTH. IF THE SARA IS LESS THAN 80
CONTIGUOUS SQUARE FEET.
 - 2) PV SYSTEM SIZE SPECIFIED BY SECTION 150.1(C)14 IS LESS THAN 1.8 KWDC.
 - 3) BUILDINGS W/ APPROVED ROOF DESIGNS, WHERE THE ENFORCEMENT AUTHORITY
DETERMINES IT IS NOT POSSIBLE FOR THE PV SYSTEM
 - 4) FOR BUILDINGS THAT ARE APPROVED BY THE LOCAL PLANNING DEPARTMENT
PRIOR TO JANUARY 1, 2020 WITH MANDATORY CONDITIONS FOR APPROVAL
 - 5) PV SYSTEM SIZES DETERMINED USING EQUATION 150.1-C MAY BE REDUCED BY 25
PERCENT IF INSTALLED IN CONJUNCTION WITH A QUALIFYING BATTERY STORAGE
SYSTEM.
- ☐ OTHER. (REQ. APPROVAL) SPECIFY: _____

SOLAR READY REQUIREMENTS SHALL BE IMPLEMENTED. FOR MORE INFORMATION SEE
"SOLAR READY NOTES" ON SHEET G-101.

UTILITY, GRADING, & DRAINAGE

(PLANS TO BE PROVIDED BY OTHERS)

IS GRADING NECESSARY TO CREATE PAD AND FOUNDATION?

☐ NO

☐ YES

IF YES, A CIVIL ENGINEER WILL BE
REQUIRED TO PROVIDE PLANS.

USER LICENSE AGREEMENT

OWNER/APPLICANT TO SIGN & SUBMIT SEPARATE SUPPORTING DOCUMENT "USER
LICENSE AGREEMENT" IN ADDITION TO SIGNING THIS USER AGREEMENT BELOW:

BY USING THESE PERMIT READY ACCESSORY DWELLING UNIT CONSTRUCTION
DOCUMENTS, THE USER AGREES TO RELEASE, HOLD HARMLESS, AND INDEMNIFY
THE CITY OF LAGUNA NIGUEL, 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 ONLY FOR USE IN CITY OF LAGUNA
NIGUEL. 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. THIS SET OF PLANS
SHALL NOT BE USED FOR A PUBLIC HOUSING PROJECT.

SIGNATURE

DATE

OPTION SELECTIONS (ALL STYLES)

*OWNER/APPLICANT REQ. TO SELECT ONE OF THE FOLLOWING STYLES AND ANY
SUBSEQUENT OPTIONS. CROSS OUT NON-APPLICABLE OPTIONS & VIEWS
THROUGHOUT SET.

COVERED FRONT PORCH OPTION

☐ (A) YES

☐ (B) NO, SEE VIEW: 2/A1-101

BATH TUB / SHOWER

☐ (A) BATHTUB (AS SHOWN IN PRIMARY VIEW)

☐ (B) WALK-IN SHOWER, SEE DETAIL: 23/A-901

EXTERIOR SOFFITS MATERIAL SELECTION (@EAVES, RAKES, & PORCHES)

PROVIDE FIRE RETARDANT TREATED (FRTW) MATERIALS AS REQ. COORDINATE
SELECTION WITH STRUCTURAL AND TRUSS MANUFACTURER.

OWNER/APPLICANT REQUIRED TO INDICATE MATERIAL SELECTION ON THE
FOLLOWING SHEETS: A1-121, A1-122, A1-123, A-911, A-912.

☐ (A) EXT. TOUNGE & GROOVE

☐ (B) EXT. GRADE PLYWOOD

WATER HEATER

☐ (A) TANKLESS WATER HEATER; SPECIFIC BRAND/MODEL **MUST** BE INSTALLED
(PER TITLE 24).

☐ (B) OTHER WATER HEATER WITH THE REQUIREMENT THAT A NEW T24 ENERGY
REPORT IS PROVIDED AND APPROVED. MFR & MODEL: _____

REVERSE FLOOR PLAN OPTION

☐ (A) NO; CROSS THROUGH SHEET A1-101R - PLAN 1 REVERSE

☐ (B) YES; SEE A1-101R - PLAN 1 REVERSE.
SEE A1-101 FOR KEYNOTES, OPTIONS, AND FOR REFERENCE.

STYLE SELECTION

*OWNER/APPLICANT REQ. TO SELECT ONE OF THE FOLLOWING STYLES AND ANY
SUBSEQUENT OPTIONS. CROSS OUT NON-APPLICABLE OPTIONS & VIEWS
THROUGHOUT SET.

☐ CALIFORNIA RANCH

EXTERIOR LIGHT(S)

☐ (A) THE GREAT OUTDOORS KIRKHAM ASPEN BRONZE (8102-A138-L) OR EQUAL

☐ (B) THE LUTEC BARN LIGHT SCONCE W/ DUSK TO DAWN (6940002012) OR EQUAL

☐ (C) OTHER; REQUIRES APPROVAL. PROVIDE SPECIFICATIONS

*REQUIRED TO BE DARK SKY COMPLIANT

☐ MODERN FARMHOUSE

EXTERIOR LIGHT(S)

☐ (A) THE GREAT OUTDOORS KIRKHAM ASPEN BRONZE (8102-A138-L) OR EQUAL

☐ (B) THE LUTEC BARN LIGHT SCONCE W/ DUSK TO DAWN (6940002012) OR EQUAL

☐ (C) OTHER; REQUIRES APPROVAL. PROVIDE SPECIFICATIONS

*REQUIRED TO BE DARK SKY COMPLIANT

☐ MEDITERRANEAN

EXTERIOR LIGHT(S)

☐ (A) MAXIM LIGHTING WHISPER DARK SKY WALL LANTERN (8639BZ) OR EQUAL

☐ (B) OTHER; REQUIRES APPROVAL. PROVIDE SPECIFICATIONS

*REQUIRED TO BE DARK SKY COMPLIANT

VICINITY MAP

(TO BE PROVIDED BY OWNER OR APPLICANT)



THESE PLANS ARE PROVIDED BY THE CITY OF LAGUNA
NIGUEL AS PART OF THE PRE-APPROVED ADU
PROGRAM AND ARE PUBLIC DOMAIN. THERE
CANNOT BE A CHARGE TO PROVIDE THESE PLANS.
NO ALTERATIONS TO THESE PLANS ARE ALLOWED. ALL
ALTERATIONS MUST BE DONE UNDER A SEPARATE
PERMIT ONCE THE BUILDING PERMIT FOR THE ADU
HAS BEEN ISSUED AND FINAL INSPECTION
COMPLETED. IF YOU DO NOT HAVE THE
CONSTRUCTION KNOWLEDGE AND EXPERIENCE TO
CONTRACT THESE PLANS WITHOUT FURTHER DETAILS,
IT IS RECOMMENDED YOU HIRE A CONTRACTOR TO
DO THE CONSTRUCTION. THE CITY WILL NOT
PROVIDE FURTHER INFORMATION OR DETAILS AND
BUILDING INSPECTORS WILL NOT PROVIDE STEP BY
STEP INSTRUCTIONS IN THE FIELD.

PRE-APPROVED ADU

CITY OF LAGUNA NIGUEL

TITLE SHEET - PLAN 1

PUBLIC SET

DATE

02/05/2025

SHEET

G-001

FLOOR PLAN NOTES

- WEATHER BARRIERS.**
 - NOT FEWER THAN ONE-LAYER WATER-RESISTIVE BARRIER SHALL BE APPLIED OVER STUDS OR SHEATHING OF ALL EXTERIOR WALLS CONTINUOUS FROM TOP OF WALLS AND TERMINATED AT PENETRATIONS AND BUILDING APPENDAGES WITH FLASHING. MINIMUM NO. 15 FELT COMPLYING WITH ASTM D256, TYPE I.
 - PROVIDE (2) LAYERS OF GRADE 1 PAPER OR EQUAL WHEN PLASTER IS INSTALLED OVER WOOD BASED SHEATHING. (2022 CMC R303.7.3)
- DOMESTIC RANGE** VENTILATION DUCTS SHALL HAVE SMOOTH INTERIOR SURFACES. (2022 CMC 504.3)
- 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 2'-0" FOR EVERY ELBOW IN EXCESS OF TWO. MIN. DIA. 4". SMOOTH, METAL DUCT. (2022 CMC 504.4)
- ALL MANUFACTURED EQUIPMENT** SHALL BE INSTALLED AS PER MANUFACTURER'S SPECIFICATION AND DIMENSIONS VERIFIED WITH INSTALLATION REQUIREMENTS. ALL MANUFACTURER'S INSTALLATION INSTRUCTIONS SHOULD BE ON SITE FOR INSPECTIONS.
- SHOWERS AND TUB-SHOWER COMBINATIONS:** CONTROL VALVES MUST BE PRESSURE BALANCED OR THERMOSTATIC MIXING VALVES. (2022 CPC 417.0)
- WET-ROOM GLAZING.** PROVIDE TEMPERED GLAZING IN DOORS AND ENCLOSURES FOR SHOWERS, BATHTUBS, SAUNAS, STEAM ROOMS, HOT TUBS & SIMILAR USES WHERE THE BOTTOM EXPOSED EDGE IS LESS THAN 60-INCHES ABOVE A STANDING SURFACE. (2022 CPC R308.4.5)
- HEATING AND AIR-CONDITIONING SYSTEM DESIGN** SHALL CONFORM TO CALGREEN SEC. 4.507, ENVIRONMENTAL COMFORT.
- WATER CLOSETS.**
 - CLEARANCES: 24" MIN. FRONT, 30" MIN COMPARTMENT WIDTH.
 - PROVIDE A MIN 3 SF WINDOW, 12" 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. (2022 CPC R303.3)
- NEW WATER CLOSETS AND ASSOCIATED FLUSHOMETER 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 1792.13(B).
- BATH ACCESSORIES:** PROVIDE MINIMUM 1 TOILET PAPER HOLDER AND 1 TOWEL BAR PER BATHROOM. PROVIDE NECESSARY BLOCKING FOR TOILET PAPER HOLDER AND TOWEL BAR.
- WHOLE-BUILDING MECHANICAL VENTILATION SYSTEM** PER ASHRAE STANDARD 62.2. PROVIDE THE INSPECTOR WITH 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:**
 - WHERE REQUIRED, PROVIDE 30" MIN. HEADROOM IN THE ATTIC SPACE (2022 CRC R807.1)
 - 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. (2022 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 ITS 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 OPTIMUM AIR CONDITIONING.
 - PROVIDE A 120V RECEPTACLE AND A LIGHT NEAR THE EQUIPMENT WITH LIGHT SWITCH LOCATED AT THE ATTIC ACCESS.
- BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBABLE SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR PER 2022 CRC, SECTION R307.2.

PLUMBING NOTES

- CONFORM WITH CURRENT CPC AND LOCAL REQUIREMENTS.
- DOMESTIC WATER (WITHIN BUILDING): COPPER OR PEX PIPE OR APPROVED PIPING.
- AIR CHAMBERS: 12" LONG CAPPED NIPPLE AT END OF EACH BRANCH TO EACH FIXTURE.
- DIELECTRIC UNIONS "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.
- WATER METER: PER WATER DISTRICT (REFER SIZE W/ FIRE SPRINKLER PLANS IF APPLICABLE)
- SHOWER HEADS AND FAUCETS: FLOW RATES PER 2022 CGBSC SECTION 4.303
- WATER HEATER** (REFER TO BUILDING ENERGY ANALYSIS REPORT):
 - ALL DOMESTIC HOT WATER PIPING SHALL BE INSULATED. (2022 CPC 609.12.1)
 - PIPES UP TO 2 INCHES IN DIAMETER: INSULATION WALL THICKNESS NOT LESS THAN 1/2 INCHES (2022 CPC 609.12.2)
 - PIPES GREATER THAN 2 INCHES IN DIAMETER: INSULATION WALL THICKNESS NOT LESS THAN 2 INCHES. (2022 CPC 609.12.2)
 - EXCEPTIONS:**
 - PIPING THAT PENETRATES FRAMING MEMBERS SHALL NOT BE REQUIRED TO HAVE PIPE INSULATION FOR THE DISTANCE OF THE FRAMING PENETRATION. (2022 CPC 609.12.2)
 - HOT WATER PIPING BETWEEN THE FIXTURE CONTROL VALVE OR SUPPLY STOP AND THE FIXTURE OR APPLIANCE SHALL NOT BE REQUIRED TO BE INSULATED. (2022 CPC 609.12.2)
- PROVIDE A TEMPERATURE AND PRESSURE RELIEF VALVE WITH A FULL COLD DRAIN OF CALORIZING STEAM AND HOT WATER FROM THE SYSTEM 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 MANUFACTURER REQUIREMENTS.
- CLEARANCES** PER MANUFACTURER REQUIREMENTS.
- PLUMBING INSULATION** PER 2022 CENC 150.0 (J) AND CBC 609.11
 - DOMESTIC HOT WATER PIPING SHALL BE INSULATED.
 - HOT WATER PIPE INSULATION SHALL HAVE A MINIMUM WALL THICKNESS OF NOT LESS THAN THE DIAMETER OF THE PIPE FOR A PIPE UP TO 2 INCHES (50 MM) IN DIAMETER. INSULATION WALL THICKNESS SHALL BE NOT LESS THAN 2 INCHES (51 MM) FOR A PIPE OF 2 INCHES (50 MM) OR MORE IN DIAMETER.
 - PIPING THAT PENETRATES FRAMING MEMBERS SHALL NOT BE REQUIRED TO HAVE PIPE INSULATION FOR THE DISTANCE OF THE FRAMING PENETRATION.
 - HOT WATER PIPING BETWEEN THE FIXTURE CONTROL VALVE OR SUPPLY STOP AND THE FIXTURE OR APPLIANCE SHALL NOT BE REQUIRED TO BE INSULATED.
- SERVICE WATER HEATING SYSTEMS PIPING TO INCLUDE:
 - RECIRCULATING SYSTEM PIPING, INCLUDING THE SUPPLY AND RETURN PIPING TO THE WATER HEATER
 - THE FIRST 6 FEET OF HOT AND COLD OUTLET PIPING, INCLUDING PIPING BETWEEN A STORAGE TANK AND A HEAT TRAP, FOR A NON-RECIRCULATING STORAGE SYSTEM.
- PIPES THAT ARE EXTERNALLY HEATED.
SHALL BE INSULATED AS FOLLOWS:
UP TO 1" PIPE DIAMETER TO HAVE 1.0 MIN THICKNESS OR R7/7
RATING PER CENC TABLE 120.3A
EXCEPTIONS:
 - FACTORY-INSTALLED PIPING WITHIN SPACE-CONDITIONING EQUIPMENT CERTIFIED UNDER SECTION 110.1 OR 110.2.

PLUMBING NOTES CONTINUED.

- PIPING THAT PENETRATES FRAMING MEMBERS SHALL NOT BE REQUIRED TO HAVE PIPE INSULATION FOR THE DISTANCE OF THE FRAMING PENETRATION. METAL PIPING THAT ENETRATES METAL FRAMING SHALL USE GRADE 1 PAPER OR EQUAL OVER OR OTHER INSULATING MATERIAL TO ASSURE THAT NO CONTACT IS MADE WITH THE METAL FRAMING.
 - PIPING INSTALLED IN INTERIOR OR EXTERIOR WALLS SHALL NOT BE REQUIRED TO HAVE PIPE INSULATION IF ALL OF THE REQUIREMENTS ARE MET FOR COMPLIANCE WITH QUALITY INSULATION INSTALLATION (QII) AS SPECIFIED IN THE REFERENCE RESIDENTIAL APPENDIX RA3.5.
 - PIPING SURROUNDED WITH A MINIMUM OF 1 INCH OF WALL INSULATION, 2 INCHES OF CRAWLSPACE INSULATION, OR 4 INCHES OF ATTIC INSULATION SHALL NOT BE REQUIRED TO HAVE PIPE INSULATION.
 - INSULATION PROTECTION.** PIPE INSULATION SHALL BE PROTECTED FROM DAMAGE DUE TO SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE AND WIND. PROTECTION SHALL, AT MINIMUM, INCLUDE THE FOLLOWING (2022 CEC SECTION 120.3(B)).
 - PIPE INSULATION EXPOSED TO WEATHER SHALL BE PROTECTED BY A COVER SUITABLE FOR OUTDOOR SERVICE. THE COVER SHALL BE WATER RETARDANT AND PROVIDES SHIELDING FROM SOLAR RADIATION THAT CAN CAUSE DEGRADATION OF THE MATERIAL. ADHESIVE TAPE SHALL NOT BE USED TO PROVIDE THIS PROTECTION.
 - PIPE INSULATION COVERING CHILLING WATER PIPING AND REFRIGERANT SUCTION PIPING LOCATED OUTSIDE THE CONDITIONED SPACE SHALL INCLUDE, OR BE PROTECTED BY, A CLASS I OR CLASS II VAPOR RETARDER. ALL PENETRATIONS AND JOINTS SHALL BE SEALED.
 - PIPE INSULATION BURIED BELOW GRADE MUST BE INSTALLED IN A WATER PROOF AND NONCRUSHABLE CASING OR SLEEVE.
 - 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 BIBBS SHALL HAVE APPROVED BACK FLOW PREVENTION DEVICES.
 - PLUMBING FIXTURES (WATER CLOSETS) 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 (2022 CPC 505.2) THE RELIEF VALVE SHALL BE PROVIDED WITH A DRAIN LINE WHICH EXTENDS FROM THE VALVES TO THE OUTSIDE OF THE BUILDING. PER (2022 608.5 CPC)
 - PER 2022 CPC 603.5.7 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 VACUUM BREAKER OR PREVENTER, A NONREMOVABLE HOSE BIBB TYPE VACUUM BREAKER, OR BY AN ATMOSPHERIC 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 PROTECTING VALVE WITH AN INTEGRAL BACKFLOW PREVENTER OR VACUUM BREAKER SHALL BE USED.
- ## ELECTRICAL NOTES
- CONFORM WITH CURRENT CEC, NFPA, MFR'S, AND LOCAL REQUIREMENTS.
 - ELECTRICAL SYSTEMS SHALL BE PROVIDED PER NEC ARTICLE 250-81.
 - ALL MATERIALS TO BE UL Labeled.
 - METER: "SQUARE D", 120 VOLT/ 240 VOLT, 1 AND 3 WIRE GROUND OR EQUAL.
 - ELECTRICAL PANEL: FLUSH MOUNT, 30" CLEARANCE. SEE COVER SHEET FOR SELECTION. SEE SITE PLAN FOR ELECTRICAL PANEL LOCATION.
 - CONDUITS OR: TW, THW, COPPER, MINIMUM 14 AT LIGHTING, 12 AT OTHER CIRCUITS.
 - ALL LUMINAIRES SHALL COMPLY WITH 2022 CENC SECTION 150.0 (K) AND TABLE 150.0-A AS REFERENCED IN ENERGY NOTES, LUMINAIRE REQUIREMENTS SHEET C-101.
 - 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 Art. 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 120-VOLT, 20-AMPERE BRANCH CIRCUIT. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS. THIS DEDICATED CIRCUIT MAY SERVE MORE THAN ONE BATHROOM. (2022 CEC 210.11(C))
 - THERMOSTAT SHALL BE A PROGRAMMABLE TYPE, HONEYWELL TH8320 OR EQUAL.
 - CEILING-SUSPENDED (PADDLÉ) 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 2022 CEC 314.27(C) (2022 CEC 422.18).
 - ALL LUMINAIRES, LAMPHOLDERS, AND RETROFIT KITS SHALL BE LISTED (2022 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 GROUND-FAULT CIRCUIT INTERRUPTER, COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT. (2022 CEC 210-12(A))
 - 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 5'6" 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 DEDICATED SPACE AND ARE CHORD-AND-PLUG CONNECTED AS PER CEC 400.10, AND (4) NON-GROUNDING RECEPTACLES USED FOR REPLACEMENTS AS PERMITTED IN CEC 406.4(D)(2)(A).
 - HIGH EFFICACY LUMINAIRES OTHER THAN OUTDOOR HD LIGHTING CONTAIN ONLY HIGH EFFICACY LAMPS AS OUTLINED IN TABLE 150-C OF 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 MIN. 1 FT CLR TO HVAC SUCT. 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.
 - EXHAUST FANS WILL BE CONTROLLED BY A HUMIDISTAT PER THE GREEN BUILDING STANDARDS CODE SECTION 4.506. EXHAUST FANS MUST BE SWITCHED SEPARATELY FROM LIGHTS (2022 CENC 150.0(K)(2)).
 - IN ADDITION TO THE NUMBER OF BRANCH CIRCUITS REQUIRED BY OTHER PARTS OF THE CODE, TWO OR MORE 20-AMPERE SMALL-APPLIANCE BRANCH CIRCUITS SHALL BE PROVIDED FOR ALL RECEPTACLE OUTLETS IN THE KITCHEN, PANTRY, BREAKFAST ROOM, DINING ROOM, OR SIMILAR AREA PER 2022 CEC, ARTICLE 210.11 (C)(1). THE CIRCUITS SHALL HAVE NO OTHER OUTLETS PER 2022 CEC, ARTICLE 120.1.52(B).
 - IN ADDITION TO THE NUMBER OF BRANCH CIRCUITS REQUIRED BY OTHER PARTS OF THE CODE, AT LEAST ONE ADDITIONAL 20-AMPERE BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY THE LAUNDRY RECEPTACLE OUTLET(S) REQUIRED BY 2022 CEC, ARTICLE 210.52 (F). THIS CIRCUIT SHALL HAVE NO OTHER OUTLETS PER 2022 CEC, ARTICLE 201.11(C)(2).
 - ELECTRICAL RECEPTACLE OUTLET, SWITCH AND CONTROLS (INCLUDING CONTROLS FOR HEATING, VENTILATION AND AIR CONDITIONING) INTENDED TO BE USED BY OCCUPANTS SHALL BE LOCATED NO MORE THAN 48" MEASURED FROM THE POINT OF MANAGEMENT CONTROL THAT PROVIDES THE MEASURED FROM THE BOTTOM OF THE OUTLET BOX ABOVE THE FINISH FLOOR (PER CRC R327.1.2).
 - DOORBELL BUTTONS OR CONTROLS, WHEN INSTALLED, SHALL NOT EXCEED 48" ABOVE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL BUTTON ASSEMBLY. WHEN THE DOORBELL BUTTON IS INTEGRATED WITH OTHER FEATURES ARE REQUIRED TO BE INSTALLED ABOVE 48" MEASURED FROM THE EXTERIOR FLOOR OR LANDING, A STANDARD DOORBELL BUTTON OR CONTROL SHALL ALSO BE PROVIDED AT A HEIGHT NOT EXCEEDING 48" ABOVE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL BUTTON OR CONTROL (PER CRC R327.1.4).

ENERGY NOTES

- THE BUILDER MUST PROVIDE NEW HOMEOWNERS WITH A LUMINAIRE SCHEDULE THAT INCLUDES A LIST OF INSTALLED LAMPS AND LUMINAIRES.
- LUMINAIRE REQUIREMENTS** (2022 Cenc 150.0(K)(1)).
 - LUMINAIRE EFFICACY.** ALL INSTALLED LUMINAIRES SHALL MEET THE REQUIREMENTS IN TABLE 150.0-A.
EXCEPT: INTEGRATED DEE LIGHTING, LIGHTING INTEGRAL TO EXHAUST FANS, KITCHEN CABINETS, BATH VARIETY MIRRORS AND EXTERIOR OPENERS, NAVIGATION LIGHTING: SUCH AS NIGHT LIGHTS, STEP LIGHTS, AND PATH LIGHTS LESS THAN 5 WATTS, CABINET LIGHTING: LIGHTING INTERNAL TO DRAWERS, CABINENTRY AND LINEN CLOSETS WITH AN EFFICACY OF 45 LUMENS PER WATT OR GREATER.
THE FOLLOWING LIGHT SOURCES SHALL COMPLY PER TABLE 150.0-A:
THE FOLLOWING LIGHT SOURCES, OTHER THAN THOSE INSTALLED IN CEILING RECESSED DOWNLIGHT LUMINAIRES, ARE NOT REQUIRED TO COMPLY WITH REFERENCE JOINT APPENDIX JAB:
 - LED LIGHT SOURCES INSTALLED OUTDOORS
 - INSEPARABLE SOLID STATE LIGHTING (SSL) LUMINAIRES CONTAINING COLORED LIGHT SOURCES THAT ARE INSTALLED TO PROVIDE DECORATIVE LIGHTING.
 - PIN-BASED LINEAR FLUORESCENT OR COMPACT FLUORESCENT LIGHT SOURCES USING ELECTRONIC BALLASTS
 - HIGH INTENSITY DISCHARGE (HID) LIGHT SOURCES INCLUDING PULSE START METAL HALIDE AND HIGH PRESSURE SODIUM LIGHT SOURCES
 - LUMINAIRES WITH HARDWIRED HIGH FREQUENCY GENERATOR AND INDUCTION LAMP
 - CEILING FAN LIGHT KITS SUBJECT TO FEDERAL APPLIANCE REQUIREMENTS
- THE FOLLOWING LIGHT SOURCES ARE ONLY CONSIDERED TO BE HIGH EFFICACY IF THEY ARE CERTIFIED TO THE COMMISSION AS HIGH EFFICACY LIGHT SOURCES IN ACCORDANCE WITH REFERENCE JOINT APPENDIX JAB AND MARKED AS REQUIRED BY JAB:
 - ALL LIGHT SOURCES INCLUDING RECESSED DOWNLIGHT LUMINAIRES. NOTE THAT CEILING RECESSED DOWNLIGHT LUMINAIRES SHALL NOT HAVE SCREW BASES REGARDLESS OF LAMP TYPE AS DESCRIBED IN SECTION 150.0(K)(1).
 - ANY LIGHT SOURCE NOT OTHERWISE LISTED
- SCREW-BASED LUMINAIRES.** SCREW-BASED LUMINAIRES SHALL CONTAIN LAMPS THAT COMPLY WITH REFERENCE JOINT APPENDIX JAB.
- RECESSED DOWNLIGHT LUMINAIRES IN CEILINGS.** LUMINAIRES RECESSED INTO CEILINGS SHALL MEET ALL OF THE FOLLOWING REQUIREMENTS:
 - SHALL NOT CONTAIN SCREW BASE LAMP SOCKETS; AND
 - HAVE A LABEL THAT CERTIFIES THE LUMINAIRE IS AIRTIGHT WITH AIR LEAKAGE LESS THAN 2.0 CFM AT 75 PASCALES WHEN TESTED IN ACCORDANCE WITH ASTM E283. AN EXHAUST FAN HOUSING WITH INTEGRAL LIGHT SHALL NOT BE REQUIRED TO BE CERTIFIED AIRTIGHT; AND
 - BE SEALED WITH A GASKET OR CAULK BETWEEN THE LUMINAIRE HOUSING AND CEILING, AND HAVE ALL AIR LEAK PATHS BETWEEN CONDITIONED AND UNCONDITIONED SPACES SEALED WITH A GASKET OR CAULK, OR BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS TO MAINTAIN AN AIRTIGHTNESS BETWEEN THE LUMINAIRE HOUSING AND CEILING; AND
 - MEET THE CLEARANCE AND INSTALLATION REQUIREMENTS OF CALIFORNIA ELECTRICAL CODE SECTION 410.116 FOR RECESSED LUMINAIRES.
EXCEPT: RECESSED LUMINAIRES MARKED FOR USE IN FIRE-RATED INSTALLATIONS EXTRUDED INTO CEILING SPACE AND RECESSED LUMINAIRES INSTALLED IN NONINSULATED CEILINGS.
- LIGHT SOURCES IN ENCLOSED OR RECESSED LUMINAIRES.** LAMPS AND OTHER SEPARABLE LIGHT SOURCES THAT ARE NOT COMPLIANT WITH THE JAB ELEVATED TEMPERATURE REQUIREMENTS, INCLUDING MARKING REQUIREMENTS, SHALL NOT BE INSTALLED IN ENCLOSED OR RECESSED LUMINAIRES.
- BLANK ELECTRICAL BOXES.** 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, VACUANCY SENSOR CONTROL, LOW VOLTAGE WIRING OR FAN SPEED CONTROL.
- INDOOR LIGHTING CONTROLS** (2022 Cenc 150.0(K)(2)).
 - LIGHTING SHALL HAVE READILY ACCESSIBLE WALL-MOUNTED CONTROLS THAT ALLOW THE LIGHTING TO BE MANUALLY TURNED ON AND OFF. **EXCEPT: CEILING FANS MAY PROVIDE CONTROL OF INTEGRATED LIGHTING VIA A REMOTE CONTROL.**
 - NO CONTROLS SHALL BYPASS A DIMMER, OCCUPANT SENSOR OR VACUANCY SENSOR FUNCTION WHERE THAT DIMMER OR SENSOR HAS BEEN INSTALLED IN COMPLIANCE WITH SECTION 150.0(K).
 - LIGHTING CONTROLS SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF SECTION 110.9.
 - AN ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) OR A MULTISCENE PROGRAMMABLE CONTROL MAY BE USED TO COMPLY WITH DIMMING, OCCUPANCY AND LIGHTING CONTROL REQUIREMENTS IN SECTION 150.0(K)(2) IF IT PROVIDES THE FUNCTIONALITY OF THE SPECIFIED CONTROLS IN ACCORDANCE WITH SECTION 110.9, AND THE PHYSICAL CONTROLS SPECIFIED IN SECTION 150.0(K)(2A).
- AUTOMATIC-OFF CONTROLS.**
 - IN BATHROOMS, GARAGES, LAUNDRY ROOMS, UTILITY ROOMS AND WALK-IN CLOSETS, AT LEAST ONE INSTALLED LUMINAIRE SHALL BE CONTROLLED BY AN OCCUPANCY OR VACUANCY SENSOR PROVIDING AUTOMATIC-OFF FUNCTIONALITY.
 - FOR LIGHTING INTERNAL TO DRAWERS AND CABINENTRY WITH OPAQUE FRONTS OR DOORS, CONTROLS THAT TURN THE LIGHT OFF WHEN THE DRAWER OR DOOR IS CLOSED SHALL BE PROVIDED.
- DIMMING CONTROLS.** LIGHTING IN HABITABLE SPACES, INCLUDING BUT NOT LIMITED TO LIVING ROOMS, DINING ROOMS, KITCHENS AND BEDROOMS, SHALL HAVE READILY ACCESSIBLE WALL-MOUNTED DIMMING CONTROLS THAT ALLOW THE LIGHTING TO BE MANUALLY ADJUSTED UP AND DOWN. FORWARD PHASE-TO-TO DIMMERS CONTROLLING LED LIGHT SOURCES IN THESE SPACES SHALL COMPLY WITH NEMA SSL 7A. **EXCEPT: CEILING FANS MAY PROVIDE CONTROL OF INTEGRATED LIGHTING VIA A REMOTE CONTROL. LUMINAIRES CONNECTED TO A CIRCUIT WITH CONTROLLED LIGHTING POWER LESS THAN 20 WATTS OR CONTROLLED BY AN OCCUPANCY OR VACUANCY SENSOR PROVIDING AUTOMATIC-OFF FUNCTIONALITY, NAVIGATION LIGHTING SUCH AS NIGHT LIGHTS, STEP LIGHTS, AND PATH LIGHTS LESS THAN 5 WATTS, AND LIGHTING INTERNAL TO DRAWERS AND CABINENTRY WITH OPAQUE FRONTS OR DOORS OR WITH AUTOMATIC-OFF CONTROLS.**
- INDEPENDENT CONTROLS.** INTEGRATED LIGHTING OF EXHAUST FANS SHALL BE CONTROLLED BY A HUMIDISTAT. IN ADDITION TO THE REQUIREMENTS OF SECTION 150.0(K)(3), LUMINAIRES PROVIDING RESIDENTIAL OUTDOOR LIGHTING SHALL MEET THE FOLLOWING REQUIREMENTS, AS APPLICABLE:
 - FOR SINGLE-FAMILY RESIDENTIAL BUILDINGS, OUTDOOR LIGHTING PERMANENTLY MOUNTED TO A RESIDENTIAL BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL MEET THE REQUIREMENT IN ITEM I AND THE REQUIREMENTS IN EITHER ITEM II OR ITEM III:
 - CONTROLLED BY A MANUAL ON AND OFF CONTROL SWITCH THAT PERMITS THE AUTOMATIC ACTIONS OF ITEMS II OR III BELOW; AND
 - CONTROLLED BY A PHOTOCELL AND EITHER A MOTION SENSOR OR AN AUTOMATIC TIME SWITCH CONTROL; OR
 - CONTROLLED BY AN ASTRONOMICAL TIME CLOCK CONTROL.**NOTE:** CONTROLS THAT OVERRIDE TO ON SHALL NOT BE ALLOWED UNLESS THE OVERRIDE AUTOMATICALLY RETURNS THE AUTOMATIC CONTROL TO ITS NORMAL OPERATION WITHIN 6 HOURS. AN ENERGY MANAGEMENT CONTROL SYSTEM THAT PROVIDES THE SPECIFIED LIGHTING CONTROL FUNCTIONALITY AND COMPLIES WITH ALL REQUIREMENTS APPLICABLE TO THE SPECIFIED CONTROLS MAY BE USED TO MEET THESE REQUIREMENTS.
- ALL JOINTS, PENETRATIONS AND OTHER OPENINGS IN THE BUILDING ENVELOPE THAT ARE POTENTIAL SOURCES OF AIR LEAKAGE SHALL BE CAULKED, GASKETED, WEATHER-STRIPPED OR OTHERWISE SEALED TO LIMIT INFILTRATION AND EXFILTRATION (2022 Cenc 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 (2022 Cenc 150.0(K)(2))

ENERGY STORAGE READINESS

- ENERGY STORAGE SYSTEM (ESS) REQUIREMENTS:**
 - IN SINGLE-FAMILY RESIDENTIAL BUILDINGS THAT INCLUDE ONE OR TWO DWELLINGS, EACH DWELLING UNIT SHALL BE PROVIDED WITH DEDICATED RACEWAYS, DESIGNATED BRANCH CIRCUITS AND ISOLATION DEVICES FOR ENERGY STORAGE SYSTEMS AS SPECIFIED IN CALIFORNIA ENERGY CODE SECTION 150.0(S). ADDITIONALLY, THE PANELBOARDS SHALL BE PROVIDED WITH THE MINIMUM BUSBAR RATINGS AS SPECIFIED IN CALIFORNIA ENERGY CODE SECTION 150.0(S). (2022 CEC SECTION 706.10)
- CALIFORNIA ENERGY CODE SECTION 150.0(S)**
 - AT LEAST ONE OF THE FOLLOWING SHALL BE PROVIDED:
 - ESS READY INTERCONNECTION EQUIPMENT WITH A MINIMUM BACKED-UP CAPACITY OF 60 AMPS AND A MINIMUM OF FOUR ESS-SUPPLIED BRANCH CIRCUITS, OR
 - A DEDICATED RACEWAY FROM THE MAIN SERVICE TO A PANELBOARD (SUBPANEL) THAT SUPPLIES THE BRANCH CIRCUITS IN SECTION 150.0(S)
 - ALL BRANCH CIRCUITS ARE PERMITTED TO BE SUPPLIED BY THE MAIN SERVICE PANEL PRIOR TO THE INSTALLATION OF AN ESS. THE TRADE SIZE OF THE RACEWAY SHALL BE NOT LESS THAN 1 INCH. THE PANELBOARD THAT SUPPLIES THE BRANCH CIRCUITS (SUBPANEL) MUST BE LABELED "SUBPANEL SHALL INCLUDE ALL BACKUP LOAD CIRCUITS." *
- A MINIMUM OF FOUR BRANCH CIRCUITS SHALL BE IDENTIFIED AND HAVE THEIR SOURCE OF SUPPLY COLLOCATED AT A SINGLE PANELBOARD SUITABLE TO BE SUPPLIED BY THE ESS. AT LEAST ONE CIRCUIT SHALL SUPPLY THE REFRIGERATOR, ONE LIGHTING CIRCUIT SHALL BE LOCATED NEAR THE PRIMARY EGRESS AND AT LEAST ONE CIRCUIT SHALL SUPPLY A SLEEPING ROOM RECEPTACLE OUTLET.
- THE MAIN PANELBOARD SHALL HAVE A MINIMUM BUSBAR RATING OF 225 AMPS.
- SUFFICIENT SPACE SHALL BE RESERVED TO ALLOW FUTURE INSTALLATION OF A SYSTEMATION EQUIPMENT/TRANSFER SWITCH WITHIN 3 FEET OF THE MAIN PANELBOARD. RACEWAYS SHALL BE INSTALLED BETWEEN THE PANELBOARD AND THE SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH LOCATION TO ALLOW THE CONNECTION OF BACKUP POWER SOURCE.

MECHANICAL NOTES

- CONFORM WITH CURRENT ADOPTED BCD, CMC, SMACNA, NFPA AND LOCAL REQUIREMENTS.
- DUCTWORK: "SMAONA" "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 LEAKS. DUCTS SHALL BE INSULATED AS REQUIRED BY THE UMC. SEE FLOOR PLAN FOR F.A.U. 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 OWNER'S APPROVAL. "CARNES" OR EQUIV. FANS: DIRECTLY VENTED TO OUTSIDE. BACK DRAFT DAMPERS ARE REQUIRED (PER TABLE 2-53V, TITLE 24 C.A.C.).
- LAUNDRY DRYER VENT TO EXTERIOR TO BE 14 FEET MAXIMUM, LESS 2 FEET PER 90 DEGREE TURN PER CMC 504.3.2.2. IF VENT IS OVER 14' AN APPROVED POWER ASSISTED DEVICE IS REQUIRED. DRYER EXHAUST DUCT PROVED VENTILATORS WITH ROOF AREAS LESS THAN OR EQUAL TO 10,000 SQUARE FEET AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS PER 2022 CMC, SECTION 504.2.2.3. SEE NOTE BELOW.
- BATHROOM EXHAUST FANS (BATHROOM APPLIES TO ROOMS CONTAINING BATHTUB, SHOWER, OR TUB-SHOWER COMBINATION) WHICH EXHAUST DIRECTLY FROM BATHROOMS SHALL COMPLY WITH THE FOLLOWING (2022 CGBSC SEC. 4.506.1):
 - 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 HUMIDITY CONTROL.
 - HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF ≤ 50 PERCENT TO A MAXIMUM OF 90 PERCENT. A HUMIDITY CONTROL MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT.
 - A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL(I.E. BUILT IN)
- BATHROOM EXHAUST FANS SHALL PROVIDE MINIMUM 50 CFM EXHAUST RATE (2022 CMC TABLE 403.7).
- KITCHEN EXHAUST FANS SHALL PROVIDE MINIMUM 100 CFM EXHAUST RATE (2022 CMC TABLE 403.7)

SOLAR READY NOTES

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

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 OR 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 RA4 AND WITH A MINIMUM SOLAR SAVINGS FRACTION OF 0.50.
- 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.
- EXCEPTION 6** TO SECTION 110.10(B)(1A): SINGLE-FAMILY RESIDENCES MEETING THE FOLLOWING CONDITIONS:
 - ALL THERMOSTATS ARE DEMAND RESPONSIVE CONTROLS THAT 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.
 - COMPLY WITH ONE OF THE FOLLOWING MEASURES:
 - INSTALL A DISHWASHER THAT MEETS OR EXCEEDS THE ENERGY STAR® PROGRAM REQUIREMENTS WITH A REFRIGERATOR THAT MEETS OR EXCEEDS THE ENERGY STAR PROGRAM REQUIREMENTS, A WHOLE HOUSE FAN DRIVEN BY AN ELECTRONICALLY COMMUTATED MOTOR, OR AN SAE I1772 LEVEL 2 EV CHARGER, OR ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE OR EV CHARGER) WITH A MINIMUM OF 40 AMPERES; OR
 - INSTALL A HOME AUTOMATION SYSTEM CAPABLE OF, AT A MINIMUM, CONTROLLING THE APPLIANCES AND LIGHTING OF THE DWELLING AND RESPONDING TO DEMAND RESPONSE SIGNALS.
 - INSTALL ALTERNATIVE PLUMBING PIPING TO PERMIT THE DISCHARGE FROM THE CLOTHES WASHER AND ALL SHOWERS AND BATHTUBS TO BE USED FOR AN IRRIGATION SYSTEM IN COMPLIANCE WITH THE CALIFORNIA PLUMBING CODE AND ANY APPLICABLE LOCAL ORDINANCES; OR
 - INSTALL A RAINWATER CATCHMENT SYSTEM DESIGNED TO COMPLY WITH THE CALIFORNIA PLUMBING CODE AND ANY APPLICABLE LOCAL ORDINANCES, AND THAT USES RAINWATER FLOWING FROM AT LEAST 65 PERCENT OF THE AVAILABLE ROOF AREA.

PROJECT GENERAL NOTES

- APPLICABLE CODES AND STANDARDS:
 - 2022 CALIFORNIA RESIDENTIAL CODE AND STANDARDS.
 - 2022 CALIFORNIA PLUMBING CODE AND STANDARDS.
 - 2022 CALIFORNIA MECHANICAL CODE AND STANDARDS.
 - 2022 CALIFORNIA FIRE CODE AND STANDARDS.
 - 2022 CALIFORNIA ELECTRICAL CODE AND STANDARDS.
 - 2022 CALIFORNIA ENERGY CODE AND STANDARDS.
 - 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE AND STANDARDS.
 - CITY OF LAGUNA NIGUEL MUNICIPAL CODE
- ALL WORK DESCRIBED IN THE DRAWINGS SHALL BE VERIFIED FOR DIMENSION, GRADE, EXTENT AND COMPATIBILITY WITH EXISTING SITE CONDITIONS. ANY DISCREPANCIES SHALL BE NOTICED IMMEDIATELY. THE ATTACHEE OR CHARGE OF 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 PROCEEDING AT HIS/HER OWN RISK.
- DIMENSIONS SHOWN SHALL TAKE PRECEDENCE OVER DRAWING SCALE OR PORTION THEREOF. LARGER SCALE DRAWINGS SHALL TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS.
- 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 THE CONTRACTOR SHALL NOTIFY THE OWNER. THE PROJECT 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.
- GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COVER ALL WATER RELATED MATTERS.
- SHOP WELDS MUST BE PERFORMED BY A LICENSED FABRICATOR'S SHOP.
- THE FOLLOWING ITEMS SHOWN ON THE DRAWINGS ARE OWNER PROVIDED, OWNER INSTALLED, UTILITIES PROVIDED FOR THESE ITEMS WILL BE PROVIDED BY THE CONTRACTOR. CONTRACTOR TO COORDINATE INSTALLATION WITH OWNER.
- TV/DVD SYSTEMS
- ICE MACHINE
- VENDING MACHINE
- REFRIGERATOR
- MICROWAVE
- OSHA PERMITS REQUIRED FOR VERTICAL CUTS 5' OR OVER.
- CONTRACTOR TO PROVIDE COMPLETE DETAILS OF ENGINEERED TEMPORARY SHORING OR SLOTT 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 OF EXCAVATION. THE FILL IS TO BE PLACED IN ACCORDANCE WITH WITHOUT APPROVAL OF THE GRADING INSPECTOR.
- CONTRACTOR TO REVIEW CALIFORNIA GREEN CODE REQUIREMENTS FOR CONTRACTOR REQUIREMENTS.
- A SEPARATE OFFICER, ACCESS EASEMENT/AGREEMENT, AND/OR RECIPROCAL ACCESS EASEMENT/AGREEMENT MAY BE REQUIRED TO INSURE THAT THE PROPOSED PRIVATE ACCESS ROADWAY WILL REMAIN OPEN TO THROUGH TRAFFIC AND EMERGENCY VEHICLES PRIOR TO FINAL OF BUILDING PERMIT.

STORMWATER MANAGEMENT

- BEST MANAGEMENT PRACTICES (BMPs) SHALL BE IMPLEMENTED DURING ALL PHASES OF CONSTRUCTION IN CONFORMANCE WITH THE CITY OF LANCASTER'S MUNICIPAL CODE. ADDITIONALLY, SITES OVER AN ACRE SHALL BE REQUIRED TO OBTAIN A PERMIT UNDER THE CALIFORNIA CLEAN WATER ACT. ALL CONSTRUCTION GENERAL PERMITS SHALL BE INSTALLED IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE CASQA HANDBOOK. AT A MINIMUM PERIMETER CONTROL AND CONSTRUCTION ENTRANCES SHOULD BE IN PLACE PRIOR TO A GRADING PERMIT BEING ACTIVATED.
- PLANS AND MANAGE WATER DETAINED ONSITE IN BASINS/TRAPS. NEED TO BE DEVELOPED, SO THAT THESE BASINS CAN REMAIN OPERATIONAL DURING A SERIES OF BACK-TO-BACK RAINS. FOR SITES THAT ARE COVERED UNDER THE STATE CONSTRUCTION PERMIT (CSP) THAT PLAN TO DISCHARGE WATER INTO A NEARBY STORM DRAIN MUST FOLLOW THE CGP REQUIREMENTS AS WELL AS THE CITY'S MUNICIPAL CODE. PRIOR TO DISCHARGING, PLEASE PROVIDE YOUR FIELD INSPECTOR WITH A WRITTEN PLAN OF HOW THE WATER WILL BE TREATED PRIOR TO DISCHARGE TO MEET THEIR NUMERIC LEVELS. THE FIELD INSPECTOR MUST BE ADVISED IN ADVANCE OF THE DAY/TIME A DISCHARGE IS PLANNED. ADDITIONALLY, POST DISCHARGE PLEASE PROVIDE YOUR FIELD INSPECTOR YOUR MONITORING DATA AND MENTION ANY EXCEEDANCE.
- INSPECTION, MODIFICATION AND MAINTENANCE OF THE BMPs SHALL BE IMPLEMENTED AS NECESSARY. IN THE EVENT OF FAILURE OR REFUSAL TO PROPERLY MAINTAIN THE BMPs, THE CITY MAY ISSUE EMERGENCY MAINTENANCE WORK TO BE COMPLETED TO PROTECT ADJACENT PRIVATE AND PUBLIC PROPERTY. THE COST (INCLUDING AN INITIAL MOBILIZATION AMOUNT) AND ANY FINES ASSESSED TO THE CITY SHALL BE CHARGED TO THE OWNER/ CONTRACTOR OF THE PROJECT.
- NECESSARY MATERIALS TO IMPLEMENT THE REQUIRED BMPs SHALL BE AVAILABLE ON SITE TO FACILITATE RAPID DEPLOYMENT OR TO REPAIR ANY BMP FAILURES.
- CITY STAFF SHALL BE ALERTED BY THE CONTRACTOR, PERMITTEE OR OWNER, AS NEEDED FOR EMERGENCY WORK DURING RAINSTORMS.
- RUN-ON FLOW INTO THE SITE SHALL BE PROPERLY MANAGED AND PLANNED FOR TO PREVENT FAILURE OF BMPs AND/OR ILLEGAL DISCHARGES FROM THE PROJECT SITE INTO THE STORM DRAIN.
- STORM DRAIN INLET PROTECTION SHALL BE INSTALLED AT EVERY ONSITE STORM DRAIN INLET TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM, WHERE FEASIBLE DESILTING BASINS SHALL ALSO BE PROVIDED AT DRAINAGE OUTLETS FROM THE GRADED SITE.
- EROSION CONTROL MEASURES SHALL BE IMPLEMENTED ON SLOPES AND ANY EXPOSED SOIL USING THE FOLLOWING BMPs. FIBER BLANKETS, BONDED FIBER MATRIX, OR BY INSTALLING OR MAINTAINING EXISTING VEGETATION. THE CONTRACTOR SHALL IMMEDIATELY REPAIR AND STABILIZE ANY ERODED AREAS. INACTIVE SLOPES SHALL BE PROTECTED AND STABILIZED. ALL EXPOSED SOIL INCLUDING INACTIVE AND ACTIVE SLOPES SHALL BE PROTECTED PRIOR TO A RAIN.
- ALL UNPAVED GRADED CHANNELS SHALL IMPLEMENT EROSION PREVENTION MEASURES SUCH AS LINING AND INSTALLING VELOCITY CHECK DAMS AT REGULAR INTERVALS.
- STREET SWEEPING VEHICLES WITH VACUUMS AND WATER TANKS SHALL BE USED TO KEEP PAVED STREETS FREE OF LOOSE SOIL AND/OR CONSTRUCTION DEBRIS.
- CONTRACTORS SHALL HAVE WATER TRUCKS AND EQUIPMENT ON-SITE TO MINIMIZE AIRBORNE DUST CREATED FROM GRADING AND HAULING OPERATIONS OR EXCESSIVE WIND CONDITIONS. ADDITIONAL DUST CONTROL MEASURES SHALL BE IMPLEMENTED AS NEEDED.
- ALL



THESE PLANS ARE PROVIDED BY THE CITY OF LAGUNA NIGUEL AS PART OF THE PRE-APPROVED ADU PROGRAM AND ARE PUBLIC DOMAIN. THERE CANNOT BE A CHARGE TO PROVIDE THESE PLANS. NO ALTERATIONS TO THESE PLANS ARE ALLOWED. ALL ALTERATIONS MUST BE DONE UNDER A SEPARATE PERMIT ONCE THE BUILDING PERMIT FOR THE ADU HAS BEEN ISSUED AND FINAL INSPECTION COMPLETED. IF YOU DO NOT HAVE THE CONSTRUCTION KNOWLEDGE AND EXPERIENCE TO CONTRUCT THESE PLANS WITHOUT FURTHER DETAILS, IT IS RECOMMENDED YOU HIRE A CONTRACTOR TO DO THE CONSTRUCTION. THE CITY WILL NOT PROVIDE FURTHER INFORMATION OR DETAILS AND BUILDING INSPECTORS WILL NOT PROVIDE STEP BY STEP INSTRUCTIONS IN THE FIELD.

PRE-APPROVED ADU

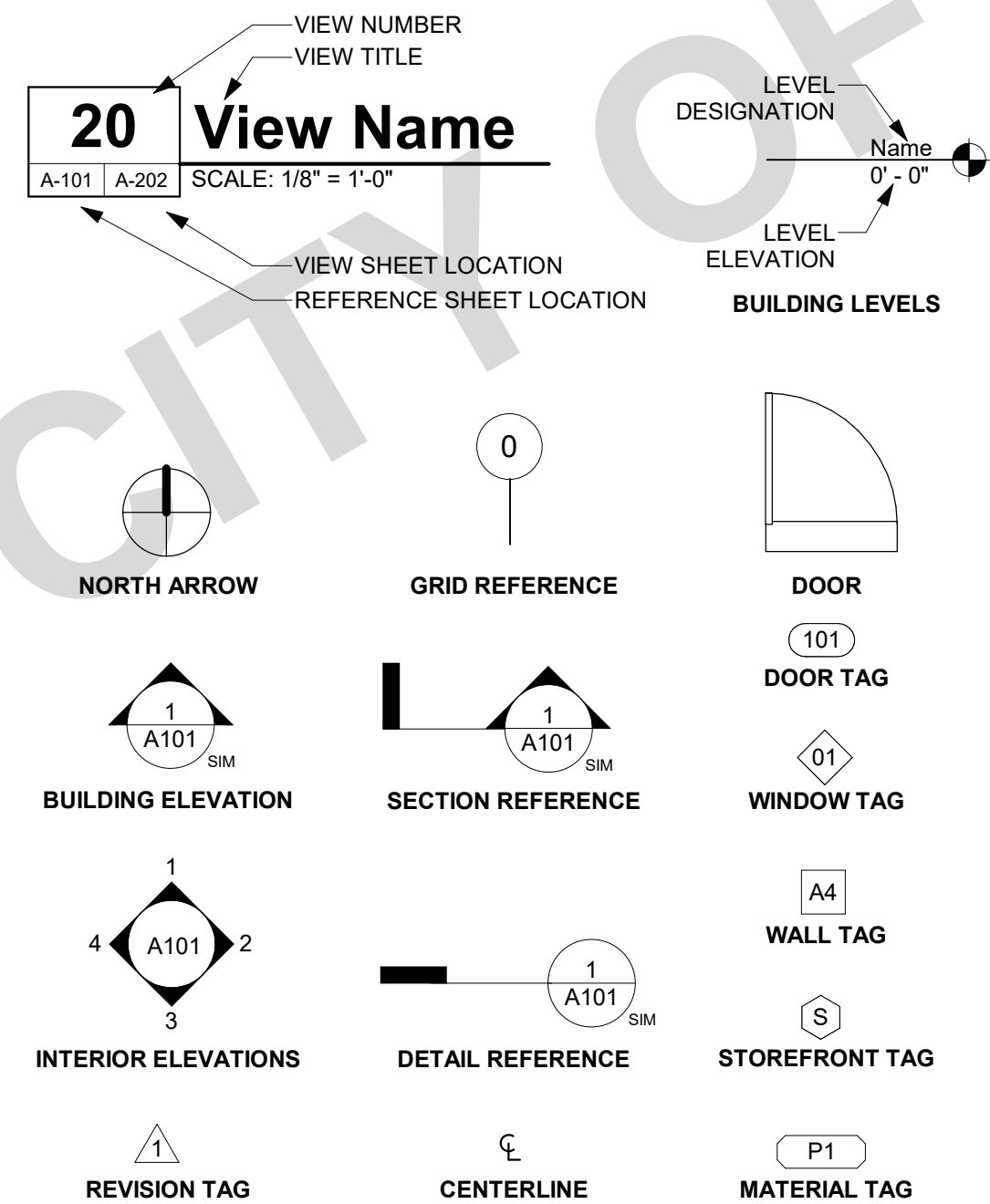
CITY OF LAGUNA NIGUEL

ABBREVIATIONS & SYMBOLS

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	GYP SUM BOARD	RH	RIGHT HAND
BET	BETWEEN	GYP	GYP SUM	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
CEM	CEMENT	IN	IMPACT INSULATION CLASS	SF	SQUARE FOOT
CFM	CUBIC FEET PER MINUTE	INCAND	INCANDESCENT	SHT	SHEET
CIP	CAST IN PLACE	INSUL	INSULATION, INSULATED	SHTHG	SHEATHING
CJ	CONTROL JOINT	INT	INTERIOR	SIM	SIMILAR
CL	CENTER LINE	JC	JANITORS CLOSET	SM	SHEET METAL
CLG	CEILING	JT	JOINT	SPEC	SPECIFICATION
CLO	CLOSET	LAM	LAMINATE	SQ	SQUIRE
CLR	CLEAR	LAV	LAVATORY	SS	SOLID SURFACE
CMU	CONCRETE MASONRY UNIT	LBS	POUNDS	SSTL	STAINLESS STEEL
CO	CLEAN OUT	LEED	LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN	STD	SOUND TRANSMISSION CLASS
COL	COLUMN	LF	LINEAR FEET	STL	STEEL
CONC	CONCRETE	LIN	LINEN CLOSET	STOR	STORAGE
CONST	CONSTRUCTION	LINO	LINOLEUM	STRUCT	STRUCTURAL
CONT	CONTINUOUS	LT(G)	LIGHT(ING)	SUSP	SUPSPENDED
CONTR	CONTRACTOR	LVL	LAMINATED VENEER LUMBER	SV	SHEET VINYL
CPT	CARPET	LW	LIGHTWEIGHT	SYM	SYMMETRICAL
CT	CERAMIC TILE	MAX	MAXIMUM	T	TREAD
CTR	CENTER	MDF	MEDIUM DENSITY FIBERBOARD	T&G	TONGUE & GROOVE
DBL	DOUBLE	MECH	MECHANICAL	TEL	TELEPHONE
DF	DRINKING FOUNTAIN	MEMB	MEMBRANE	TEMP	TEMPERED
DIA	DIAMETER, DIAPHRAGM	MEP	MECHANICAL, ELECTRICAL, PLUMBING	TER	TERRAZZO
DIM	DIMENSION	MFR	MANUFACTURER	THK	THICK
DN	DOWN	MIN	MINIMUM	THR	THRESHOLD
DR	DOOR	MTD	MOUNTED	TJI	TRUSS JOIST I-JOIST
DS	DOWN SPOUT	MTL	METAL	TO	TOP OF
DTL	DETAIL	N	NORTH	TOS	TOP OF SLAB
DW	DISHWASHER	NIC	NOT IN CONTRACT	TOW	TOP OF WALL
DWG	DRAWING	NO	NUMBER	TRANS	TRANSFORMER
(E)	EXISTING	NTS	NOT TO SCALE	TV	TELEVISION
E	EAST	O.P.	OVERFLOW PIPE	TYP	TYPICAL
EA	EACH	OC	ON CENTER	UFAS	UNIFORM FEDERAL ACCESSIBILITY STANDARDS
EJ	EXPANSION JOINT	OD	OVERFLOW DRAIN	UG	UNDERGROUND
EL	ELEVATION	OFF	OFFICE	UNFIN	UNFINISHED
ELEV	ELEVATION	OH	OPPOSITE HAND	UNO	UNLESS NOTED OTHERWISE
ELEC	ELECTRIC	OPG	OPENING	UV	ULTRAVIOLET
ENCL	ENCLOSURE	OPP	OPPOSITE	VCT	VINYL COMPOSITION TILE
EQ	EQUAL	(P)	PROPOSED	VERT	VERTICAL
EQUIP	EQUIPMENT	PERM	PERIMETER	VIF	VERIFY IN FIELD
EXH	EXHAUST	PERP	PERPENDICULAR	VTR	VENT TERMINATION PIPE
EXP	EXPANSION	PG	PAINT GRADE	VWC	VINYL WALL COVERING
EXT	EXTERIOR	PL	PLATE, PROPERTY LINE	W	WEST
FACP	FIRE ALARM CONTROL PANEL	PLAM	PLASTIC LAMINATE	W/	WITH
FAU	FORCED AIR UNIT	PLBG	PLUMBING	W/D	WASHER DRYER
FAWP	FLUID APPLIED WATERPROOFING	PLYWD	PLYWOOD	W/O	WITHOUT
FD	FLOOR DRAIN	PNL	PANEL	WC	WATERCLOSET
FDC	FIRE DEPARTMENT CONNECTION	PP	POWER POLE	WD	WOOD
FE	FIRE EXTINGUISHER	PR	PAIR	WDW	WINDOW
FEC	FIRE EXTINGUISHER CABINET	PRTN	PARTITION	WH	WATER HEATER
FF	FINISHED FLOOR ELEVATION	PSF	POUNDS PER SQUARE FOOT	WI	WROUGHT IRON
FG	FINISHED GRADE	PSI	POUNDS PER SQUARE INCH	WIN	WINDOW
FH	FIRE HYDRANT	PSL	PARALLEL STRAND LUMBER	WP	WATERPROOF(ING)
FHC	FIRE HOSE CABINET	PT	PRESSURE TREATED	WR	WEATHER RESISTIVE
FIN	FINISH	PTD	PAINTED	WRB	WATER RESISTIVE BARRIER
FIXT	FIXTURE			WSCT	WAINSCOT
FLR	FLOOR			WT	WEIGHT
FLUOR	FLOURESCENT			WWF	WELED WIRE FABRIC
FND	FOUNDATION			YD	YARD
FO	FACE OF				
FOC	FACE OF CONCRETE				
FOF	FACE OF FINISH				

SYMBOLS



PUBLIC SET

DATE
02/05/2025

SHEET

G-102

2022 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 THE APPLICABLE STANDARDS CODE IS THE CALGREEN CODE. THE CALIFORNIA GREEN BUILDING STANDARDS CODE IS PART 11 OF THIRTEEN PARTS OF THE OFFICIAL COMPILED 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.
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 APPLICATION CHECKLISTS CONTAINED IN THIS CODE. VOLUNTARY GREEN BUILDING MEASURES MAY 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.

THE MANDATORY PROVISIONS OF SECTION 4.106.4.2 MAY APPLY TO ADDITIONS OR ALTERATIONS OF EXISTING PARKING FACILITIES OR THE ADDITION OF NEW PARKING FACILITIES SERVING EXISTING MULTIFAMILY BUILDINGS. SEE SECTION 4.106.4.3 FOR APPLICATION.

NOTE: REPAIRS INCLUDING, BUT NOT LIMITED TO, RESURFACING, RESTRIPIING, AND REPAIRING OR MAINTAINING EXISTING LIGHTING FIXTURES ARE NOT CONSIDERED ALTERATIONS FOR THE PURPOSE OF THIS SECTION.

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 BASINS 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, WATTLE 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 CHARGING PURPOSES AS "EV CAPABLE" IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE, ARTICLE 625.

EXCEPTIONS:

1. ON A CASE-BY-CASE BASIS, WHERE THE LOCAL ENFORCING AGENCY HAS DETERMINED EV CHARGING IN A BUILDING STRUCTURE ARE NOT FEASIBLE BASED UPON ONE OR MORE OF THE FOLLOWING CONDITIONS:
 - 1.1. WHERE THERE IS NO LOCAL UTILITY POWER SUPPLY OR THE LOCAL UTILITY IS UNABLE TO SUPPLY ADEQUATE POWER.
 - 1.2. WHERE THERE IS EVIDENCE SUITABLE TO THE LOCAL ENFORCING AGENCY SUBSTANTIATING THAT ADDITIONAL LOCAL UTILITY INFRASTRUCTURE DESIGN REQUIREMENTS, DIRECTLY RELATED TO THE IMPLEMENTATION OF SECTION 4.106.4, MAY ADVERSELY IMPACT THE CONSTRUCTION COST OF THE PROJECT.
2. ACCESSORY DWELLING UNITS (ADU) AND JUNIOR ACCESSORY DWELLING UNITS (JADU) WITHOUT ADDITIONAL PARKING FACILITIES.

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, HOTELS AND MOTELS WITH RESIDENTIAL PARKING FACILITIES
WHEN PARKING IS PROVIDED, PARKING SPACES FOR NEW MULTIFAMILY DWELLINGS, HOTELS AND MOTELS SHALL MEET THE REQUIREMENTS OF SECTIONS 4.106.4.2.1 AND 4.106.4.2.2. CALCULATIONS FOR SPACES SHALL BE ROUNDED UP TO THE NEAREST 10% INCREASE. THE RACEWAY SHALL BE SERVED BY ELECTRIC VEHICLE SUPPLY EQUIPMENT OR DESIGNED AS A FUTURE EV CHARGING SPACE SHALL COUNT AS AT LEAST ONE STANDARD AUTOMOBILE PARKING SPACE ONLY FOR THE PURPOSE OF COMPLYING WITH ANY APPLICABLE MINIMUM PARKING SPACE REQUIREMENTS ESTABLISHED BY A LOCAL JURISDICTION. SEE VEHICLE CODE SECTION 22511.2 FOR FURTHER DETAILS.

4.106.4.2.1 MULTIFAMILY DEVELOPMENT PROJECTS WITH LESS THAN 20 DWELLING UNITS, AND HOTELS AND MOTELS WITH LESS THAN 20 SLEEPING UNITS OR GUEST ROOMS
THE NUMBER OF DWELLING UNITS, SLEEPING UNITS OR GUEST ROOMS SHALL BE BASED ON ALL BUILDINGS ON A PROJECT SITE SUBJECT TO THIS SECTION.

1. **EV CAPABLE.** TEN (10) PERCENT OF THE TOTAL NUMBER OF PARKING SPACES ON A BUILDING SITE, PROVIDED FOR ALL TYPES OF PARKING FACILITIES, SHALL BE ELECTRIC VEHICLE CHARGING SPACES (EV SPACES) CAPABLE OF SUPPORTING FUTURE LEVEL 2 EVSE. ELECTRICAL LOAD CALCULATIONS SHALL DEMONSTRATE 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 A MINIMUM OF 40 AMPERES.

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.

EXCEPTIONS:

1. WHEN EV CHARGERS (LEVEL 2 EVSE) ARE INSTALLED IN A NUMBER EQUAL TO OR GREATER THAN THE REQUIRED NUMBER OF EV CAPABLE SPACES.
2. WHEN EV CHARGERS (LEVEL 2 EVSE) ARE INSTALLED IN A NUMBER LESS THAN THE REQUIRED NUMBER OF EV CAPABLE SPACES, THE NUMBER OF EV CAPABLE SPACES REQUIRED MAY BE REDUCED BY A NUMBER EQUAL TO THE NUMBER OF EV CHARGERS INSTALLED.

NOTES:

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

2. **EV READY.** TWENTY-FIVE (25) PERCENT OF THE TOTAL NUMBER OF PARKING SPACES SHALL BE EQUIPPED WITH LOW POWER LEVEL 2 EV CHARGING RECEPTACLES. FOR MULTIFAMILY PARKING FACILITIES, NO MORE THAN ONE RECEPTACLE IS REQUIRED PER DWELLING UNIT WHEN MORE THAN ONE PARKING SPACE IS PROVIDED FOR USE BY A SINGLE DWELLING UNIT.

EXCEPTION: AREAS OF PARKING FACILITIES SERVED BY PARKING LIFTS.

4.106.4.2.2 MULTIFAMILY DEVELOPMENT PROJECTS WITH 20 OR MORE DWELLING UNITS, HOTELS AND MOTELS WITH 20 OR MORE SLEEPING UNITS OR GUEST ROOMS
THE NUMBER OF DWELLING UNITS, SLEEPING UNITS OR GUEST ROOMS SHALL BE BASED ON ALL BUILDINGS ON A PROJECT SITE SUBJECT TO THIS SECTION.

1. **EV CAPABLE.** TEN (10) PERCENT OF THE TOTAL NUMBER OF PARKING SPACES ON A BUILDING SITE, PROVIDED FOR ALL TYPES OF PARKING FACILITIES, SHALL BE ELECTRIC VEHICLE CHARGING SPACES (EV SPACES) CAPABLE OF SUPPORTING FUTURE LEVEL 2 EVSE. ELECTRICAL LOAD CALCULATIONS SHALL DEMONSTRATE 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 A MINIMUM OF 40 AMPERES.

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.

EXCEPTION: WHEN EV CHARGERS (LEVEL 2 EVSE) ARE INSTALLED IN A NUMBER GREATER THAN FIVE (5) PERCENT OF PARKING SPACES REQUIRED BY SECTION 4.106.4.2.2, ITEM 3, THE NUMBER OF EV CAPABLE SPACES REQUIRED MAY BE REDUCED BY A NUMBER EQUAL TO THE NUMBER OF EV CHARGERS INSTALLED OVER THE FIVE (5) PERCENT REQUIRED.

NOTES:

1. CONSTRUCTION DOCUMENTS SHALL SHOW LOCATIONS OF FUTURE EV SPACES.
2. THERE IS NO REQUIREMENT FOR EV SPACES TO BE CONSTRUCTED OR AVAILABLE UNTIL RECEPTACLES FOR EV CHARGING OR EV CHARGERS ARE INSTALLED FOR USE.

2. **EV READY.** TWENTY-FIVE (25) PERCENT OF THE TOTAL NUMBER OF PARKING SPACES SHALL BE EQUIPPED WITH LOW POWER LEVEL 2 EV CHARGING RECEPTACLES. FOR MULTIFAMILY PARKING FACILITIES, NO MORE THAN ONE RECEPTACLE IS REQUIRED PER DWELLING UNIT WHEN MORE THAN ONE PARKING SPACE IS PROVIDED FOR USE BY A SINGLE DWELLING UNIT.

EXCEPTION: AREAS OF PARKING FACILITIES SERVED BY PARKING LIFTS.

3. **EV CHARGERS.** FIVE (5) PERCENT OF THE TOTAL NUMBER OF PARKING SPACES SHALL BE EQUIPPED WITH LEVEL 2 EVSE. WHERE COMMON USE PARKING IS PROVIDED, AT LEAST ONE EV CHARGER SHALL BE LOCATED IN THE COMMON USE PARKING AREA AND SHALL BE AVAILABLE FOR USE BY ALL RESIDENTS OR GUESTS.

WHEN LOW POWER LEVEL 2 EV CHARGING RECEPTACLES OR LEVEL 2 EVSE ARE INSTALLED BEYOND THE MINIMUM REQUIRED, AN AUTOMATIC LOAD MANAGEMENT SYSTEM (ALMS) MAY BE USED TO REDUCE THE MAXIMUM REQUIRED ELECTRICAL CAPACITY TO EACH SPACE SERVED BY THE ALMS. THE ELECTRICAL SYSTEM AND ANY ON-SITE DISTRIBUTION TRANSFORMERS SHALL HAVE SUFFICIENT CAPACITY TO DELIVER AT LEAST 3.3 KW SIMULTANEOUSLY TO EACH EV CHARGING STATION (EVCS) INSTALLED IN CLOSE BY THE ALMS. THE BRANCH CIRCUIT SHALL HAVE A MINIMUM CAPACITY OF 40 AMPERES, AND INSTALLED EVSE SHALL HAVE A CAPACITY OF NOT LESS THAN 30 AMPERES. ALMS SHALL NOT BE USED TO REDUCE THE MINIMUM REQUIRED ELECTRICAL CAPACITY TO THE REQUIRED EV CAPABLE SPACES.

4.106.4.2.1 ELECTRIC VEHICLE CHARGING STATIONS (EVCS)
ELECTRIC VEHICLE CHARGING STATIONS REQUIRED BY SECTION 4.106.4.2.2, ITEM 3, SHALL COMPLY WITH SECTION 4.106.4.2.2.1.

EXCEPTION: ELECTRIC VEHICLE CHARGING STATIONS SERVING PUBLIC ACCOMMODATIONS, PUBLIC HOUSING, MOTELS AND HOTELS SHALL NOT BE REQUIRED TO COMPLY WITH THIS SECTION. SEE CALIFORNIA BUILDING CODE, CHAPTER 11B, FOR APPLICABLE REQUIREMENTS.

4.106.4.2.2.1.1 LOCATION
EVCS SHALL COMPLY WITH AT LEAST ONE OF THE FOLLOWING OPTIONS:
THE CHARGING 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.

THE CHARGING SPACE SHALL BE LOCATED ON AN ACCESSIBLE ROUTE, AS DEFINED IN THE CALIFORNIA BUILDING CODE, CHAPTER 2, TO THE BUILDING.

EXCEPTION: ELECTRIC VEHICLE CHARGING STATIONS DESIGNED AND CONSTRUCTED IN COMPLIANCE WITH THE CALIFORNIA BUILDING CODE, CHAPTER 11B, ARE NOT REQUIRED TO COMPLY WITH SECTION 4.106.4.2.2.1 AND SECTION 4.106.4.2.2.1.2, ITEM 3.

4.106.4.2.2.1.2 ELECTRIC VEHICLE CHARGING STATIONS (EVCS) DIMENSIONS
THE CHARGING 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 CHARGING 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.

4.106.4.2.2.1.3 ACCESSIBLE EV SPACES
IN ADDITION TO THE REQUIREMENTS IN SECTIONS 4.106.4.2.2.1.1 AND 4.106.4.2.2.1.2, ALL EVSE, WHEN INSTALLED, SHALL COMPLY WITH THE ACCESSIBILITY PROVISIONS FOR EV CHARGERS IN THE CALIFORNIA BUILDING CODE, CHAPTER 11B, AND EV READY SPACES AND EVS IN MULTIFAMILY DEVELOPMENTS SHALL COMPLY WITH CALIFORNIA BUILDING CODE, CHAPTER 11A, SECTION 1109A.

4.106.4.2.3 EV SPACE REQUIREMENTS

1. **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 LOCATION OR THE PROPOSED LOCATION OF THE EV SPACE. CONSTRUCTION DOCUMENTS SHALL IDENTIFY THE RACEWAY TERMINATION POINT, RECEPTACLE OR CHARGER LOCATION, AS APPLICABLE. THE SERVICE PANEL AND/OR SUBPANEL SHALL HAVE A 40-AMPERE MINIMUM DEDICATED BRANCH CIRCUIT, INCLUDING BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE INSTALLED, 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.

EXCEPTION: A RACEWAY IS NOT REQUIRED IF A MINIMUM 40-AMPERE 208/240-VOLT DEDICATED EV BRANCH CIRCUIT IS INSTALLED IN CLOSE PROXIMITY TO THE LOCATION OR THE PROPOSED LOCATION OF THE EV SPACE, AT THE TIME OF ORIGINAL CONSTRUCTION IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE.

2. **MULTIPLE EV SPACES REQUIRED.** CONSTRUCTION DOCUMENTS SHALL IDENTIFY THE RACEWAY TERMINATION POINT AND THE LOCATION OF INSTALLED OR FUTURE EV SPACES, RECEPTACLES OR EV CHARGERS. CONSTRUCTION DOCUMENTS SHALL ALSO PROVIDE INFORMATION ON AMPERAGE OF INSTALLED OR FUTURE RECEPTACLES OR EVSE, RACEWAY METHOD(S), WIRING SCHEMATICS AND ELECTRICAL LOAD CALCULATIONS. PLAN DESIGN SHALL BE BASED UPON A 40-AMPERE MINIMUM BRANCH CIRCUIT. REQUIRED 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.

EXCEPTION: A RACEWAY IS NOT REQUIRED IF A MINIMUM 40-AMPERE 208/240-VOLT DEDICATED EV BRANCH CIRCUIT IS INSTALLED IN CLOSE PROXIMITY TO THE LOCATION OR THE PROPOSED LOCATION OF THE EV SPACE AT THE TIME OF ORIGINAL CONSTRUCTION IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE.

4.106.4.2.4 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.

4.106.4.2.5 ELECTRIC VEHICLE READY SPACE SIGNAGE
ELECTRIC VEHICLE READY SPACES SHALL BE IDENTIFIED BY SIGNAGE OR PAVEMENT MARKINGS. IN COMPLIANCE WITH CALTRANS TRAFFIC OPERATIONS POLICY DIRECTIVE 13-01 (ZERO EMISSION VEHICLE SIGNS AND PAVEMENT MARKINGS) OR ITS SUCCESSOR(S).

4.106.4.3 ELECTRIC VEHICLE CHARGING FOR ADDITIONS AND ALTERATIONS OF PARKING FACILITIES SERVING EXISTING MULTIFAMILY BUILDINGS
WHEN NEW PARKING FACILITIES ARE ADDED, OR ELECTRICAL SYSTEMS OR LIGHTING OF EXISTING PARKING FACILITIES ARE ADDED OR ALTERED AND THE WORK REQUIRES A BUILDING PERMIT, TEN (10) PERCENT OF THE TOTAL NUMBER OF PARKING SPACES ADDED OR ALTERED SHALL BE ELECTRIC VEHICLE CHARGING SPACES (EV SPACES) CAPABLE OF SUPPORTING FUTURE LEVEL 2 EVSE.

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.

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 1.25 GALLONS PER FLUSH. TANK-TYPE WATER CLOSETS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE 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 1.8 GALLONS PER MINUTE AT 80 PSI. SHOWERHEADS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE 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 1.8 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 60 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 0.2 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 60 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 SUBMETERS FOR MULTIFAMILY BUILDINGS AND DWELLING UNITS IN MIXED-USE RESIDENTIAL/COMMERCIAL BUILDINGS
SUBMETERS SHALL BE INSTALLED TO MEASURE WATER USAGE OF INDIVIDUAL RENTAL DWELLING UNITS IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE.

4.303.2 SUBMETERS FOR MULTIFAMILY BUILDINGS AND DWELLING UNITS IN MIXED-USE RESIDENTIAL/COMMERCIAL BUILDINGS
SUBMETERS SHALL BE INSTALLED TO MEASURE WATER USAGE OF INDIVIDUAL RENTAL DWELLING UNITS IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE.

4.303.3 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.

TABLE - MAXIMUM FIXTURE WATER USE	
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	0.2 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
RESIDENTIAL DEVELOPMENTS SHALL COMPLY WITH A LOCAL WATER EFFICIENT LANDSCAPE ORDINANCE OR THE CURRENT CALIFORNIA DEPARTMENT OF WATER RESOURCES' MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWEL0), WHICHEVER IS MORE STRINGENT.

NOTES:

1. THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWEL0) IS LOCATED IN THE CALIFORNIA CODE OF REGULATIONS, TITLE 23, CHAPTER 2.7, DIVISION 2.

MWEL0 AND SUPPORTING DOCUMENTS, INCLUDING A WATER BUDGET CALCULATOR, ARE AVAILABLE AT: [HTTPS://WWW.WATER.CA.GOV/](https://www.water.ca.gov/)

DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

4.406.1 RODENT PROOFING
ANNULAR 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 LOCOSING 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. ALTERNATE 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 ACCEPTATIONS 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
SUBMIT 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 DISPOSAL BY 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" ARE AVAILABLE AT 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 RE

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RESIDENTIAL MANDATORY MEASURES (SHEET 2)

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:

- DIRECTIONS TO THE OWNER OR OCCUPANT THAT THE MANUAL SHALL REMAIN WITH THE BUILDING THROUGHOUT THE LIFE CYCLE OF THE STRUCTURE.
- OPERATION AND MAINTENANCE INSTRUCTIONS FOR THE FOLLOWING:
 - 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.
 - ROOF AND YARD DRAINAGE, INCLUDING GUTTERS AND DOWNSPOUTS.
 - SPACE CONDITIONING SYSTEMS, INCLUDING CONDENSERS AND AIR FILTERS.
 - LANDSCAPE IRRIGATION SYSTEMS.
 - WATER REUSE SYSTEMS.
- INFORMATION FROM LOCAL UTILITY, WATER AND WASTE RECOVERY PROVIDERS ON METHODS TO FURTHER REDUCE RESOURCE CONSUMPTION, INCLUDING RECYCLE PROGRAMS AND LOCATIONS.
- PUBLIC TRANSPORTATION AND/OR CARPOOL OPTIONS AVAILABLE IN THE AREA.
- 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.
- INFORMATION ABOUT WATER-CONSERVING LANDSCAPE AND IRRIGATION DESIGN AND CONTROLLERS WHICH CONSERVE WATER.
- INSTRUCTIONS FOR MAINTAINING GUTTERS AND DOWNSPOUTS AND THE IMPORTANCE OF DIVERTING WATER AT LEAST 5 FEET AWAY FROM THE FOUNDATION.
- INFORMATION ON REQUIRED ROUTINE MAINTENANCE MEASURES, INCLUDING, BUT NOT LIMITED TO, CAULKING, PAINTING, GRADING AROUND THE BUILDING, ETC.
- INFORMATION ABOUT STATE SOLAR ENERGY AND INCENTIVE PROGRAMS AVAILABLE.
- A COPY OF ALL SPECIAL INSPECTION VERIFICATIONS REQUIRED BY THE ENFORCING AGENCY OR THIS CODE.
- INFORMATION FROM CAL FIRE ON MAINTENANCE OF DEFENSIBLE SPACE AROUND RESIDENTIAL STRUCTURES.
- INFORMATION AND/OR DRAWINGS IDENTIFYING THE LOCATION OF GRAB BAR REINFORCEMENTS.

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 2649.82 (A)(2)(A) ET SEQ. ARE NOT REQUIRED TO COMPLY WITH THE ORGANIC WASTE PORTION OF THIS SECTION.

DIVISION 4.5 ENVIROMENTAL 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 SCQMD 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

4.504.3.1 CARPET CUSHION

ALL CARPET CUSHION INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF 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 1.2, JANUARY 2017 (EMISSION TESTING METHOD FOR CALIFORNIA SPECIFICATION 01350).

SEE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH'S WEBSITE FOR CERTIFICATION PROGRAMS AND TESTING LABS.

HTTPS://WWW.CDPH.CA.GOV/PROGRAMS/CCDPHP/DEODC/EHLB/IAQ/PAG/ES/VOC/ASPX

4.504.3.2 CARPET ADHESIVE

ALL CARPET ADHESIVE SHALL MEET THE REQUIREMENTS OF TABLE 4.504.1.

4.504.4 RESILIENT FLOORING SYSTEMS

WHERE RESILIENT FLOORING IS INSTALLED, AT LEAST 80 PERCENT OF FLOOR AREA RECEIVING RESILIENT FLOORING SHALL MEET THE REQUIREMENTS OF 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 1.2, JANUARY 2017 (EMISSION TESTING METHOD FOR CALIFORNIA SPECIFICATION 01350).

SEE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH'S WEBSITE FOR CERTIFICATION PROGRAMS AND TESTING LABS.

HTTPS://WWW.CDPH.CA.GOV/PROGRAMS/CCDPHP/DEODC/EHLB/IAQ/PAG/ES/VOC/ASPX

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 (17CCR 93120 ET SEQ.) 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 2269, EUROPEAN 636 3S, AND CANADIAN CSA 0121, CSA 0151, CSA 0153 AND CSA 0325 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
ABB 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

- IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.
- FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

TABLE 4.504.2 - 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

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS^{2,3}

(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 ¹	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED 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	250
SHELLACS	
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 LIMITS¹

(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 ²	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 GENERAL

BUILDINGS SHALL MEET OR EXCEED THE PROVISIONS OF THE CALIFORNIA BUILDING STANDARDS CODE.

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-04.
- OTHER EQUIVALENT METHODS APPROVED BY THE ENFORCING AGENCY.
- A SLAB DESIGN SPECIFIED BY A LICENSED DESIGN PROFESSIONAL.

4.505.3 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 ± 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 ENVIROMENTAL 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—2016 (RESIDENTIAL LOAD CALCULATION), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
- DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI/ACCA 1 MANUAL D—2016 (RESIDENTIAL DUCT SYSTEMS), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
- SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ACCA 3 MANUAL S—2016 (RESIDENTIAL EQUIPMENT SELECTION) OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

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

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 A 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.



THESE PLANS ARE PROVIDED BY THE CITY OF LAGUNA NIGUEL AS PART OF THE PRE-APPROVED ADU PROGRAM AND ARE PUBLIC DOMAIN. THERE CANNOT BE A CHARGE TO PROVIDE THESE PLANS. NO ALTERATIONS TO THESE PLANS ARE ALLOWED. ALL ALTERATIONS MUST BE DONE UNDER A SEPARATE PERMIT ONCE THE BUILDING PERMIT FOR THE ADU HAS BEEN ISSUED AND FINAL INSPECTION COMPLETED. IF YOU DO NOT HAVE THE CONSTRUCTION KNOWLEDGE AND EXPERIENCE TO CONTRACT THESE PLANS WITHOUT FURTHER DETAILS, IT IS RECOMMENDED YOU HIRE A CONTRACTOR TO DO THE CONSTRUCTION. THE CITY WILL NOT PROVIDE FURTHER INFORMATION OR DETAILS AND BUILDING INSPECTORS WILL NOT PROVIDE STEP BY STEP INSTRUCTIONS IN THE FIELD.

PRE-APPROVED ADU

CITY OF LAGUNA NIGUEL

CAL GREEN RESIDENTIAL REQUIREMENTS

PUBLIC SET

DATE
02/05/2025
SHEET

G-202



2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(m)13:	Space Conditioning System Airflow Rate and Fan Efficacy. Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 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 ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. *
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Ventilation and Indoor Air Quality:

§ 150.0(o)1:	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 subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	Central Fan Integrated (CFI) Ventilation Systems. Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed and controlled per §150.0(o)1Bii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses. Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1C-ii.
§ 150.0(o)1G:	Local Mechanical Exhaust. Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of §150.0(o)1Gii, enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Giii-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems. The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	Field Verification and Diagnostic Testing. Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G

Pool and Spa Systems and Equipment:

§ 110.4(a):	Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDBS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating. *
§ 110.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves. *

Lighting:

§ 110.9:	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9. *
§ 150.0(k)1A:	Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
§ 150.0(k)1B:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1C:	Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k)1D:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1E:	Blank Electrical Boxes. The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(k)1F:	Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).

5/6/22

03



2022 Single-Family Residential Mandatory Requirements Summary

§ 110.5:	Pilot Lights. Continuously burning pilot lights are prohibited for natural gas, fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters. *
§ 150.0(h)1:	Building Cooling and Heating Loads. Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.
§ 150.0(h)3A:	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(h)3B:	Liquid Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(i)1:	Water Piping, Solar Water-Heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code. *
§ 150.0(i)2:	Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction 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-crushable casing or sleeve.
§ 150.0(n)1:	Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2' higher than the base of the water heater.
§ 150.0(n)3:	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 by a listing agency that is approved by the executive director.

Ducts and Fans:

§ 110.8(d)3:	Ducts. Insulation installed on an existing space-conditioning duct must comply with § 804.0 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.
§ 150.0(m)1:	CMC Compliance. All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than 1". If mastic or tape is used, Building cavities, air handler support platforms, 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 these spaces must not be compressed. *
§ 150.0(m)2:	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 not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	Protection of Insulation. Insulation must be protected from damage due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	Porous Inner Core Flex Duct. Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
§ 150.0(m)11:	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 Reference Residential Appendix RA3.1.
§ 150.0(m)12:	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 must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter. *

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2022 Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information.
(04/2022)

Building Envelope:

§ 110.6(a)1:	Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 1011.S.2/A440-2011. *
§ 110.6(a)5:	Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.
§ 110.7:	Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather-stripped.
§ 110.8(a):	Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CFR.
§ 110.8(j):	Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	Roof Deck, Ceiling and Rafters Roof Insulation. Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling. *
§ 150.0(b):	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	Wall Insulation. Minimum R-13 insulation in 2x4-inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. *
§ 150.0(f):	Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no 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 deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to conditioned ventilation crawl space for buildings complying with the exception to §150.0(d).
§ 150.0(g)2:	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 insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-Factor of 0.45, or area-weighted average U-Factor of all fenestration must not exceed 0.45.

Fireplaces, Decorative Gas Appliances, and Gas Log:

§ 110.5(e)	Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device. *
§ 150.0(e)3:	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *

Space Conditioning, Water Heating, and Plumbing System:

§ 110.0-§ 110.3:	Certification. Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other required appliances must be certified by the manufacturer to the California Energy Commission.
§ 110.2(a):	HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. *
§ 110.2(b):	Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-off temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
§ 110.2(c):	Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
§ 110.3(c)3:	Insulation. Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)6:	Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

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2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(s)	Energy Storage System (ESS) Ready. All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
§ 150.0(t)	Heat Pump Space Heater Ready. Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(u)	Electric Cooktop Ready. Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(v)	Electric Clothes Dryer Ready. Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

*Exceptions may apply.

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2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(k)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinet or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that 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 drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	Accessible Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 150.0(k)2B:	Multiple Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	Mandatory Requirements. Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	Energy Management Control Systems. An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2E:	Automatic Shutoff Controls. In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets and opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	Dimmers. Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	Independent controls. Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3A:	Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	Internally illuminated address signs. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

Solar Readiness:

§ 110.10(a)1:	Single-family Residences. Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§ 110.10(b)1A:	Minimum Solar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must 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 must be comprised of areas that have no dimension less than 5 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. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. *
§ 110.10(b)2:	Azimuth. All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A:	Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment. *
§ 110.10(b)3B:	Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane. *
§ 110.10(b)4:	Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	Interconnection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	Documentation. A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
§ 110.10(e)1:	Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

Electric and Energy Storage Ready:

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THESE PLANS ARE PROVIDED BY THE CITY OF LAGUNA NIGUEL AS PART OF THE PRE-APPROVED ADU PROGRAM AND ARE PUBLIC DOMAIN. THERE CANNOT BE A CHARGE TO PROVIDE THESE PLANS. NO ALTERATIONS TO THESE PLANS ARE ALLOWED. ALL ALTERATIONS MUST BE DONE UNDER A SEPARATE PERMIT ONCE THE BUILDING PERMIT FOR THE ADU HAS BEEN ISSUED AND FINAL INSPECTION COMPLETED. IF YOU DO NOT HAVE THE CONSTRUCTION KNOWLEDGE AND EXPERIENCE TO CONSTRUCT THESE PLANS WITHOUT FURTHER DETAILS, IT IS RECOMMENDED YOU HIRE A CONTRACTOR TO DO THE CONSTRUCTION. THE CITY WILL NOT PROVIDE FURTHER INFORMATION OR DETAILS AND BUILDING INSPECTORS WILL NOT PROVIDE STEP BY STEP INSTRUCTIONS IN THE FIELD.

PRE-APPROVED ADU

CITY OF LAGUNA NIGUEL

CAL GREEN RESIDENTIAL
MANDATORY REQUIREMENTS

PUBLIC SET

DATE
02/05/2025
SHEET

G-203

2/7/2025 9:55:13 AM
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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
Project Name: Laguna Niguel ADU Plan 1
Calculation Description: Title 24 Analysis
Calculation Date/Time: 2025-01-04T08:10:23-08:00
Input File Name: Laguna Niguel ADU Plan 1.rbd22x
CF1R-PRF-01-E
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GENERAL INFORMATION				
01	Project Name	Laguna Niguel ADU Plan 1		
02	Run Title	Title 24 Analysis		
03	Project Location			
04	City	Laguna Niguel	05	Standards Version
06	Zip code		07	Software Version
08	Climate Zone	6	09	Front Orientation (deg/ Cardinal)
10	Building Type	Single family	11	Number of Dwelling Units
12	Project Scope	Newly Constructed	13	Number of Bedrooms
14	Addition Cond. Floor Area (ft²)	0	15	Number of Stories
16	Existing Cond. Floor Area (ft²)	n/a	17	Fenestration Average U-factor
18	Total Cond. Floor Area (ft²)	350	19	Glazing Percentage (%)
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area
22	Fuel Type	All electric	23	No Dwelling Unit:

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: 425-P010038168A-000-000-0000000-0000
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Room Load Summary

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BUILDING ENERGY ANALYSIS REPORT

PROJECT:
Laguna Niguel ADU Plan 1
Laguna Niguel, CA
Project Designer:
RRM Design Group
805-543-1794

Report Prepared by:
Timothy Carstairs, CEA, HERS, GPR
Carstairs Energy Inc.
2238 Bayview Heights Drive, Suite E
Los Osos, CA 93402
805-904-9048



Job Number:
25-01/046
Date:
2/5/2025

The EnergyPro computer program has been used to perform the calculations summarized in this compliance report. This program has approval and is authorized by the California Energy Commission for use with both the Residential and Nonresidential 2022 Building Energy Efficiency Standards.
This program developed by EnergySoft, LLC—www.energysoft.com



THESE PLANS ARE PROVIDED BY THE CITY OF LAGUNA NIGUEL AS PART OF THE PRE-APPROVED ADU PROGRAM AND ARE PUBLIC DOMAIN. THERE CANNOT BE A CHARGE TO PROVIDE THESE PLANS. NO ALTERATIONS TO THESE PLANS ARE ALLOWED. ALL ALTERATIONS MUST BE DONE UNDER A SEPARATE PERMIT ONCE THE BUILDING PERMIT FOR THE ADU HAS BEEN ISSUED AND FINAL INSPECTION COMPLETED. IF YOU DO NOT HAVE THE CONSTRUCTION KNOWLEDGE AND EXPERIENCE TO CONTRUCT THESE PLANS WITHOUT FURTHER DETAILS, IT IS RECOMMENDED YOU HIRE A CONTRACTOR TO DO THE CONSTRUCTION. THE CITY WILL NOT PROVIDE FURTHER INFORMATION OR DETAILS AND BUILDING INSPECTORS WILL NOT PROVIDE STEP BY STEP INSTRUCTIONS IN THE FIELD.

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Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft² - yr)	Standard Design TDV Energy (EDR2) (kTDV/ft² - yr)	Proposed Design Source Energy (EDR1) (kBtu/ft² - yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft² - yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	0.15	1.03	0.21	1.51	-0.06	-0.48
Space Cooling	1.22	33.63	0.94	26.19	0.28	7.44
IAQ Ventilation	0.56	5.99	0.56	5.99	0	0
Water Heating	10.5	125.03	10.5	125.03	0	0
Self Utilization/Flexibility Credit			0	0	0	0
South Facing Efficiency Compliance Total	12.43	165.68	12.21	158.72	0.22	6.96
Space Heating	0.15	1.03	0.13	1	0.02	0.03
Space Cooling	1.22	33.63	0.92	25.73	0.3	7.9
IAQ Ventilation	0.56	5.99	0.56	5.99	0	0
Water Heating	10.5	125.03	10.5	125.03	0	0
Self Utilization/Flexibility Credit			0	0	0	0
West Facing Efficiency Compliance Total	12.43	165.68	12.11	157.75	0.32	7.93

Registration Number: 425-P010038168A-000-000-0000000-0000
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Schema Version: rev 20220901
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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
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Input File Name: Laguna Niguel ADU Plan 1.rbd22x
CF1R-PRF-01-E
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Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft² - yr)	Standard Design TDV Energy (EDR2) (kTDV/ft² - yr)	Proposed Design Source Energy (EDR1) (kBtu/ft² - yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft² - yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	0.15	1.03	0.26	1.94	-0.11	-0.91
Space Cooling	1.22	33.63	1.09	28.3	0.13	5.33
IAQ Ventilation	0.56	5.99	0.56	5.99	0	0
Water Heating	10.5	125.03	10.5	125.03	0	0
Self Utilization/Flexibility Credit			0	0	0	0
North Facing Efficiency Compliance Total	12.43	165.68	12.41	161.26	0.02	4.42
Space Heating	0.15	1.03	0.28	2.06	-0.13	-1.03
Space Cooling	1.22	33.63	0.79	22.75	0.43	10.88
IAQ Ventilation	0.56	5.99	0.56	5.99	0	0
Water Heating	10.5	125.03	10.5	125.03	0	0
Self Utilization/Flexibility Credit			0	0	0	0
East Facing Efficiency Compliance Total	12.43	165.68	12.13	155.83	0.3	9.85

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
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	Energy Design Ratings			Compliance Margins		
	Source Energy (EDR1)	Efficiency ¹ EDR (EDR2/efficiency)	Total ² EDR (EDR2total)	Source Energy (EDR1)	Efficiency ¹ EDR (EDR2/efficiency)	Total ² EDR (EDR2total)
Standard Design	44.8	53.5	66.9			
Proposed Design						
North Facing	44.8	52.1	66.1	0	1.4	0.8
East Facing	44.4	50.3	65.2	0.4	3.2	1.7
South Facing	44.5	51.2	65.7	0.3	2.3	1.2
West Facing	44.4	50.9	65.6	0.4	2.6	1.3
RESULT ³ : PASS						
¹ Efficiency EDR includes improvements like a better building envelope and more efficient equipment ² Total EDR includes efficiency and demand response measures such as photovoltaic (PV) system and batteries ³ Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded						
• Standard Design PV Capacity: 0.00 kWdc • Proposed PV Capacity Scaling: North (0.00 kWdc) East (0.00 kWdc) South (0.00 kWdc) West (0.00 kWdc)						

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
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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	Status
Living Area	Conditioned	HVAC System1	350	8	DHW Sys 1	New

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	112	32	90
Left Wall	Living Area	R-21 Wall	90	Left	200	7.5	90
Rear Wall	Living Area	R-21 Wall	180	Back	112	6	90
Right Wall	Living Area	R-21 Wall	270	Right	200	44	90
Roof	Living Area	R-30 Roof Attic	n/a	n/a	350	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	5	0.1	0.85	Yes	No

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
01	Window	Front Wall	Front	0			1	12	0.3	NFRC	0.23	NFRC	Bug Screen
02	Window	Left Wall	Left	90			1	7.5	0.3	NFRC	0.23	NFRC	Bug Screen
03	Window	Rear Wall	Back	180			1	6	0.3	NFRC	0.23	NFRC	Bug Screen

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REQUIRED PV SYSTEMS											
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 (%)
0	No PV - required PV less than 1.8kWdc	Standard (14-17%)	Fixed	none	true	n/a	n/a	n/a	n/a	n/a	

REQUIRED SPECIAL FEATURES											
The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.											
• PV exception 2: No PV required when minimum PV size (Section 150.1(c)(14) < 1.8 kWdc (0 kW) • Variable capacity heat pump compliance option (verification details from VHP Staff report, Appendix B, and RA3) • Electric water heater exception - Exception 2 to Section 150.1(c)(8) • Point of use											

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 CF2Rs and CF3Rs are required to be completed in the HERS Registry											
• Indoor air quality ventilation • Kitchen range hood • Verified Refrigerant Charge • Airflow in habitable rooms (SC3.1.4.1.7) • 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 (SC3.1.4.1.8)											

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
Laguna Niguel ADU Plan 1	350	1	1	1	0	1

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ENERGY USE INTENSITY				
	Standard Design (kBtu/ft² - yr)	Proposed Design (kBtu/ft² - yr)	Margin (kBtu/ft² - yr)	Margin Percentage
North Facing				
Gross EU1 ¹	49.36	49.05	0.31	0.63
Net EU1 ²	49.36	49.05	0.31	0.63
East Facing				
Gross EU1 ¹	49.36	48.48	0.88	1.78
Net EU1 ²	49.36	48.48	0.88	1.78
South Facing				
Gross EU1 ¹	49.36	48.98	0.38	0.77
Net EU1 ²	49.36	48.98	0.38	0.77
West Facing				
Gross EU1 ¹	49.36	48.78	0.58	1.18
Net EU1 ²	49.36	48.78	0.58	1.18

Notes
1. Gross EU1 is Energy Use Total (not including PV) / Total Building Area.
2. Net EU1 is Energy Use Total (including PV) / Total Building Area.

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PRE-APPROVED ADU
CITY OF LAGUNA NIGUEL
ENERGY COMPLIANCE - PLAN 1

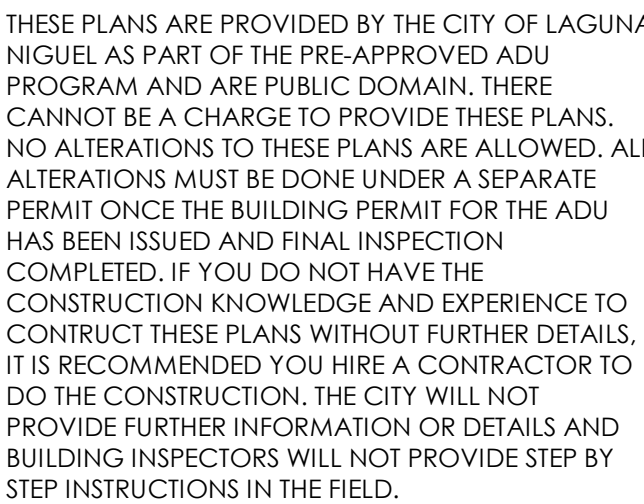
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* Total includes ventilation load for zonal systems.



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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
Project Name: Laguna Niguel ADU Plan 1 Reverse
Calculation Date/Time: 2025-01-04T08:13:24-08:00
Calculation Description: Title 24 Analysis
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GENERAL INFORMATION											
01	Project Name Laguna Niguel ADU Plan 1 Reverse										
02	Run Title Title 24 Analysis										
03	Project Location										
04	City	Laguna Niguel	05	Standards Version 2022							
06	Zip code		07	Software Version EnergyPro 9.3							
08	Climate Zone	6	09	Front Orientation (deg/ Cardinal) All orientations							
10	Building Type	Single family	11	Number of Dwelling Units 1							
12	Project Scope	Newly Constructed	13	Number of Bedrooms 1							
14	Addition Cond. Floor Area (ft²)	0	15	Number of Stories 1							
16	Existing Cond. Floor Area (ft²)	n/a	17	Fenestration Average U-factor 0.3							
18	Total Cond. Floor Area (ft²)	350	19	Glazing Percentage (%) 19.86%							
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area n/a							
22	Fuel Type	All electric	23	No Dwelling Unit: 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

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Form RMS-1 Residential Measures Summary
Form MF1R Mandatory Measures Summary
Room Load Summary

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BUILDING ENERGY ANALYSIS REPORT

PROJECT:
Laguna Niguel ADU Plan 1 Reverse
Laguna Niguel, CA

Project Designer:
RRM Design Group

805-543-1794

Report Prepared by:
Timothy Carstairs, CEA, HERS, GPR
Carstairs Energy Inc.
2238 Bayview Heights Drive, Suite E
Los Osos, CA 93402
805-904-9048



Job Number:
25-01046

Date:
2/5/2025

The EnergyPro computer program has been used to perform the calculations submitted in this compliance report. This program has approval and is authorized by the California Energy Commission for use with both the Residential and Nonresidential 2022 Building Energy Efficiency Standards.
This program developed by EnergySoft, LLC - www.energysoft.com

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
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Calculation Description: Title 24 Analysis
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Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft²-yr)	Standard Design TDV Energy (EDR2) (kTOD/ft²-yr)	Proposed Design Source Energy (EDR1) (kBtu/ft²-yr)	Proposed Design TDV Energy (EDR2) (kTOD/ft²-yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	0.15	1.03	0.22	1.64	-0.07	-0.61
Space Cooling	1.22	33.63	1.11	28.89	0.11	4.74
IAQ Ventilation	0.56	5.99	0.56	5.99	0	0
Water Heating	10.5	125.03	10.5	125.03	0	0
Self Utilization/Flexibility Credit			0	0	0	0
South Facing Efficiency Compliance Total	12.43	165.68	12.39	161.55	0.04	4.13
Space Heating	0.15	1.03	0.29	2.11	-0.14	-1.08
Space Cooling	1.22	33.63	0.84	23.47	0.38	10.16
IAQ Ventilation	0.56	5.99	0.56	5.99	0	0
Water Heating	10.5	125.03	10.5	125.03	0	0
Self Utilization/Flexibility Credit			0	0	0	0
West Facing Efficiency Compliance Total	12.43	165.68	12.19	156.6	0.24	9.08

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD
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Calculation Description: Title 24 Analysis
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Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft²-yr)	Standard Design TDV Energy (EDR2) (kTOD/ft²-yr)	Proposed Design Source Energy (EDR1) (kBtu/ft²-yr)	Proposed Design TDV Energy (EDR2) (kTOD/ft²-yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	0.15	1.03	0.25	1.81	-0.1	-0.78
Space Cooling	1.22	33.63	0.92	25.6	0.3	8.03
IAQ Ventilation	0.56	5.99	0.56	5.99	0	0
Water Heating	10.5	125.03	10.5	125.03	0	0
Self Utilization/Flexibility Credit			0	0	0	0
North Facing Efficiency Compliance Total	12.43	165.68	12.23	158.43	0.2	7.25
Space Heating	0.15	1.03	0.13	0.96	0.02	0.07
Space Cooling	1.22	33.63	0.86	25.01	0.36	8.62
IAQ Ventilation	0.56	5.99	0.56	5.99	0	0
Water Heating	10.5	125.03	10.5	125.03	0	0
Self Utilization/Flexibility Credit			0	0	0	0
East Facing Efficiency Compliance Total	12.43	165.68	12.05	156.99	0.38	8.69

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	Energy Design Ratings			Compliance Margins		
	Source Energy (EDR1)	Efficiency ¹ EDR (EDR2efficiency)	Total ² EDR (EDR2total)	Source Energy (EDR1)	Efficiency ¹ EDR (EDR2efficiency)	Total ² EDR (EDR2total)
Standard Design	44.8	53.5	66.9			
Proposed Design						
North Facing	44.5	51.1	65.6	0.3	2.4	1.3
East Facing	44.3	50.7	65.5	0.5	2.8	1.4
South Facing	44.8	52.1	66.2	0	1.4	0.7
West Facing	44.5	50.5	65.3	0.3	3	1.6
RESULT ³ : PASS						
¹ Efficiency EDR includes improvements like a better building envelope and more efficient equipment. ² Total EDR includes efficiency and demand response measures such as photovoltaic (PV) system and batteries. ³ Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded.						
• Standard Design PV Capacity: 0.00 kWdc • Proposed PV Capacity Scaling: North (0.00 kWdc) East (0.00 kWdc) South (0.00 kWdc) West (0.00 kWdc)						

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ZONE INFORMATION													
01	02	03	04	05	06	07							
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft ²)	Avg. Ceiling Height	Water Heating System 1	Status							
Living Area	Conditioned	HVAC System1	350	8	DHW Sys 1	New							
OPAQUE SURFACES													
01	02	03	04	05	06	07	08						
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft ²)	Window and Door Area (ft2)	Tilt (deg)						
Front Wall	Living Area	R-21 Wall	0	Front	112	32	90						
Left Wall	Living Area	R-21 Wall	90	Left	200	44	90						
Rear Wall	Living Area	R-21 Wall	180	Back	112	6	90						
Right Wall	Living Area	R-21 Wall	270	Right	200	7.5	90						
Roof	Living Area	R-30 Roof Attic	n/a	n/a	350	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	5	0.1	0.85	Yes	No						
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 ²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
01	Window	Front Wall	Front	0			1	12	0.3	NFRC	0.23	NFRC	Bug Screen
04	Window	Left Wall	Left	90			1	24	0.3	NFRC	0.23	NFRC	Bug Screen
05	Window	Left Wall	Left	90			1	20	0.3	NFRC	0.23	NFRC	Bug Screen

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REQUIRED PV SYSTEMS											
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 (%)
0	No PV - required PV less than 1.8kWdc	Standard (14-17%)	Fixed	none	true	n/a	n/a	n/a	n/a	n/a	
REQUIRED SPECIAL FEATURES											
The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis. • PV exception 2: No PV required when minimum PV size (Section 150.1(c)(14) < 1.8 kWdc (0 kW) • Variable capacity heat pump compliance option (verification details from VCHP Staff report, Appendix B, and RA3) • Electric water heater exception - Exception 2 to Section 150.1(c)(8) • Point of use											
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 CF2Rs and CF3Rs are required to be completed in the HERS Registry • Indoor air quality ventilation • Kitchen range hood • Verified Refrigerant Charge • Airflow in habitable rooms (SC3.1.4.1.7) • 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 (SC3.1.4.1.8)											
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					
Laguna Niguel ADU Plan 1 Reverse	350	1	1	1	0	1					

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ENERGY USE INTENSITY				
	Standard Design (kBtu/ft²-yr)	Proposed Design (kBtu/ft²-yr)	Margin (kBtu/ft²-yr)	Margin Percentage
North Facing				
Gross EU1 ¹	49.36	48.9	0.46	0.93
Net EU1 ²	49.36	48.9	0.46	0.93
East Facing				
Gross EU1 ¹	49.36	48.76	0.6	1.22
Net EU1 ²	49.36	48.76	0.6	1.22
South Facing				
Gross EU1 ¹	49.36	49.12	0.24	0.49
Net EU1 ²	49.36	49.12	0.24	0.49
West Facing				
Gross EU1 ¹	49.36	48.51	0.85	1.72
Net EU1 ²	49.36	48.51	0.85	1.72
Notes 1. Gross EU1 is Energy Use Total (not including PV) / Total Building Area. 2. Net EU1 is Energy Use Total (including PV) / Total Building Area.				

Registration Number: 425-P010038165A-000-000-0000000-0000
NOTICE: This document has been generated by California Home Energy Efficiency Rating Services (CHEERS) using information uploaded by third parties not

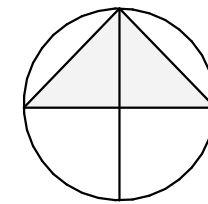
FOR USE IN THE CITY OF LAGUNA NIGUEL

RESIDENTIAL MEASURES SUMMARY										RMS-1	
Project Name Laguna Niguel ADU Plan 1 Reverse	Building Type Single-Family	Addition Alone No	Existing Addition/Alteration No	Total Floor Area 350	CA Climate Zone 06	Area (sf)	Special Features	Status	Date 2/5/2025	# of Units 1	Status
Project Name Laguna Niguel	Construction Type	Cavity	R-21	350	P-5	350	Wood Frame	New	2/5/2025	1	New
Project Name Laguna Niguel	Construction Type	Cavity	R-21	350	P-5	350	Wood Frame	New	2/5/2025	1	New
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Project Name Laguna Niguel	Construction Type	Cavity	R-21	350	P-5						

EXAMPLE SITE PLAN

NOTE: THIS IS AN EXAMPLE SITE PLAN FOR AN INTERIOR LOT. EXACT LAYOUT, DIMENSIONS, AND BEARINGS SHALL BE PROVIDED BY OWNER/APPLICANT.
(E) EXISTING (N) NEW

SCALE: 1/10" = 1' - 0"



NORTH ARROW

SITE PLAN CHECKLIST

(FOR PLANNING STAFF ONLY) INITIAL WHEN THIS SHEET HAS BEEN REVIEWED. STAFF INITIALS: _____

- ☐ **TOPOGRAPHY** - SHOW 1 FT CONTOURS ON SITE AND 20 FT OFFSITE. (REQUIREMENT MAY BE WAIVED AT BUILDING OFFICIALS DISCRETION.)
- ☐ **FOOTPRINT OF ALL EXISTING AND PROPOSED BUILDINGS** - PLOT THE PROPOSED ADU BUILDING FOOTPRINT ALONG WITH ANY OTHER EXISTING BUILDINGS ONSITE. THIS INCLUDES ALL STRUCTURES / PORCHES / GAZEBOs. PLOT ANY OPTIONAL COVERED PATIOS (WHEN SELECTED).
- ☐ **AREA OF EXISTING BUILDING** - INDICATE THE SQUARE FOOTAGE OF THE EXISTING HOUSE.
- ☐ **FOOTPRINT OF PROPOSED ADU** - REFER TO LEGEND FOR FOOTPRINT AT 10"=1" SCALE
- ☐ **DRAWING SCALE** - SITE PLAN SHOULD BE DRAWN TO A MEASURABLE SCALE.
- ☐ **LOCATION OF ELECTRICAL PANEL** - SEE COVER SHEET FOR PANEL OPTION AND MAXIMUM AMPERAGE FOR THE PROPOSED ADU. SEE TITLE SHEET UNDER OPTION SELECTIONS FOR REQ. ADDITIONAL CALCULATIONS BASED ON CHOSEN ELECTRICAL PANEL.

- ☐ **PROPERTY LINES** - SHOW OUTLINE OF PROPERTY USING DASHED LINE IN LEGEND. INDICATE THE BEARING AND DISTANCE OF THE PROPERTY LINE.
- ☐ **LOT COVERAGE CALCULATION** - TOTAL FOOTPRINT AREA FOR STRUCTURES ON SITE / LOT AREA
- ☐ **SWIMMING POOLS** - ALL EXISTING SWIMMING POOLS SHALL BE SHOWN ON THE SITE PLAN AND SHALL HAVE 10' MINIMUM SETBACK TO THE NEW ADU STRUCTURE.
- ☐ **LOCATION OF RAIN WATER LEADERS** - THE ROOF DRAINS SHOULD DRAIN AWAY FROM THE PROPERTY LINES AND INTO THE LANDSCAPE AREA.
- ☐ **LABEL STREETS & SIDEWALKS**
- ☐ **PORCHES** - THERE SHALL BE NO MORE THAN 30 INCHES MEASURED VERTICALLY TO THE FLOOR OR GRADE BELOW (INCLUDING FLOORS, STAIRS, RAMPS, AND LANDINGS) ANYWHERE MEASURED LESS THAN 36 INCHES HORIZONTALLY TO THE EDGE OF THE PORCH/SLAB/SURFACE OF THE RAIL. INSECT SCREENING SHALL NOT BE CONSIDERED AS A GUARD.

- ☐ **DIMENSION BUILDING SEPARATION** - DIMENSION THE DISTANCE BETWEEN THE PROPOSED ADU AND ANY EXISTING STRUCTURES
- ☐ **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 SIDE AND REAR PROPERTY SIDE SHALL BE A MINIMUM OF (4' - 0").
- ☐ **EASEMENTS** - REFER TO LEGEND. MUST INCLUDE ALL APPLICABLE EASEMENTS. PROPOSED STRUCTURE SHALL COMPLY WITH EASEMENT REQUIREMENTS.
- ☐ **DRIVEWAY / PAVED ACCESS** - SHOW THE PROPOSED (OR EXISTING) DRIVEWAY / PAVED ACCESS TO THE PROPOSED ADU.
- ☐ **LOCATION OF FIRE HYDRANTS** - INDICATE THE LOCATION OF ALL FIRE HYDRANTS WITHIN 500 FEET OF THE PROPERTY.

- ☐ **PROVIDE THE EXACT LOCATION AND LABEL ALL OF THE EXISTING & PROPOSED UTILITIES ON THE SITE PLAN**
- A. THIS INCLUDES BUT IS NOT LIMITED TO UTILITIES, POLES, SEPTIC, SEWER, DRAINS, ELECTRICAL, GAS METERS, LINES, AND ANY PHOTOVOLTATIC.
- B. INDICATE SEWER ELEVATION OF LATERAL AND MAIN CONNECTION. IF ON SEPTIC SYSTEM, PROVIDE DEPARTMENT OF ENVIRONMENTAL HEALTH (DEH) EXHIBIT WITH LEACH LINES SHOWN AND AREA FOR NEW LEACH LINES. SEWER MAIN EXTENSION MAY BE REQUIRED. INCLUDE LOCATIONS AND ALL ELEVATIONS OF PROPOSED SEPTIC / SEWER / LEACH LINES. PROVIDE INVERT ELEVATIONS AT CLEANOUT, SEWER MAIN CONNECTION, ADU CONNECTION, AND AT ANY OTHER CONNECTION POINTS.
- C. PLEASE SPECIFY ON THE PLANS IF THE ADU WILL HAVE NEW INDEPENDENT SERVICES DIRECTLY FROM THE PUBLIC RIGHT OF WAY CONNECTION OR IF THE SERVICES WILL BE BRANCHED OFF THE EXISTING MAIN LINES ON THE PROPERTY.
- D. JUSTIFY PIPE SIZES SHOWN ON THE PLAN ARE ADEQUATE FOR THE PROPOSED ADU SERVICES. IF THE SERVICES ARE CONNECTED TO THE EXISTING MAIN SERVICES, THEN PROVIDE JUSTIFICATION THAT THE EXISTING MAINS CAN HANDLE THE NEW INCREASED FLOWS OF THE ADU FOR WATER SUPPLY AND SANITARY SEWER SYSTEMS. PLEASE USE CPC TABLE 610.3, TABLE 610.4, AND SECTION 610.5 FOR JUSTIFICATION. NOTE, IF USING APPENDIX SIZING CRITERIA, PLEASE INCLUDE THE CPC APPENDIX A CHART ON THE PLAN.
- ☐ **SHOW ALL EV CHARGING AND ALL ASSOCIATED CIRCUITS FOR NEW AND EXISTING LOCATIONS.**

SITE PLAN GENERAL NOTES

- REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS
- REFER TO STRUCTURAL PLANS FOR FURTHER INFORMATION
- EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY PER 2022 CRC, SECTION 310.1.
- NOT LESS THAN 30" OF CLEARANCE IN WIDTH, DEPTH, & HEIGHT SHALL BE PROVIDED TO ACCESS EXTERIOR MECHANICAL EQUIPMENT. SHOW LOCATION ON SITE PLAN & LABEL (2022 CMC SECTION 304.1 & 2022 CPC 504.3).
- PROPOSED ADU IS TO BE FULLY ELECTRIC. INSTALLATION OF A GAS LINE TO THE PROPOSED ADU WILL NOT BE PERMITTED.
- CALL BEFORE YOU DIG!** CONTACT UNDERGROUND SERVICE ALERT (USA) AT 1-800-227-2600 AT LEAST 2 WORKING DAYS BEFORE EXCAVATING.
- UNLESS OTHERWISE NOTED ON THE PLANS, FINISHED GROUND SURFACES SHALL BE GRADED TO DRAIN THE FINISHED SITE PROPERLY WITHIN 10-FEET OF ANY BUILDING FOUNDATION WITH A SLOPE OF 5% AWAY FROM ANY BUILDING OR STRUCTURE. ALL EXTERIOR HARDSCAPE WITHIN 10-FEET OF A BUILDING FOUNDATION SHALL BE INSTALLED WITH A 2% MINIMUM SLOPE AWAY FROM ANY BUILDING OR STRUCTURE. DRAINAGE SWALES SHALL BE A 1.5% MINIMUM SLOPE. ALL GRADED SLOPES SHALL HAVE A MAXIMUM SLOPE OF 3H TO 1V (33%). UNLESS SHOWN OTHERWISE ON THE PLANS.
- LOT GRADING SHALL CONFORM AT THE PROPERTY LINES AND SHALL NOT SLOPE TOWARD PROPERTY LINES IN A MANNER WHICH WOULD CAUSE STORM WATER TO FLOW ONTO NEIGHBORING PROPERTY. HISTORIC DRAINAGE PATTERNS SHALL NOT BE ALTERED IN A MANNER TO CAUSE DRAINAGE PROBLEMS TO NEIGHBORING PROPERTY.
- NEW RAINWATER DOWNSPOUTS SHALL BE DISCONNECTED AND DIRECT RUNOFF TO A LANDSCAPED AREA. DOWNSPOUTS MAY BE CONNECTED TO A POP-UP DRAINAGE EMITTER IN THE LANDSCAPED AREA OR MAY DRAIN TO SPLASH BLOCKS OR COBBLESTONES THAT DIRECT WATER AWAY FROM THE BUILDING.
- CONTRACTOR TO FIELD VERIFY EXISTING DRAINAGE. IF THE EXISTING DRAINAGE SYSTEM IS DAMAGED DURING EXCAVATION, CONTRACTOR SHALL REPAIR AND/OR REROUTE DRAINAGE SYSTEM AND CONNECT TO EXISTING DRAINAGE FACILITY AS NECESSARY.
- EXISTING PUBLIC IMPROVEMENTS THAT ARE DAMAGED BY THE PROJECT CONSTRUCTION SHALL BE REPAIRED OR REPLACED. EXISTING DAMAGED PUBLIC IMPROVEMENTS WITHIN THE PROJECT LIMITS SHALL BE REPAIRED OR REPLACED EVEN IF THE DAMAGE OCCURRED PRIOR TO THE START OF CONSTRUCTION.
- EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE INSTALLED PRIOR TO OCTOBER 1 AND SHALL BE MAINTAINED DAILY UNTIL APRIL 30. THESE FACILITIES SHALL CONTROL AND CONTAIN EROSION-CAUSED SILT DEPOSITS AND PROVIDE FOR THE SAFE DISCHARGE OF SILT-FREE STORM WATERS INTO EXISTING STORM DRAIN FACILITIES. EROSION AND SEDIMENT CONTROL SUPPLIES MUST BE KEPT ON-SITE DURING THE DRY SEASON AND EMPLOYED, AS NECESSARY PRIOR TO AND DURING RAIN EVENTS.
- SEASONALLY APPROPRIATE BEST MANAGEMENT PRACTICES FOR THE FOLLOWING SITE MANAGEMENT CATEGORIES MUST BE IMPLEMENTED YEAR-ROUND: 1) EROSION CONTROL; 2) RUN-ON AND RUN-OFF CONTROL; 3) SEDIMENT CONTROL; 4) GOOD SITE MANAGEMENT; AND 5) NON-STORMWATER MANAGEMENT.
- AN ENCROACHMENT PERMIT WILL BE REQUIRED FOR ANY CONSTRUCTION ACTIVITY WITHIN A PUBLIC STREET RIGHT OF WAY THAT HAS BEEN ACCEPTED BY THE CITY.

SITE PLAN LEGEND

- PROPERTY LINE x x (E) FENCE
- - - SETBACK [] (E) WALLS/ RETAINING WALLS
- - - - - EASEMENTS



THESE PLANS ARE PROVIDED BY THE CITY OF LAGUNA NIGUEL AS PART OF THE PRE-APPROVED ADU PROGRAM AND ARE PUBLIC DOMAIN. THERE CANNOT BE A CHARGE TO PROVIDE THESE PLANS. NO ALTERATIONS TO THESE PLANS ARE ALLOWED. ALL ALTERATIONS MUST BE DONE UNDER A SEPARATE PERMIT ONCE THE BUILDING PERMIT FOR THE ADU HAS BEEN ISSUED AND FINAL INSPECTION COMPLETED. IF YOU DO NOT HAVE THE CONSTRUCTION KNOWLEDGE AND EXPERIENCE TO CONTRUCT THESE PLANS WITHOUT FURTHER DETAILS, IT IS RECOMMENDED YOU HIRE A CONTRACTOR TO DO THE CONSTRUCTION. THE CITY WILL NOT PROVIDE FURTHER INFORMATION OR DETAILS AND BUILDING INSPECTORS WILL NOT PROVIDE STEP BY STEP INSTRUCTIONS IN THE FIELD.

PRE-APPROVED ADU

CITY OF LAGUNA NIGUEL

EXAMPLE SITE PLAN

PUBLIC SET

DATE
02/05/2025
SHEET

AS101

SITE PLAN TO BE PROVIDED BY APPLICANT

REFER TO **AS101** FOR EXAMPLE SITE PLAN

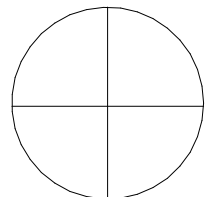


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FOR USE IN THE CITY OF LAGUNA NIGUEL

SITE PLAN

SCALE:



NORTH ARROW

DATE

02/05/2025

SHEET

AS102

PRE-APPROVED ADU

CITY OF LAGUNA NIGUEL

ARCHITECTURAL SITE PLAN



MEDITERRANEAN



CALIFORNIA RANCH



MODERN FARMHOUSE



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PRE-APPROVED ADU
CITY OF LAGUNA NIGUEL
PLAN 1 RENDERINGS

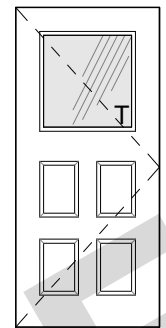
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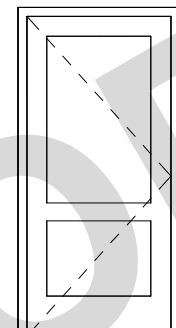
PUBLIC SET

DOOR LEGEND

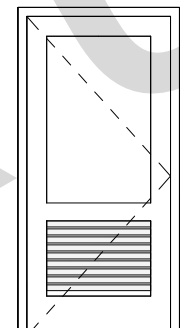
FRONT DOOR (TYPE A) STYLE/LOOK PER OWNER/APPLICANT



TYPE A (EXAMPLE)
SOLID CORE WOOD
ENTRY DOOR
EXTERIOR



TYPE B
HOLLOW CORE WOOD
INTERIOR



TYPE C
HOLLOW CORE WOOD
VENTED (MIN. 100 IN OPENING)
INTERIOR

DOOR REMARKS

- EXTERIOR DOOR.
- GLAZING PER DOOR TYPES. REFER TO GENERAL DOOR NOTE #1
- REQUIRED OPENING OF NOT LESS THAN 100 IN² FOR MAKEUP AIR SHALL BE PROVIDED IN THE DOOR OR BY APPROVED MEANS. [CMC SEC. R504.4.1]

DOOR SCHEDULE

NO.	TYPE	DOOR		REMARKS	
		WIDTH	HEIGHT		
101	A	3' - 0"	6' - 8"	1, 2	
102	C	3' - 0"	6' - 8"	3	
103	B	2' - 10"	8' - 0"		
104	B	2' - 6"	6' - 8"		

DOOR DETAIL REFERENCES		
LAP SIDING	21/A-921	
BOARD & BAT	21/A-922	
STUCCO	21/A-923	
TYP. THRESHOLD	11/A-901	12/A-901

DOOR GENERAL NOTES

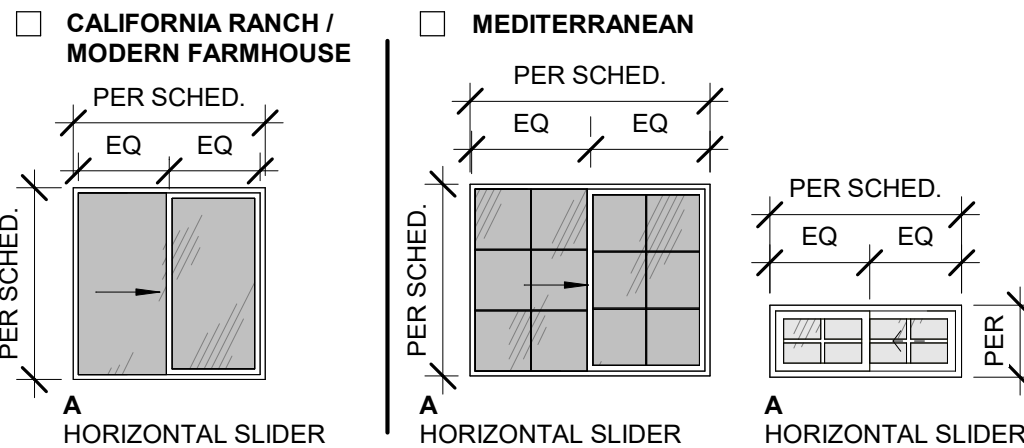
- GLAZING IN DOORS SHALL BE TEMPERED PER **SECTION R308.4.1**. PANES INDICATED IN DOOR LEGEND WITH (T).
- REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS.
- REFER TO PLANS FOR LOCATION OF DOORS.
- VERIFY ROUGH OPENING SIZE WITH DOOR MANUFACTURER SPECIFICATIONS PRIOR TO CONSTRUCTION.
- CONTRACTOR TO VERIFY ACTUAL DOOR SIZE TO FIT FINISH OPENING PRIOR TO FABRICATION OF DOOR AND FINISH OPENING.
- FIRE RATED DOORS SHALL BE SOLID WOOD OR SOLID HONEYCOMB CORE STEEL DOOR 1-3/8" THICK OR COMPLIANT WITH **CRC SECTION R302.5.1**. DOORS SHALL BE SELF-CLOSING AND SELF-LATCHING WITH WEATHER STRIPPING TO BE TIGHT FITTING.
- EXTERIOR DOORS SHALL EITHER HAVE A FIRE-RESISTANCE RATING OF NOT THAT COMPLIES WITH THE FOLLOWING REQUIREMENTS:
 - STILES AND RAILS SHALL NOT BE LESS THAN 1-3/8" THICK.
 - 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.

WINDOW SCHEDULE

NO.	TYPE	SIZE		HEAD HEIGHT	REMARKS	
		WIDTH	HEIGHT			
01	A	3' - 0"	4' - 0"	6' - 8"		
02	A	2' - 6"	3' - 0"	6' - 8"	2	
03	A	4' - 0"	1' - 6"	6' - 8"	2, 3	
04	A	6' - 0"	4' - 0"	6' - 8"	1	
05	A	5' - 0"	4' - 0"	6' - 8"		

WINDOW DETAIL REFERENCES			
LAP SIDING	11/A-921		
BOARD & BATTEN	11/A-922		
STUCCO	11/A-923		
FLASHING	31/A-902		

WINDOW TYPE



WINDOW REMARKS

- REQUIRED EGRESS WINDOW. REFER TO WINDOW GENERAL NOTE #5 FOR ADDITIONAL INFORMATION.
- WINDOW INCLUDES BOTH PANES TEMPERED GLAZING.
- REQUIRED TO PROVIDE OBSCURE / PRIVACY GLASS.

WINDOW GENERAL NOTES

- REFER TO FLOOR PLANS FOR WINDOW LOCATIONS.
- CONTRACTOR TO VERIFY EXACT ROUGH OPENING SIZES PRIOR TO FABRICATION OF ROUGH OPENINGS.
- REFER TO ENERGY COMPLIANCE REPORTS TO VERIFY U-FACTOR, SHGC AND ADDITIONAL WINDOW REQUIREMENTS. ALL OPENINGS TO BE U-FACTOR = (.3), SHGC = (.23). BUG SCREEN REQUIRED (PER TITLE 24).
- ALL GLAZING IS DOUBLE PANE UNLESS OTHERWISE NOTED.
- EGRESS WINDOWS SHALL HAVE A CLEAR OPENING WITH THE BOTTOM OF THE CLEAR OPENING NOT GREATER THAN 44" AFF. MIN. NET CLEAR OPENING FOR EMERGENCY ESCAPE SHALL BE 57 S.F. EXCEPT: 5 S.F. MIN. AT GROUND FLOOR. MINIMUM NET CLEAR OPENING DIMENSIONS: HEIGHT: 24"; WIDTH: 20". [CRC SEC. R310.2] EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY PER CRC 2022, SECTION 310.1.
- GLAZING IN WALLS ADJACENT TO BATHTUB / SHOWER WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE SHALL BE SAFETY GLAZING. [CRC SEC. R308.4.5]
- IF STRUCTURE IS IN A WUI ZONE, WINDOW MUST COMPLY WITH R337.8.

FLOOR PLAN GENERAL NOTES

- REFER TO GENERAL NOTES SHEET G-101 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.
- 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.
- 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).
- PER CRC 327.1.1 REINFORCEMENT FOR GRAB BARS SHALL BE PROVIDED IN AT LEAST ONE BATHROOM. 1. REINFORCEMENT SHALL BE SOLID LUMBER OR OTHER CONSTRUCTION MATERIALS APPROVED BY THE ENFORCING AGENCY. 2. REINFORCEMENT SHALL NOT BE LESS THAN 2X8 INCH NOMINAL LUMBER OR OTHER MATERIAL PROVIDING EQ. HT. AND CAPACITY. REINFORCEMENT ABOVE THE FINISHED FLOOR FLUSH WITH THE WALL FRAMING. 3. WATER CLOSET REINFORCEMENT SHALL BE INSTALLED ON BOTH SIDE WALLS OF THE FIXTURE, OR ONE SIDE WALL AND THE BACK WALL. 4. SHOWER REINFORCEMENT SHALL BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED. 5. BATHTUB AND COMBINATION BATHTUB/SHOWER REINFORCEMENT SHALL BE CONTINUOUS ON EACH END OF THE BATHTUB AND THE BACK WALL. ADDITIONALLY, BACK WALL REINFORCEMENT FOR A LOWER GRAB BAR SHALL BE PROVIDED WITH THE BOTTOM EDGE LOCATED NO MORE THAN 6 INCHES ABOVE THE BATHTUB RIM. REFER TO SHEET A-903 FOR MORE INFORMATION.

WALL LEGEND

- EXTERIOR** - 5 1/2" WOOD STUD W/ PLYWOOD SHEATHING AND FINISH, SEE ELEV. FOR EXTERIOR FINISH. ONE LAYER GYP. WALL BOARD INT. SEE T24 FOR INSULATION. SEE DETAIL: 42/A-901 FOR 1-HR WALL ASSEMBLY WHEN REQUIRED
- EXTERIOR** - DOUBLE 3 1/2" WOOD STUD W/ PLYWOOD SHEATHING (WITH 2" AIR SPACE) AND FINISH ON BOTH SIDES, SEE ELEV. FOR (EXT.) FINISH.
- INTERIOR** - 3 1/2" WOOD STUD W/ ONE LAYER GYP. WALL BOARD EACH SIDE.
- ADD BLOCKING AS NEEDED IN THESE LOCATIONS PER DETAIL(S): 14/A-903

NOTE: SEE MANUFACTURER LISTINGS FOR IMPROVED ACOUSTIC, MOISTURE, MOLD, & MILDEW-RESISTANT PERFORMANCE PRODUCTS.

NOTE: 5/8" GYP ATTACHED DIRECTLY TO STUDS IS ASSUMED U.N.O. VERIFY PRODUCT SELECTIONS & REQUIREMENTS, THICKNESS, AND LOCATIONS ON PLANS WITH CONTRACTOR BEFORE CONSTRUCTION. ANY INCREASE IN WALL THICKNESS IS **NOT PERMITTED** WHERE MIN. CLEARANCES ARE REQUIRED. INSTALL PER MANUFACTURER'S SPECIFICATIONS.

NOTE: SEE GYPSUM.ORG FOR MORE INFORMATION. POTENTIAL PRODUCTS CAN BE FOUND (BUT ARE NOT LIMITED TO) THE FOLLOWING MANUFACTURERS: CERTAINTEED.COM, PABCOGYPSUM.COM, GOLDBONDBUILDING.COM.

KEYNOTES

- A03 30" WIDE FREE STANDING ELECTRIC RANGE OVEN. VENT TO EXTERIOR, STAINLESS STEEL.
- A04 30" WIDE BUILT-IN MICROWAVE WITH RANGE VENT, STAINLESS STEEL.
- A05 REFRIGERATOR LOCATION. PROVIDE 42" SPACE WITH ROUGH PLUMBING FOR ICE MAKER (RECESS IN WALL).
- A06 24" WIDE FRONT CONTROL UNDERCOUNTER DISHWASHER.
- A07 STACKED WASHER/DRYER MACHINE LOCATION. PROVIDE WASTE AND WATER IN RECESSED WALL BOX. PROVIDE DRYER VENT. VENT TO OUTSIDE AIR.
- B01 20" SINGLE COMPARTMENT UNDER-MOUNT KITCHEN SINK W/ GARBAGE DISPOSAL. REFER TO WATER EFFICIENCY REQUIREMENTS ON CALGREEN CODE NOTES SHEET.
- B06 32" x 60" x 72" TUB AND SHOWER COMBINATION. MODEL BY BUILDER. PROVIDE SHOWER ROD.
- B12 WATER CLOSET. REFER TO WATER EFFICIENCY REQUIREMENTS ON CALGREEN CODE NOTES SHEETS. WATER CLOSET SHALL NOT BE SET CLOSER THAN 15" FROM ITS CENTER TO A SIDE WALL OR OBSTRUCTION PER CPC, SECTION 402.5.
- B16 ELECTRIC PANEL LOCATION. PROVIDE PROTECTION PER CPC 907.25 & CMC 305.1.1. SEE GENERAL MEP NOTES 7 & 8 ON SHEET A-111 FOR MORE INFO.
- B17 MULTI-ZONE HEAT PUMP CONDENSER UNIT. REFER TO PLANS FOR LOCATION OF INDOOR FAN COIL UNITS. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION. PROVIDE CONCRETE PAD MIN. 6" LARGER THAN UNIT IN EACH DIRECTION. 3" MIN. ABOVE GRADE. PROVIDE PROTECTION PER CPC 907.25 & CMC 305.1.1. SEE GENERAL MEP NOTES 7 & 8 ON SHEET A-111 FOR MORE INFO. SEE DETAIL 53/A-902.
- B18 FAN COIL @ 80° A.F.F. TO BOTTOM OF UNIT, PROVIDE DEDICATED WALL OUTLET. INSTALL PER MANUFACTURER'S SPECIFICATIONS. REFER TO PLANS FOR LOCATION OF OUTDOOR CONDENSING UNIT. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION.
- C01 SINGLE WOOD SHELF AND POLE.
- C04 36" HIGH BASE CABINET AND COUNTERTOP.
- C08 24" DEEP UPPER CABINET.
- C12 22" DEEP VANITY
- K08 BRICK VENEER WAINSCOT. SEE SHEET A-913 FOR DETAILS AND SEE MATERIALS LEGEND FOR MORE INFORMATION.
- M02 DOWNSPOUT TO SPLASH BLOCK BELOW. SEE DETAIL 43/A-904.
- P01 DECORATIVE PORCH RAILING. HEIGHT OF 24" MIN. TO 48" MAX. REQUIRED FOR WOOD: PRIMER & 2 COATS OF EXTERIOR GRADE PAINT. REQUIRED: 30 INCHES MAX VERTICAL DROP IS PROHIBITED WITHIN 36 INCHES (HORIZONTALLY) OF THE PORCH. SEE DETAIL FOR MORE INFORMATION.
- T12 WOOD POST. SEE STRUCTURAL - REQUIRED: PRIMER & 2 COATS OF EXTERIOR GRADE PAINT.



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PRE-APPROVED ADU
CITY OF LAGUNA NIGUEL

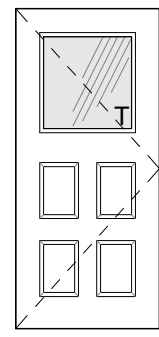
FLOOR PLAN 1

PUBLIC SET
DATE
02/05/2025
SHEET

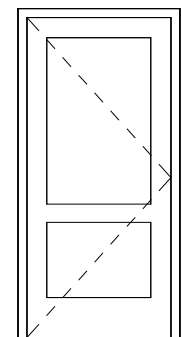
A1-101

DOOR LEGEND

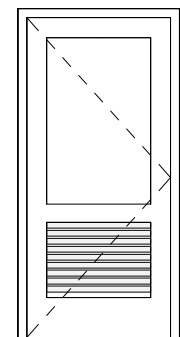
FRONT DOOR (TYPE A) STYLE/LOOK PER OWNER/APPLICANT



TYPE A (EXAMPLE)
SOLID CORE WOOD
ENTRY DOOR
EXTERIOR



TYPE B
HOLLOW CORE WOOD
INTERIOR



TYPE C
HOLLOW CORE WOOD
VENTED (MIN. 100 IN OPENING)
INTERIOR

DOOR REMARKS

- EXTERIOR DOOR.
- GLAZING PER DOOR TYPES. REFER TO GENERAL DOOR NOTE #1
- OPTIONAL DOOR.** WHEN NOT USED, STRIKE OFF DOOR MARKER ON PLANS AND STRIKE OFF DOOR IN SCHEDULE.
- REQUIRED OPENING OF NOT LESS THAN 100 IN² FOR MAKEUP AIR SHALL BE PROVIDED IN THE DOOR OR BY APPROVED MEANS. [CMC SEC. R504.4.1]
- VENT DOOR AS REQUIRED PER WATER HEATER MANUFACTURER REQUIREMENTS / SPECIFICATIONS

DOOR SCHEDULE

NO.	TYPE	DOOR		REMARKS
		WIDTH	HEIGHT	
101	A	3'-0"	6'-8"	1, 2
102	C	3'-0"	6'-8"	3
103	B	2'-10"	8'-0"	
104	B	2'-6"	6'-8"	

OPTIONAL EXTERIOR DOORS

NO.	TYPE	DOOR		REMARKS
		WIDTH	HEIGHT	
102	C	3'-0"	6'-8"	3
111	F	5'-0"	6'-8"	3
112	F	5'-0"	6'-8"	3
113	F	5'-0"	6'-8"	3
114	F	5'-0"	6'-8"	3

DOOR DETAIL REFERENCES	
LAP SIDING	21/A-921
BOARD & BAT	21/A-922
STUCCO	21/A-923
TYP THRESHOLD	11/A-901 12/A-901

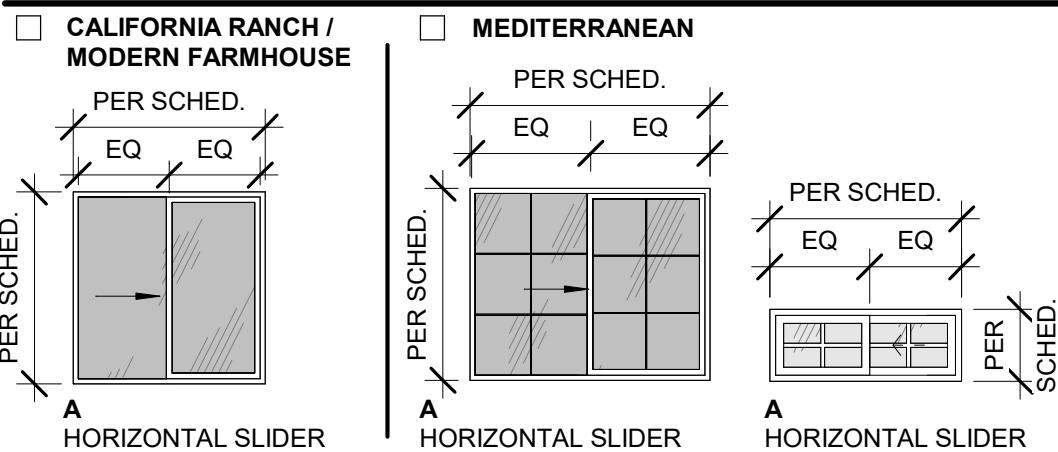
DOOR GENERAL NOTES

- GLAZING IN DOORS SHALL BE TEMPERED PER **SECTION R308.4.1**. PANES INDICATED IN DOOR LEGEND WITH (T).
- 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.
- FIRE RATED DOORS SHALL BE SOLID WOOD OR SOLID HONEYCOMB CORE STEEL DOOR 1-3/8" THICK OR COMPLIANT WITH **CRC SECTION R302.5.1**. DOORS SHALL BE SELF-CLOSING AND SELF-LATCHING WITH WEATHER STRIPPING TO BE TIGHT FITTING.
- EXTERIOR DOORS SHALL EITHER HAVE A FIRE-RESISTANCE RATING OF NOT THAT COMPLIES WITH THE FOLLOWING REQUIREMENTS:
 - STILES AND RAILS SHALL NOT BE LESS THAN 1-3/8" THICK.
 - 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.

1 REVERSE FLOOR PLAN (CALIFORNIA RANCH PORCH SHOWN)

A1-101R SCALE: 1/4" = 1'-0"

WINDOW TYPE



WINDOW SCHEDULE

NO.	TYPE	SIZE		HEAD HEIGHT	REMARKS
		WIDTH	HEIGHT		
01	A	3'-0"	4'-0"	6'-8"	
02	A	2'-6"	3'-0"	6'-8"	2
03	A	4'-0"	1'-6"	6'-8"	2, 3
04	A	6'-0"	4'-0"	6'-8"	1
05	A	5'-0"	4'-0"	6'-8"	

WINDOW DETAIL REFERENCES			
LAP SIDING	HEAD	JAMB	SILL
BOARD & BATTEN	11/A-921		
STUCCO	11/A-922		
FLASHING	11/A-923		
	31/A-902		

WINDOW REMARKS

- REQUIRED EGRESS WINDOW. REFER TO WINDOW GENERAL NOTE #5 FOR ADDITIONAL INFORMATION.
- WINDOW INCLUDES BOTH PANES TEMPERED GLAZING.
- OPTIONAL WINDOW.** CROSS THROUGH ON SCHEDULE AND FLOOR PLAN IF NOT USED. AT LEAST ONE EGRESS OPENING REQUIRED AT ALL BEDROOMS. SEE GENERAL WINDOW NOTE #5 FOR EGRESS REQUIREMENTS.
- REQUIRED TO PROVIDE OBSCURE / PRIVACY GLASS.

WINDOW GENERAL NOTES

- REFER TO FLOOR PLANS FOR WINDOW LOCATIONS.
- CONTRACTOR TO VERIFY EXACT ROUGH OPENING SIZES PRIOR TO FABRICATION OF ROUGH OPENINGS.
- REFER TO ENERGY COMPLIANCE REPORTS TO VERIFY U-FACTOR, SHGC, AND ADDITIONAL WINDOW REQUIREMENTS. ALL OPENINGS TO BE U-FACTOR = (.3) , SHGC = (.23). BUG SCREEN REQUIRED (PER TITLE 24).
- ALL GLAZING IS DOUBLE PANE UNLESS OTHERWISE NOTED.
- EGRESS WINDOWS SHALL HAVE A CLEAR OPENING WITH THE BOTTOM OF THE CLEAR OPENING NOT GREATER THAN 44" AFF. MIN. NET CLEAR OPENING FOR EMERGENCY ESCAPE SHALL BE 5.7 S.F. EXCEPT: 5 S.F. MIN. AT GROUND FLOOR. MINIMUM NET CLEAR OPENING DIMENSIONS: HEIGHT: 24", WIDTH: 20". [CRC SEC. R310.2] EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY PER CRC 2022, SECTION 310.1.
- GLAZING IN WALLS ADJACENT TO BATHTUB / SHOWER WHERE THE BOTTOM EXPOSURE EDGE OF THE GLAZING IS LESS THAN 60" MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE SHALL BE SAFETY GLAZING. [CRC SEC. R308.4.5]
- IF STRUCTURE IS IN A WUI ZONE, WINDOW MUST COMPLY WITH R337.8.

FLOOR PLAN GENERAL NOTES

- REFER TO GENERAL NOTES SHEET G-101 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, SHELVEING AND BATHROOM FIXTURES.
- 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 RATINGS 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.
- 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).
- PER CRC 327.1.1 REINFORCEMENT FOR GRAB BARS SHALL BE PROVIDED IN AT LEAST ONE BATHROOM. 1. REINFORCEMENT SHALL BE SOLID LUMBER OR OTHER CONSTRUCTION MATERIALS APPROVED BY THE ENFORCING AGENCY. 2. REINFORCEMENT SHALL NOT BE LESS THAN 2X8 INCH NOMINAL LUMBER OR OTHER MATERIAL PROVIDING EQ. HT. AND CAPACITY. REINFORCEMENT ABOVE THE FINISHED FLOOR FLUSH WITH THE WALL FRAMING. 3. WATER CLOSET REINFORCEMENT SHALL BE INSTALLED ON BOTH SIDE WALLS OF THE FIXTURE, OR ONE SIDE WALL AND THE BACK WALL. 4. SHOWER REINFORCEMENT SHALL BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED. 5. BATHTUB AND COMBINATION BATHTUB/SHOWER REINFORCEMENT SHALL BE CONTINUOUS ON EACH END OF THE BATHTUB AND THE BACK WALL. ADDITIONALLY, BACK WALL REINFORCEMENT FOR A LOWER GRAB BAR SHALL BE PROVIDED WITH THE BOTTOM EDGE LOCATED NO MORE THAN 6 INCHES ABOVE THE BATHTUB RIM. REFER TO SHEET A-903 FOR MORE INFORMATION.

WALL LEGEND

	EXTERIOR - 5 1/2" WOOD STUD W/ PLYWOOD SHEATHING AND FINISH, SEE ELEV. FOR (EXT.) FINISH. ONE LAYER GYP. WALL BOARD INT. SEE 124 FOR INSULATION. SEE DETAIL: 42/A-901 FOR 1-HR WALL ASSEMBLY WHEN REQUIRED
	EXTERIOR - DOUBLE 3 1/2" WOOD STUD W/ PLYWOOD SHEATHING (WITH 2" AIR SPACE) AND FINISH ON BOTH SIDES, SEE ELEV. FOR (EXT.) FINISH.
	INTERIOR - 3 1/2" WOOD STUD W/ ONE LAYER GYP. WALL BOARD EACH SIDE.
	ADD BLOCKING AS NEEDED IN THESE LOCATIONS PER DETAIL(S): 14/A-903

NOTE: SEE MANUFACTURER LISTINGS FOR IMPROVED ACOUSTIC, MOISTURE, MOLD, & MILDEW-RESISTANT PERFORMANCE PRODUCTS.

NOTE: 5/8" GYP ATTACHED DIRECTLY TO STUDS IS ASSUMED U.N.O. VERIFY PRODUCT SELECTIONS & REQUIREMENTS, THICKNESS, AND LOCATIONS ON PLANS WITH CONTRACTOR BEFORE CONSTRUCTION. ANY INCREASE IN WALL THICKNESS IS **NOT PERMITTED** WHERE MIN. CLEARANCES ARE REQUIRED. INSTALL PER MANUFACTURER'S SPECIFICATIONS.

NOTE: SEE GYPSUM.ORG FOR MORE INFORMATION. POTENTIAL PRODUCTS CAN BE FOUND (BUT ARE NOT LIMITED TO) THE FOLLOWING MANUFACTURERS: CERTAINTEED.COM, PABCOGYPSUM.COM, GOLDBONDBUILDING.COM.



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PRE-APPROVED ADU
CITY OF LAGUNA NIGUEL

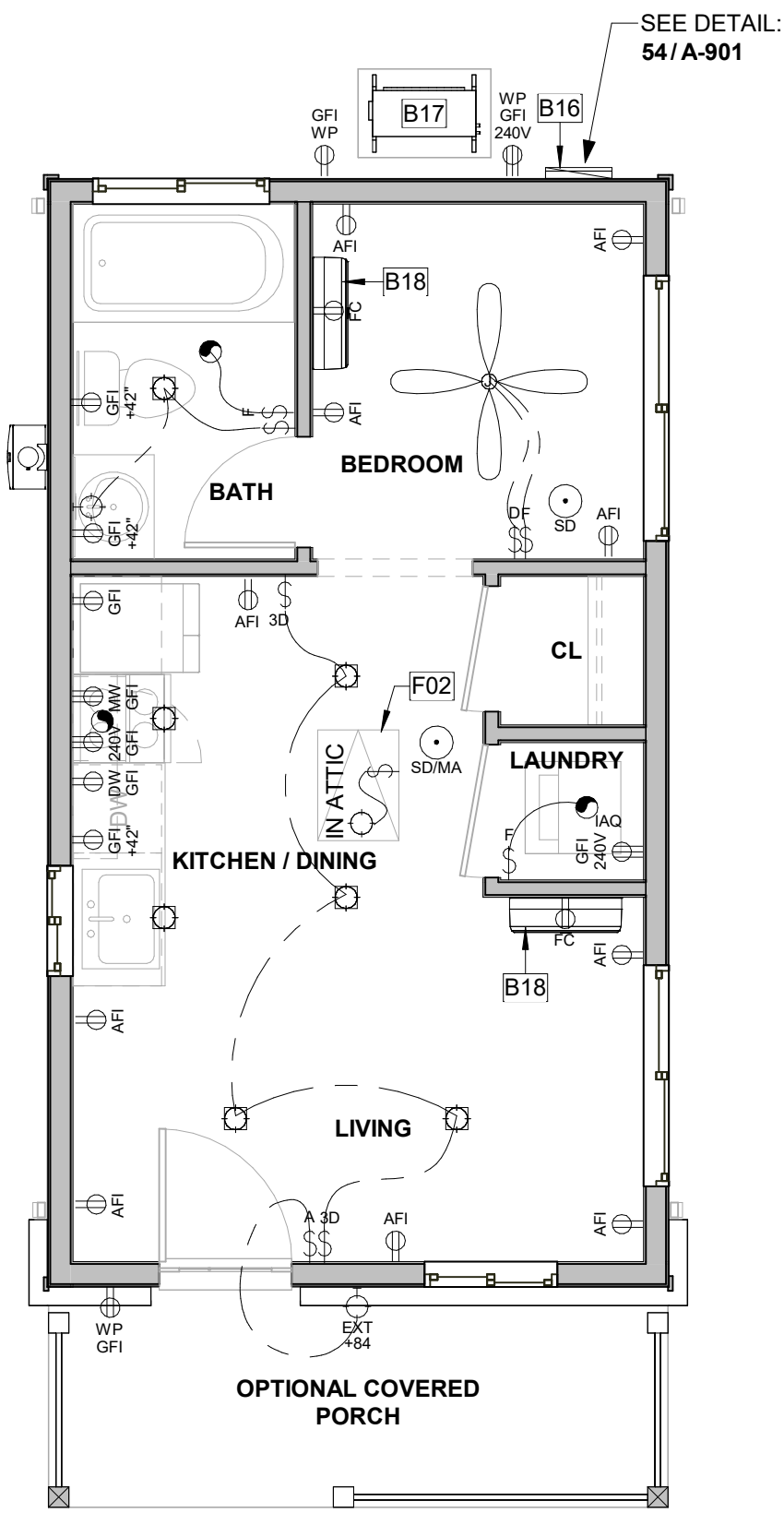
PLAN 1 - REVERSE

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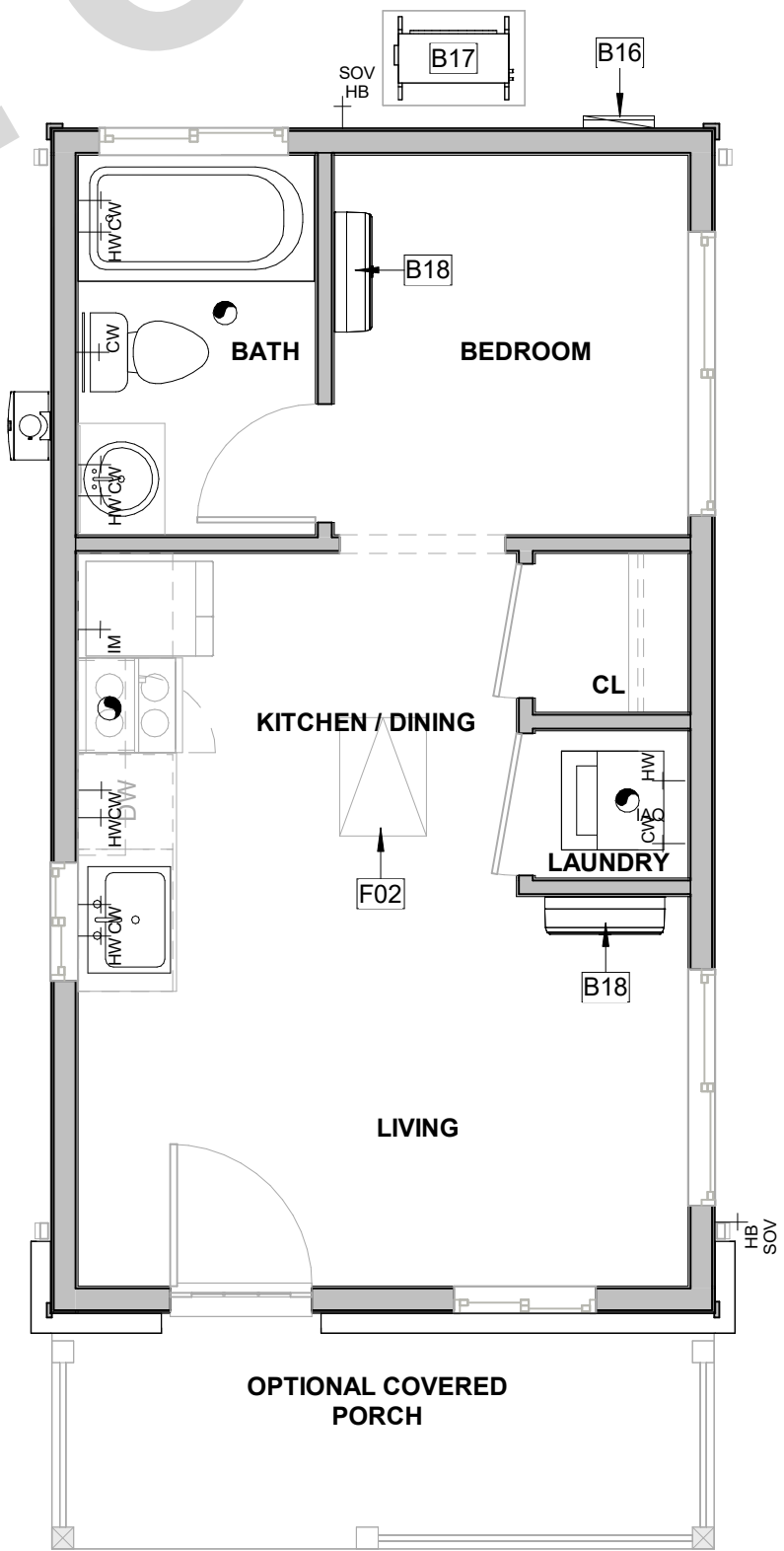
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SHEET

A1-101R



1 ELECTRICAL PLAN - PLAN 1
SCALE: 1/4" = 1'-0"



2 MECHANICAL PLAN - PLAN 1
SCALE: 1/4" = 1'-0"

LEGEND

ELECTRICAL SWITCH	NOTE: IONIZATION SMOKE DETECTOR 10' MINIMUM FROM STOVE, ALL OTHERS 20'MIN CLEARANCE	AFI	DUPLEX OUTLET ARC-FAULT CIRCUIT INTERRUPTER
ELECTRICAL SWITCH-THREE WAY-DIMMER	SMOKE DETECTOR/ALARM	GFI 240V	DUPLEX OUTLET 240 VOLTS
ELECTRICAL SWITCH-VACUANCY SENSOR	COMBINATION SMOKE/CARBON MONOXIDE	GFI	DUPLEX OUTLET GROUND FAULT INTERRUPTER
ELECTRICAL SWITCH-DIMMER	ELECTRICAL JUNCTION BOX	GFI WP	DUPLEX OUTLET WATERPROOF GROUND FAULT INTERRUPTER
ELECTRICAL SWITCH-FAN	CEILING FAN OPTIONAL (PRE WIRE FOR CEILING FAN ONLY)	GFI	DUPLEX OUTLET AFCI-HALF HOT
ASTRONOMICAL TIME OR MOTION SENSOR SWITCH (AT LEAST 1 REQ.)	ELECTRICAL WIRING	GFI MW	DUPLEX OUTLET MICROWAVE GROUND FAULT INTERRUPTER
EXHAUST FAN	RECESSED HIGH- EFFICACY DOWNLIGHT	H	DUPLEX OUTLET RANGE HOOD
INDOOR AIR QUALITY FAN	RECESSED HIGH- EFFICACY DOWNLIGHT-VAPOR PROOF	CW	COLD WATER STUB OUT
PENDANT LIGHT	22"x30" MIN. ATTIC ACCESS PANEL (WHERE REQ.)	HW	HOT WATER STUB OUT
WALL MOUNTED HIGH-EFFICACY LIGHT		HB	WATER HOSE BIBB
EXTERIOR WALL MOUNTED HIGH-EFFICACY LIGHT W/ PHOTO SENSOR		SOV HB	WATER HOSE BIBB WITH SHUT OF VALVE
RECESSED HIGH- EFFICACY DOWNLIGHT		FC	FAN COIL UNIT +80" TO BOTTOM OF UNIT PROVIDE DEDICATED OUTLET
RECESSED HIGH- EFFICACY DOWNLIGHT-VAPOR PROOF			

NOTE: IONIZATION SMOKE DETECTOR 10' MINIMUM FROM STOVE, ALL OTHERS 20'MIN CLEARANCE

KEYNOTES

- B16 ELECTRIC PANEL LOCATION. PROVIDE PROTECTION PER CPC 507.25 & CMC 305.1.1, SEE GENERAL MEP NOTES 7 & 8 ON SHEET A-111 FOR MORE INFO.
- B17 MULTI-ZONE HEAT PUMP CONDENSER UNIT. REFER TO PLANS FOR LOCATION OF INDOOR FAN COIL UNITS. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION. PROVIDE CONCRETE PAD MIN. 6" LARGER THAN UNIT IN EACH DIRECTION, 3" MIN. ABOVE GRADE. PROVIDE PROTECTION PER CPC 507.25 & CMC 305.1.1, SEE GENERAL MEP NOTES 7 & 8 ON SHEET A-111 FOR MORE INFO. SEE DETAIL 53/A-902.
- B18 FAN COIL @ 80" A.F.F. TO BOTTOM OF UNIT. PROVIDE DEDICATED WALL OUTLET. INSTALL PER MANUFACTURER'S SPECIFICATIONS. REFER TO PLANS FOR LOCATION OF OUTDOOR CONDENSING UNIT. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION.
- F02 22" X 30" MINIMUM ATTIC ACCESS. PROVIDED SWITCH AND OUTLET AT ATTIC. THERE IS NO HVAC EQUIPMENT (SUCH AS FURNACE, HEAT PUMP, OR FAU) IN THE ATTIC. PERMANENTLY ATTACH R-38 OR GREATER INSULATION TO ATTIC ACCESS DOOR USING ADHESIVE OR MECHANICAL FASTENERS CENC 150.0 (a)1. PROVIDE GASKETED ATTIC ACCESS TO PREVENT AIR LEAKAGE CENC 150.0 (a)1.

VENTILATION SUMMARIES

1) LOCAL EXHAUST VENTILATION		REFER TO T-24 FOR IAQ VENTILATION	
BATHROOM	OPTION A	OPTION B	
BATHROOM FAN FLOW (cfm)	50 CFM	50 CFM	
DUCT TYPE	FLEX DUCT	SMOOTH DUCT	
DUCT SIZE (in)	4"	4"	
MAX. ALLOWABLE DUCT LENGTH (ft)	70'	105'	
THIS EXHAUST FAN IS REQUIRED TO BE RATED FOR SOUND AT A MAX. OF 3 SONES.			
KITCHEN	OPTION A	OPTION B	
KITCHEN FAN FLOW (cfm)	280 CFM	280 CFM	
DUCT TYPE	FLEX DUCT	SMOOTH DUCT	
DUCT SIZE (in)	7"	9"	
MAX. ALLOWABLE DUCT LENGTH (ft)	20'	20'	
THIS EXHAUST FAN IS REQUIRED TO BE RATED FOR SOUND AT A MAX. OF 3 SONES.			
2) WHOLE BUILDING VENTILATION		OPTION A	OPTION B
PER ASHRAE STANDARD 62.2, CEC EQUATION 150.0-B			
BUILDING FAN FLOW (cfm)	50 CFM	50 CFM	
DUCT TYPE	FLEX DUCT	SMOOTH DUCT	
DUCT SIZE (in)	4"	4"	
MAX. ALLOWABLE DUCT LENGTH (ft)	70'	105'	
THIS EXHAUST FAN IS REQUIRED TO OPERATE CONTINUOUSLY TO ENSURE CONTINUOUSLY TO ENSURE INDOOR AIR QUALITY.			

WHOLE DWELLING UNIT MECHANICAL VENTILATION
PER SECTION 150.0(O)(C)(i) [ASHRAE 62.2.4.1.2]
1 BED - MINIMUM CUBIC FEET PER MINUTE (CFM) (Equation 150.0-B)
 $Q_{tot} = 0.03A_{floor} + 7.5(N_{br} + 1)$ $0.03(350 SF) + 7.5 (2) = 25.5 CFM < 50 CFM$
NOTE: KITCHEN RANGE HOOD (CEC 2022) PER TABLE 150.0-G AIRFLOW RATES (CFM).
AND ASTM E5387: <750 = 85% CE OR 280 CFM

EFFECTIVE ANNUAL AVERAGE INFILTRATION RATE PER SECTION 150.0(O)(C)(ii)
a. 1. (Equation 150.0-C) $Q_{50} = Vdu (x) 2 ACH50 / 60minutes$
a. 2. (Equation 150.0-D) $Q_{50} = Vdu (x) Verified ACH50 / 60minutes$
b. (Equation 150.0-E) $Q_{tot} = 0.052 (x) Q_{50} x wsf x [H/H]^2$ [ASHRAE 62.2.4.1.2.1]

REQUIRED MECHANICAL VENTILATION RATE PER 150.0(O)(C)(iii) [ASHRAE 62.2.4.1.2]
(Equation 150.0-F) $Q_{fan} = Q_{tot} (-) \phi (Q_{inf} (x) A_{ext})$

GENERAL MEP NOTES

- REFER TO ELECTRICAL NOTES ON SHEET G-101.
- REFER TO MECHANICAL NOTES ON SHEET G-101.
- REFER TO PLUMBING NOTES ON SHEET G-101.
- REFER TO TITLE 24 COMPLIANCE NOTES ON SHEET G-101.
- EXTERNALLY MOUNTED HEATING/COOLING UNITS SHALL BE SCREENED IF THEY ARE VISIBLE FROM A PUBLIC STREET.
- ENVIRONMENTAL AIR DUCT EXHAUST SHALL TERMINATE NOT LESS THAN 3 FT FROM WALL OPENINGS. **CMC 502.2.2.1.**
- APPLIANCES NOT LISTED FOR OUTDOOR INSTALLATION BUT INSTALLED OUTDOORS SHALL BE PROVIDED WITH PROTECTION TO THE DEGREE THAT THE ENVIRONMENT REQUIRES. APPLIANCES LISTED FOR OUTDOOR INSTALLATION SHALL BE PERMITTED TO BE INSTALLED WITHOUT PROTECTION IN ACCORDANCE WITH THE PROVISIONS OF ITS LISTING AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS PER CPC 507.25 PROTECTION OF OUTDOOR APPLIANCES.**
- APPLIANCES INSTALLED IN GARAGES, WAREHOUSES, OR OTHER AREAS SUBJECT TO MECHANICAL DAMAGE SHALL BE AT LEAST 18" ABOVE THE FLOOR AND GUARDED AGAINST SUCH DAMAGE BY BEING INSTALLED BEHIND PROTECTIVE BARRIERS OR BY BEING ELEVATED OR LOCATED OUT OF THE NORMAL PATH OF VEHICLES PER **CMC 305.1.1 PHYSICAL DAMAGE.**
- INSTALLED AIR CONDITIONER AND HEAT PUMP SYSTEMS SHALL HAVE A CLEARANCE OF AT LEAST FIVE (5) FEET FROM THE OUTLET OF ANY DRYER VENT. **CENC2022 150.0 (H) 3.**
- INSTALLED AIR CONDITIONER AND HEAT PUMP SYSTEMS SHALL BE EQUIPPED WITH LIQUID LINE DRIERS IF REQUIRED, AS SPECIFIC BY MANUFACTURER'S INSTRUCTIONS. **CENC2022 150.0 (H) 3. SEE DETAIL 53/A-902.**
- ASSEMBLIES AT EXTERIOR WINDOW AND DOOR HEADERS IN 2X6 EXTERIOR WALLS SHALL BE R-5 MINIMUM PER **2022 SINGLE-FAMILY RESIDENTIAL MANDATORY REQUIREMENTS**
- FOR HEAT PUMP COMPLIANCE INFORMATION SEE TITLE 24 REPORT: VARIABLE CAPACITY HEAT PUMP COMPLIANCE OPTION (VERIFICATION DETAILS FROM VCHP STAFF REPORT, APPENDIX B, AND RAS).

ELECTRICAL NOTES

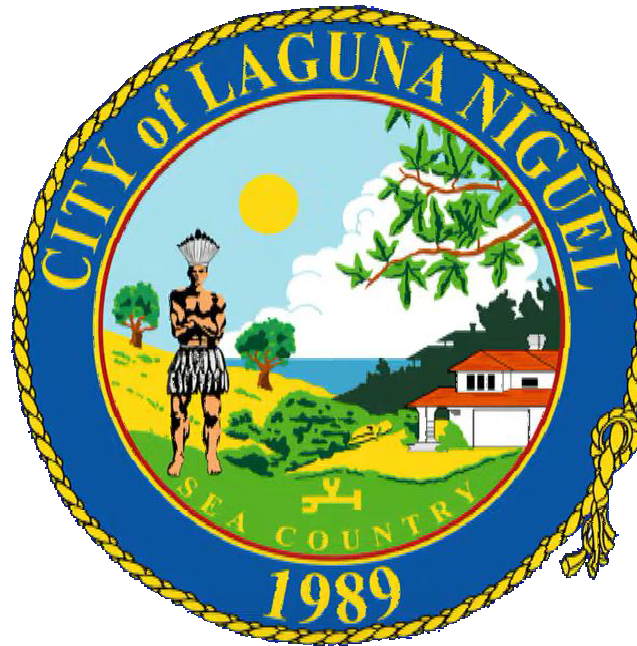
- CONFORM WITH CURRENT CEC, NFPA, MFR'S, AND LOCAL REQUIREMENTS.
- ELECTRICAL SYSTEM GROUND TO BE PROVIDED PER NEC ARTICLE 250-81.
- ALL MATERIALS TO BE U.L. LABELED.
- METER: "SQUARE D", 120 VOLT/240 VOLT, 1 AND 3 WIRE GROUND OR EQUAL.
- ELECTRICAL SUB PANEL: FLUSH MOUNT, 30" CLEARANCE, 100 AMP.
- CONDUCTORS: TW, THW, COPPER, MINIMUM 14 AT LIGHTING, 12 AT OTHER CIRCUITS.
- ALL LUMINAIRES SHALL COMPLY WITH 2022 CEC SECTION 150.0 (K) AND TABLE 150.0-A AS REFERENCED IN ENERGY NOTES, LUMINAIRE REQUIREMENTS SHEET G-101.
- 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 Art. 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 120-VOLT, 20-AMPERE BRANCH CIRCUIT. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS. THIS DEDICATED CIRCUIT MAY SERVE MORE THAN ONE BATHROOM. (2022 CEC 210.11(C))
- THERMOSTAT SHALL BE A PROGRAMMABLE TYPE, HONEYWELL TH8320 OR EQUAL.
- CEILING-SUSPENDED (PADDLE) 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 2022 CEC 314.27(C) (2022 CEC 422.18).
- ALL LUMINAIRES, LAMPHOLDERS, AND RETROFIT KITS SHALL BE LISTED (2022 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 OF THE BRANCH CIRCUIT. (2022 CEC 210-12(A)).
- 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 DEDICATED SPACE AND ARE CHORD-AND-PLUG CONNECTED AS PER CEC 400.10, 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 AS OUTLINED IN TABLE 150-C OF 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.
- EXHAUST FANS WILL BE CONTROLLED BY A HUMIDISTAT PER THE GREEN BUILDING STANDARDS CODE SECTION 4.506. EXHAUST FANS MUST BE SWITCHED SEPARATELY FROM LIGHTS (2022 CENC 150.0(k)(2)).
- IN ADDITION TO THE NUMBER OF BRANCH CIRCUITS REQUIRED BY OTHER PARTS OF THE CODE, TWO OR MORE 20-AMPERE SMALL-APPLIANCE BRANCH CIRCUITS SHALL BE PROVIDED FOR ALL RECEPTACLE OUTLETS IN THE KITCHEN, PANTRY, BREAKFAST ROOM, DINING ROOM, OR SIMILAR AREA PER 2022 CEC, ARTICLE 210.11 (C)(1). THE CIRCUITS SHALL HAVE NO OTHER OUTLETS PER 2022 CEC, ARTICLE 210.52(B).
- IN ADDITION TO THE NUMBER OF BRANCH CIRCUITS REQUIRED BY OTHER PARTS OF THE CODE, AT LEAST ONE ADDITIONAL 20-AMPERE BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY THE LAUNDRY RECEPTACLE OUTLET(S) REQUIRED BY 2022 CEC, ARTICLE 210.52 (F). THIS CIRCUIT SHALL HAVE NO OTHER OUTLETS PER 2022 CEC, ARTICLE 201.11(C)(2).

PLUMBING NOTES

- WATER HEATER**
REFER TO T-24 ENERGY REPORT FOR REQUIRED PRODUCT. SEE SHEET A-930 FOR PRODUCT REFERENCE SHEETS.

WATER HEATER SHALL FOLLOW FIRST HOUR RATINGS REQUIRED IN TABLE **PER 2022 CPC TABLE 501.1(2).**

- ALL DOMESTIC HOT WATER PIPING SHALL BE INSULATED. (2022 CPC 609.12.1)
 - PIPES UP TO 2 INCHES IN DIAMETER: INSULATION WALL THICKNESS NOT LESS THAN DIAMETER OF PIPE. (2022 CPC 609.12.2)
 - PIPES GREATER THAN 2 INCHES IN DIAMETER: INSULATION WALL THICKNESS NOT LESS THAN 2 INCHES. (2022 CPC 609.12.2)
- EXCEPTIONS:**
 - PIPING THAT PENETRATES FRAMING MEMBERS SHALL NOT BE REQUIRED TO HAVE PIPE INSULATION FOR THE DISTANCE OF THE FRAMING PENETRATION. (2022 CPC 609.12.2)
 - HOT WATER PIPING BETWEEN THE FIXTURE OR APPLIANCE CONTROL VALVE OR SUPPLY STOP AND THE FIXTURE OR APPLIANCE SHALL NOT BE REQUIRED TO BE INSULATED. (2022 CPC 609.12.2)
- 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.

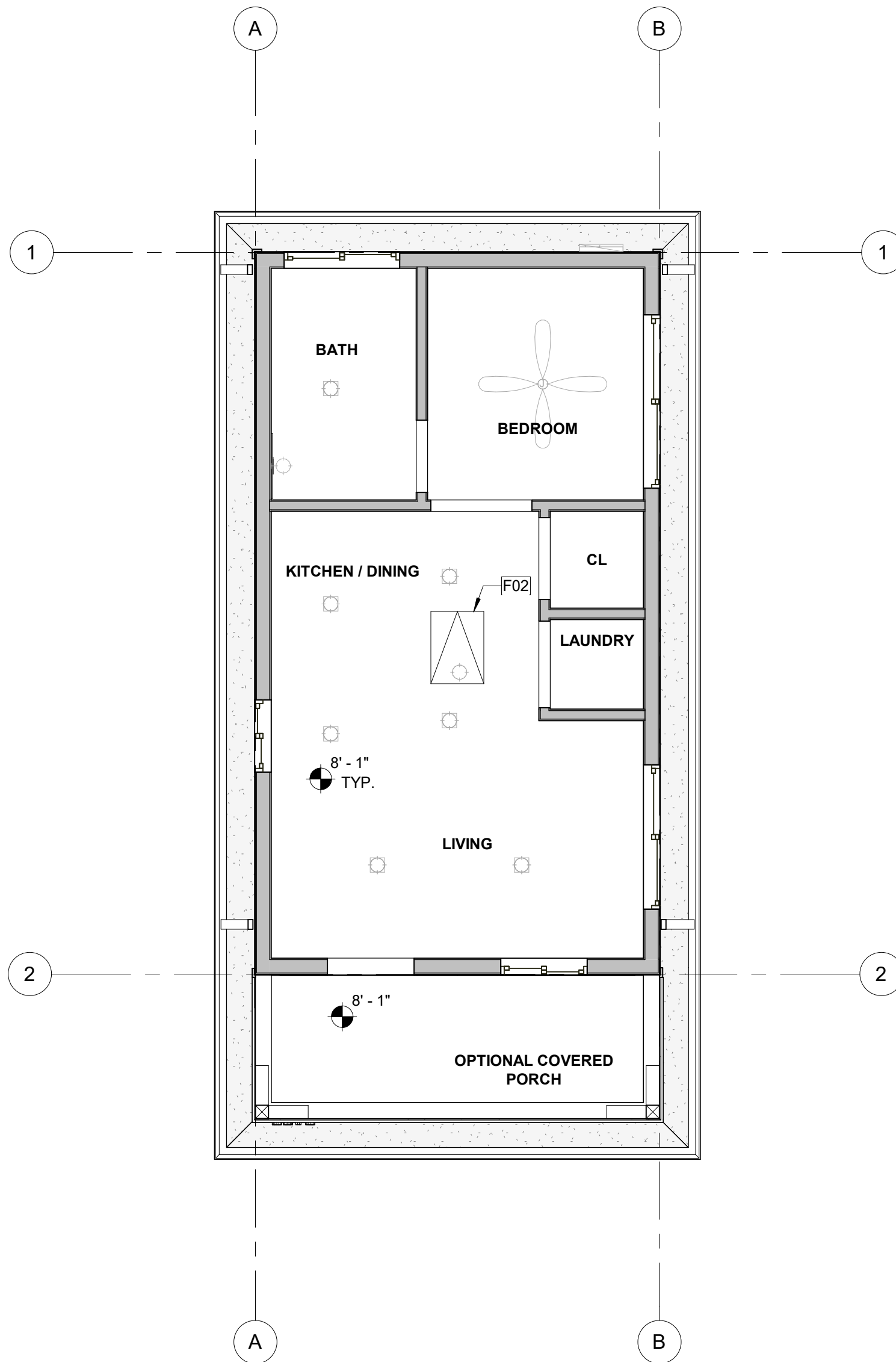


THESE PLANS ARE PROVIDED BY THE CITY OF LAGUNA NIGUEL AS PART OF THE PRE-APPROVED ADU PROGRAM AND ARE PUBLIC DOMAIN. THERE CANNOT BE A CHARGE TO PROVIDE THESE PLANS. NO ALTERATIONS TO THESE PLANS ARE ALLOWED. ALL ALTERATIONS MUST BE DONE UNDER A SEPARATE PERMIT ONCE THE BUILDING PERMIT FOR THE ADU HAS BEEN ISSUED AND FINAL INSPECTION COMPLETED. IF YOU DO NOT HAVE THE CONSTRUCTION KNOWLEDGE AND EXPERIENCE TO CONTRUCT THESE PLANS WITHOUT FURTHER DETAILS, IT IS RECOMMENDED YOU HIRE A CONTRACTOR TO DO THE CONSTRUCTION. THE CITY WILL NOT PROVIDE FURTHER INFORMATION OR DETAILS AND BUILDING INSPECTORS WILL NOT PROVIDE STEP BY STEP INSTRUCTIONS IN THE FIELD.

PRE-APPROVED ADU
CITY OF LAGUNA NIGUEL
MECHANICAL, & ELECTRICAL PLANS

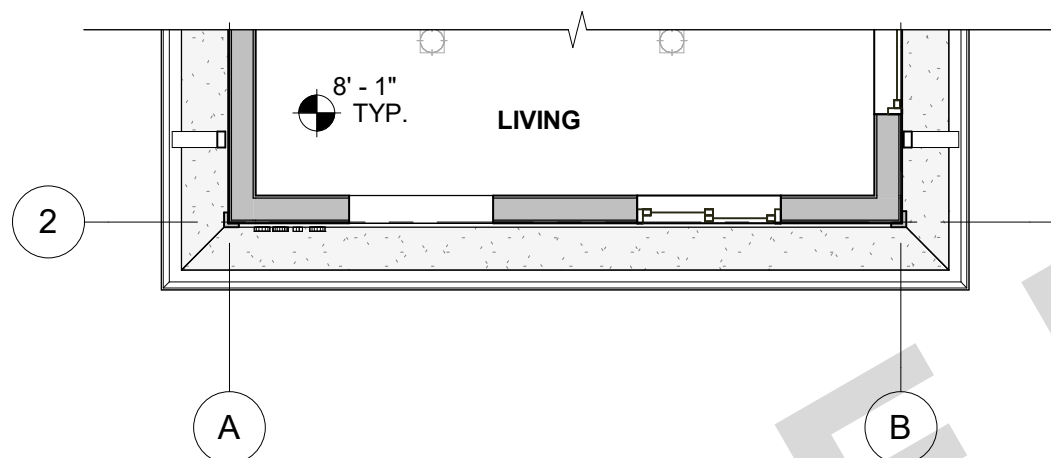
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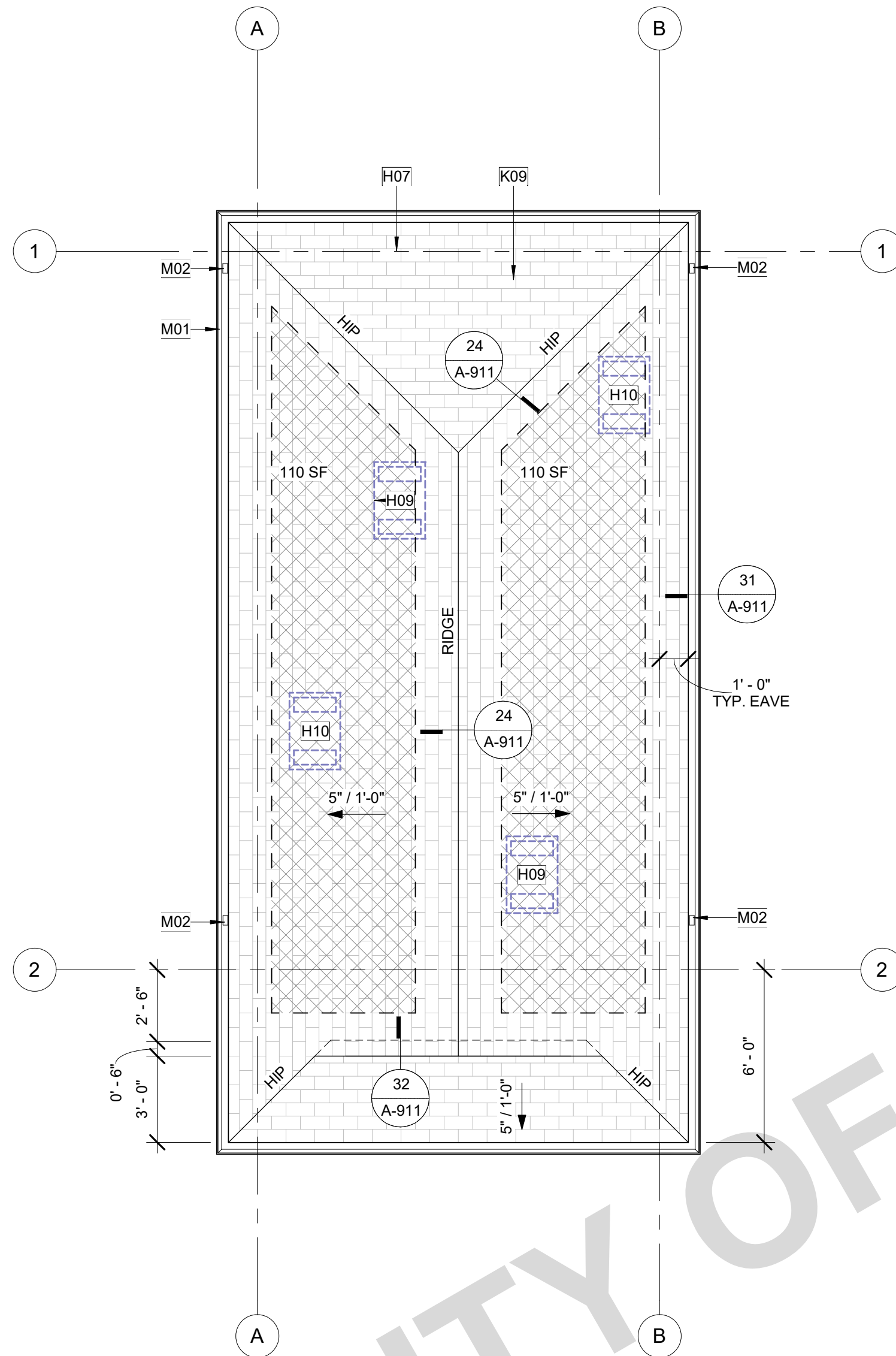
2 REFLECTED CEILING PLAN - CALIFORNIA RANCH

[A1-121] SCALE: 1/4" = 1'-0"



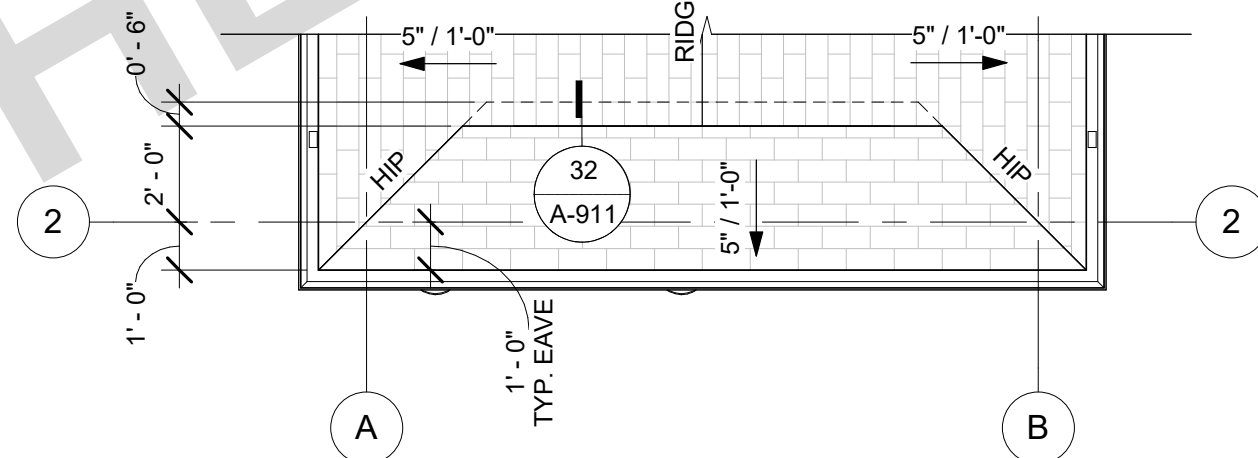
4 REFLECTED CEILING PLAN - NO COV. PORCH

[A1-121] SCALE: 1/4" = 1'-0"



1 ROOF PLAN - CALIFORNIA RANCH

[A1-121] SCALE: 1/4" = 1'-0"



3 ROOF PLAN - NO COVERED PORCH

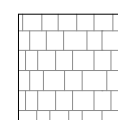
[A1-121] SCALE: 1/4" = 1'-0"

MATERIALS LEGEND

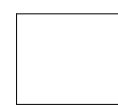
OWNER/APP. TO PROVIDE MANUFACTURER, COLOR/FINISH SPECIFICATIONS, & WUI (WHEN REQ.)

GRAPHICS LEGEND:

ROOFING: SEE G-001 FOR SELECTION & MATERIALS LEGEND ON ELEVATION SHEET FOR MORE INFORMATION.



ASPHALT SHINGLE ROOF: ROOF REFLECTANCE (0.1) MIN. ROOF EMITTANCE (0.85) MIN. SEE MATERIALS LEGEND ON ELEVATION SHEET FOR MORE INFORMATION.



INTERIOR CEILING FINISH, TYP. 5/8" GYP. INSTALL PER MFR RECOMMENDATIONS
IMPROVED SOUND
MOISTURE/MOLD/MILDEW-RESISTANT PERFORMANCE PRODUCTS.
NOTE: VISIT GYPSUM.ORG FOR MORE INFORMATION.



EXTERIOR SOFFITS, RAKES, & EAVES; SEE G-001 FOR MATERIAL SELECTION AND CORRESPONDING DETAILS FOR MORE INFORMATION.
A) TOUNGE & GROOVE (SOLID SAWN LUMBER)
B) EXT. GRADE FIRE RETARDANT TREATED SHEATHING (LABEL SELECTION ON REFLECTED CEILING PLAN)

NOTES:

- SOFFIT MATERIALS TO MEET REQ. OF **CRC 337** & **CRC 704**.
- INSTALL ALL MATERIALS, FASTENERS, & COMPONENTS PER MANUFACTURER'S SPECIFICATIONS & RECOMMENDATIONS
- INSTALL ADDITIONAL BLOCKING AS NEEDED TO MEET ATTACHMENT REQUIREMENTS PER **CRC TABLE R702.3.5**
- A PROJECT SITE WITHIN THE WILDLAND-URBAN INTERFACE FIRE AREA SHALL COMPLY WITH THE **CRC SECTION R337**.

KEYNOTES

- F02 22" X 30" MINIMUM ATTIC ACCESS. PROVIDED SWITCH AND OUTLET AT ATTIC. THERE IS NO HVAC EQUIPMENT (SUCH AS FURNACE, HEAT PUMP, OR FAU) IN THE ATTIC. PERMANENTLY ATTACH R-38 OR GREATER INSULATION TO ATTIC ACCESS DOOR USING ADHESIVE OR MECHANICAL FASTENERS CENc 150.0 (a)1. PROVIDE GASKETED ATTIC ACCESS TO PREVENT AIR LEAKAGE CENc 150.0 (a)1.
- H07 BUILDING LINE BELOW.
- H09 ATTIC VENT (HIGH); UPPER VENTS SHALL BE LOCATED NOT MORE THAN 3 FEET BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. PAINT FINISH TO MATCH ROOF COLOR. SEE VENTING CALCCS.
- H10 ATTIC VENT (LOW); LOWER VENTS SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE PER R806.2 EXCEPTION 2. PROVIDE DAMPER TO PROVIDE 1" CLR. AIRSPACE WHERE REQ. PAINT FINISH TO MATCH ROOF COLOR. SEE VENTING CALCCS.
- K09 COMPOSITE ROOF SHINGLES, ROOF REFLECTANCE (0.1) MIN. ROOF EMITTANCE (0.85) MIN. SEE MATERIALS LEGEND FOR MORE INFORMATION.
- M01 GUTTER. CONNECT TO DOWNSPOUT. PROVIDE MEANS TO PREVENT ACCUMULATION OF LEAVES AND DEBRIS IN GUTTER PER CRC R337.5.4. SEE DETAIL 12/A-903.
- M02 DOWNSPOUT TO SPLASH BLOCK BELOW. SEE DETAIL 43/A-904.

ROOF VENTING CALCULATIONS

*OWNER/APPLICANT REQ. TO SELECT ONE THE FOLLOWING
WUI REQUIRED? (SEE G-001) ☐ A) YES ☐ B) NO

UPPER & LOWER VENTS:

CALIFORNIA RANCH & MODERN FARMHOUSE STYLE:

- ☐ A) O'HAGIN TAPERED LOW PROFILE COMPOSITION SHINGLE.
72.0 SQ.IN. OF AIR MOVEMENT PER VENT = 72.0 SQ.IN. / 144 = 0.5 SF
(SEE 42/A-913 FOR PRODUCT REFERENCE)

- ☐ B) ALTERNATIVE PRODUCT, MUST BE EQUAL TO PRODUCT ABOVE, AND PROVIDE GREATER THAN OR EQUAL AIR MOVEMENT.

MEDITERRANEAN STYLE:

- ☐ A) O'HAGIN TAPERED LOW PROFILE COMPOSITION S-TILE OR CLAY.
97.5 SQ.IN. OF AIR MOVEMENT PER VENT = 97.5 SQ.IN. / 144 = .68 SF
(SEE 34/A-913 FOR PRODUCT REFERENCE)

- ☐ B) ALTERNATIVE PRODUCT, MUST BE EQUAL TO PRODUCT ABOVE, AND PROVIDE GREATER THAN OR EQUAL AIR MOVEMENT.

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

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

1) ROOF VENTING SHALL COMPLY WITH **CRC R806** & **CBC 701A**.

2) ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. VENTILATION OPENINGS SHALL HAVE A LEAST DIMENSION OF 1/16 INCH MINIMUM AND 1/4 INCH MAXIMUM. OPENINGS IN ROOF FRAMING MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF SECTION R802.7. REQUIRED VENTILATION OPENINGS SHALL OPEN DIRECTLY TO THE OUTSIDE AIR AND SHALL BE PROTECTED TO PREVENT THE ENTRY OF BIRDS, RODENTS, SNAKES AND OTHER SIMILAR CREATURES.

3) THE MINIMUM NET FREE VENTILATING AREA SHALL COMPLY WITH **CRC R806.2**.

VENTING NEEDED: 1.04 SF

ATTIC	AREA	REQUIRED ATTIC VENTING (NFA)	UPPER VENTING REQUIRED (NFA)	LOWER VENTING REQUIRED (NFA)
PLAN 1	312 SF	1.04 SF	0.52 SF	0.52 SF

VENTING PROVIDED - ASPHALT SHINGLE

VENT TYPE	COUNT	VENT LENGTH	NET FREE AREA PER VENT	PROVIDED NET FREE AREA
LOWER O'HAGIN SHINGLE ROOF VENT (LOWER)	2	2' - 8"	0.50 SF	1.00 SF
UPPER O'HAGIN SHINGLE ROOF VENT (UPPER)	2	2' - 8"	0.50 SF	1.00 SF
				2.00 SF

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.
- 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 SHALL BE APPLIED IN ACCORDANCE WITH (**CRC R905**), AND MANUFACTURER'S INSTALLATION INSTRUCTIONS. ROOF COVERINGS SHALL BE INSTALLED TO RESIST THE COMPONENT AND CLADDING LOADS SPECIFIED IN R301.2.1(1), AND ADJUSTED FOR HEIGHT AND EXPOSURE IN ACCORDANCE WITH TABLE R301.2.1(2).
- ROOF UNDERLAYMENTS SHALL BE IN ACCORDANCE WITH WITH SECTION R905.1.1, TABLE R905.1.1(2), AND TABLE R905.1.1(1).
- 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. ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. VENTILATION OPENINGS SHALL HAVE A LEAST DIMENSION OF 1/16 INCH (1.6 MM) MINIMUM AND 1/4 INCH (6.4 MM) MAXIMUM. VENTILATION OPENINGS HAVING A LEAST DIMENSION LARGER THAN 1/4 INCH (6.4 MM) SHALL BE PROVIDED WITH CORROSION-RESISTANT WIRE CLOTH SCREENING, HARDWARE CLOTH, PERFORATED VINYL OR SIMILAR MATERIAL WITH OPENINGS HAVING A LEAST DIMENSION OF 1/16 INCH (1.6 MM) MINIMUM AND 1/4 INCH (6.4 MM) MAXIMUM. OPENINGS IN ROOF FRAMING MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF SECTION R802.7. REQUIRED VENTILATION OPENINGS SHALL OPEN DIRECTLY TO THE OUTSIDE AIR AND SHALL BE PROTECTED TO PREVENT THE ENTRY OF BIRDS, RODENTS, SNAKES AND OTHER SIMILAR CREATURES (**CRC R806**).
- THE MINIMUM NET FREE VENTILATING AREA SHALL COMPLY WITH **CRC R806.2**.
- IN THE INSTANCE OF UPPER VENTS, VENTS SHALL BE LOCATED NO MORE THAN 3 FT BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. **CRC R806.2**.

RCP GENERAL NOTES

- REFER TO GENERAL NOTES SHEET G-102 FOR ADDITIONAL REQUIREMENTS.
- HEIGHT OF CEILINGS SHALL BE MEASURED FROM TOP OF SLAB OR FLOOR TO FINISH FACE OF GWB, U.N.O.
- REFER TO DETAILS FOR FLOOR/CEILING ASSEMBLIES.
- REFER TO ELECT. PLANS FOR LIGHT FIXTURE AND EXHAUST LOCATIONS.
- DIMENSIONS ARE TO THE FACE OF FRAMING UNLESS OTHERWISE NOTED.
- SOFFITS ARE TO BE HELD TIGHT TO UNDERSIDE OF MECHANICAL EQUIP.

ROOF PLAN & RCP LEGEND

- XX'-X" CEILING HEIGHT (SEE PLAN FOR ACTUAL HEIGHTS)
- X" / 12" ROOF SLOPE (REFER TO PLANS FOR ACTUAL SLOPE)
- 22"X30" MIN. ATTIC ACCESS PANEL (WHERE REQ.)
- OUTLINE OF WALL BELOW
- GUTTER, CONNECT TO DOWNSPOUT; SEE DETAIL:
- APPROXIMATE LOCATION OF DOWNSPOUT/LEADER TO ROOF OR SPLASHBLOCK BELOW; SEE DETAILS:
- ROOF VENT, SEE ROOF VENTING CALCULATIONS
- AREA OF ATTIC WITH 30" HEIGHT OR GREATER. 22" X 30" CLEAR OPENING ACCESS REQUIRED IF TOTAL AREA GREATER THAN 30 SQ. FT. PER CRC R807.1
- AVAILABLE SOLAR ZONE LOCATIONS; PV SYSTEM UNDER SEPARATE PERMIT. SEE TITLE SHEET AND TITLE 24 REPORT FOR MORE INFORMATION. SEE "SETBACK AT RIDGE TABLE"

X: SETBACK AT RIDGE TABLE

PV ARRAYS PERCENT OF THE PLAN VIEW TOTAL ROOF AREA	(X) HORIZONTAL RIDGE SETBACK
≤33%	18" BOTH SIDES OF RIDGE
>33%	36" BOTH SIDES OF RIDGE
≤66% + 13D SPRINKLER	18" BOTH SIDES OF RIDGE
>66% + 12D SPRINKLER	36" BOTH SIDES OF RIDGE



THESE PLANS ARE PROVIDED BY THE CITY OF LAGUNA NIGUEL AS PART OF THE PRE-APPROVED ADU PROGRAM AND ARE PUBLIC DOMAIN. THERE CANNOT BE A CHARGE TO PROVIDE THESE PLANS. NO ALTERATIONS TO THESE PLANS ARE ALLOWED. ALL ALTERATIONS MUST BE DONE UNDER A SEPARATE PERMIT ONCE THE BUILDING PERMIT FOR THE ADU HAS BEEN ISSUED AND FINAL INSPECTION COMPLETED. IF YOU DO NOT HAVE THE CONSTRUCTION KNOWLEDGE AND EXPERIENCE TO CONTRUCT THESE PLANS WITHOUT FURTHER DETAILS, IT IS RECOMMENDED YOU HIRE A CONTRACTOR TO DO THE CONSTRUCTION. THE CITY WILL NOT PROVIDE FURTHER INFORMATION OR DETAILS AND BUILDING INSPECTORS WILL NOT PROVIDE STEP BY STEP INSTRUCTIONS IN THE FIELD.

PRE-APPROVED ADU
CITY OF LAGUNA NIGUEL

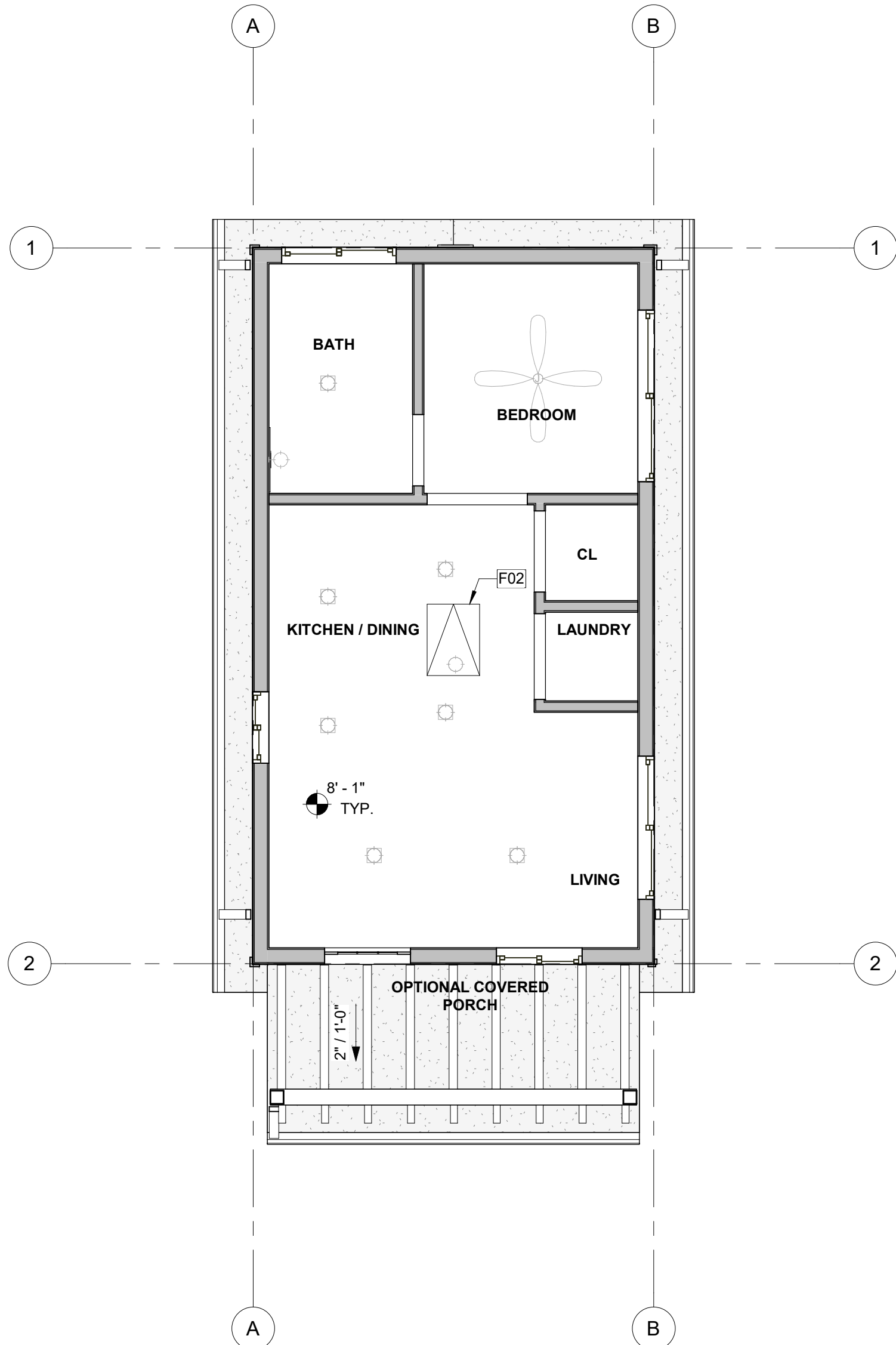
**ROOF PLAN & REFLECTED
CEILING PLAN - CAL RANCH**

PUBLIC SET

DATE
02/05/2025

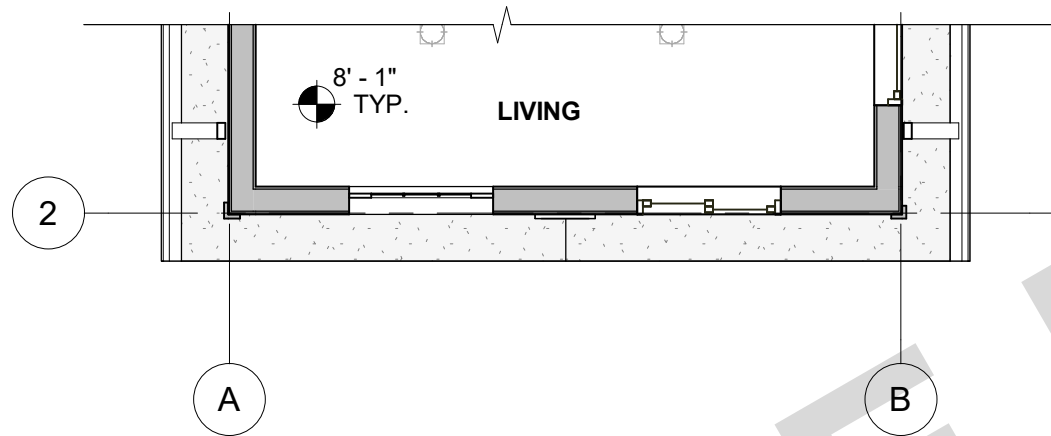
SHEET

A1-121



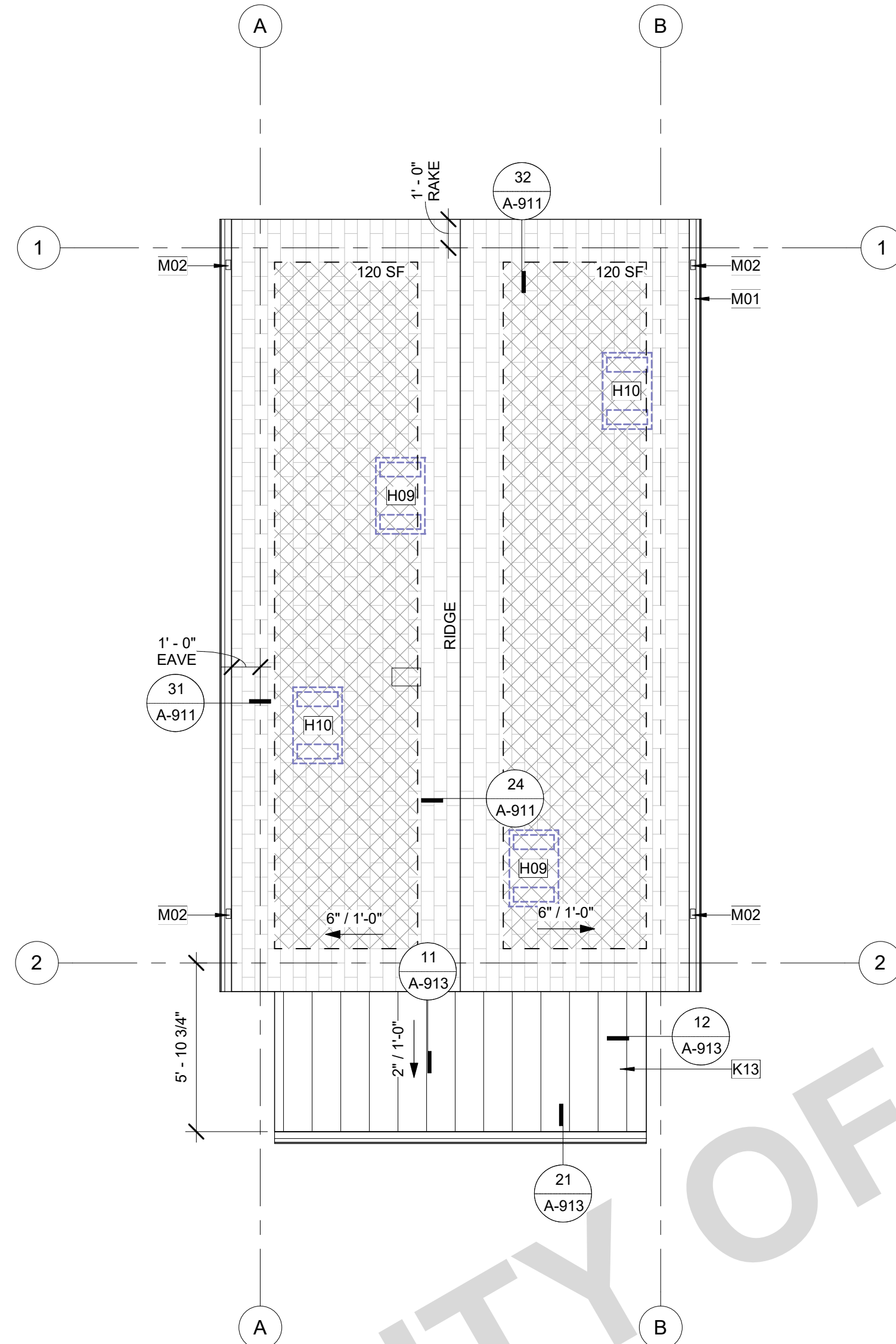
2 REFLECTED CEILING PLAN - MODERN FARMHOUSE

A1-122 SCALE: 1/4" = 1'-0"



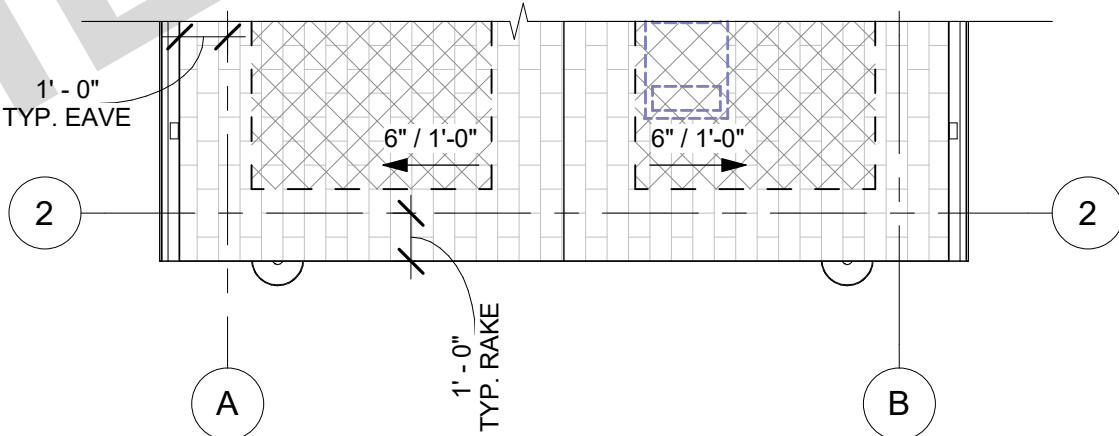
4 REFLECTED CEILING PLAN - NO COV. PORCH

A1-122 SCALE: 1/4" = 1'-0"



1 ROOF PLAN - MODERN FARMHOUSE

A1-122 SCALE: 1/4" = 1'-0"



3 ROOF PLAN - NO COVERED PORCH

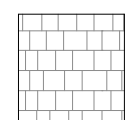
A1-122 SCALE: 1/4" = 1'-0"

MATERIALS LEGEND

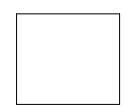
OWNER/APP. TO PROVIDE MANUFACTURER, COLOR/FINISH SPECIFICATIONS, & WUI (WHEN REQ.)

GRAPHICS LEGEND:

ROOFING: SEE G-001 FOR SELECTION & MATERIALS LEGEND ON ELEVATION SHEET FOR MORE INFORMATION.



ASPHALT SHINGLE ROOF: ROOF REFLECTANCE (0.1) MIN. ROOF EMITTANCE (0.85) MIN. SEE MATERIALS LEGEND ON ELEVATION SHEET FOR MORE INFORMATION.



INTERIOR CEILING FINISH, TYP. 5/8" GYP. INSTALL PER MFR RECOMMENDATIONS
IMPROVED SOUND
MOISTURE/MOLD/MILDEW-RESISTANT PERFORMANCE PRODUCTS.
NOTE: VISIT GYPSUM.ORG FOR MORE INFORMATION.



EXTERIOR SOFFITS, RAKES, & EAVES; SEE G-001 FOR MATERIAL SELECTION AND CORRESPONDING DETAILS FOR MORE INFORMATION.
A) TOUNGE & GROOVE (SOLID SAWN LUMBER)
B) EXT. GRADE FIRE RETARDANT TREATED SHEATHING (LABEL SELECTION ON REFLECTED CEILING PLAN)

NOTES:

- SOFFIT MATERIALS TO MEET REQ. OF **CRC 337** & **CRC 704**.
- INSTALL ALL MATERIALS, FASTENERS, & COMPONENTS PER MANUFACTURER'S SPECIFICATIONS & RECOMMENDATIONS
- INSTALL ADDITIONAL BLOCKING AS NEEDED TO MEET ATTACHMENT REQUIREMENTS PER **CRC TABLE R702.3.5**
- A PROJECT SITE WITHIN THE WILDLAND-URBAN INTERFACE FIRE AREA SHALL COMPLY WITH THE **CRC SECTION R337**.

KEYNOTES

- F02 22" X 30" MINIMUM ATTIC ACCESS. PROVIDED SWITCH AND OUTLET AT ATTIC. THERE IS NO HVAC EQUIPMENT (SUCH AS FURNACE, HEAT PUMP, OR FAU) IN THE ATTIC. PERMANENTLY ATTACH R-38 OR GREATER INSULATION TO ATTIC ACCESS DOOR USING ADHESIVE OR MECHANICAL FASTENERS CENC 150.0 (a)1. PROVIDE GASKETED ATTIC ACCESS TO PREVENT AIR LEAKAGE CENC 150.0 (a)1.
- H09 ATTIC VENT (HIGH); UPPER VENTS SHALL BE LOCATED NOT MORE THAN 3 FEET BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. PAINT FINISH TO MATCH ROOF COLOR. SEE VENTING CALCS.
- H10 ATTIC VENT (LOW); LOWER VENTS SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE PER R806.2 EXCEPTION 2. PROVIDE DAMPER TO PROVIDE 1" CLR. AIRSPACE WHERE REQ. PAINT FINISH TO MATCH ROOF COLOR. SEE VENTING CALCS.
- K13 STANDING SEAM METAL ROOF. SEE MATERIALS LEGEND FOR MORE INFORMATION.
- M01 GUTTER. CONNECT TO DOWNSPOUT. PROVIDE MEANS TO PREVENT ACCUMULATION OF LEAVES AND DEBRIS IN GUTTER PER CRC R337.5.4. SEE DETAIL 12/A-903.
- M02 DOWNSPOUT TO SPLASH BLOCK BELOW. SEE DETAIL 43/A-904.

ROOF VENTING CALCULATIONS

*OWNER/APPLICANT REQ. TO SELECT ONE THE FOLLOWING
WUI REQUIRED? (SEE G-001) ☐ A) YES ☐ B) NO

UPPER & LOWER VENTS:

CALIFORNIA RANCH & MODERN FARMHOUSE STYLE:

☐ A) O'HAGIN TAPERED LOW PROFILE COMPOSITION SHINGLE.
72.0 SQ.IN. OF AIR MOVEMENT PER VENT = 72. SQ.IN. / 144 = 0.5 SF
(SEE 42/A-913 FOR PRODUCT REFERENCE)

☐ B) ALTERNATIVE PRODUCT, MUST BE EQUAL TO PRODUCT ABOVE, AND PROVIDE GREATER THAN OR EQUAL AIR MOVEMENT.

MEDITERRANEAN STYLE:

☐ A) O'HAGIN TAPERED LOW PROFILE COMPOSITION S-TILE OR CLAY.
97.5 SQ.IN. OF AIR MOVEMENT PER VENT = 97.5 SQ.IN. / 144 = .68 SF
(SEE 34/A-913 FOR PRODUCT REFERENCE)

☐ B) ALTERNATIVE PRODUCT, MUST BE EQUAL TO PRODUCT ABOVE, AND PROVIDE GREATER THAN OR EQUAL AIR MOVEMENT.

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

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

1) ROOF VENTING SHALL COMPLY WITH **CRC R806** & **CBC 701A**.

2) ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS SHALL HAVE A LEAST DIMENSION OF 1/16 INCH MINIMUM AND 1/4 INCH MAXIMUM. OPENINGS IN ROOF FRAMING MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF SECTION R802.7. REQUIRED VENTILATION OPENINGS SHALL OPEN DIRECTLY TO THE OUTSIDE AIR AND SHALL BE PROTECTED TO PREVENT THE ENTRY OF BIRDS, RODENTS, SNAKES AND OTHER SIMILAR CREATURES.

3) THE MINIMUM NET FREE VENTILATING AREA SHALL COMPLY WITH **CRC R806.2**.

VENTING NEEDED: 1.04 SF

ATTIC	AREA	REQUIRED ATTIC VENTING (NFA)	UPPER VENTING REQUIRED (NFA)	LOWER VENTING REQUIRED (NFA)
PLAN 1	312 SF	1.04 SF	0.52 SF	0.52 SF

VENTING PROVIDED - ASPHALT SHINGLE

VENT TYPE	COUNT	VENT LENGTH	NET FREE AREA PER VENT	PROVIDED NET FREE AREA
LOWER O'HAGIN SHINGLE ROOF VENT (LOWER)	2	2' - 8"	0.50 SF	1.00 SF
UPPER O'HAGIN SHINGLE ROOF VENT (UPPER)	2	2' - 8"	0.50 SF	1.00 SF
				2.00 SF

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.
- 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 SHALL BE APPLIED IN ACCORDANCE WITH (**CRC R905**), AND MANUFACTURER'S INSTALLATION INSTRUCTIONS. ROOF COVERINGS SHALL BE INSTALLED TO RESIST THE COMPONENT AND CLADDING LOADS SPECIFIED IN R301.2.1(1), AND ADJUSTED FOR HEIGHT AND EXPOSURE IN ACCORDANCE WITH TABLE R301.2.1(2).
- ROOF UNDERLAYMENTS SHALL BE IN ACCORDANCE WITH WITH SECTION R905.1.1, TABLE R905.1.1(2), AND TABLE R905.1.1(1).
- 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 ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. VENTILATION OPENINGS SHALL HAVE A LEAST DIMENSION OF 1/16 INCH (1.6 MM) MINIMUM AND 1/4 INCH (6.4 MM) MAXIMUM. VENTILATION OPENINGS HAVING A LEAST DIMENSION LARGER THAN 1/4 INCH (6.4 MM) SHALL BE PROVIDED WITH CORROSION-RESISTANT WIRE CLOTH SCREENING, HARDWARE CLOTH, PERFORATED VINYL OR SIMILAR MATERIAL WITH OPENINGS HAVING A LEAST DIMENSION OF 1/16 INCH (1.6 MM) MINIMUM AND 1/4 INCH (6.4 MM) MAXIMUM. OPENINGS IN ROOF FRAMING MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF SECTION R802.7. REQUIRED VENTILATION OPENINGS SHALL OPEN DIRECTLY TO THE OUTSIDE AIR AND SHALL BE PROTECTED TO PREVENT THE ENTRY OF BIRDS, RODENTS, SNAKES AND OTHER SIMILAR CREATURES (**CRC R806**).
- THE MINIMUM NET FREE VENTILATING AREA SHALL COMPLY WITH **CRC R806.2**.
- IN THE INSTANCE OF UPPER VENTS, VENTS SHALL BE LOCATED NO MORE THAN 3 FT BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. **CRC R806.2**.

RCP GENERAL NOTES

- REFER TO GENERAL NOTES SHEET G-102 FOR ADDITIONAL REQUIREMENTS.
- HEIGHT OF CEILINGS SHALL BE MEASURED FROM TOP OF SLAB OR FLOOR TO FINISH FACE OF GWB, U.N.O.
- REFER TO DETAILS FOR FLOOR/CEILING ASSEMBLIES.
- REFER TO ELECT. PLANS FOR LIGHT FIXTURE AND EXHAUST LOCATIONS.
- DIMENSIONS ARE TO THE FACE OF FRAMING UNLESS OTHERWISE NOTED.
- SOFFITS ARE TO BE HELD TIGHT TO UNDERSIDE OF MECHANICAL EQUIP.

ROOF PLAN & RCP LEGEND

- XX'-X" CEILING HEIGHT (SEE PLAN FOR ACTUAL HEIGHTS)
- X" / 12" ROOF SLOPE (REFER TO PLANS FOR ACTUAL SLOPE)
- 22"X30" MIN. ATTIC ACCESS PANEL (WHERE REQ.)
- OUTLINE OF WALL BELOW
- GUTTER, CONNECT TO DOWNSPOUT; SEE DETAIL:
- APPROXIMATE LOCATION OF DOWNSPOUT/LEADER TO ROOF OR SPLASHBLOCK BELOW; SEE DETAILS:
- ROOF VENT, SEE ROOF VENTING CALCULATIONS
- AREA OF ATTIC WITH 30" HEIGHT OR GREATER. 22" X 30" CLEAR OPENING ACCESS REQUIRED IF TOTAL AREA GREATER THAN 30 SQ. FT. PER CRC R807.1
- AVAILABLE SOLAR ZONE LOCATIONS; PV SYSTEM UNDER SEPARATE PERMIT. SEE TITLE SHEET AND TITLE 24 REPORT FOR MORE INFORMATION. SEE "SETBACK AT RIDGE TABLE"

X: SETBACK AT RIDGE TABLE

PV ARRAYS PERCENT OF THE PLAN VIEW TOTAL ROOF AREA	(X) HORIZONTAL RIDGE SETBACK
≤33%	18" BOTH SIDES OF RIDGE
>33%	36" BOTH SIDES OF RIDGE
≤66% + 13D SPRINKLER	18" BOTH SIDES OF RIDGE
>66% + 12D SPRINKLER	36" BOTH SIDES OF RIDGE



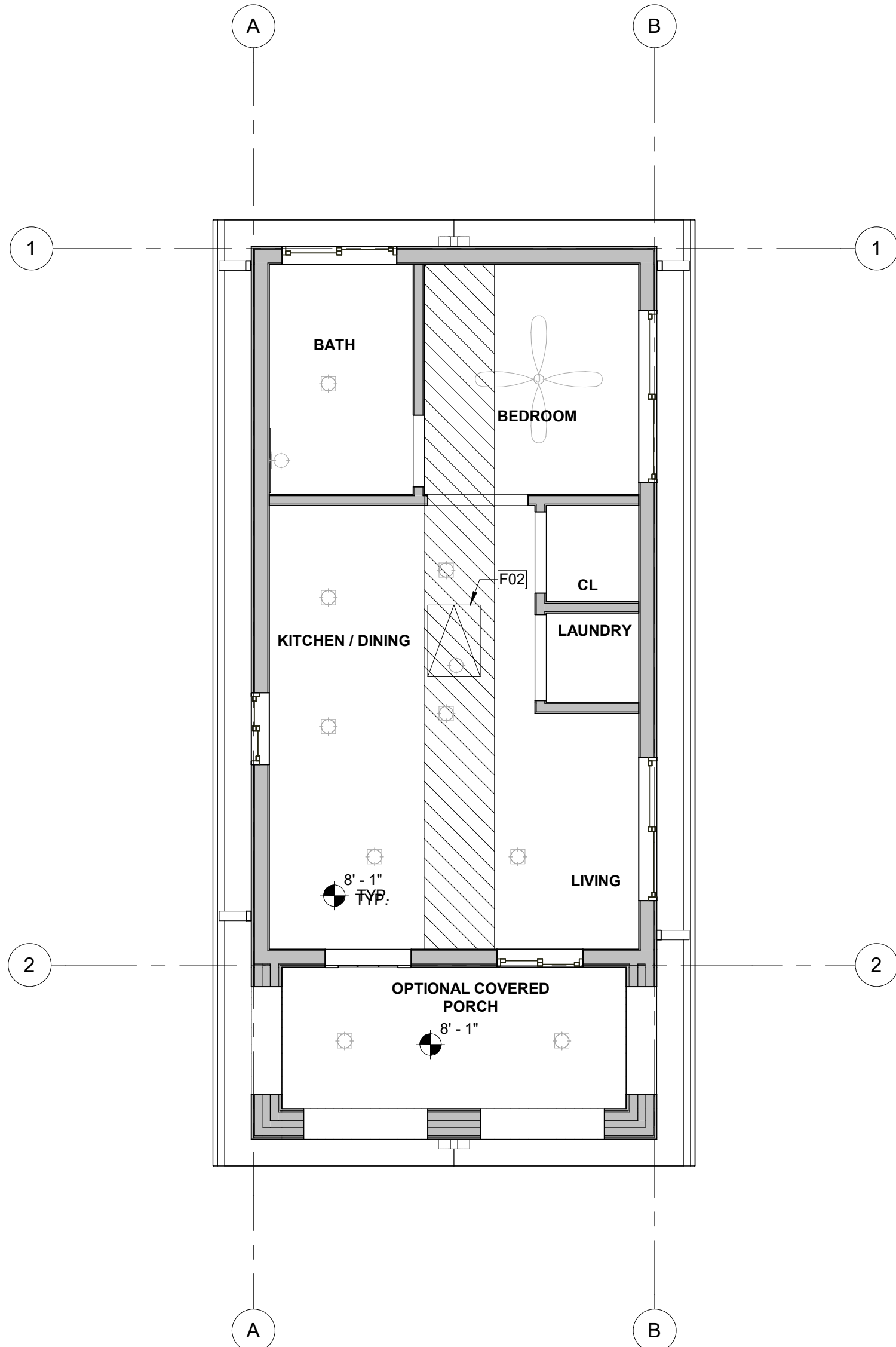
THESE PLANS ARE PROVIDED BY THE CITY OF LAGUNA NIGUEL AS PART OF THE PRE-APPROVED ADU PROGRAM AND ARE PUBLIC DOMAIN. THERE CANNOT BE A CHARGE TO PROVIDE THESE PLANS. NO ALTERATIONS TO THESE PLANS ARE ALLOWED. ALL ALTERATIONS MUST BE DONE UNDER A SEPARATE PERMIT ONCE THE BUILDING PERMIT FOR THE ADU HAS BEEN ISSUED AND FINAL INSPECTION COMPLETED. IF YOU DO NOT HAVE THE CONSTRUCTION KNOWLEDGE AND EXPERIENCE TO CONTRUCT THESE PLANS WITHOUT FURTHER DETAILS, IT IS RECOMMENDED YOU HIRE A CONTRACTOR TO DO THE CONSTRUCTION. THE CITY WILL NOT PROVIDE FURTHER INFORMATION OR DETAILS AND BUILDING INSPECTORS WILL NOT PROVIDE STEP BY STEP INSTRUCTIONS IN THE FIELD.

PRE-APPROVED ADU
CITY OF LAGUNA NIGUEL
ROOF PLAN & REFLECTED
CEILING PLAN - MODERN
FARMHOUSE

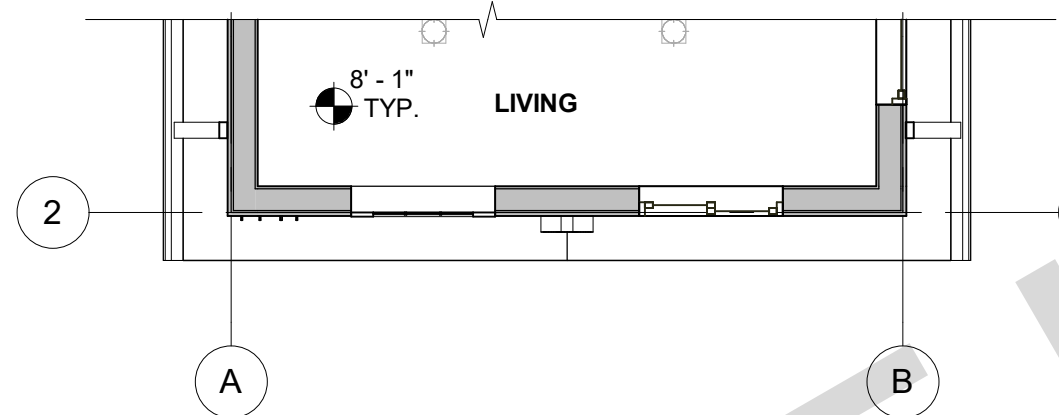
DATE
02/05/2025
SHEET

A1-122

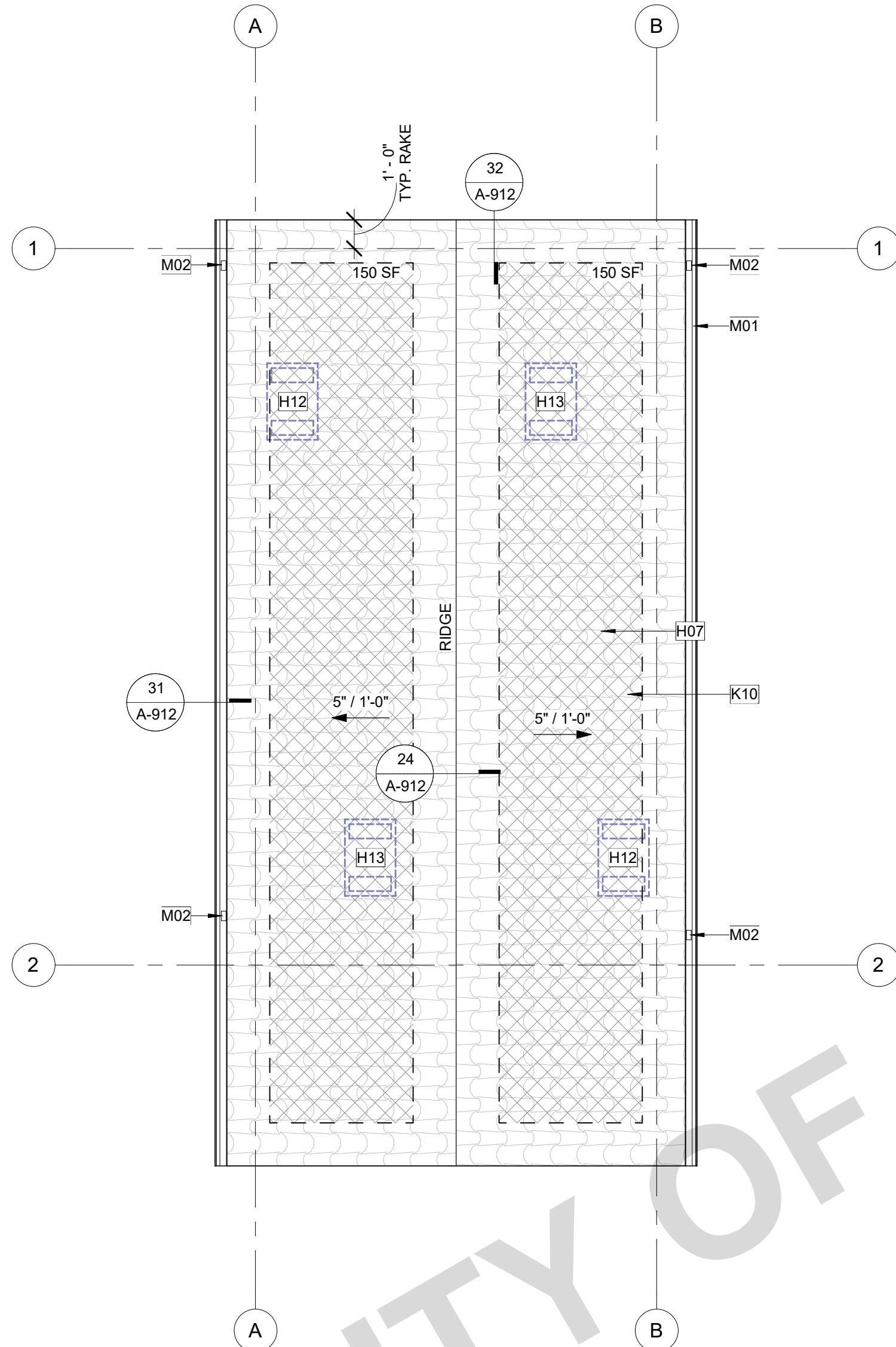
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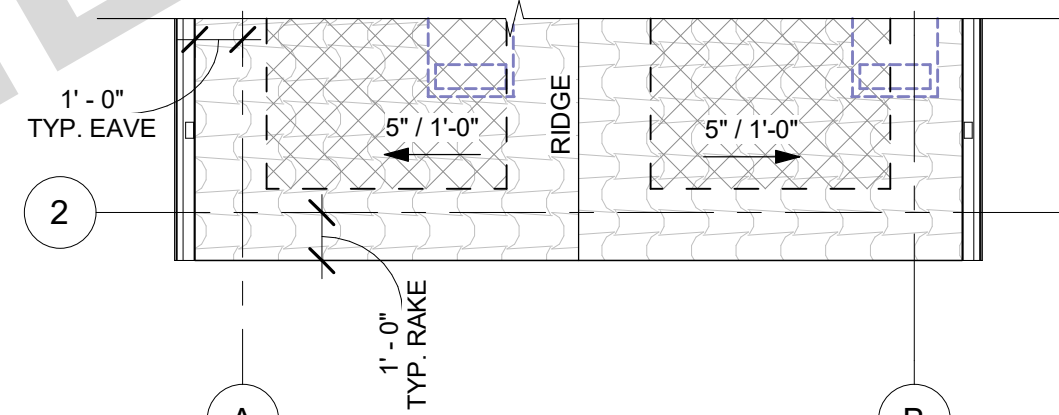
2 REFLECTED CEILING PLAN - MEDITERRANEAN
A1-123 SCALE: 1/4" = 1'-0"



4 RCP - NO COVERED PORCH - MEDITERRANEAN
A1-123 SCALE: 1/4" = 1'-0"



1 ROOF PLAN - COVERED FRONT PORCH - MEDITERRANEAN
A1-123 SCALE: 1/4" = 1'-0"



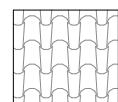
3 ROOF PLAN - NO COVERED PORCH - MEDITERRANEAN
A1-123 SCALE: 1/4" = 1'-0"

MATERIALS LEGEND

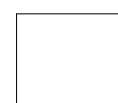
OWNER/APP. TO PROVIDE MANUFACTURER, COLOR/FINISH SPECIFICATIONS, & WUI (WHEN REQ.)

GRAPHICS LEGEND:

ROOFING: SEE G-001 FOR SELECTION & MATERIALS LEGEND ON ELEVATION SHEET FOR MORE INFORMATION.



S-TILE MASONRY ROOF TILE. ROOF REFLECTANCE (0.1) MIN. ROOF EMITTANCE (0.85) MIN. SEE MATERIALS LEGEND ON ELEVATION SHEET FOR MORE INFORMATION.



INTERIOR CEILING FINISH, TYP. 5/8" GYP. INSTALL PER MFR RECOMMENDATIONS
IMPROVED SOUND
MOISTURE/MOLD/MILDEW-RESISTANT PERFORMANCE PRODUCTS.
NOTE: VISIT GYPSUM.ORG FOR MORE INFORMATION.



EXTERIOR SOFFITS, RAKES, & EAVES; SEE G-001 FOR MATERIAL SELECTION AND CORRESPONDING DETAILS FOR MORE INFORMATION.
A) TOUNGE & GROOVE (SOLID SAWN LUMBER)
B) EXT. GRADE FIRE RETARDANT TREATED SHEATHING (LABEL SELECTION ON REFLECTED CEILING PLAN)

NOTES:

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- INSTALL ALL MATERIALS, FASTENERS, & COMPONENTS PER MANUFACTURER'S SPECIFICATIONS & RECOMMENDATIONS
- INSTALL ADDITIONAL BLOCKING AS NEEDED TO MEET ATTACHMENT REQUIREMENTS PER **CRC TABLE R702.3.5**
- A PROJECT SITE WITHIN THE WILDLAND-URBAN INTERFACE FIRE AREA SHALL COMPLY WITH THE **CRC SECTION R337**.

KEYNOTES

- F02 22" X 30" MINIMUM ATTIC ACCESS. PROVIDED SWITCH AND OUTLET AT ATTIC. THERE IS NO HVAC EQUIPMENT (SUCH AS FURNACE, HEAT PUMP, OR FAU) IN THE ATTIC. PERMANENTLY ATTACH R-38 OR GREATER INSULATION TO ATTIC ACCESS DOOR USING ADHESIVE OR MECHANICAL FASTENERS CENc 150.0 (a)1. PROVIDE GASKETED ATTIC ACCESS TO PREVENT AIR LEAKAGE CENc 150.0 (a)1.
- H07 BUILDING LINE BELOW.
- H12 ATTIC VENT (HIGH). ATTIC VENTING OPTION B. STRIKE THROUGH IF NOT USED. SEE VENTING CALCCS.
- H13 ATTIC VENT (LOW). ATTIC VENTING OPTION B. STRIKE THROUGH IF NOT USED. SEE VENTING CALCCS.
- K10 S-TYPE CLAY ROOF TILE. ROOF REFLECTANCE (0.1) MIN. ROOF EMITTANCE (0.85) MIN. SEE MATERIALS LEGEND FOR MORE INFORMATION.
- M01 GUTTER. CONNECT TO DOWNSPOUT. PROVIDE MEANS TO PREVENT ACCUMULATION OF LEAVES AND DEBRIS IN GUTTER PER CRC R337.5.4. SEE DETAIL 12/A-903.
- M02 DOWNSPOUT TO SPLASH BLOCK BELOW. SEE DETAIL 43/A-904.

ROOF VENTING CALCULATIONS

OWNER/APPLICANT REQ. TO SELECT ONE THE FOLLOWING
WUI REQUIRED? (SEE G-001) ☐ A) YES ☐ B) NO

UPPER & LOWER VENTS:

CALIFORNIA RANCH & MODERN FARMHOUSE STYLE:

☐ A) O'HAGIN TAPERED LOW PROFILE COMPOSITION SHINGLE.
72.0 SQ. IN. OF AIR MOVEMENT PER VENT = 72.0 SQ. IN. / 144 = 0.5 SF
(SEE 42/A-913 FOR PRODUCT REFERENCE)

☐ B) ALTERNATIVE PRODUCT, MUST BE EQUAL TO PRODUCT ABOVE, AND PROVIDE GREATER THAN OR EQUAL AIR MOVEMENT.

MEDITERRANEAN STYLE:

☐ A) O'HAGIN TAPERED LOW PROFILE COMPOSITION S-TILE OR CLAY.
97.5 SQ. IN. OF AIR MOVEMENT PER VENT = 97.5 SQ. IN. / 144 = .68 SF
(SEE 34/A-913 FOR PRODUCT REFERENCE)

☐ B) ALTERNATIVE PRODUCT, MUST BE EQUAL TO PRODUCT ABOVE, AND PROVIDE GREATER THAN OR EQUAL AIR MOVEMENT.

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

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

1) ROOF VENTING SHALL COMPLY WITH **CRC R806** & **CBC 701A**.

2) ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. VENTILATION OPENINGS SHALL HAVE A LEAST DIMENSION OF 1/16 INCH MINIMUM AND 1/4 INCH MAXIMUM. OPENINGS IN ROOF FRAMING MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF SECTION R802.7. REQUIRED VENTILATION OPENINGS SHALL OPEN DIRECTLY TO THE OUTSIDE AIR AND SHALL BE PROTECTED TO PREVENT THE ENTRY OF BIRDS, RODENTS, SNAKES AND OTHER SIMILAR CREATURES.

3) THE MINIMUM NET FREE VENTILATING AREA SHALL COMPLY WITH **CRC R806.2**.

VENTING NEEDED: 1.04 SF

ATTIC	AREA	REQUIRED ATTIC VENTING (NFA)	UPPER VENTING REQUIRED (NFA)	LOWER VENTING REQUIRED (NFA)
PLAN 1	312 SF	1.04 SF	0.52 SF	0.52 SF

VENTING PROVIDED - S-TILE

VENT TYPE	COUNT	VENT LENGTH	NET FREE AREA PER VENT	PROVIDED NET FREE AREA
LOWER O'HAGIN S-TILE ROOF VENT (LOWER)	2	2' - 8"	0.68 SF	1.35 SF
UPPER O'HAGIN S-TILE ROOF VENT (UPPER)	2	2' - 8"	0.68 SF	1.35 SF
				2.71 SF

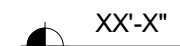
ROOF PLAN GENERAL NOTES

- REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS.
- REFER TO STRUCTURAL PLANS FOR ROOF FRAMING INFORMATION INCLUDING MEMBER SIZES AND CONNECTION HARDWARE.
- 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 SHALL BE APPLIED IN ACCORDANCE WITH (**CRC R905**), AND MANUFACTURER'S INSTALLATION INSTRUCTIONS. ROOF COVERINGS SHALL BE INSTALLED TO RESIST THE COMPONENT AND CLADDING LOADS SPECIFIED IN R301.2.1(1), AND ADJUSTED FOR HEIGHT AND EXPOSURE IN ACCORDANCE WITH TABLE R301.2.1(2).
- ROOF UNDERLAYMENTS SHALL BE IN ACCORDANCE WITH WITH SECTION R905.1.1, TABLE R905.1.1(2), AND TABLE R905.1.1(1).
- 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. ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. VENTILATION OPENINGS SHALL HAVE A LEAST DIMENSION OF 1/16 INCH (1.6 MM) MINIMUM AND 1/4 INCH (6.4 MM) MAXIMUM. VENTILATION OPENINGS HAVING A LEAST DIMENSION LARGER THAN 1/4 INCH (6.4 MM) SHALL BE PROVIDED WITH CORROSION-RESISTANT WIRE CLOTH SCREENING, HARDWARE CLOTH, PERFORATED VINYL OR SIMILAR MATERIAL WITH OPENINGS HAVING A LEAST DIMENSION OF 1/16 INCH (1.6 MM) MINIMUM AND 1/4 INCH (6.4 MM) MAXIMUM. OPENINGS IN ROOF FRAMING MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF SECTION R802.7. REQUIRED VENTILATION OPENINGS SHALL OPEN DIRECTLY TO THE OUTSIDE AIR AND SHALL BE PROTECTED TO PREVENT THE ENTRY OF BIRDS, RODENTS, SNAKES AND OTHER SIMILAR CREATURES (**CRC R806**).
- THE MINIMUM NET FREE VENTILATING AREA SHALL COMPLY WITH **CRC R806.2**.
- IN THE INSTANCE OF UPPER VENTS, VENTS SHALL BE LOCATED NO MORE THAN 3 FT BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. **CRC R806.2**.

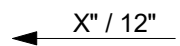
RCP GENERAL NOTES

- REFER TO GENERAL NOTES SHEET G-102 FOR ADDITIONAL REQUIREMENTS.
- HEIGHT OF CEILINGS SHALL BE MEASURED FROM TOP OF SLAB OR FLOOR TO FINISH FACE OF GWB. U.N.O.
- REFER TO DETAILS FOR FLOOR/CEILING ASSEMBLIES.
- REFER TO ELECT. PLANS FOR LIGHT FIXTURE AND EXHAUST LOCATIONS.
- DIMENSIONS ARE TO THE FACE OF FRAMING UNLESS OTHERWISE NOTED.
- SOFFITS ARE TO BE HELD TIGHT TO UNDERSIDE OF MECHANICAL EQUIP.

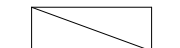
ROOF PLAN & RCP LEGEND



CEILING HEIGHT (SEE PLAN FOR ACTUAL HEIGHTS)



ROOF SLOPE (REFER TO PLANS FOR ACTUAL SLOPE)



22"X30" MIN. ATTIC ACCESS PANEL (WHERE REQ.)



OUTLINE OF WALL BELOW



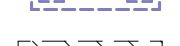
GUTTER, CONNECT TO DOWNSPOUT; SEE DETAIL:



APPROXIMATE LOCATION OF DOWNSPOUT/LEADER TO ROOF OR SPLASHBLOCK BELOW; SEE DETAILS:



ROOF VENT, SEE ROOF VENTING CALCULATIONS



AREA OF ATTIC WITH 30" HEIGHT OR GREATER. 22" X 30" CLEAR OPENING ACCESS REQUIRED IF TOTAL AREA GREATER THAN 30 SQ. FT. PER CRC R807.1



AVAILABLE SOLAR ZONE LOCATIONS; PV SYSTEM UNDER SEPARATE PERMIT. SEE TITLE SHEET AND TITLE 24 REPORT FOR MORE INFORMATION. SEE "SETBACK AT RIDGE TABLE"

X: SETBACK AT RIDGE TABLE

PV ARRAYS PERCENT OF THE PLAN VIEW TOTAL ROOF AREA	(X) HORIZONTAL RIDGE SETBACK
≤33%	18" BOTH SIDES OF RIDGE
>33%	36" BOTH SIDES OF RIDGE
≤66% + 13D SPRINKLER	18" BOTH SIDES OF RIDGE
>66% + 12D SPRINKLER	36" BOTH SIDES OF RIDGE



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PRE-APPROVED ADU

CITY OF LAGUNA NIGUEL

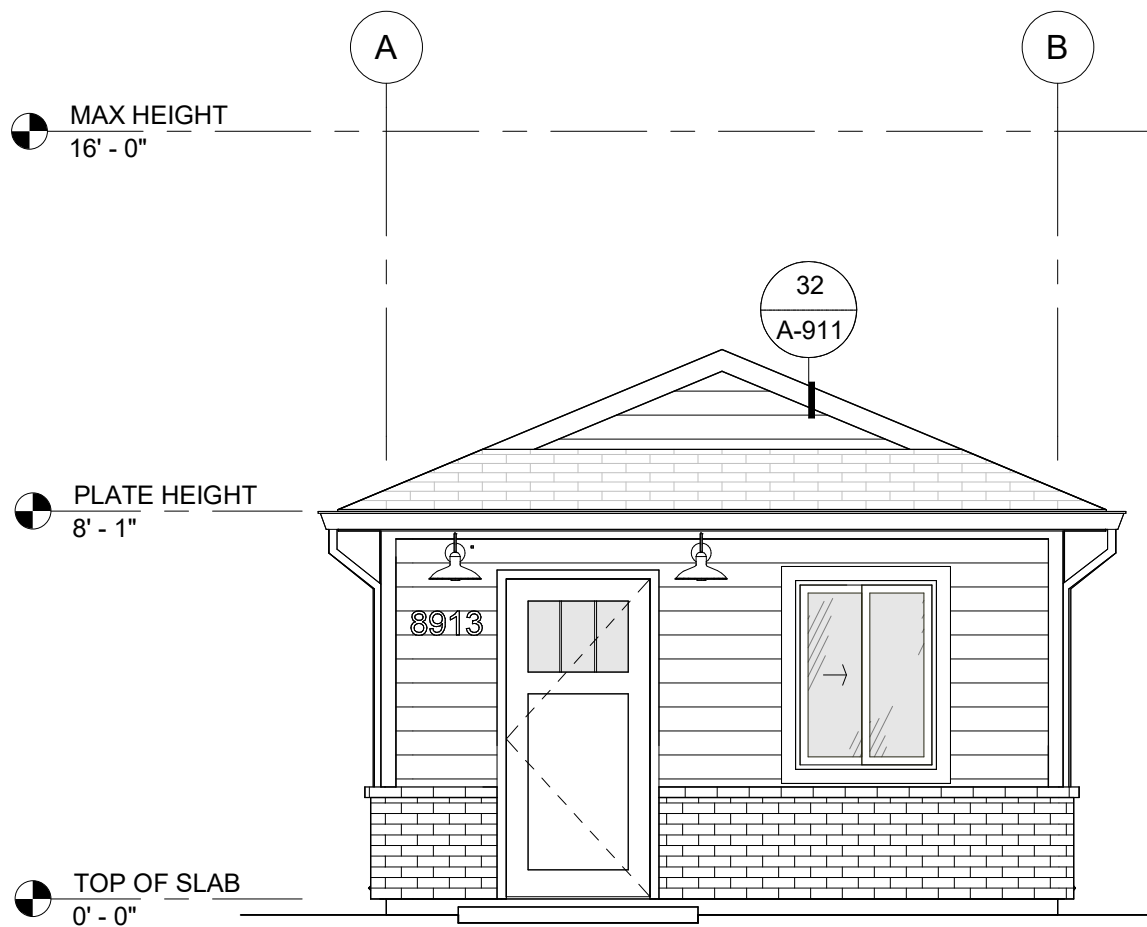
ROOF PLAN & REFLECTED
CEILING PLAN - MEDITERRANEAN

PUBLIC SET

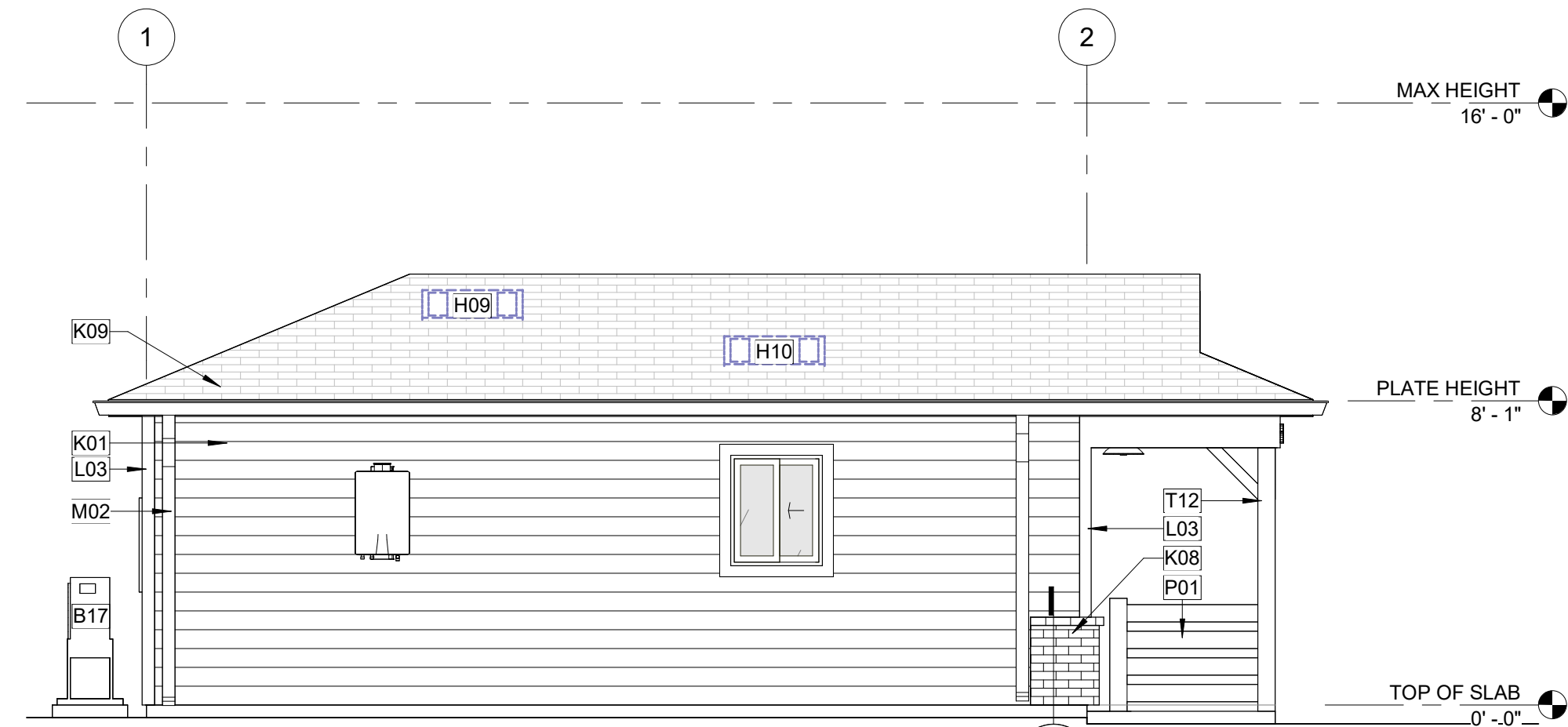
DATE
02/05/2025

SHEET

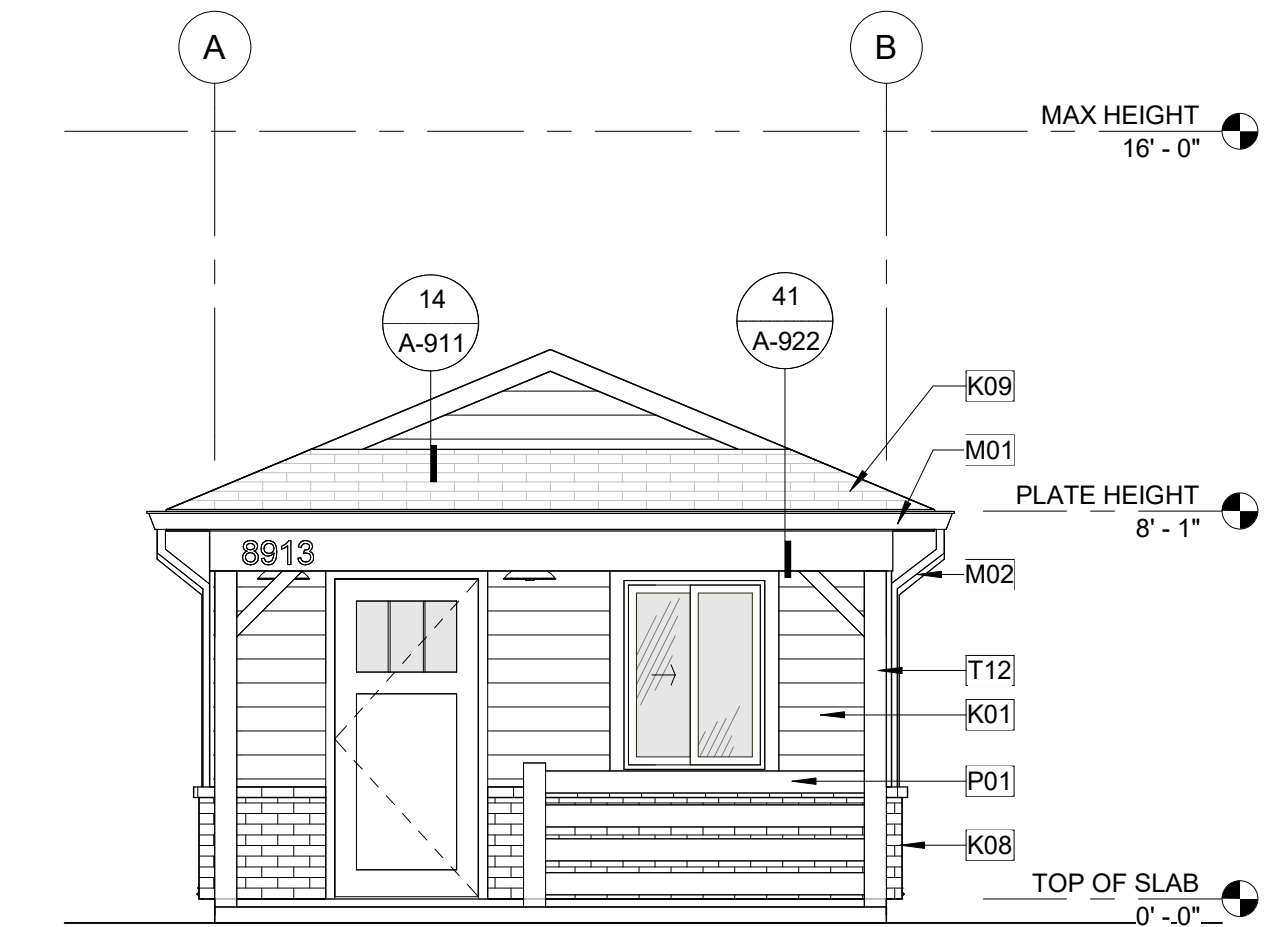
A1-123



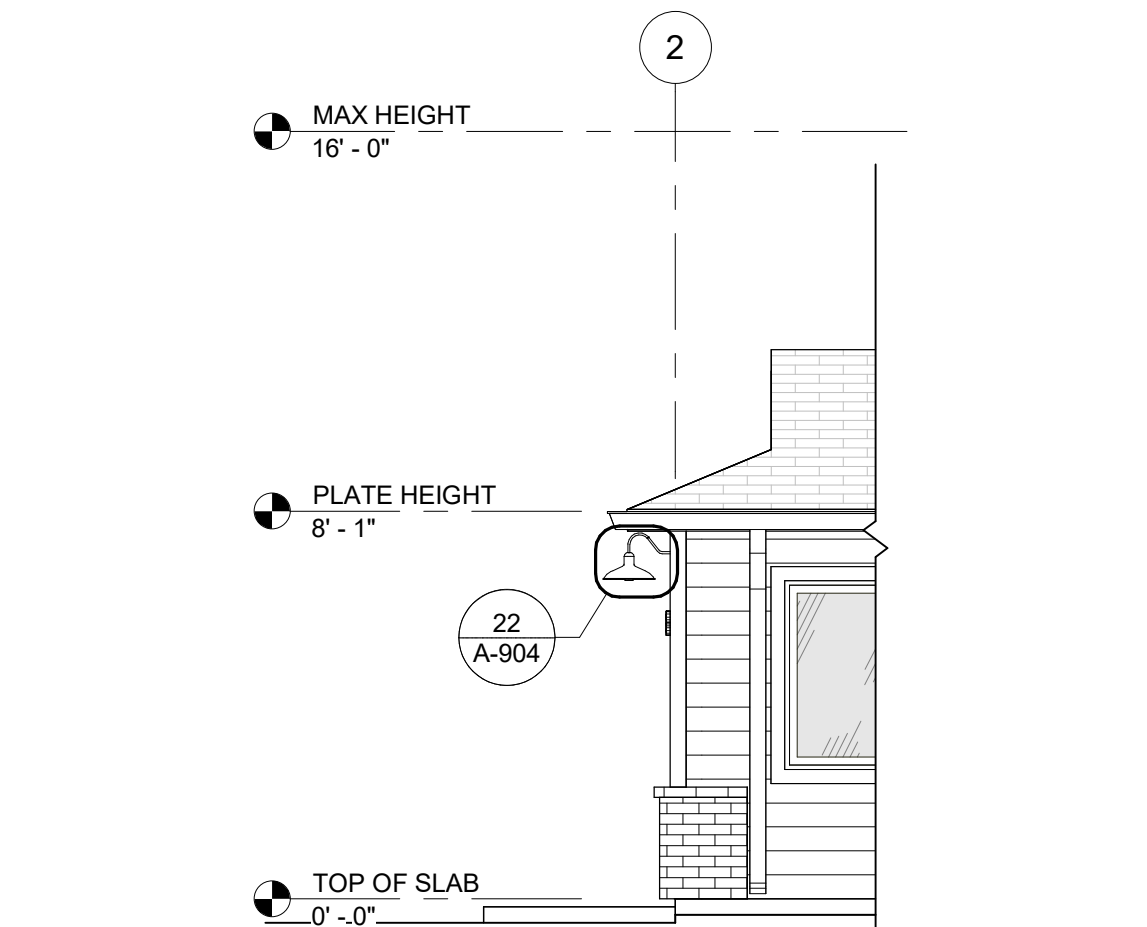
3 FRONT ELEV - NO PORCH
A1-201 SCALE: 1/4" = 1'-0"



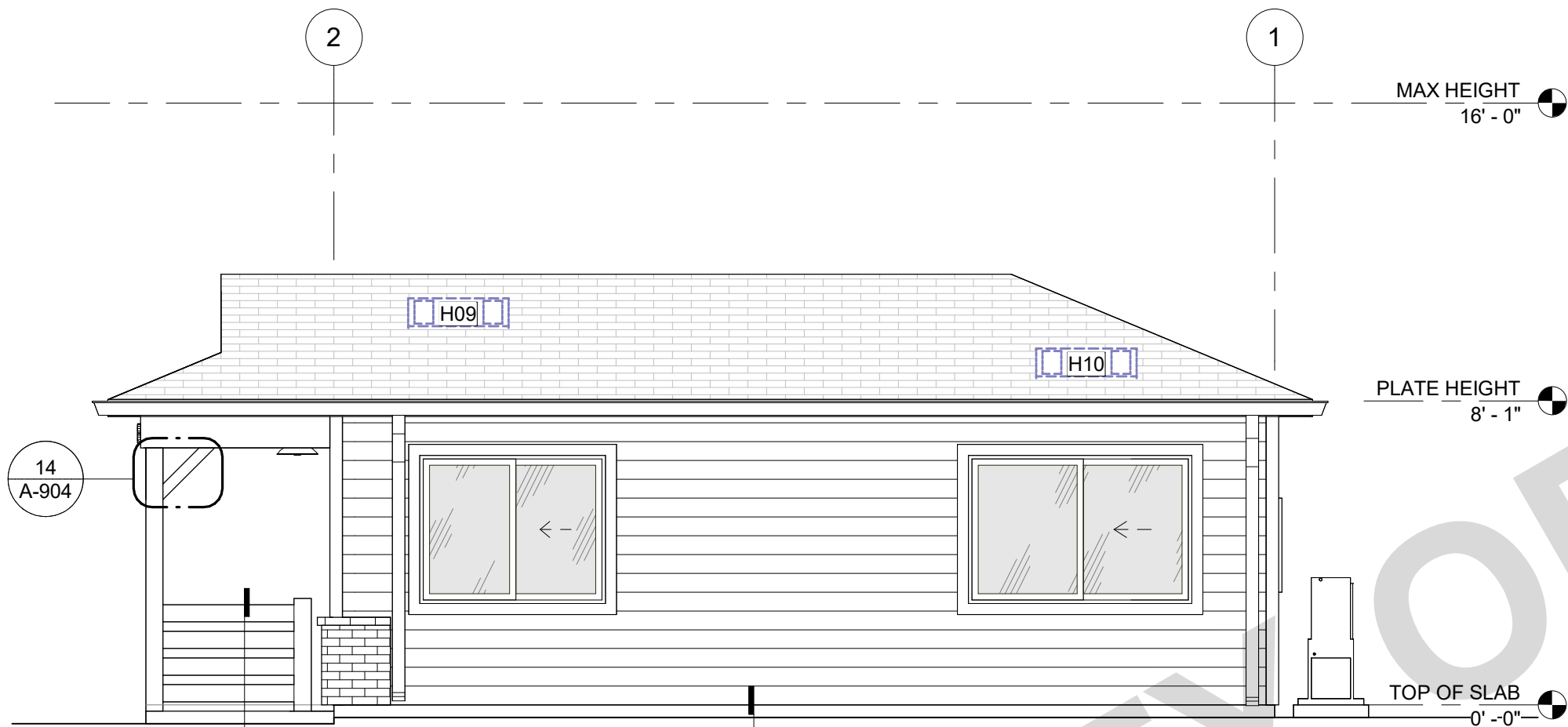
2 LEFT ELEVATION - CALIFORNIA RANCH
A1-101 | A1-201 SCALE: 1/4" = 1'-0"



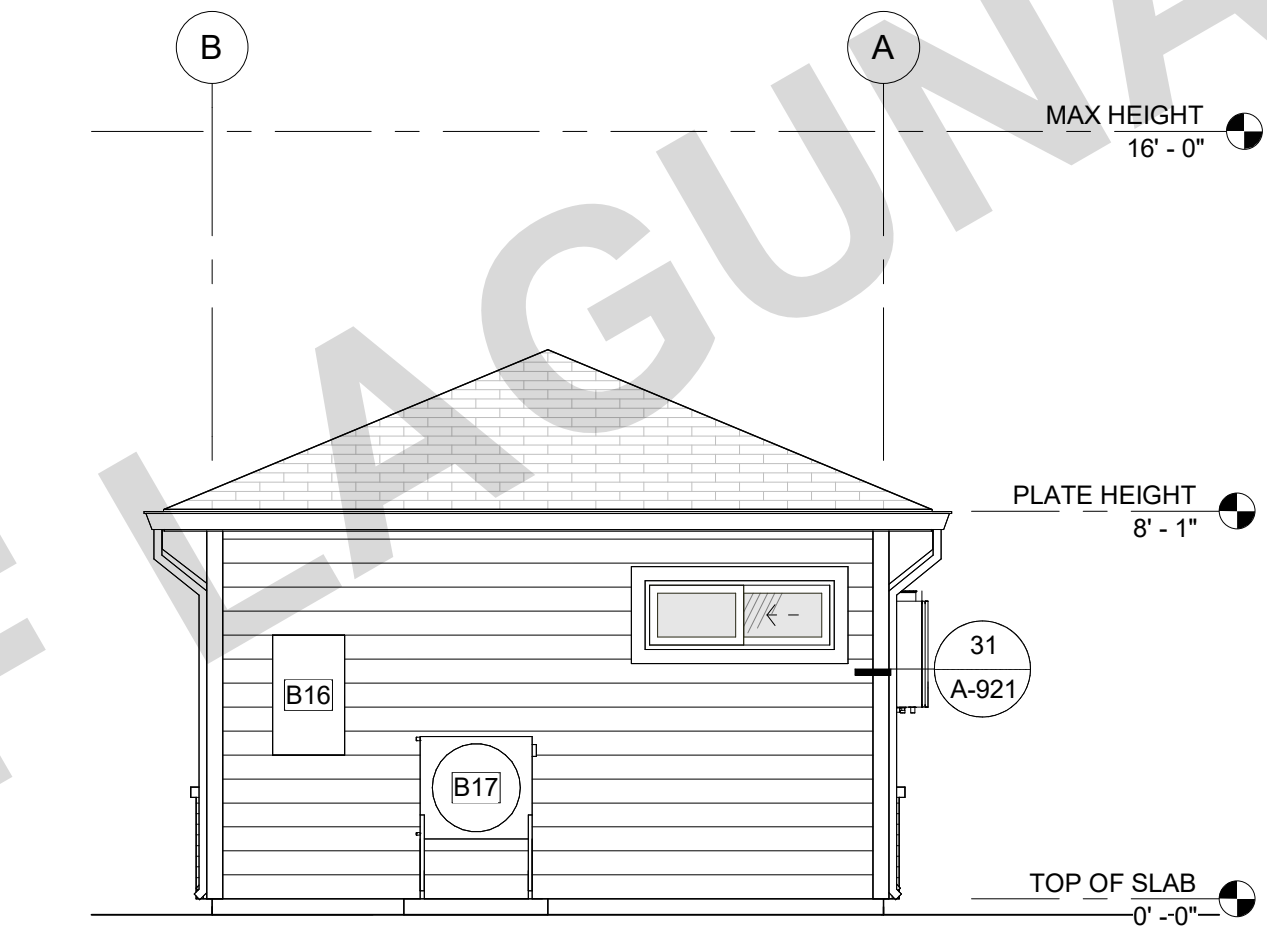
1 FRONT ELEVATION - CALIFORNIA RANCH
A1-101 | A1-201 SCALE: 1/4" = 1'-0"



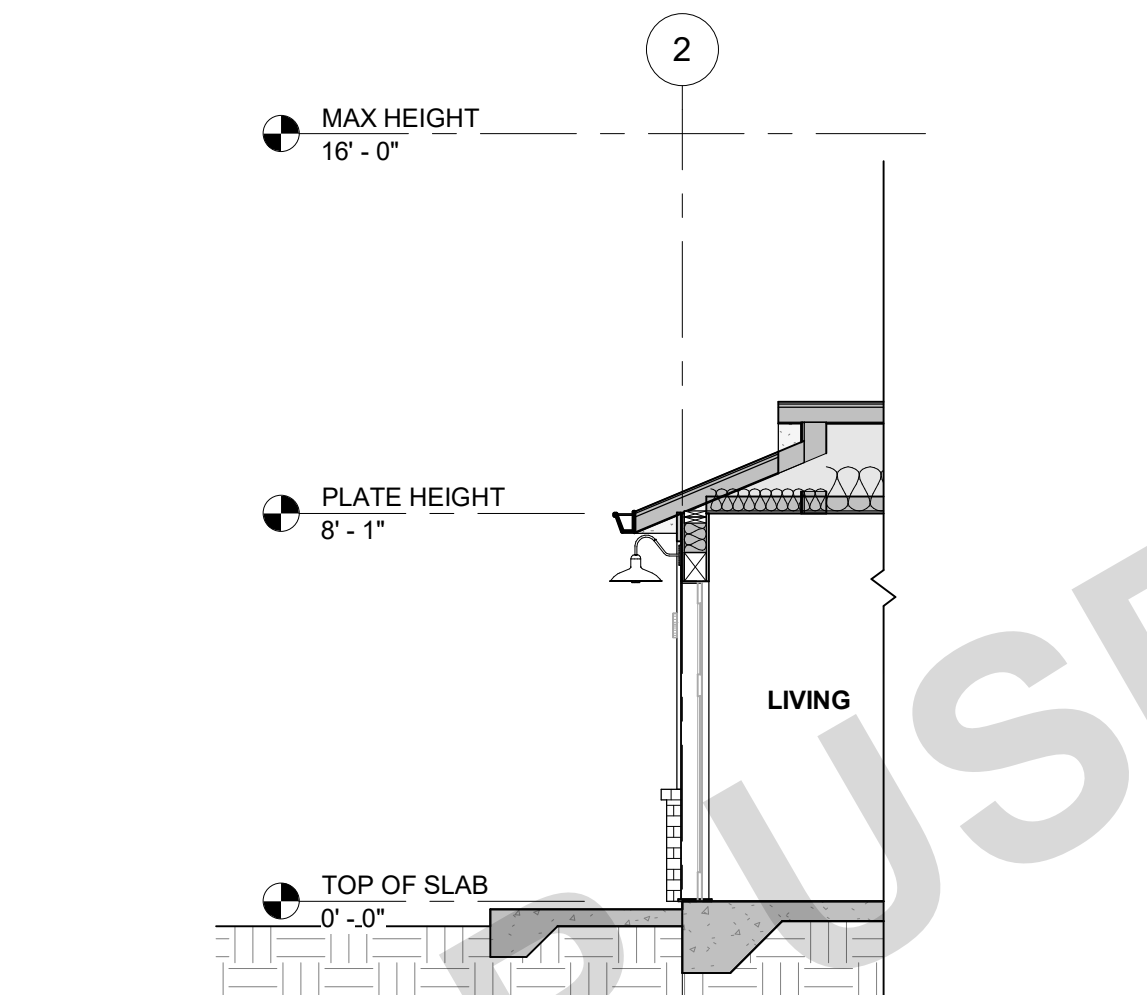
6 RIGHT ELEV - NO PORCH
A1-201 SCALE: 1/4" = 1'-0"



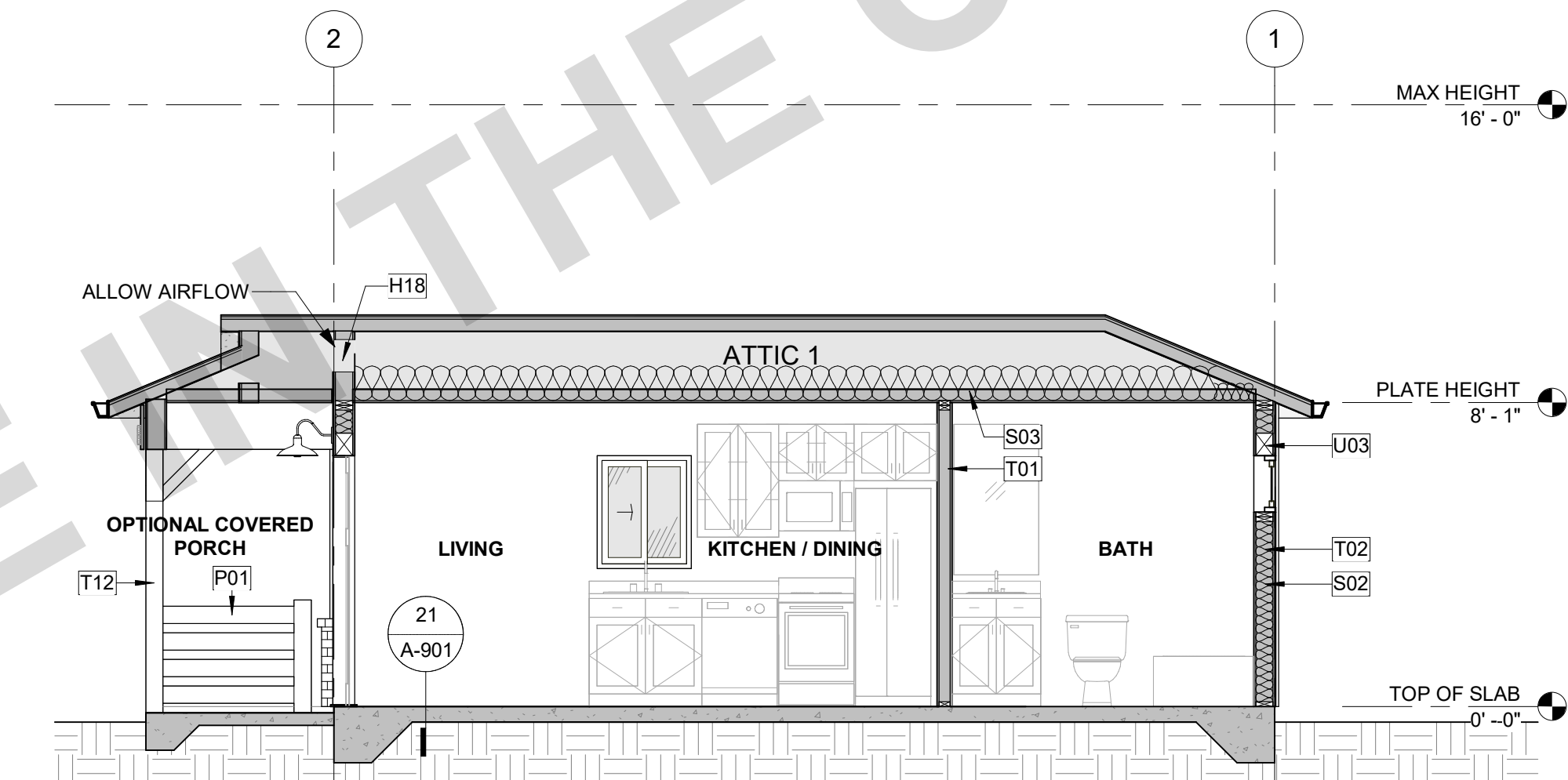
5 RIGHT ELEVATION - CALIFORNIA RANCH
A1-101 | A1-201 SCALE: 1/4" = 1'-0"



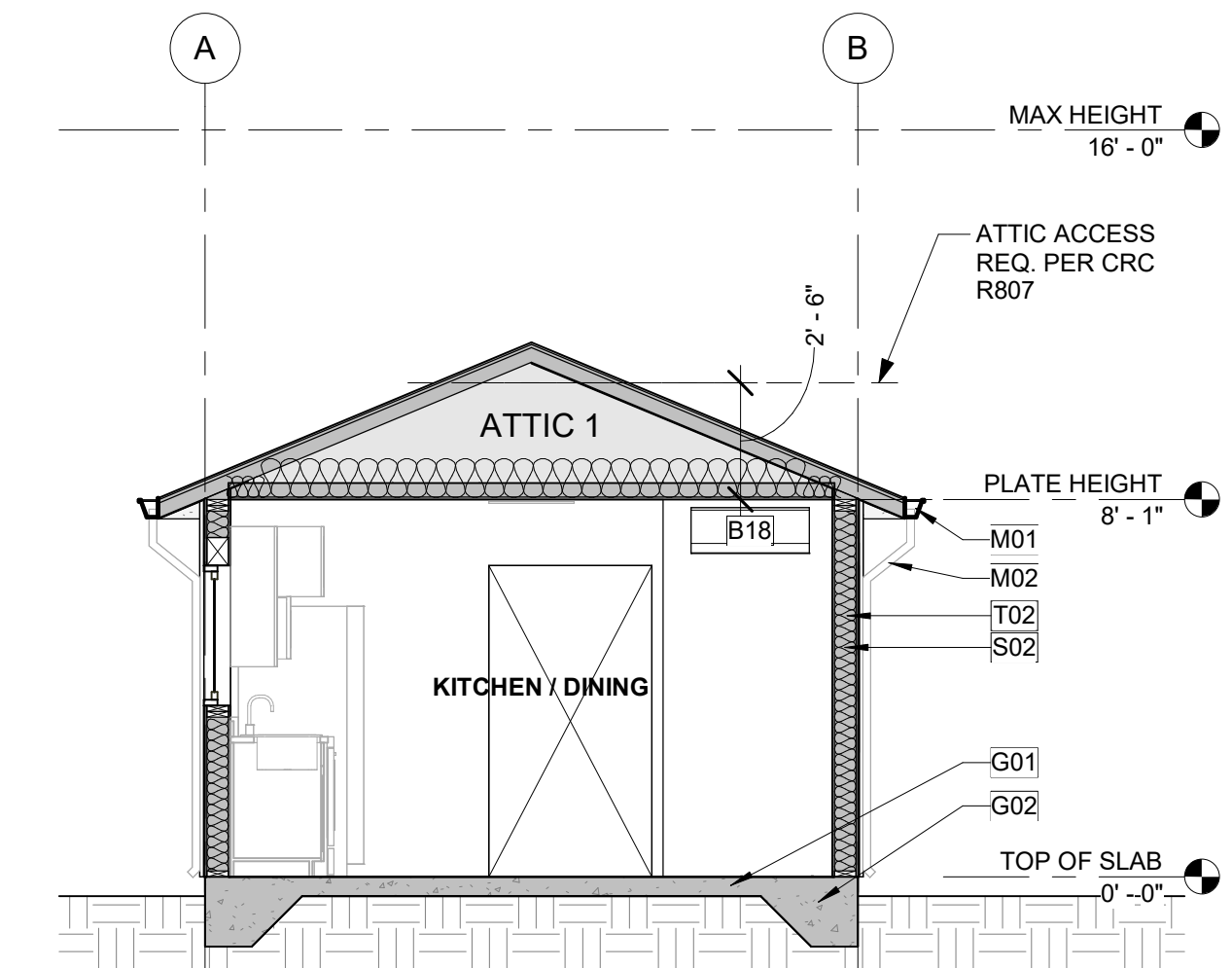
4 REAR ELEVATION - CALIFORNIA RANCH
A1-101 | A1-201 SCALE: 1/4" = 1'-0"



9 SECTION 3 - NO PORCH
A1-101 | A1-201 SCALE: 1/4" = 1'-0"



8 SECTION 2 - CALIFORNIA RANCH
A1-101 | A1-201 SCALE: 1/4" = 1'-0"



7 SECTION 1 - CALIFORNIA RANCH
A1-101 | A1-201 SCALE: 1/4" = 1'-0"

MATERIALS LEGEND HORIZONTAL SIDING

NOTES:

- SEE TITLE SHEET FOR MATERIAL SELECTIONS. APPLICANT OR OWNER TO PROVIDE SIZES, MANUFACTURER, AND COLOR/FINISH SPECIFICATIONS.
- ALL MATERIAL SELECTIONS SHALL COMPLY WITH CRC, SECTION R703.

GRAPHICS LEGEND: (SEE TITLE SHEET, STRIKE THROUGH NON-USED OPTIONS)

HORIZONTAL SIDING 4" MIN. TO 12" MAX. BOARD EXPOSURE
OPTION A: FIBER CEMENT (PER CRC R703.10)
OPTION B: WOOD SIDING (PER CRC 703.5.3)

BRICK WAINSCOT
MASONRY

ASPHALT COMPOSITE ROOF SHINGLES - CLASS C MIN. REQ.
ROOF REFLECTANCE (0.1) MIN. ROOF EMITTANCE (0.85) MIN.
(SHALL COMPLY WITH CRC R905.2.4, CRC R905.1, TABLE R905.1.1(1), TABLE R905.1.1(2) & ASTM D3462)

EAVES, RAKES, & EXT. SOFFIT MATERIAL (SEE REFLECTED CEILING PLAN & DETAILS)
A) EXT. T&G
B) EXT. GRADE FIRE RATED PLYWOOD

OWNER/APP. TO PROVIDE SIZE, MFR, COLOR/FINISH SPECIFICATIONS.
*WHEN WUI IS REQUIRED (SEE G-001) PROVIDE PRODUCT LISTINGS:

COLOR/FINISH:

SIDING:

TRIM:

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 PER **CRC SECTION R302.11**:

- SECTION R302.11**:
 - 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 E136 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** - 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
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 - 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 **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 IN ACCORDANCE WITH AWPA U1.
- REFER TO RCP'S FOR SOFFIT DIMENSIONS AND FURTHER INFORMATION.
- PROVIDE BLOCKING FOR ALL WALLS WHERE WALL HUNG EQUIPMENT AND FIXTURES OCCUR.
- ALL WALL AND CEILING FINISHES SHALL COMPLY WITH **CRC 803.13** FOR MAXIMUM FLAME SPREAD AND SMOKE DENSITY.

GENERAL ELEVATION NOTES

- REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS
- SEE DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- REFER TO ROOF PLAN FOR OVERHANGS, FASCIA PER DETAILS. PROVIDE ALUMINUM GUTTER. SEE ROOF PLAN FOR APPROXIMATE DOWNSPOUT LOCATIONS, U.N.O.
- REFER TO DOOR AND WINDOW SCHEDULES AND TYPES FOR DOOR AND WINDOW INFORMATION.
- THE NOMINAL THICKNESS AND ATTACHMENT OF EXTERIOR WALL COVERINGS SHALL BE IN ACCORDANCE WITH CRC TABLE R703.3(1).
- GYPSUM SHEATHING SHALL BE ATTACHED TO EXTERIOR WALLS IN ACCORDANCE WITH CRC TABLE R602.3.
- CLADDING ATTACHMENT OVER FOAM SHEATHING TO WOOD FRAMING IN ACCORDANCE WITH CRC R703.15. REFER TO CRC R703.8 FOR ANCHORED MASONRY OR STONE VENEER INSTALLED OVER FOAM SHEATHING.

KEYNOTES

- B16 ELECTRIC PANEL LOCATION. PROVIDE PROTECTION PER CPC 507.25 & CMC 305.1.1. SEE GENERAL MEP NOTES 7 & 8 ON SHEET A-111 FOR MORE INFO.
- B17 1-TON ZONE HEAT PUMP CONDENSER UNIT. REFER TO PLANS FOR LOCATION OF INDOOR FAN COIL UNITS. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION. PROVIDE CONCRETE PAD MIN. 6" LARGER THAN UNIT IN EACH DIRECTION, 3" MIN. ABOVE GRADE. PROVIDE PROTECTION PER CPC 507.25 & CMC 305.1.1. SEE GENERAL MEP NOTES 7 & 8 ON SHEET A-111 FOR MORE INFO. SEE DETAIL 53/A-902.
- B18 FAN COIL @ 80" A.F.F. TO BOTTOM OF UNIT. PROVIDE DEDICATED WALL OUTLET. INSTALL PER MANUFACTURER'S SPECIFICATIONS. REFER TO PLANS FOR LOCATION OF OUTDOOR CONDENSING UNIT. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION.
- G01 4" CONCRETE SLAB ON GRADE. REFER TO STRUCTURAL PLANS
- G02 CONCRETE FOOTING. REFER TO STRUCTURAL PLANS
- H09 ATTIC VENT (HIGH); UPPER VENTS SHALL BE LOCATED NOT MORE THAN 3 FEET BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. PAINT FINISH TO MATCH ROOF COLOR, SEE VENTING CALCS.
- H10 ATTIC VENT (LOW); LOWER VENTS SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE PER R806.2 EXCEPTION 2. PROVIDE DAMPER TO PROVIDE 1" CLR. AIRSPACE WHERE REQ. PAINT FINISH TO MATCH ROOF COLOR. SEE VENTING CALCS.
- H18 WHERE AIRFLOW IS BLOCKED BY SHEAR PANEL, PROVIDE MINIMUM OF 12"x12" BLOCKED OPENING TO PROVIDE CROSS-VENTILATION.
- K01 HORIZONTAL SIDING. SEE MATERIALS LEGEND FOR MORE INFORMATION.
- K08 BRICK VENEER WAINSCOT. SEE SHEET A-913 FOR DETAILS AND SEE MATERIALS LEGEND FOR MORE INFORMATION.
- K09 COMPOSITE ROOF SHINGLES. ROOF REFLECTANCE (0.1) MIN. ROOF EMITTANCE (0.85) MIN. SEE MATERIALS LEGEND FOR MORE INFORMATION.
- L03 HORIZONTAL TRIM. SEE DETAILS FOR MORE INFORMATION.
- M01 GUTTER. CONNECT TO DOWNSPOUT. PROVIDE MEANS TO PREVENT ACCUMULATION OF LEAVES AND DEBRIS IN GUTTER PER CRC R337.5.4. SEE DETAIL 12/A-903.
- M02 DOWNSPOUT TO SPLASH BLOCK BELOW. SEE DETAIL 43/A-904.
- P01 DECORATIVE PORCH RAILING, HEIGHT OF 24" MIN. TO 48" MAX. REQUIRED FOR WOOD: PRIMER & 2 COATS OF EXTERIOR GRADE PAINT. REQUIRED: 30 INCHES MAX VERTICAL DROP IS PROHIBITED WITHIN 36 INCHES (HORIZONTALLY) OF THE PORCH, SEE DETAIL FOR MORE INFORMATION.
- S02 EXTERIOR WALL INSULATION. REFER TO TITLE 24 (R-21 MIN.)
- S03 R-30 MIN. ROOF INSULATION; RADIANT BARRIER REQUIRED (VERIFY WITH TITLE 24 REPORT)
- T01 2X4 WOOD STUD WALL. REFER TO STRUCTURAL.
- T02 2X6 WOOD STUD WALL. REFER TO STRUCTURAL.
- T12 WOOD POST. SEE STRUCTURAL - REQUIRED: PRIMER & 2 COATS OF EXTERIOR GRADE PAINT.
- U03 WOOD BEAM / HEADER. REFER TO STRUCTURAL.



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PRE-APPROVED ADU

CITY OF LAGUNA NIGUEL

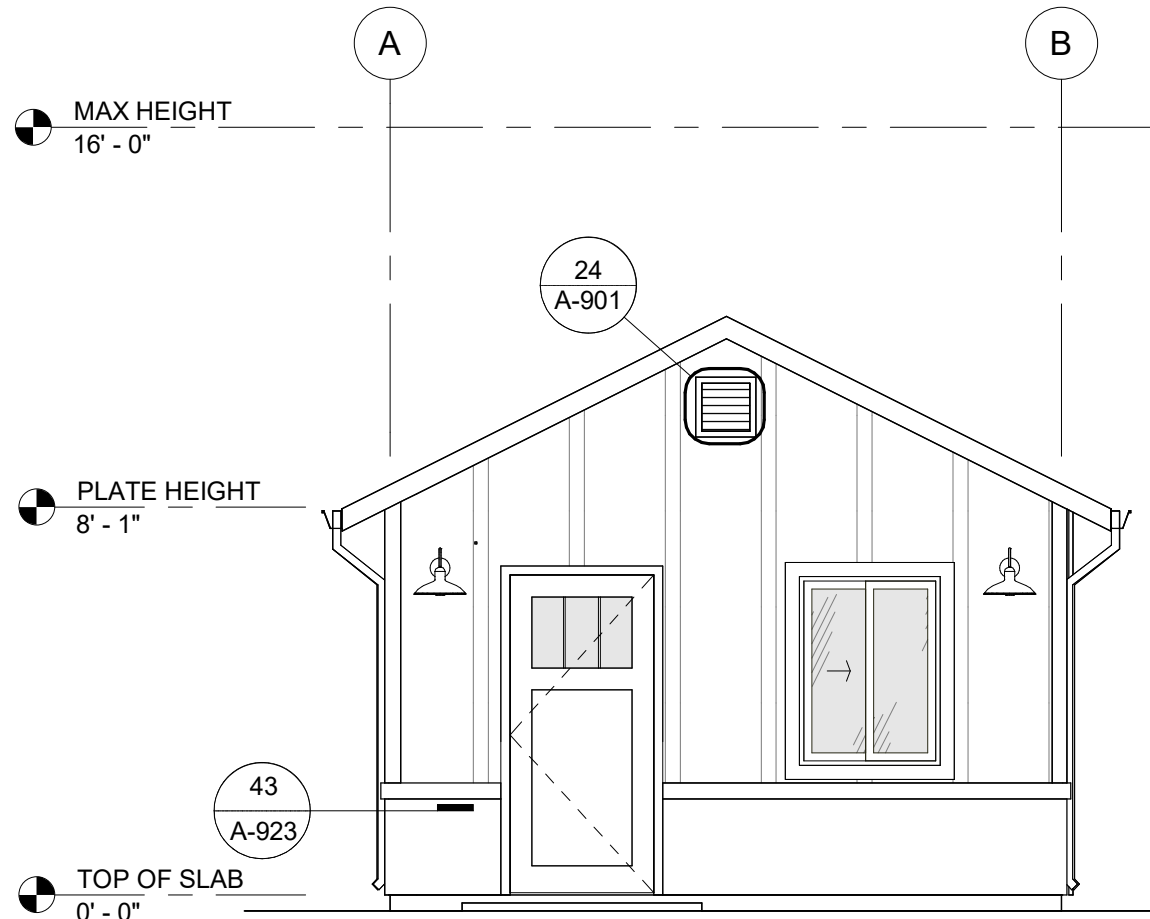
ELEVATIONS & SECTIONS - CAL
RANCH

DATE
02/05/2025

SHEET

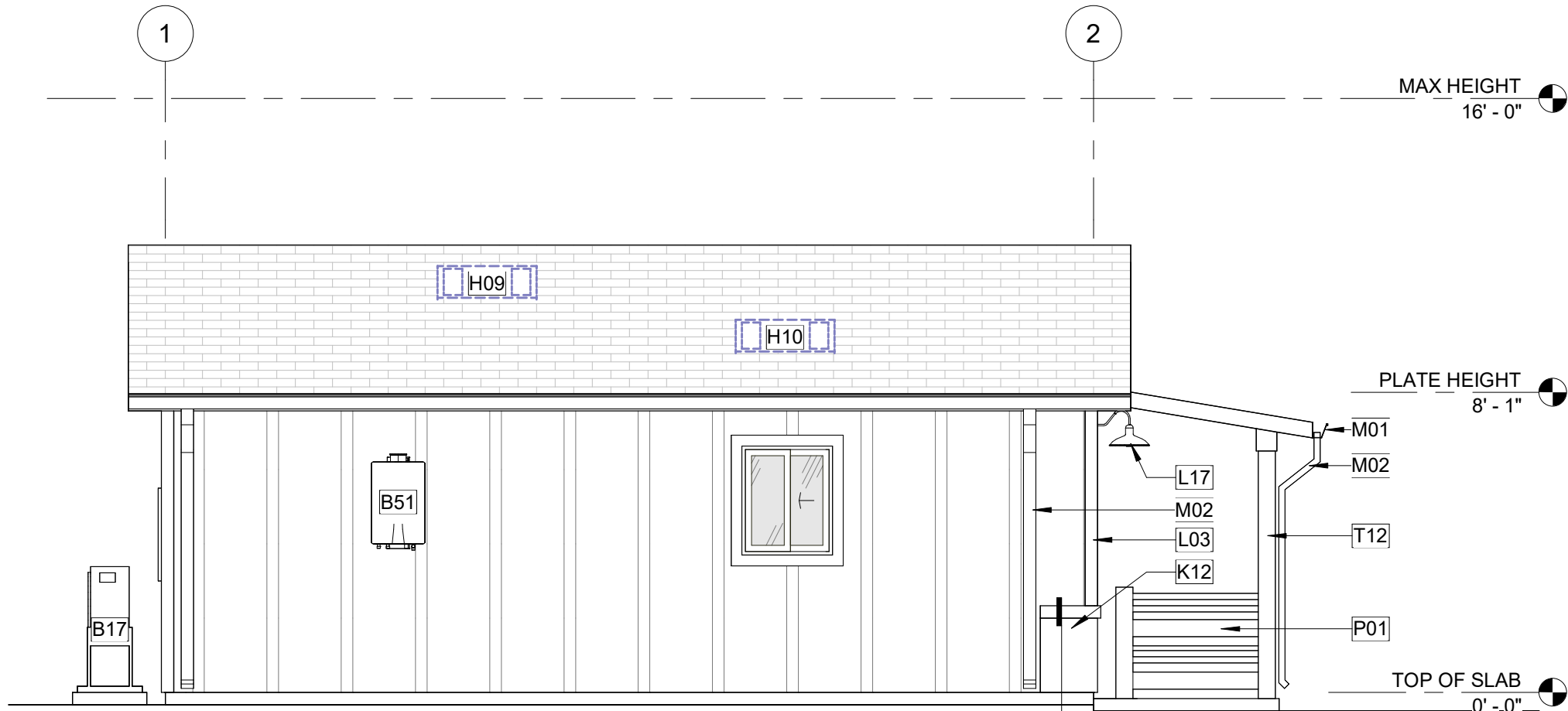
A1-201

PUBLIC SET



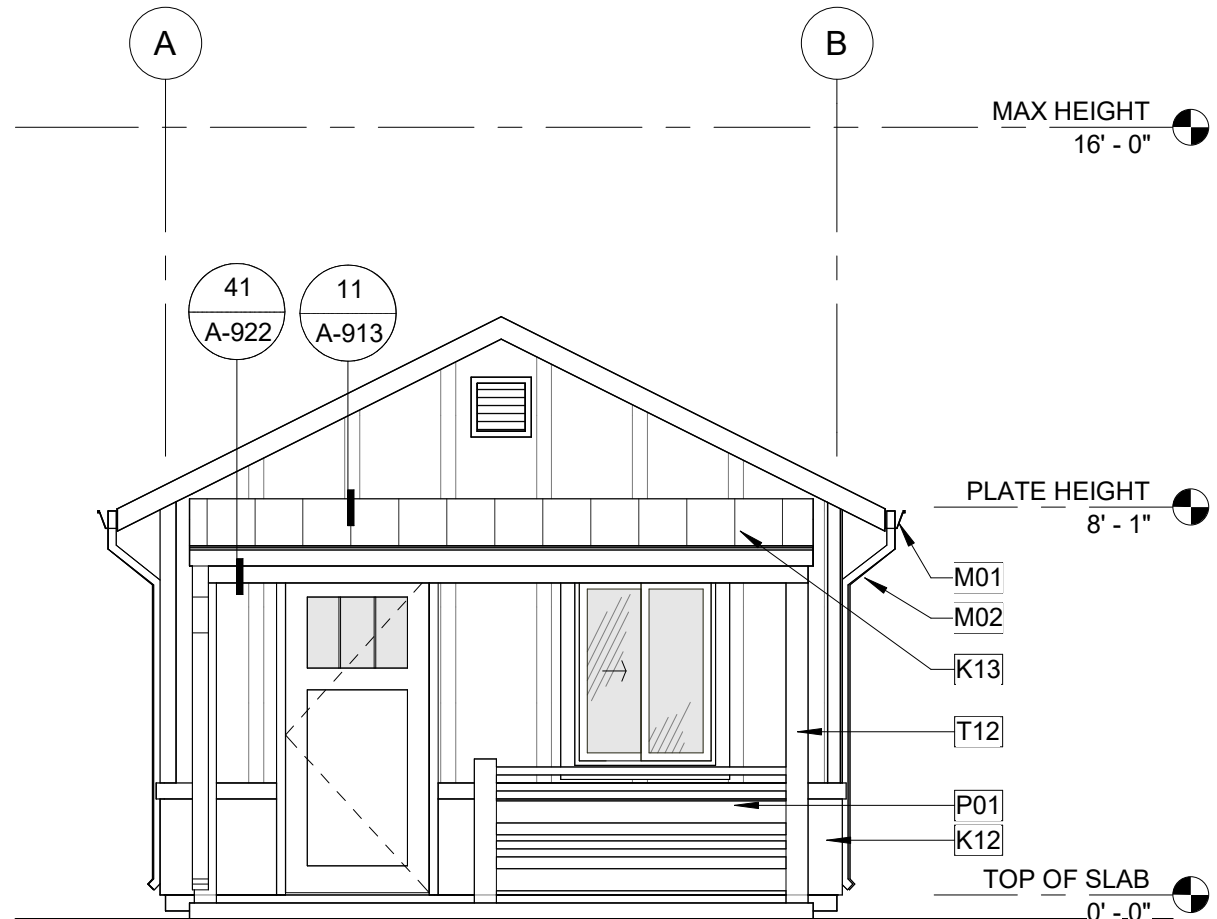
3 FRONT ELEV - NO PORCH

A1-202 SCALE: 1/4" = 1'-0"



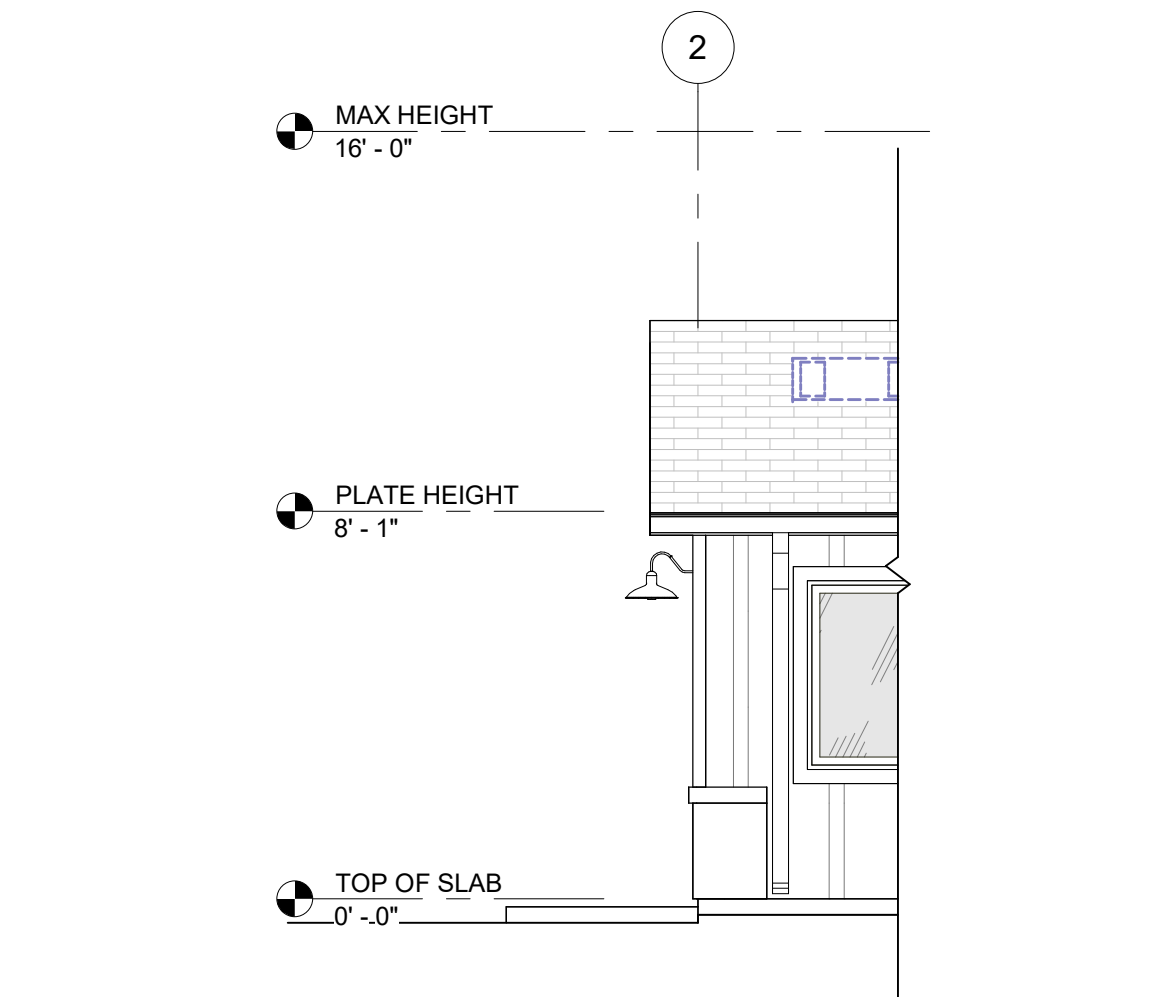
2 LEFT ELEVATION - MODERN FARMHOUSE

A1-101 | A1-202 SCALE: 1/4" = 1'-0"



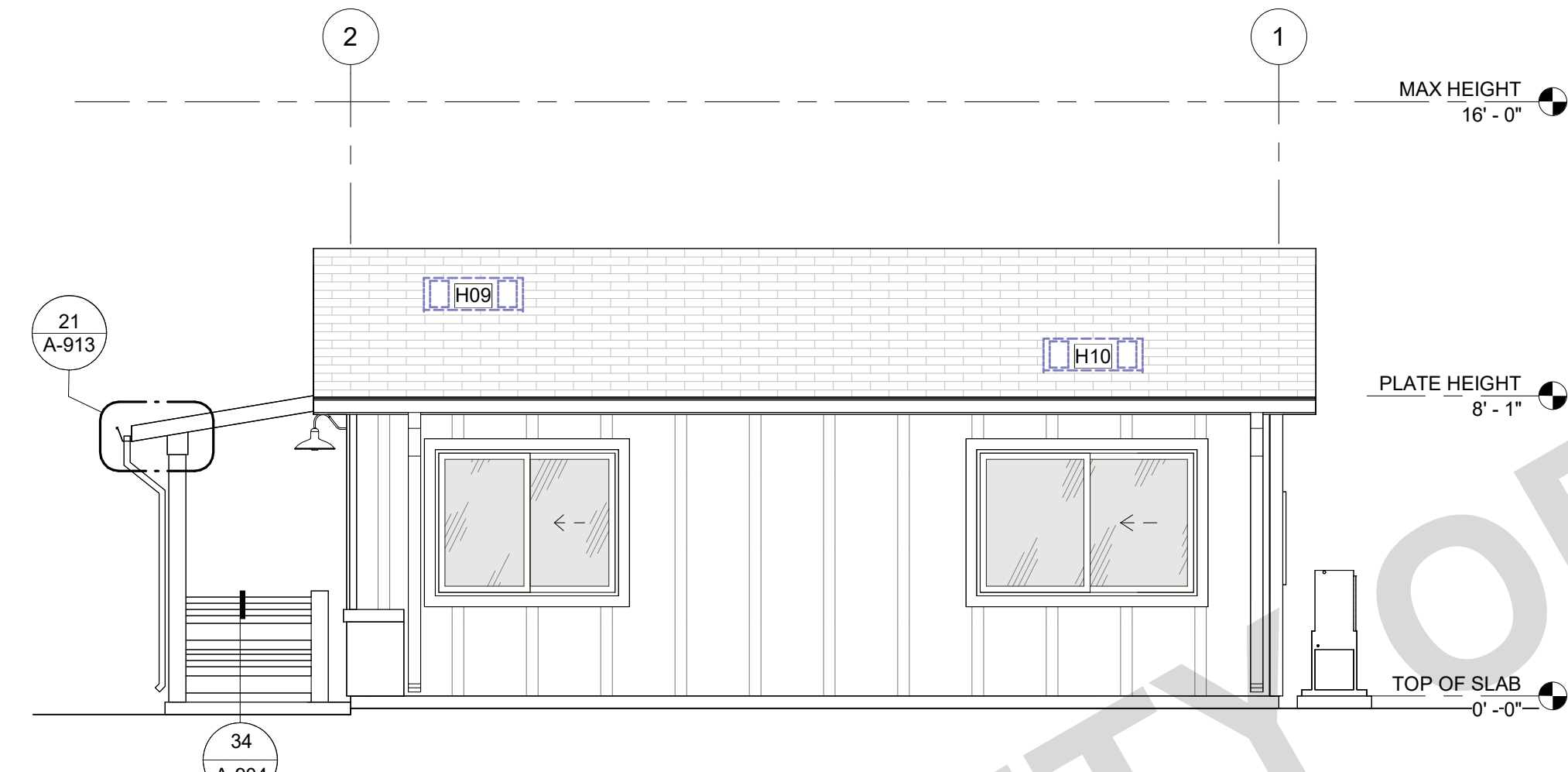
1 FRONT ELEVATION - MODERN FARMHOUSE

A1-101 | A1-202 SCALE: 1/4" = 1'-0"



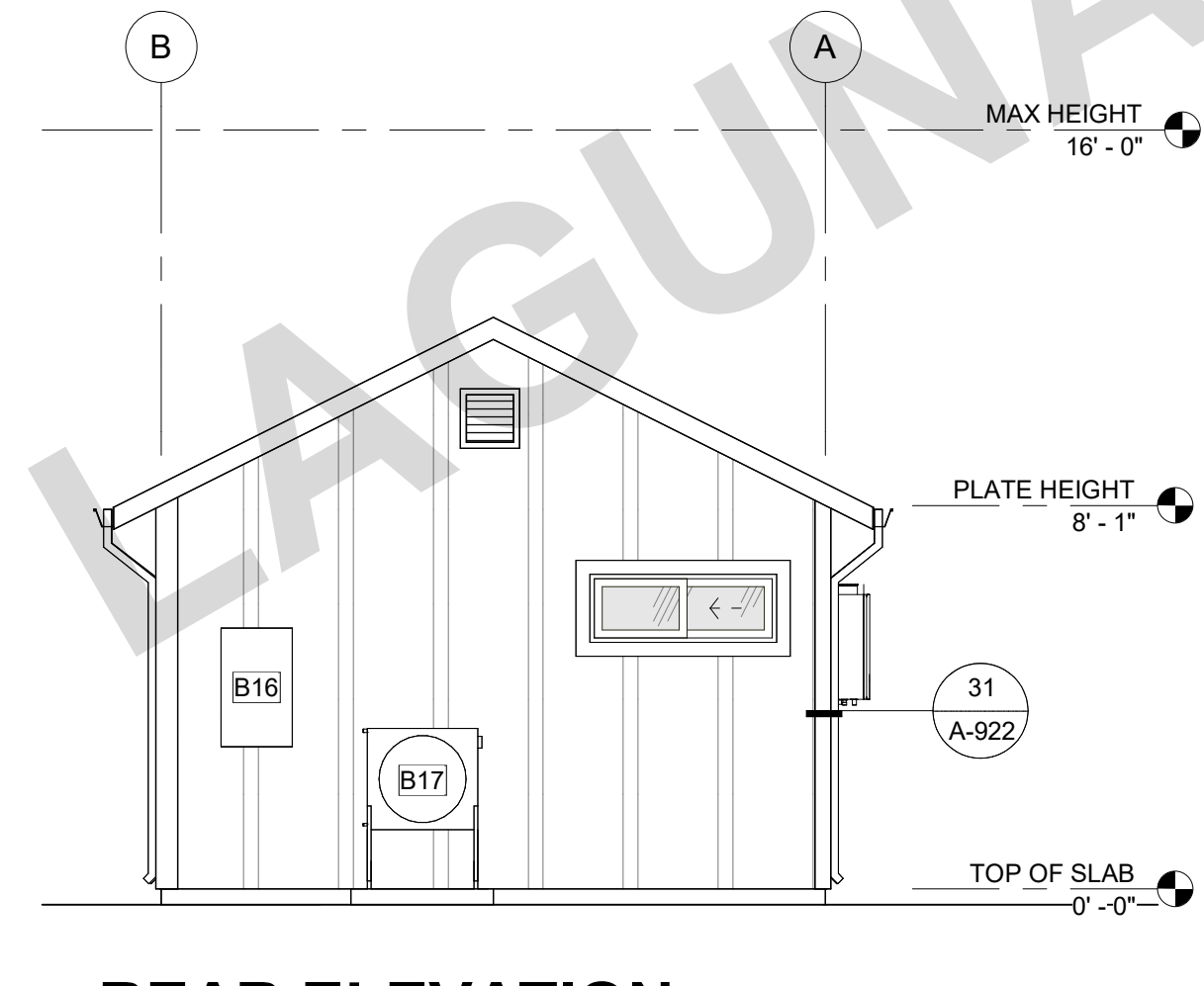
6 RIGHT ELEV - NO PORCH

A1-202 SCALE: 1/4" = 1'-0"



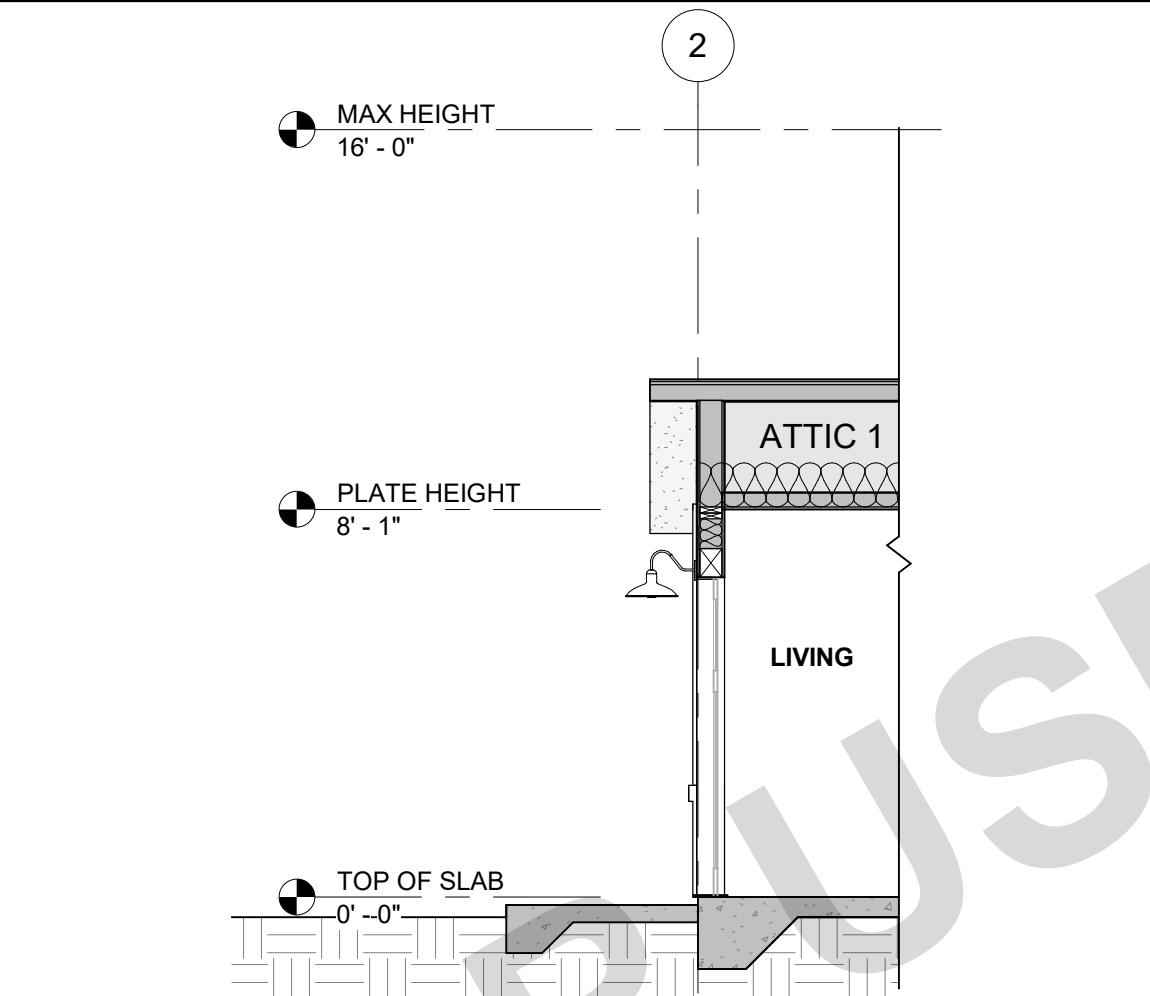
5 RIGHT ELEVATION - MODERN FARMHOUSE

A1-101 | A1-202 SCALE: 1/4" = 1'-0"



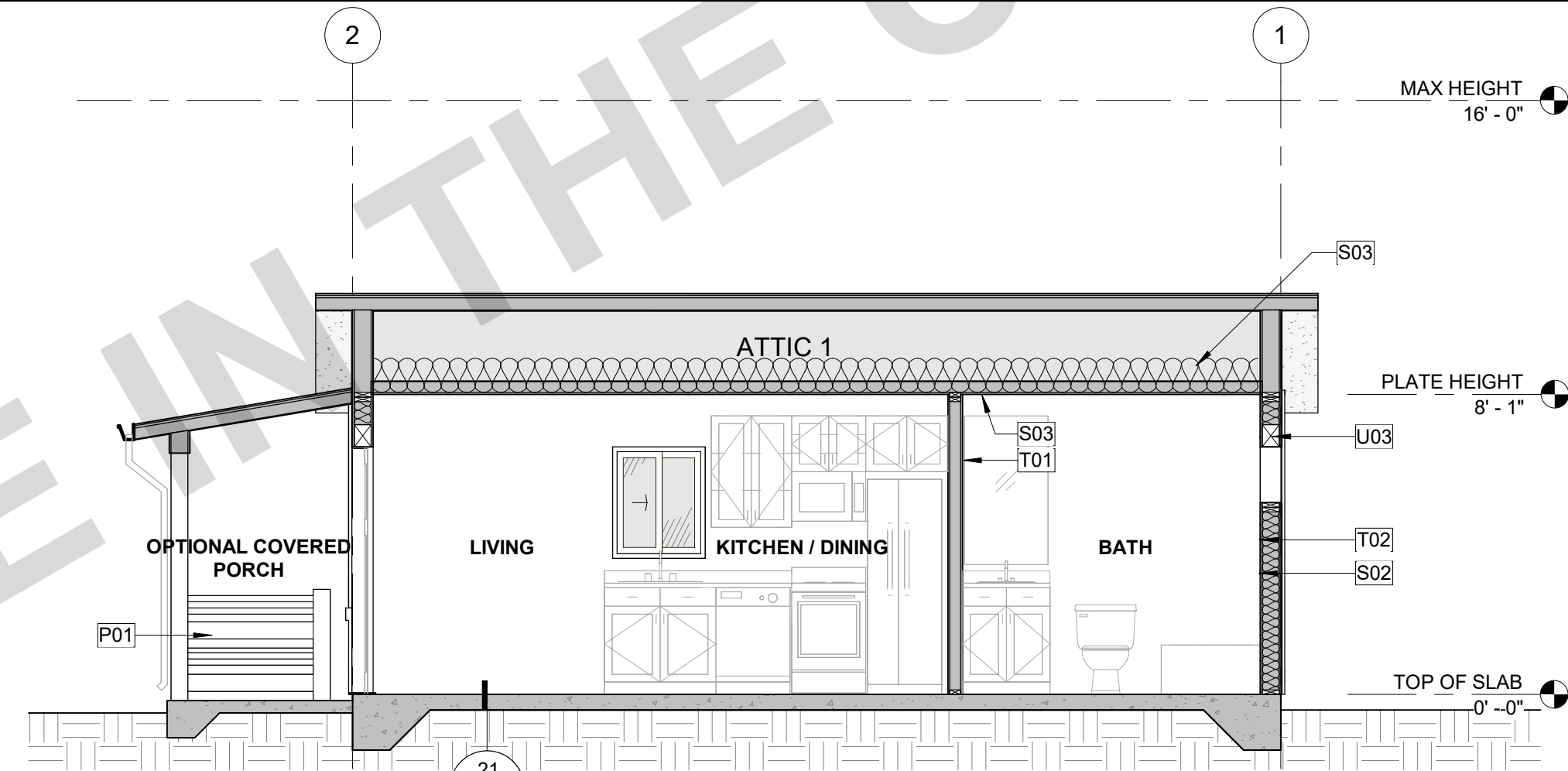
4 REAR ELEVATION - MODERN FARMHOUSE

A1-101 | A1-202 SCALE: 1/4" = 1'-0"



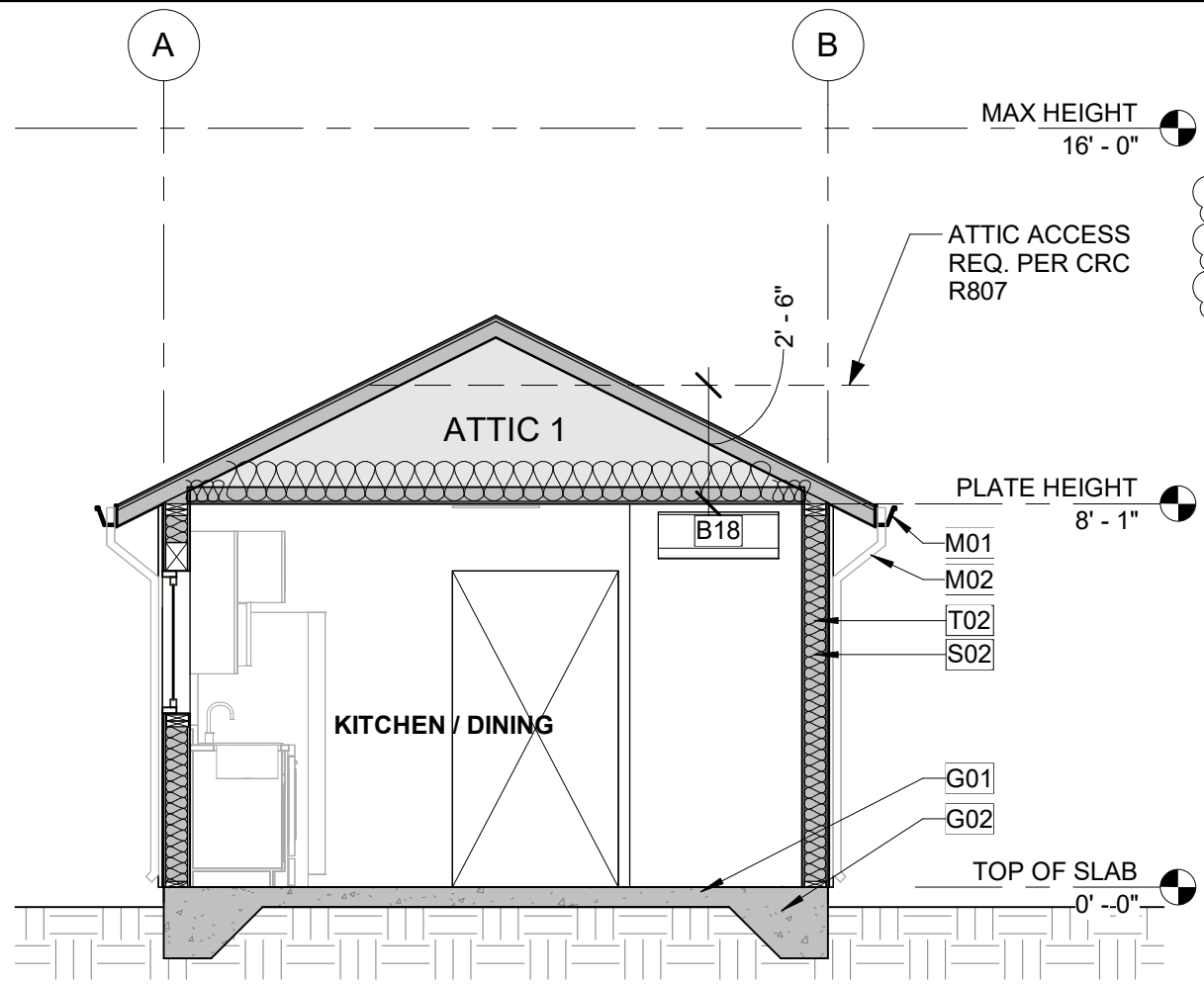
9 SECTION 3 - NO PORCH

A1-101 | A1-202 SCALE: 1/4" = 1'-0"



8 SECTION 2 - MODERN FARMHOUSE

A1-101 | A1-202 SCALE: 1/4" = 1'-0"



7 SECTION 1 - MODERN FARMHOUSE

A1-101 | A1-202 SCALE: 1/4" = 1'-0"

MATERIALS LEGEND BOARD & BATTEN

NOTES:

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- ALL MATERIAL SELECTIONS SHALL COMPLY WITH CRC, SECTION R703.
- A PROJECT SITE LOCATED WITHIN WUI SHALL COMPLY WITH THE CRC SECTION R337. IF WUI APPROVED PRODUCTS ARE REQUIRED, PROVIDE SELECTED PRODUCT LISTINGS IN THE SPACES PROVIDED.
- APPROVED PRODUCT LISTINGS CAN BE FOUND IN THE (CURRENT) CAL-FIRE STATE FIRE MARSHAL LISTED WILDLAND URBAN INTERFACE WUI PRODUCT HANDBOOK.
- (ALTERNATIVELY), IF PROJECT SITE REQUIRES WUI COMPLIANCE, AND THE PRODUCT SELECTIONS ARE NOT BML LISTED, NOR IN THE HANDBOOK, MATERIALS SHALL COMPLY WITH THE PRESCRIPTIVE STANDARDS OF CHAPTER 7A. INDICATE IN THE MATERIALS LEGEND WHEN THIS OCCURS AND PROVIDE DOCUMENTATION OF COMPLIANCE FOR APPROVAL.

GRAPHICS LEGEND: (SEE TITLE SHEET; STRIKE THROUGH NON-USED OPTIONS)

BOARD & BATTEN SIDING
4" MIN. TO 15" MAX. BOARD EXPOSURE
A) FIBER CEMENT (PER CRC R703.10)
B) WOOD SIDING (PER CRC 703.5.3)

STUCCO WAINSCOT
LATHE & PLASTER

ASPHALT COMPOSITE ROOF SHINGLES - CLASS C MIN. REQ. - CLASS A REQ FOR WUI
ROOF REFLECTANCE (0.1) MIN. ROOF EMITTANCE (0.85) MIN.
(SHALL COMPLY WITH CRC R905.2.4, CRC R905.1, TABLE R905.1.1(1), TABLE R905.1.1(2) & ASTM D3462)

EAVES, RAKES, & EXT. SOFFIT MATERIAL (SEE REFLECTED CEILING PLAN & DETAILS)
A) EXT. T&G (NOTE: 1X T&G REQUIRES TYPE X GYP. FOR WUI COMPLIANCE)
B) FIBER CEMENT
C) EXT. GRADE FIRE RATED PLYWOOD

OWNER/APP. TO PROVIDE SIZE, MFR. COLOR/FINISH SPECIFICATIONS.
*WHEN WUI IS REQUIRED (SEE G-001) PROVIDE PRODUCT LISTINGS:

COLOR/FINISH:

SIDING:

TRIM:

SECTIONS GENERAL NOTES

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- FIREBLOCKING TO BE LOCATED PER **CRC SECTION R302.11**:
 - SECTION R302.11**:
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 - HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET.
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 - 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
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 - CELLULOSE INSULATION INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E119 OR UL 263, FOR THE SPECIFIC APPLICATION.
- PER **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 IN ACCORDANCE WITH AWPA U1.
- REFER TO RCP'S FOR SOFFIT DIMENSIONS AND FURTHER INFORMATION.
- PROVIDE BLOCKING FOR ALL WALLS WHERE WALL HUNG EQUIPMENT AND FIXTURES OCCUR.
- ALL WALL AND CEILING FINISHES SHALL COMPLY WITH **CRC 803.13** FOR MAXIMUM FLAME SPREAD AND SMOKE DENSITY.

GENERAL ELEVATION NOTES

- REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS
- SEE DETAIL FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- REFER TO ROOF PLAN FOR OVERHANGS, FASCIA PER DETAILS. PROVIDE ALUMINUM GUTTER. SEE ROOF PLAN FOR APPROXIMATE DOWNSPOUT LOCATIONS, U.N.O.
- REFER TO DOOR AND WINDOW SCHEDULES AND TYPES FOR DOOR AND WINDOW INFORMATION.
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KEYNOTES

- B16 ELECTRIC PANEL LOCATION. PROVIDE PROTECTION PER CPC 507.25 & CMG 305.1.1. SEE GENERAL MEP NOTES 7 & 8 ON SHEET A-111 FOR MORE INFO.
- B17 MULTI-ZONE HEAT PUMP CONDENSER UNIT. REFER TO PLANS FOR LOCATION OF INDOOR FAN COIL UNITS. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION. PROVIDE CONCRETE PAD MIN. 6" LARGER THAN UNIT IN EACH DIRECTION, 3" MIN. ABOVE GRADE. PROVIDE PROTECTION PER CPC 507.25 & CMG 305.1.1. SEE GENERAL MEP NOTES 7 & 8 ON SHEET A-111 FOR MORE INFO. SEE DETAIL 53/A-902.
- B18 FAN COIL @ 80" A.F.F. TO BOTTOM OF UNIT, PROVIDE DEDICATED WALL OUTLET. INSTALL PER MANUFACTURER'S SPECIFICATIONS. REFER TO PLANS FOR LOCATION OF OUTDOOR CONDENSING UNIT. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION.
- B51 TANKLESS WATER HEATER.
- G01 4" CONCRETE SLAB ON GRADE. REFER TO STRUCTURAL PLANS
- G02 CONCRETE FOOTING, REFER TO STRUCTURAL PLANS
- H09 ATTIC VENT (HIGH); UPPER VENTS SHALL BE LOCATED NOT MORE THAN 3 FEET BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. PAINT FINISH TO MATCH ROOF COLOR, SEE VENTING CALC'S.
- H10 ATTIC VENT (LOW); LOWER VENTS SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE PER R606.2 EXCEPTION 2. PROVIDE DAMPER TO PROVIDE 1" CLR. AIRSPACE WHERE REQ. PAINT FINISH TO MATCH ROOF COLOR, SEE VENTING CALC'S.
- K12 STUCCO VENEER WAINSCOT, SEE DETAIL XX & XXA-XXX FOR DETAILS AND SEE MATERIALS LEGEND FOR MORE INFORMATION.
- K13 STANDING SEAM METAL ROOF. SEE MATERIALS LEGEND FOR MORE INFORMATION.
- L03 HORIZONTAL TRIM, SEE DETAILS FOR MORE INFORMATION.
- L17 EXTERIOR LIGHT. SEE DETAILS FOR MORE INFORMATION.
- M01 GUTTER, CONNECT TO DOWNSPOUT. PROVIDE MEANS TO PREVENT ACCUMULATION OF LEAVES AND DEBRIS IN GUTTER PER CRC R337.5.4. SEE DETAIL 12/A-903.
- M02 DOWNSPOUT TO SPLASH BLOCK BELOW. SEE DETAIL 43/A-904.
- P01 DECORATIVE PORCH RAILING, HEIGHT OF 24" MIN. TO 48" MAX. REQUIRED FOR WOOD: PRIMER & 2 COATS OF EXTERIOR GRADE PAINT. REQUIRED: 30 INCHES MAX VERTICAL DROP IS PROHIBITED WITHIN 36 INCHES (HORIZONTALLY) OF THE PORCH, SEE DETAIL FOR MORE INFORMATION.
- S02 EXTERIOR WALL INSULATION. REFER TO TITLE 24 (R-21 MIN.)
- S03 R-30 MIN ROOF INSULATION; RADIANT BARRIER REQUIRED (VERIFY WITH TITLE 24 REPORT)
- T01 2X4 WOOD STUD WALL. REFER TO STRUCTURAL.
- T02 2X6 WOOD STUD WALL. REFER TO STRUCTURAL.
- T12 WOOD POST, SEE STRUCTURAL - REQUIRED: PRIMER & 2 COATS OF EXTERIOR GRADE PAINT.
- U03 WOOD BEAM / HEADER, REFER TO STRUCTURAL.



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PRE-APPROVED ADU

CITY OF LAGUNA NIGUEL

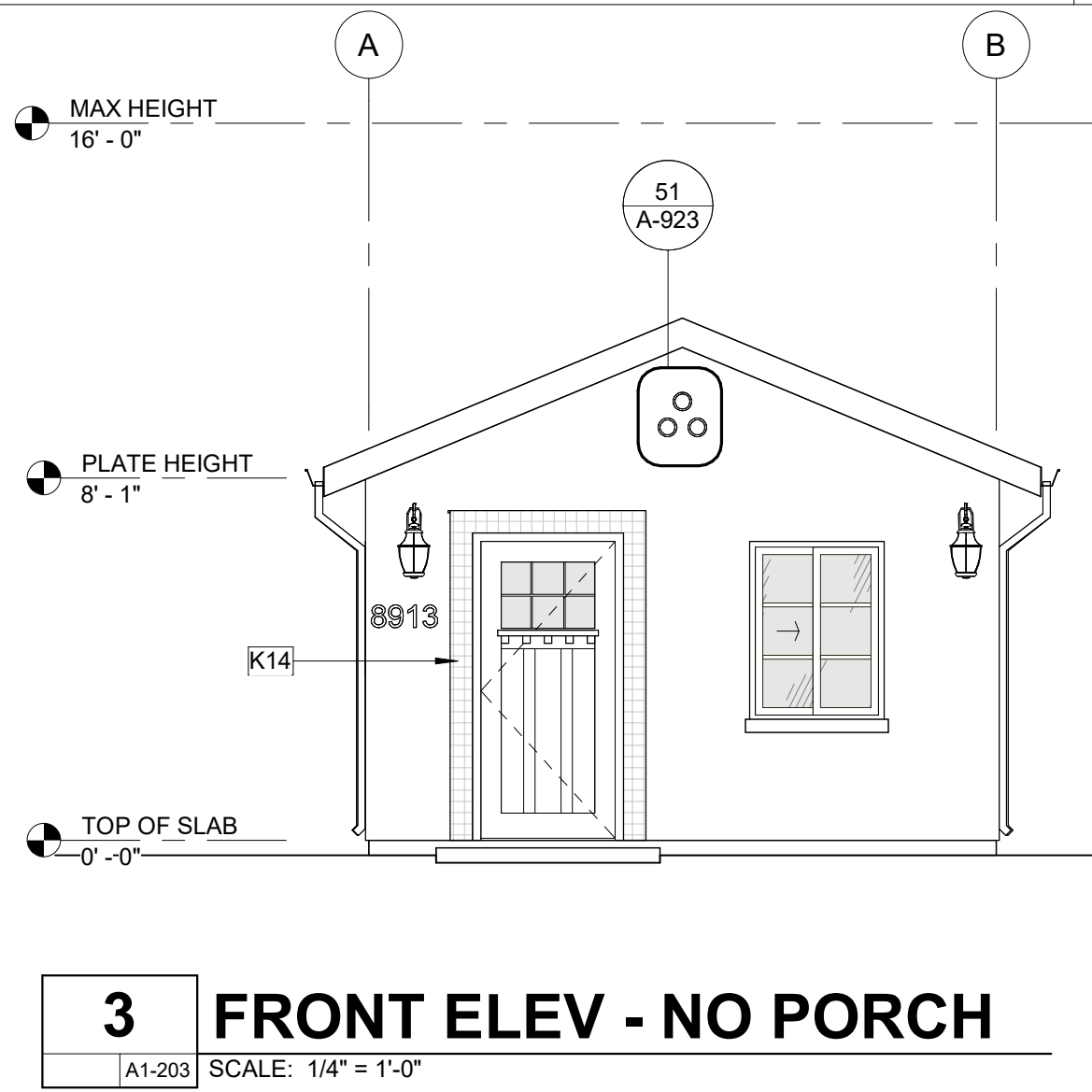
ELEVATIONS & SECTIONS -
MODERN FARMHOUSE

PUBLIC SET

DATE
02/05/2025
SHEET

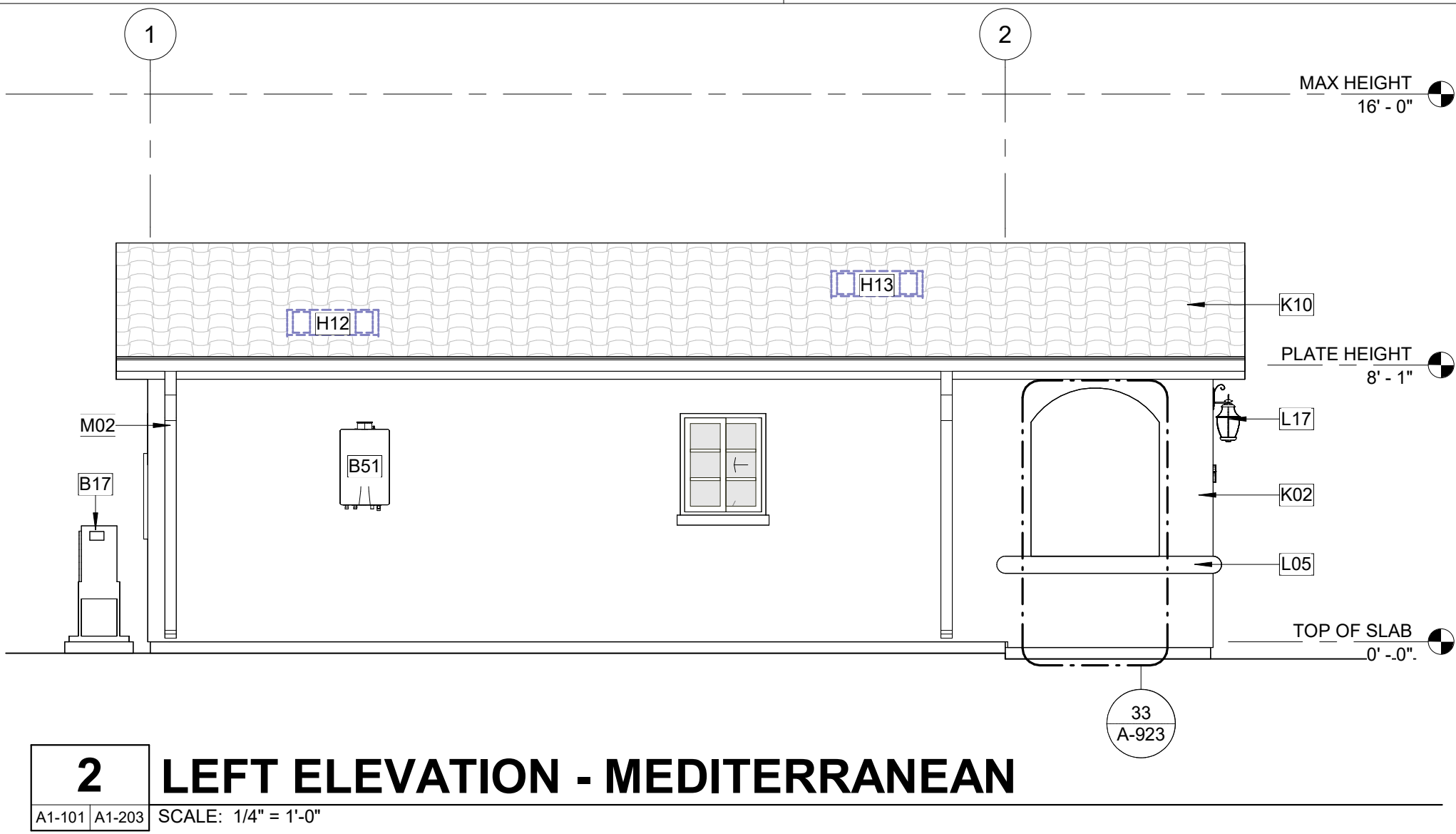
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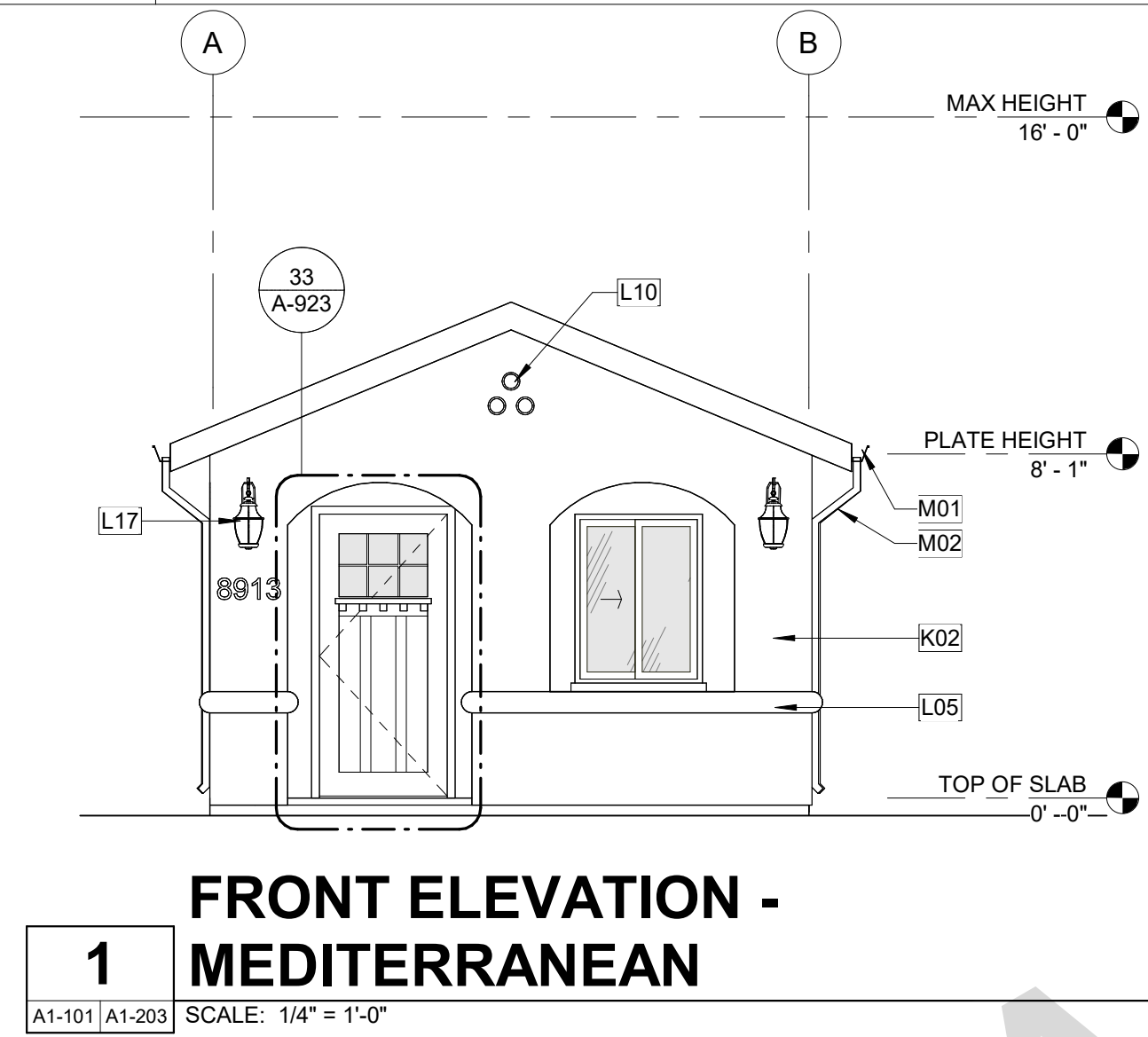
3 FRONT ELEV - NO PORCH

A1-203 SCALE: 1/4" = 1'-0"



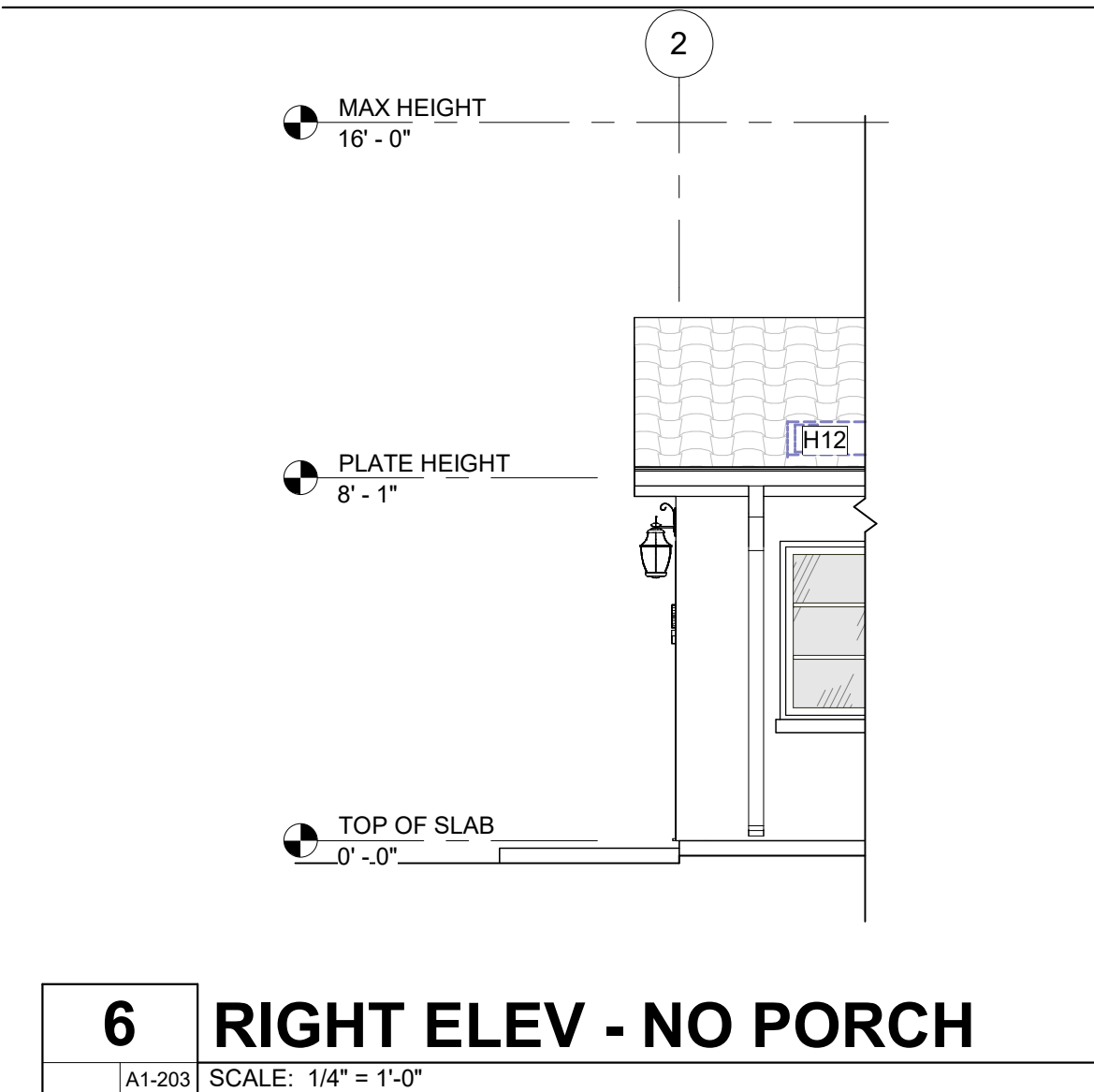
2 LEFT ELEVATION - MEDITERRANEAN

A1-101 | A1-203 SCALE: 1/4" = 1'-0"



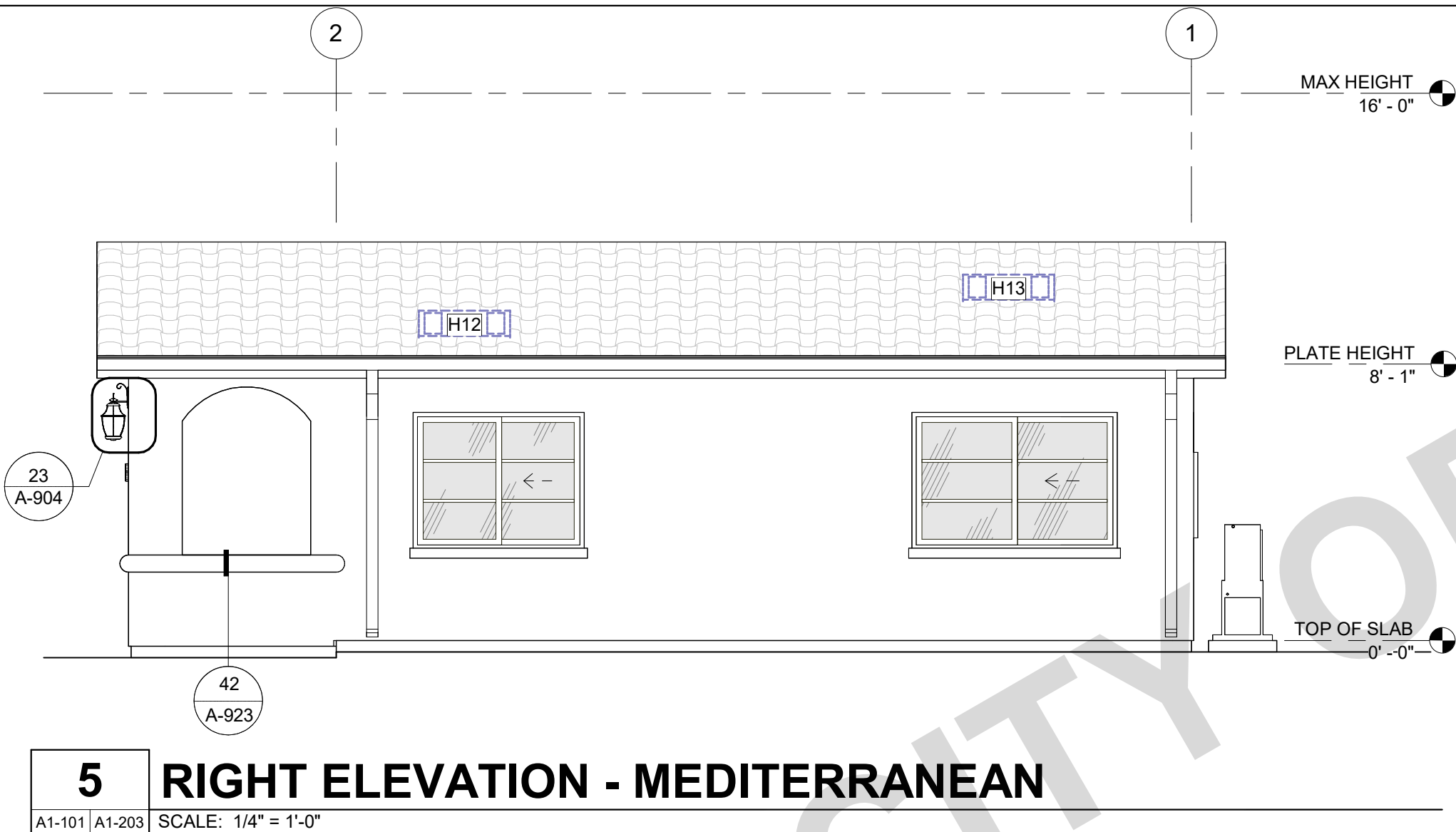
1 FRONT ELEVATION - MEDITERRANEAN

A1-101 | A1-203 SCALE: 1/4" = 1'-0"



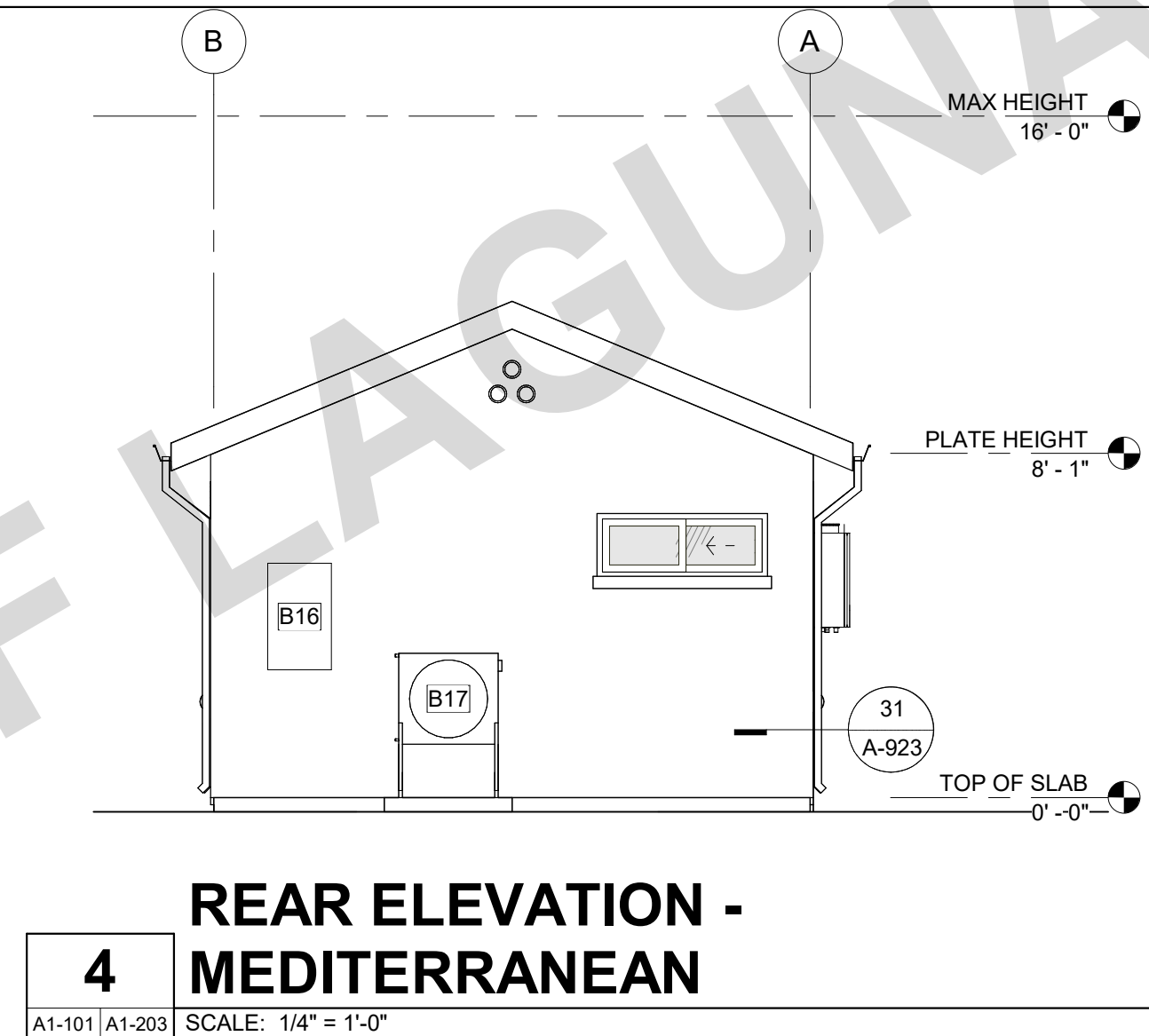
6 RIGHT ELEV - NO PORCH

A1-203 SCALE: 1/4" = 1'-0"



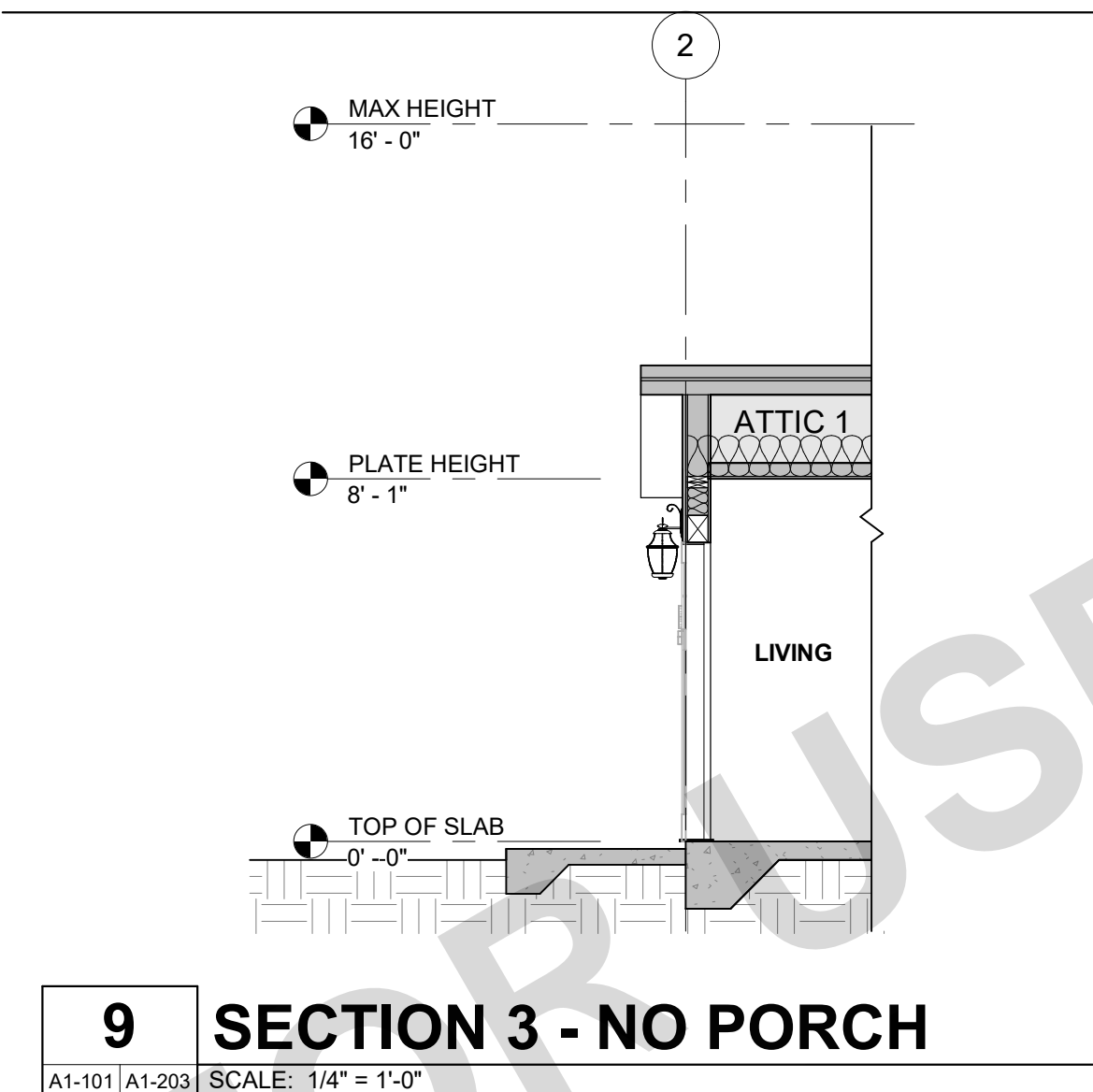
5 RIGHT ELEVATION - MEDITERRANEAN

A1-101 | A1-203 SCALE: 1/4" = 1'-0"



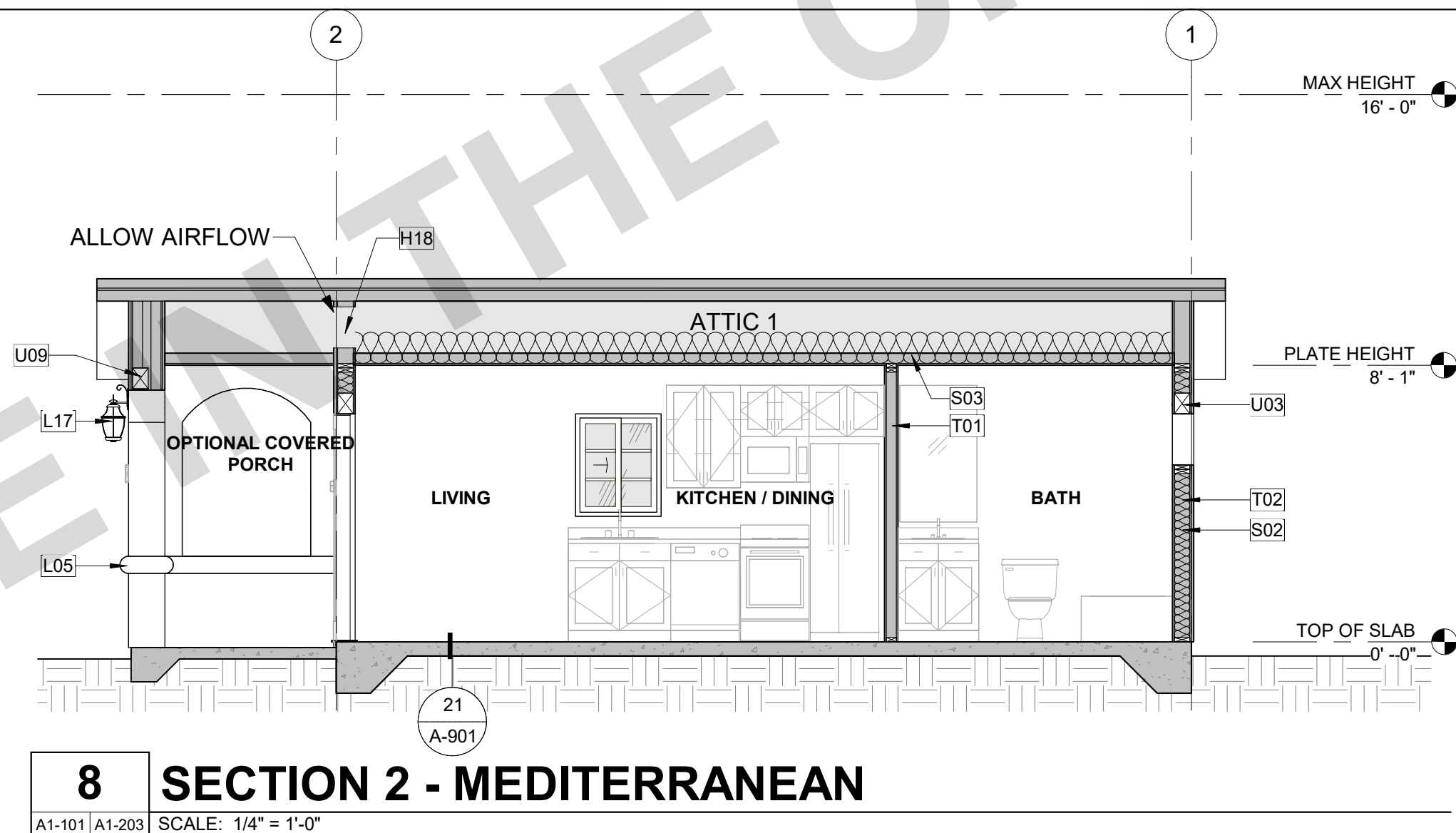
4 REAR ELEVATION - MEDITERRANEAN

A1-101 | A1-203 SCALE: 1/4" = 1'-0"



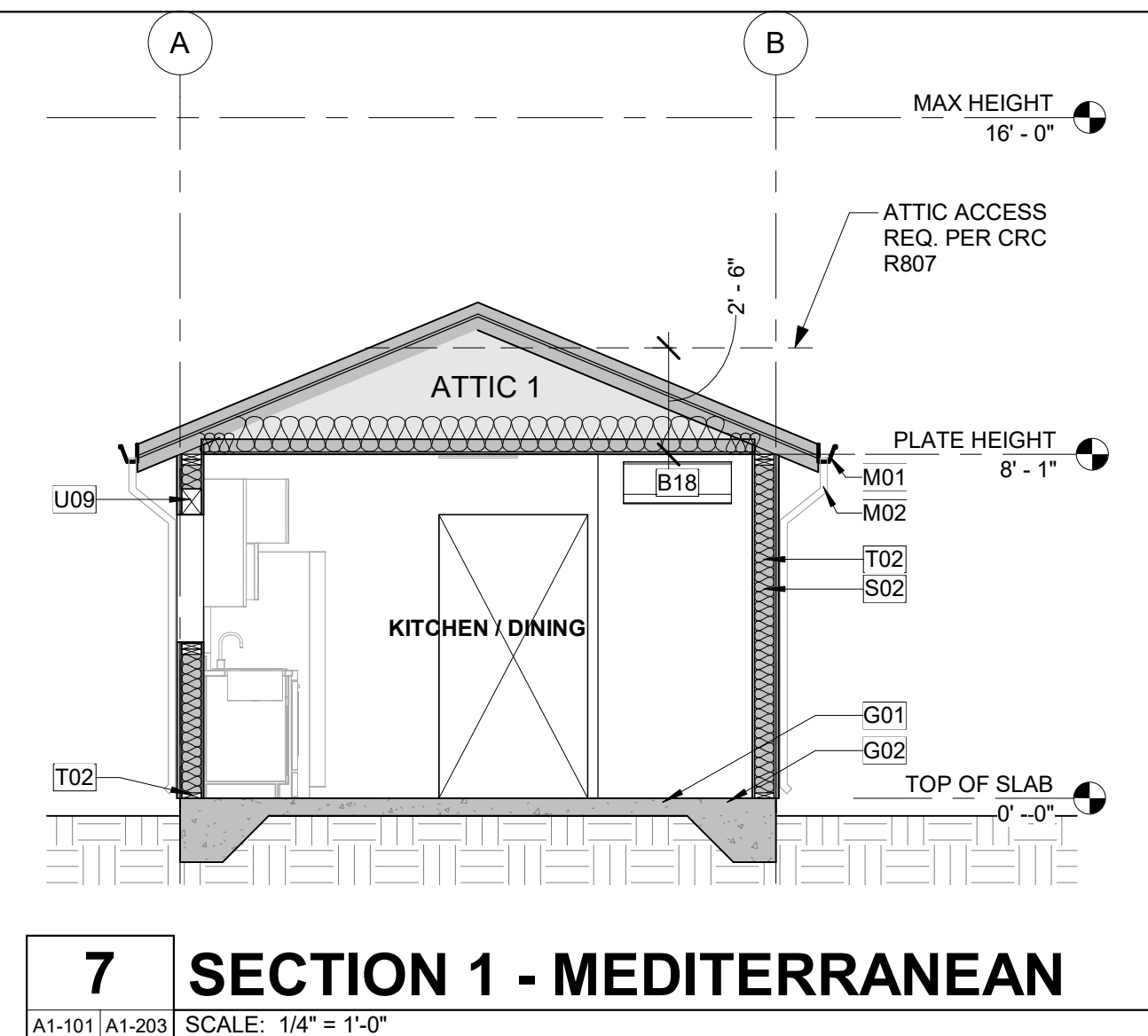
9 SECTION 3 - NO PORCH

A1-101 | A1-203 SCALE: 1/4" = 1'-0"



8 SECTION 2 - MEDITERRANEAN

A1-101 | A1-203 SCALE: 1/4" = 1'-0"



7 SECTION 1 - MEDITERRANEAN

A1-101 | A1-203 SCALE: 1/4" = 1'-0"

MATERIALS LEGEND MEDITERRANEAN

NOTES:

- SEE TITLE SHEET FOR MATERIAL SELECTIONS. APPLICANT OR OWNER TO PROVIDE SIZES, MANUFACTURER, AND COLOR/FINISH SPECIFICATIONS.
- ALL MATERIAL SELECTIONS SHALL COMPLY WITH CRC, SECTION R703.
- A PROJECT SITE LOCATED WITHIN WUI SHALL COMPLY WITH THE CRC SECTION R337. IF WUI APPROVED PRODUCTS ARE REQUIRED, PROVIDE SELECTED PRODUCT LISTINGS IN THE SPACES PROVIDED.
- APPROVED PRODUCT LISTINGS CAN BE FOUND IN THE (CURRENT) CAL-FIRE STATE FIRE MARSHAL LISTED WILDLAND URBAN INTERFACE WUI PRODUCT HANDBOOK.
- (ALTERNATIVELY), IF PROJECT SITE REQUIRES WUI COMPLIANCE, AND THE PRODUCT SELECTIONS ARE NOT BML LISTED, NOR IN THE HANDBOOK, MATERIALS SHALL COMPLY WITH THE PRESCRIPTIVE STANDARDS OF CHAPTER 7A. INDICATE IN THE MATERIALS LEGEND WHEN THIS OCCURS AND PROVIDE DOCUMENTATION OF COMPLIANCE FOR APPROVAL.

GRAPHICS LEGEND: (SEE TITLE SHEET; STRIKE THROUGH NON-USED OPTIONS)

CEMENT PLASTER STUCCO SIDING
(PER CRC R703.7)

S-TILE ROOF - CLASS C MIN. REQ.
MAXIMUM WEIGHT 10 PSF
ROOF REFLECTANCE (0.1) MIN.
ROOF EMITTANCE (0.85) MIN.
(SHALL COMPLY WITH CRC R905.1, CRC R905.3)

SOFFIT MATERIAL (SEE REFLECTED CEILING PLAN & DETAILS)
A) EXT. T&G (NOTE: 1X T&G REQUIRES TYPE X GYP. FOR WUI COMPLIANCE)
B) EXT. GRADE FIRE RATED PLYWOOD

OWNER/APP. TO PROVIDE SIZE, MFR. COLOR/FINISH SPECIFICATIONS.
*WHEN WUI IS REQUIRED (SEE G-001) PROVIDE PRODUCT LISTINGS.

COLOR/FINISH:

SIDING:

TRIM:

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.
- FIREBLOCKINGS TO BE LOCATED PER **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 E136 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 - 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 **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 IN ACCORDANCE WITH AWPA U1.
- REFER TO RCP'S FOR SOFFIT DIMENSIONS AND FURTHER INFORMATION.
- PROVIDE BLOCKING FOR ALL WALLS WHERE WALL HUNG EQUIPMENT AND FIXTURES OCCUR.
- ALL WALL AND CEILING FINISHES SHALL COMPLY WITH **CRC 803.13** FOR MAXIMUM FLAME SPREAD AND SMOKE DENSITY.

GENERAL ELEVATION NOTES

- REFER TO GENERAL NOTES SHEET G-101 FOR ADDITIONAL REQUIREMENTS
- SEE DETAILS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
- REFER TO ROOF PLAN FOR OVERHANGS, FASCIA PER DETAILS. PROVIDE ALUMINUM GUTTER. SEE ROOF PLAN FOR APPROXIMATE DOWNSPOUT LOCATIONS, U.N.O.
- REFER TO DOOR AND WINDOW SCHEDULES AND TYPES FOR DOOR AND WINDOW INFORMATION.
- THE NOMINAL THICKNESS AND ATTACHMENT OF EXTERIOR WALL COVERINGS SHALL BE IN ACCORDANCE WITH CRC TABLE R703.3(1).
- GYPSUM SHEATHING SHALL BE ATTACHED TO EXTERIOR WALLS IN ACCORDANCE WITH CRC TABLE R602.3.
- CLADDING ATTACHMENT OVER FOAM SHEATHING TO WOOD FRAMING IN ACCORDANCE WITH CRC R703.15. REFER TO CRC R703.8 FOR ANCHORED MASONRY OR STONE VENEER INSTALLED OVER FOAM SHEATHING.

KEYNOTES

- B16 ELECTRIC PANEL LOCATION. PROVIDE PROTECTION PER CPC 507.25 & CMC 305.1.1. SEE GENERAL MEP NOTES 7 & 8 ON SHEET A-111 FOR MORE INFO.
- B17 MULTI-ZONE HEAT PUMP CONDENSER UNIT. REFER TO PLANS FOR LOCATION OF INDOOR FAN COIL UNITS. REFER TO TITLE 24 FOR ADDITIONAL INFORMATION. PROVIDE CONCRETE PAD MIN. 6" LARGER THAN UNIT IN EACH DIRECTION, 3" MIN. ABOVE GRADE. PROVIDE PROTECTION PER CPC 507.25 & CMC 305.1.1. SEE GENERAL MEP NOTES 7 & 8 ON SHEET A-111 FOR MORE INFO. SEE DETAIL 53/A-902.
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- B51 TANKLESS WATER HEATER.
- G01 4" CONCRETE SLAB ON GRADE. REFER TO STRUCTURAL PLANS
- G02 CONCRETE FOOTING. REFER TO STRUCTURAL PLANS
- H12 ATTIC VENT (HIGH). ATTIC VENTING OPTION B. STRIKE THROUGH IF NOT USED. SEE VENTING CALCS.
- H13 ATTIC VENT (LOW). ATTIC VENTING OPTION B. STRIKE THROUGH IF NOT USED. SEE VENTING CALCS.
- H18 WHERE AIRFLOW IS BLOCKED BY SHEAR PANEL, PROVIDE MINIMUM OF 12"x12" BLOCKED OPENING TO PROVIDE CROSS-VENTILATION.
- K02 STUCCO SIDING. SEE MATERIALS LEGEND FOR MORE INFORMATION.
- K10 S-TYPE CLAY ROOF TILE. ROOF REFLECTANCE (0.1) MIN. ROOF EMITTANCE (0.85) MIN. SEE MATERIALS LEGEND FOR MORE INFORMATION.
- K14 MEDITERRANEAN STYLE DECORATIVE TILE DOOR SURROUND; WIDTH/ HEIGHT MAY VARY 3" MINIMUM TO 9" MAXIMUM. SELECTION REQUIRES APPROVAL FROM APPLICANT/OWNER
- L05 STUCCO BAND TRIM
- L10 DECORATIVE FAUX GABLE VENT - SEE DETAIL 42/A-922.
- L17 EXTERIOR LIGHT. SEE DETAILS FOR MORE INFORMATION.
- M01 GUTTER. CONNECT TO DOWNSPOUT. PROVIDE MEANS TO PREVENT ACCUMULATION OF LEAVES AND DEBRIS IN GUTTER PER CRC R337.5.4. SEE DETAIL 12/A-903.
- M02 DOWNSPOUT TO SPLASH BLOCK BELOW. SEE DETAIL 43/A-904.
- S02 EXTERIOR WALL INSULATION. REFER TO TITLE 24 (R-21 MIN.)
- S03 R-30 MIN. ROOF INSULATION; RADIANT BARRIER REQUIRED (VERIFY WITH TITLE 24 REPORT)
- T01 2X4 WOOD STUD WALL. REFER TO STRUCTURAL.
- T02 2X8 WOOD STUD WALL. REFER TO STRUCTURAL.
- U03 WOOD BEAM / HEADER. REFER TO STRUCTURAL.
- U09 6X8 WOOD BEAM / WOOD HEADER. REFER TO & VERIFY WITH STRUCTURAL DRAWINGS.



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PRE-APPROVED ADU
CITY OF LAGUNA NIGUEL
ELEVATIONS & SECTIONS -
MEDITERRANEAN

DATE
02/05/2025

SHEET

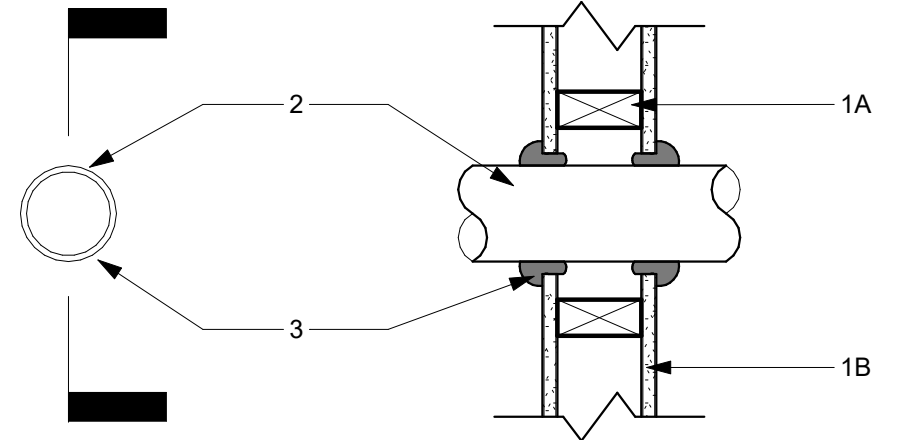
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WALL SYSTEM PENETRATION
F RATING - 1 AND 2 HR (SEE ITEM 1B)
T RATING - 0 HR



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

STUCCO EXTERIOR WALL
CBC TABLE 721.1(2) ITEM 15-1.3 (EXTERIOR)

1 HOUR

EXTERIOR SIDE

CEMENT PLASTER SYSTEM OVER WEATHER RESISTIVE BARRIER(S)
WHEN LOCATED IN MARINE CLIMATE, DRAINABLE WRB WITH 90% OR BETTER REQUIRED PER CBC 2510.6
18 GA HORIZONTAL LINE WIRE AT 8" O/C BENEATH WR BARRIER FOR FULL LENGTH & HEIGHT OF EXTERIOR BUILDING WALLS - TYPICAL. OMIT LINE WIRE AT SHEATHED WALLS
SHEAR PANEL WHERE OCCURS PER STRUCTURAL. ADD SHEATHING TO ENTIRE LENGTH OF WALL AT WALLS IN LINE WITH SHEAR PANEL. OTHERWISE, TYPICAL WOOD FRAMED EXTERIOR WALLS USE LINE WIRE.
2 X 6 FRAMING @ 16" OC, TYP.

INTERIOR SIDE

5/8" TYPE X GWB TYP* APPLIED VERTICALLY OR HORIZONTALLY, ATTACHED WITH 1 1/4" TYPE S SCREWS, AT 7" O.C. WITH END JOINTS ON NAILING MEMBERS STAGGER JOINTS EACH SIDE.
*NOTE: SUBSTITUTE 5/8" TYPE X MOLD-RESISTANT NON-PAPER GWB W/ FIBERGLASS MATS AT ALL BATHROOM WALLS & CEILINGS, AND AT KITCHEN, LAUNDRY, AND JANITOR CLOSET WET WALLS
**INCREASE FASTENER LENGTH BY AMOUNT AT LEAST EQUAL TO FURRING THICKNESS
ADD 1/2" OR 5/8" FURRING AS NEEDED TO FLUSH INTERIOR FACE OF FINISH
INSULATION PER ENERGY REPORT

PLAN VIEW

ROOF ASSEMBLY FIRE RESISTANCE CALCULATION
PER CBC TABLE 722.6.2(1) & PER CBC 722.6.2(2)

WOOD JOISTS 16" O.C. 10 MIN.
1/2" PLYWOOD 10 MIN.
5/8" TYPE X GYPSUM BOARD 40 MIN.

TOTAL FIRE RESISTANCE 60 MIN.

WALL ASSEMBLY FIRE RESISTANCE CALCULATION
PER CBC TABLE 722.6.2(1) & PER CBC 722.6.2(2)

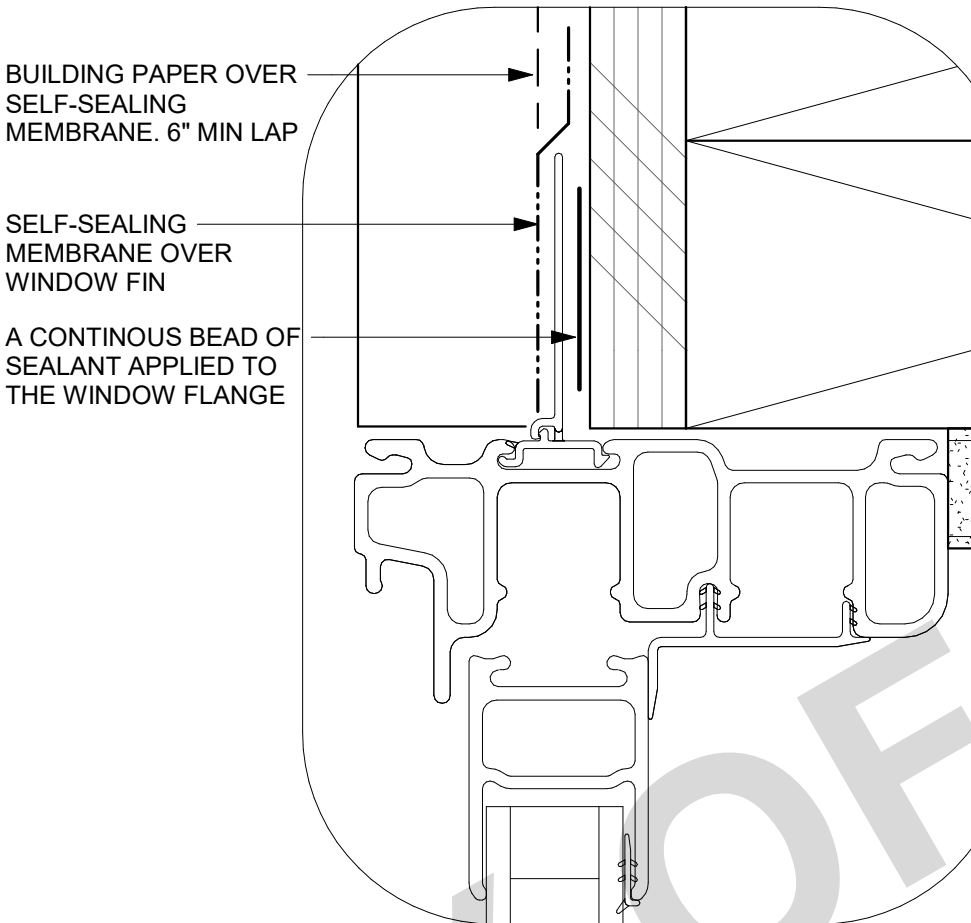
WOOD STUDS 16" O.C. 20 MIN.
1/2" PLYWOOD 10 MIN.
5/8" TYPE X GYPSUM BOARD 40 MIN.

TOTAL FIRE RESISTANCE 70 MIN.

31

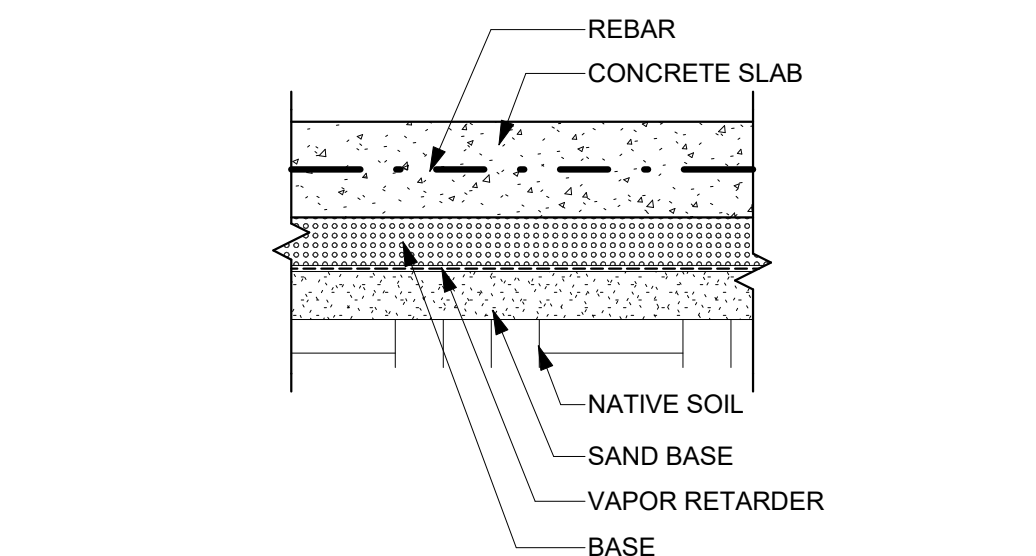
CALC. FIRE RESISTANCE RATING

SCALE: 12" = 1'-0"



FOUNDATION MINIMUM REQUIREMENTS: 5" SLAB WITH #4 @ 18" O.C. EW OVER 2" SAND, OVER MINIMUM 6MIL VISQUEEN, OVER 2" SAND OR CALIFORNIA GREEN CODE SECTION 4.505.2.1 CAPILLARY BREAK TO BE APPROVED BY THE BUILDING OFFICIAL.

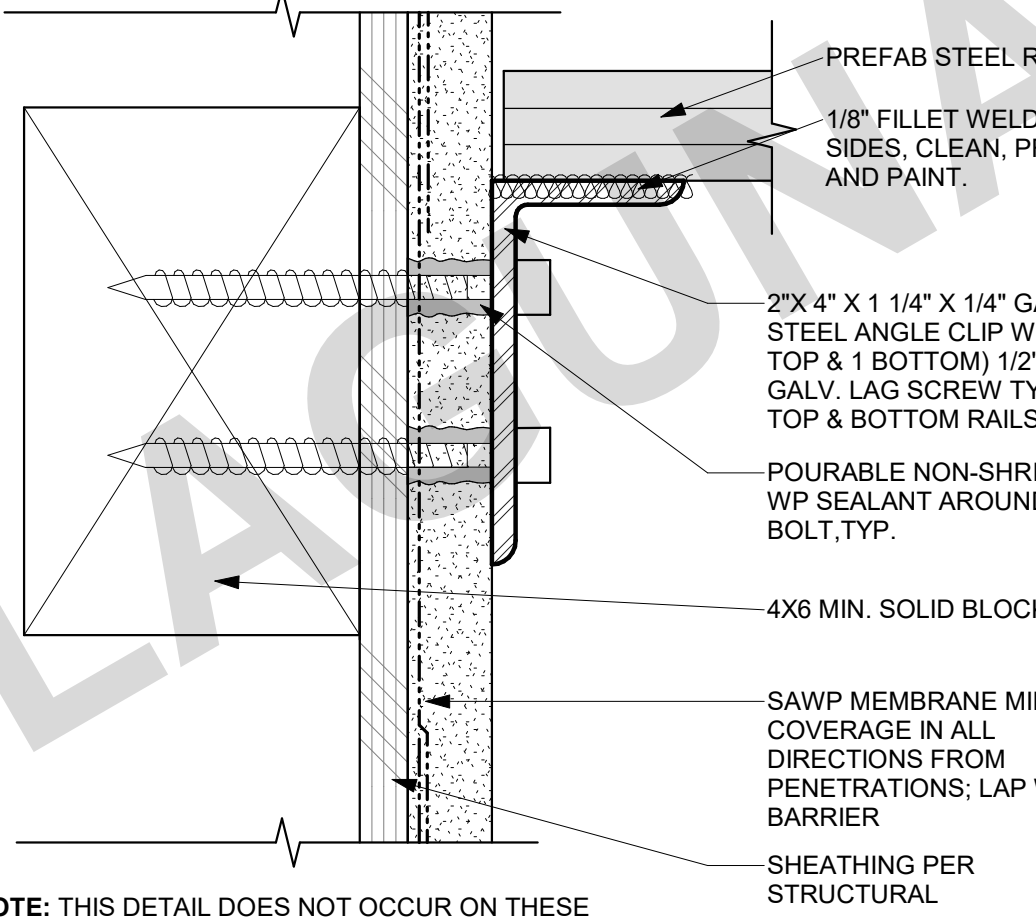
REFERENCE DETAIL:



21

TYPICAL SLAB O/ VAPOR BARRIER

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



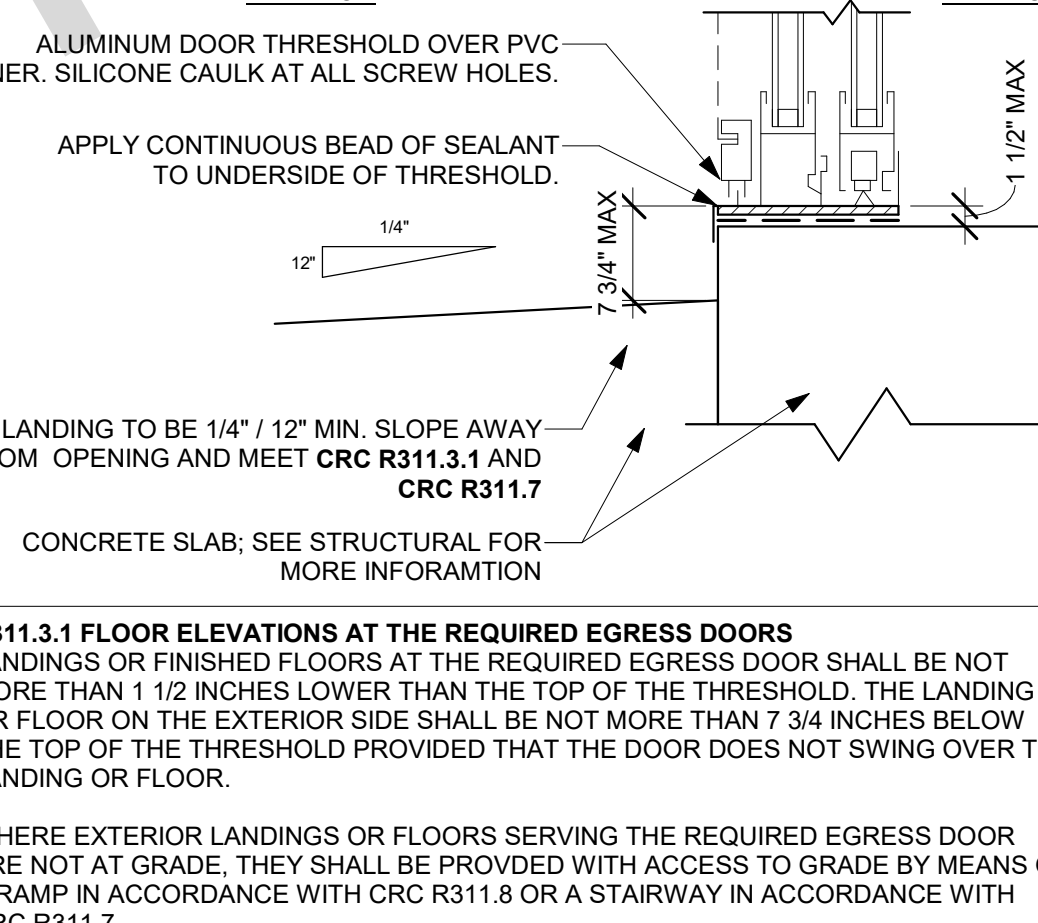
R311.3.1 FLOOR ELEVATIONS AT THE REQUIRED EGRESS DOORS
LANDINGS OR FINISHED FLOORS AT THE REQUIRED EGRESS DOOR SHALL BE NOT MORE THAN 1 1/2 INCHES LOWER THAN THE TOP OF THE THRESHOLD. THE LANDING OR FLOOR ON THE EXTERIOR SIDE SHALL BE NOT MORE THAN 7 3/4 INCHES BELOW THE TOP OF THE THRESHOLD PROVIDED THAT THE DOOR DOES NOT SWING OVER THE LANDING OR FLOOR.

WHERE EXTERIOR LANDINGS OR FLOORS SERVING THE REQUIRED EGRESS DOOR ARE NOT AT GRADE, THEY SHALL BE PROVIDED WITH ACCESS TO GRADE BY MEANS OF A RAMP IN ACCORDANCE WITH CRC R311.8 OR A STAIRWAY IN ACCORDANCE WITH CRC R311.7.

11

EXTERIOR DOOR THRESHOLD - TYPICAL

SCALE: 6" = 1'-0"



52

THROUGH PENETRATION @ WALL

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

42

EXTERIOR RATED WALL ASSEMBLY-1HR

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

32

DETAILED HEAD FLASHING

SCALE: 12" = 1'-0"

22

RAILING CONNECTION DETAIL

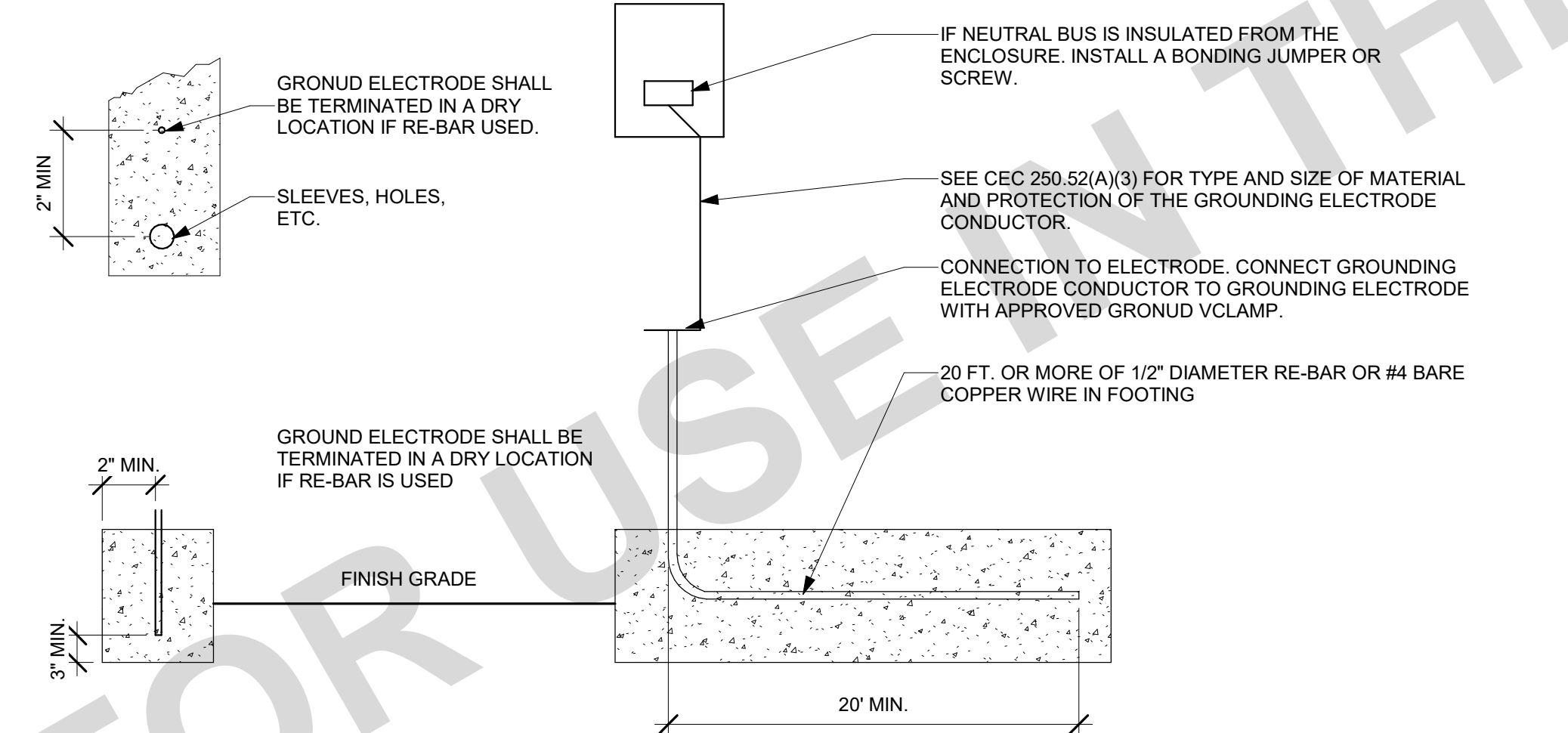
SCALE: 6" = 1'-0"

12

EXT. THRESHOLD - SLIDING DOOR TYP.

SCALE: 3" = 1'-0"

EXTERIOR FOUNDATION



GRONUD ELECTRODE SHALL BE TERMINATED IN A DRY LOCATION IF RE-BAR USED.

SLEEVES, HOLES, ETC.

IF NEUTRAL BUS IS INSULATED FROM THE ENCLOSURE, INSTALL A BONDING JUMPER OR SCREW.

SEE CEC 250.52(A)(3) FOR TYPE AND SIZE OF MATERIAL AND PROTECTION OF THE GROUNDING ELECTRODE CONDUCTOR.

CONNECTION TO ELECTRODE. CONNECT GROUNDING ELECTRODE CONDUCTOR TO GROUNDING ELECTRODE WITH APPROVED GRONUD VCLAMP.

20 FT. OR MORE OF 1/2" DIAMETER RE-BAR OR #4 BARE COPPER WIRE IN FOOTING

GROUND ELECTRODE SHALL BE TERMINATED IN A DRY LOCATION IF RE-BAR IS USED

FINISH GRADE

20' MIN.

CONCRETE ENCASED ELECTRODE
1. ALL NEW CONSTRUCTION REQUIRES A UFER SERVICE GROUND IN THE FOUNDATION REQUIREMENTS ARE NOT LESS THAN 20 FEET OF EITHER 1/2" RE-BAR (INSIDE TERMINAL) #4 BARE COPPER WIRE, OR 3/4" GALVANIZED STEEL CONDUIT INSTALLED CORRECTLY. REFER TO DETAIL.
2. ELECTRICAL EQUIPMENT AND MATERIAL TO BE LISTED FOR THAT USE.
3. SECURE AN ENGRAVED NAMEPLATE TO THE FUSE ENCLOSURE FACE, RELAY FUSES MARKED (MFRS. TYPE OR DESIGNATION), (CONTINUOUS CURRENT RATING), (VOLTAGE RATING), (AMPERAGE INTERRUPTING RATING).
4. USE "T TAP" CONNECTIONS ON ALL MULTI-WIRE CIRCUITS WITH COMMON NEUTRAL.
5. SWITCHING CIRCUIT BREAKER MUST BE UL. LISTED FOR THAT USE.
6. UNDERGROUND SERVICE ENTRANCE CONDUCTORS WILL SERVE THE MAIN ELECTRIC SERVICE PANEL.

54

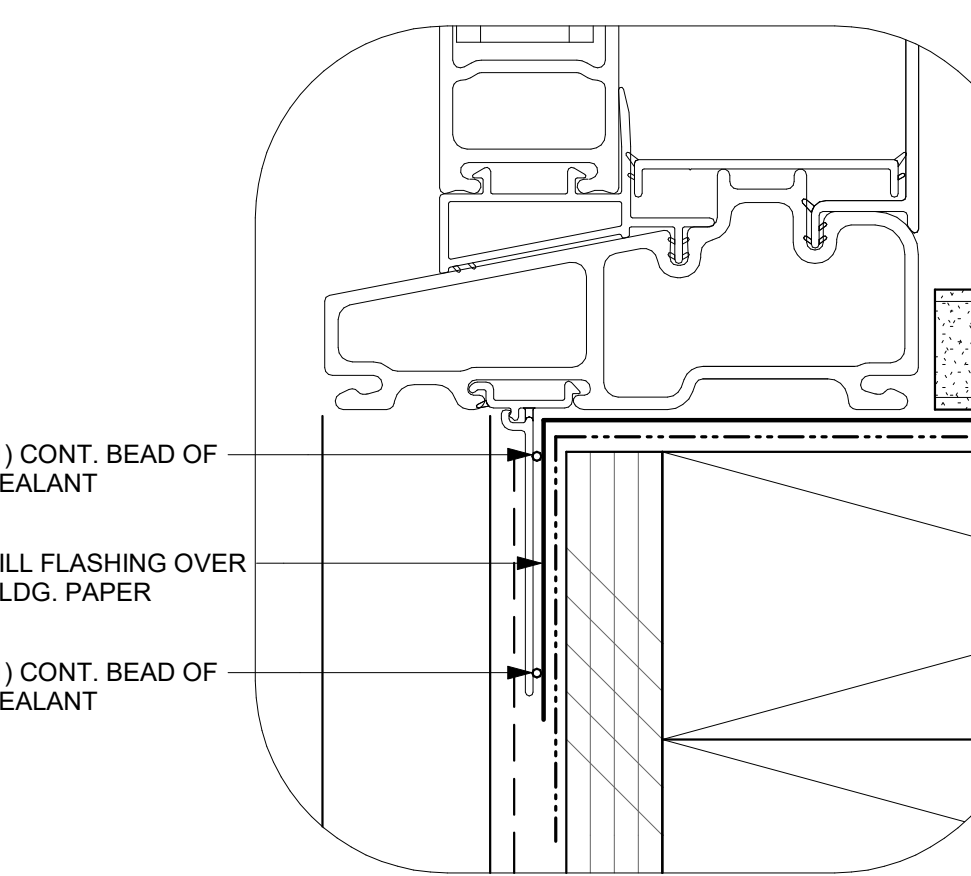
CONCRETE ENCASED ELECTRODE

SCALE: 1" = 1'-0"

33

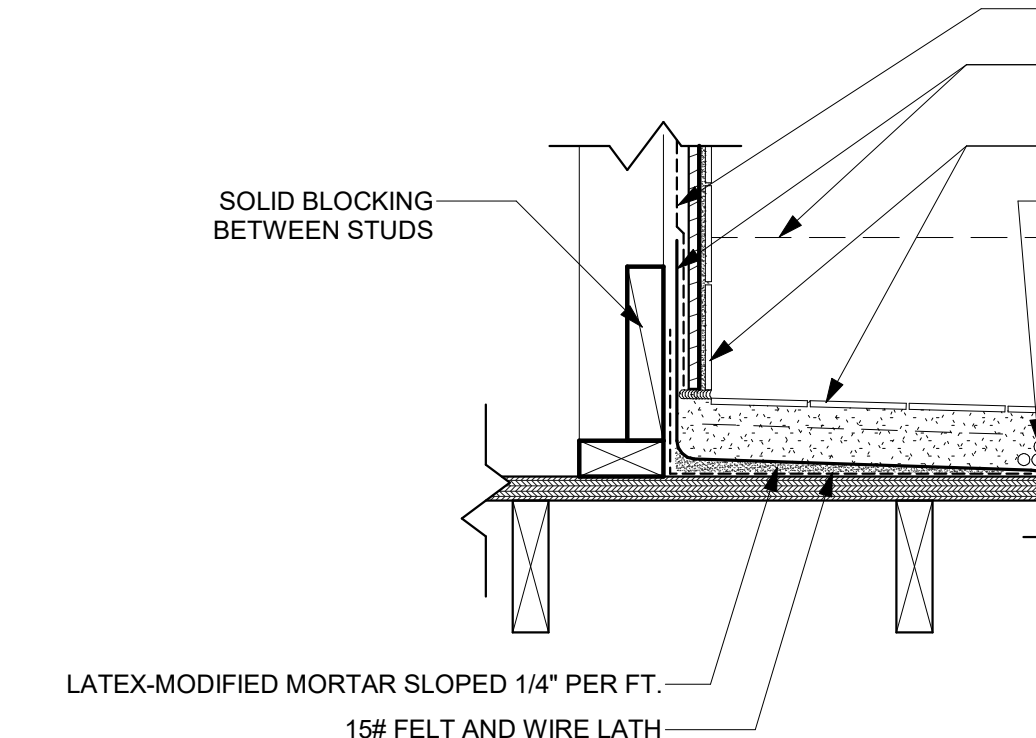
DETAILED JAMB FLASHING

SCALE: 12" = 1'-0"



GENERAL NOTES:

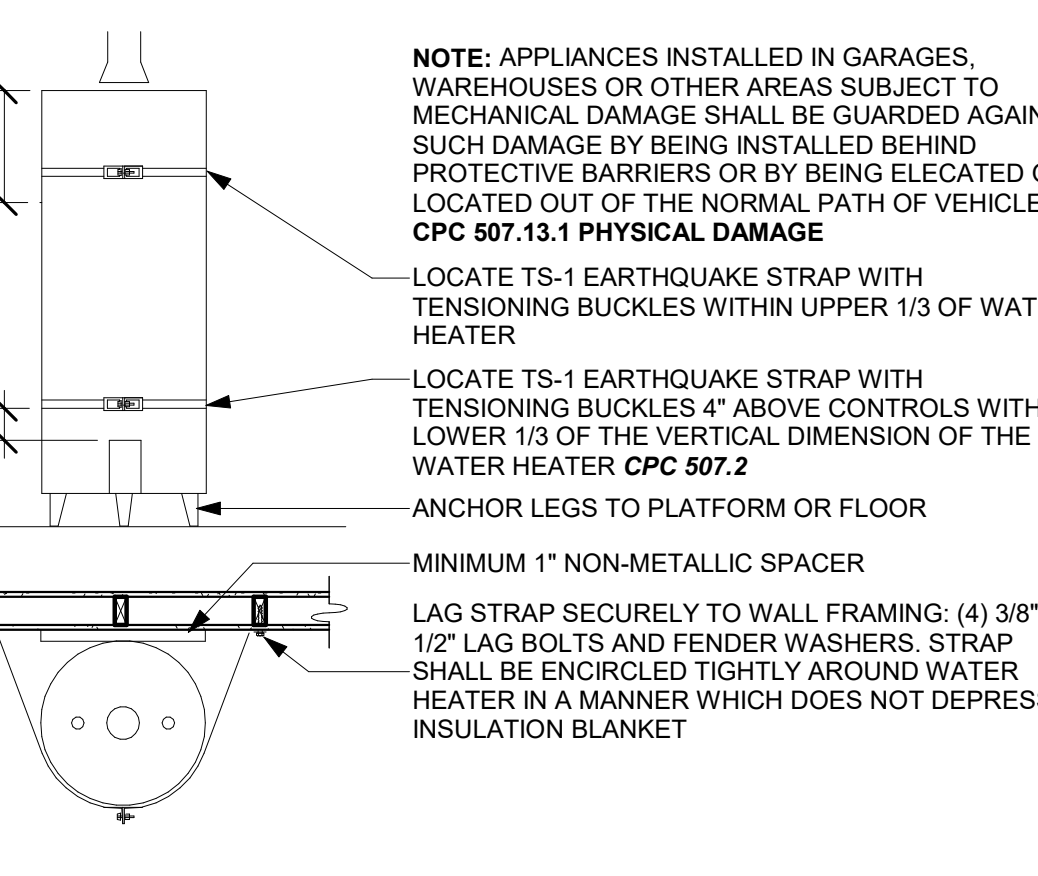
1. REFER TO 2022 CPC FOR COMPLETE INFORMATION
2. FINISH FLOOR TO HAVE 1/4" MIN. TO 1/2" MAX SLOPE TO DRAIN PER FOOT.
3. FINISH HEIGHT OF DAM TO BE AT LEAST 2" (50.8mm) ABOVE HIGH POINT OF DRAIN.



23

SHOWER SECTION

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



NOTE: APPLIANCES INSTALLED IN GARAGES, WAREHOUSES OR OTHER AREAS SUBJECT TO MECHANICAL DAMAGE SHALL BE GUARDED AGAINST SUCH DAMAGE BY BEING INSTALLED BEHIND PROTECTIVE BARRIERS OR BY BEING ELEVATED OR LOCATED OUT OF THE NORMAL PATH OF VEHICLES. **CPC 507.13.1 PHYSICAL DAMAGE**

LOCATE TS-1 EARTHQUAKE STRAP WITH TENSIONING BUCKLES WITHIN UPPER 1/3 OF WATER HEATER

LOCATE TS-1 EARTHQUAKE STRAP WITH TENSIONING BUCKLES 4" ABOVE CONTROLS WITHIN LOWER 1/3 OF THE VERTICAL DIMENSION OF THE WATER HEATER **CPC 507.2**

ANCHOR LEGS TO PLATFORM OR FLOOR


MINIMUM 1" NON-METALLIC SPACER

LAG STRAP SECURELY TO WALL FRAMING: (4) 3/8"x 2 1/2" LAG BOLTS AND FENDER WASHERS. STRAP SHALL BE ENCIRCLED TIGHTLY AROUND WATER HEATER IN A MANNER WHICH DOES NOT DEPRESS INSULATION BLANKET

14

WATER HEATER MOUNTING

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



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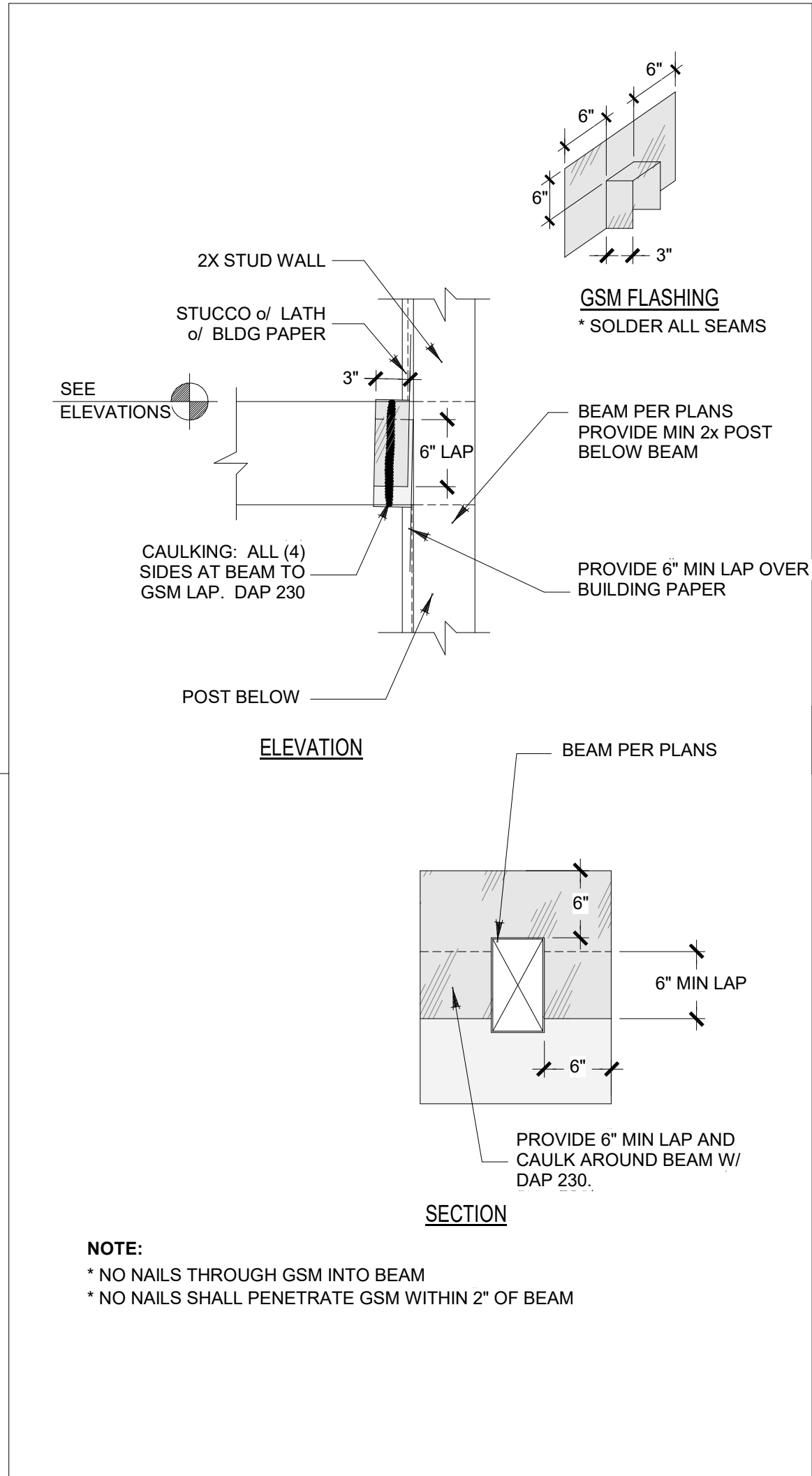
PRE-APPROVED ADU
CITY OF LAGUNA NIGUEL

ARCHITECTURAL DETAILS -
COMMON

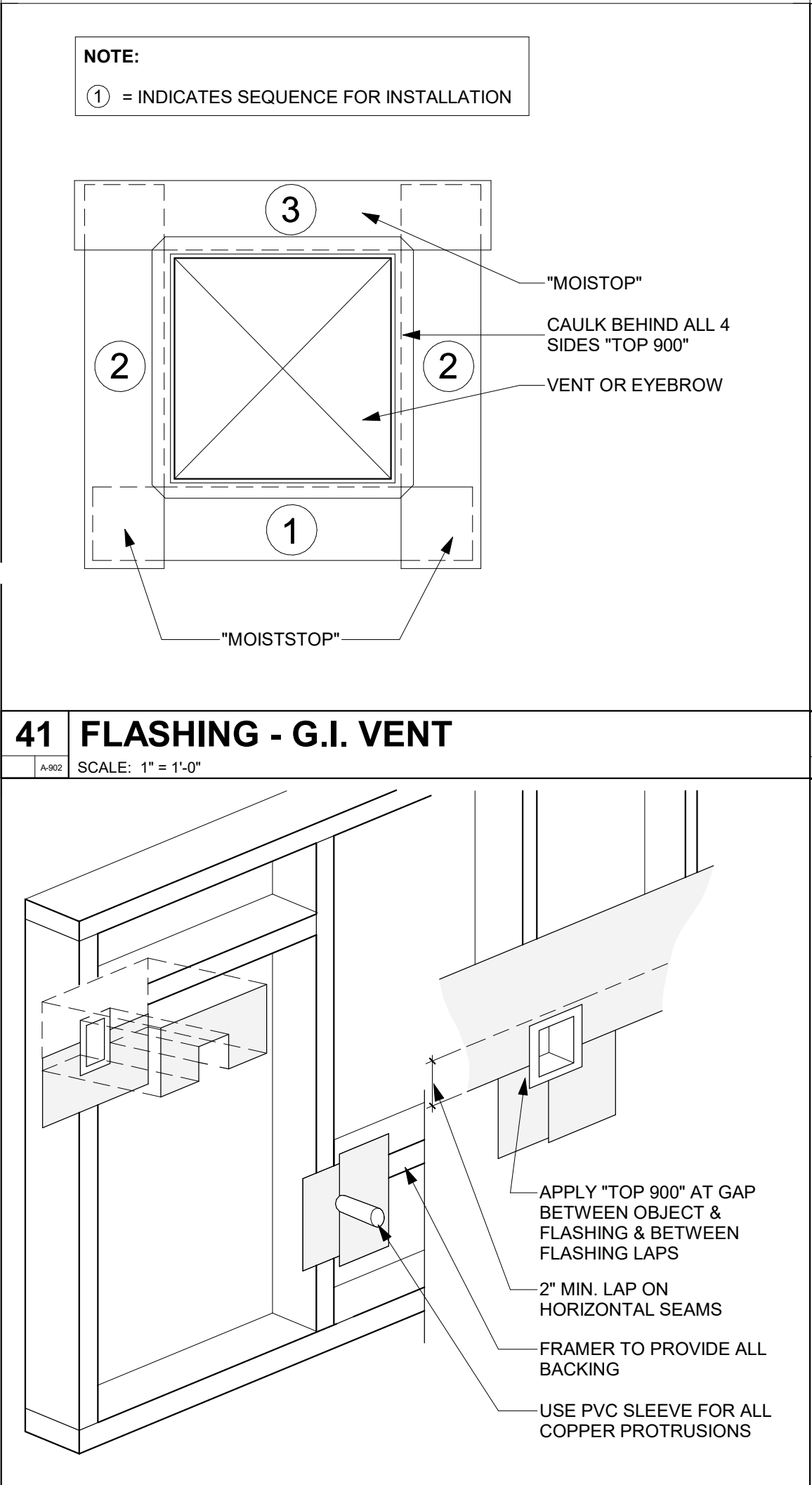
PUBLIC SET

DATE
02/05/2025

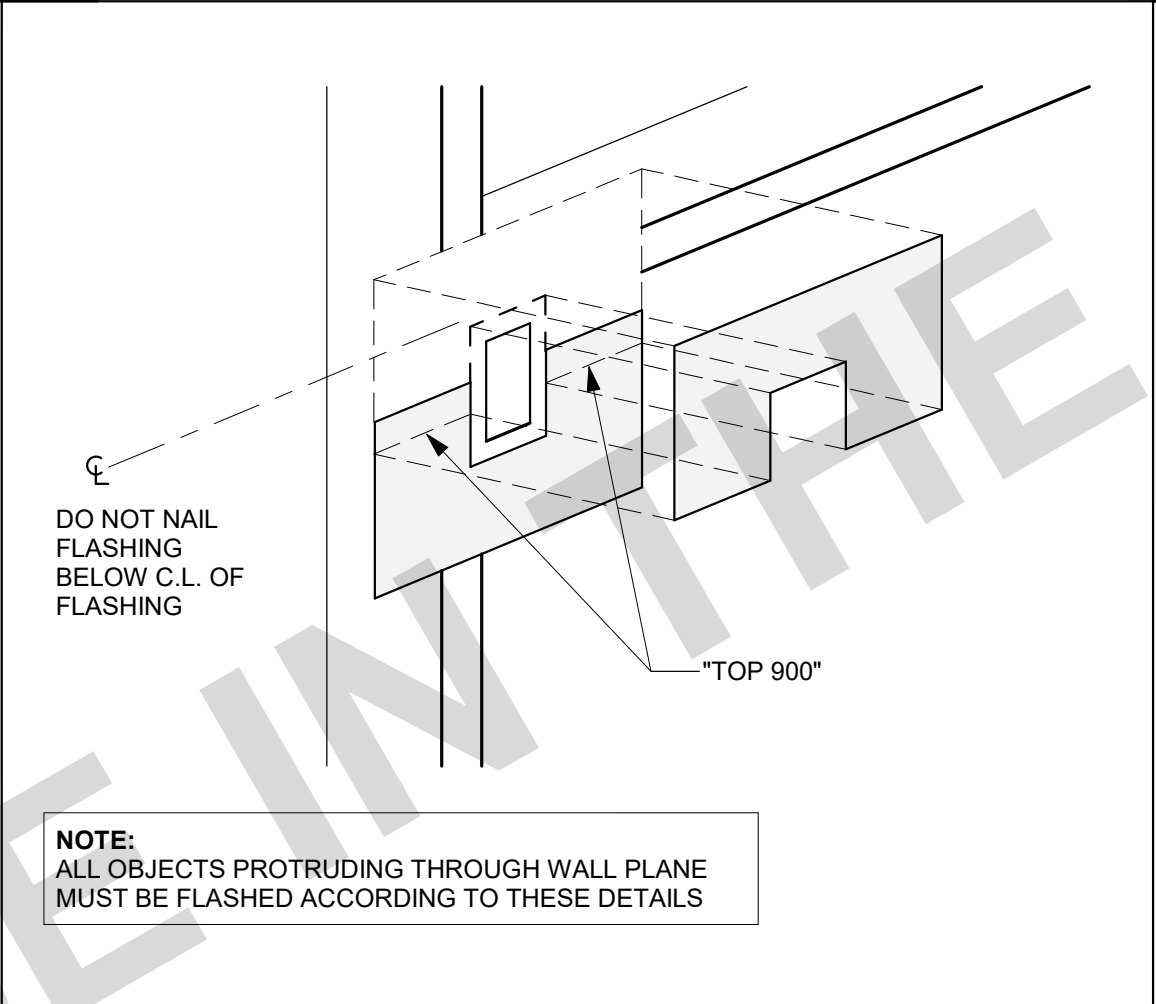
SHEET
A-901



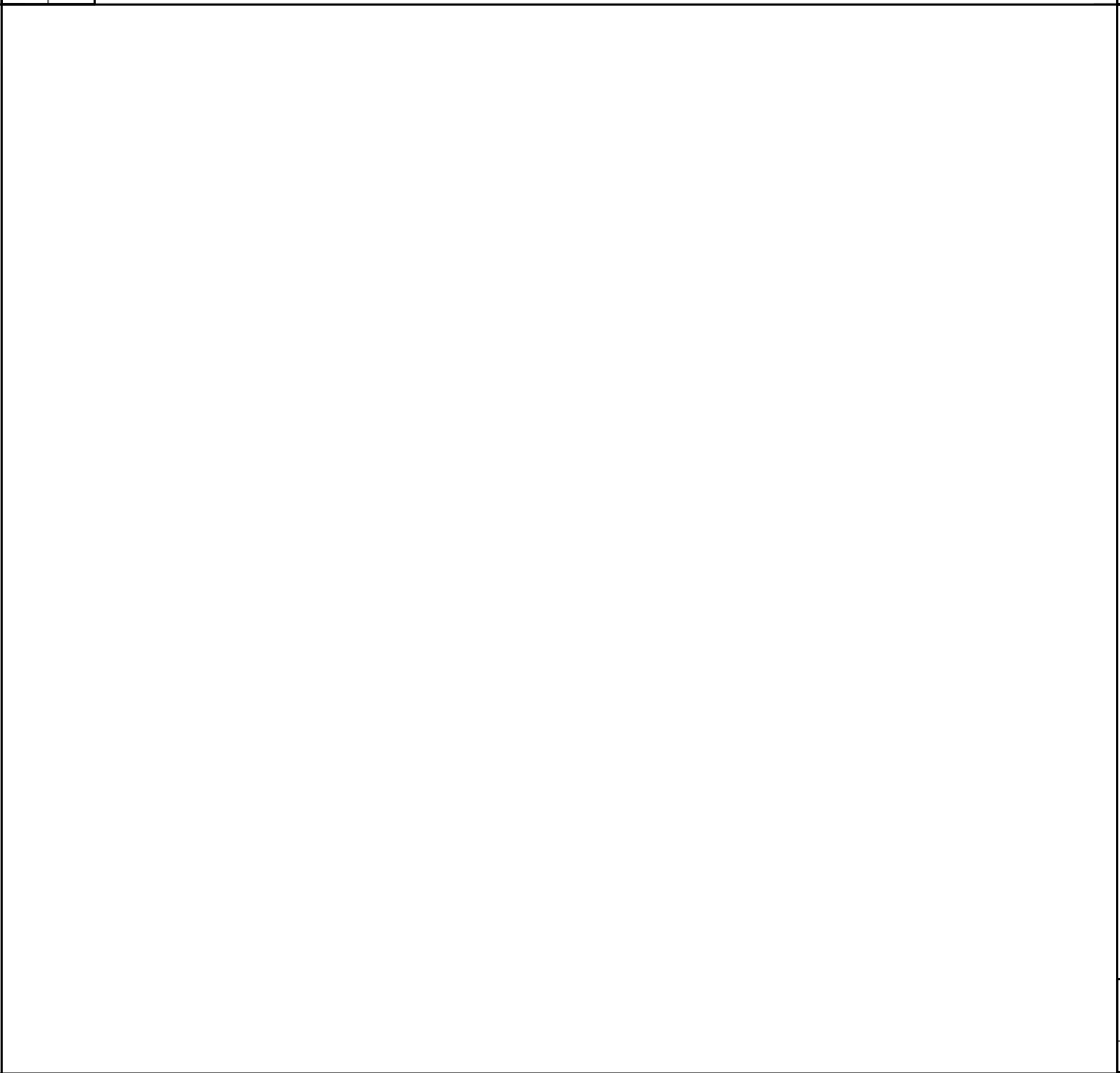
52 BEAM TO WALL FLASHING
SCALE: 1" = 1'-0"



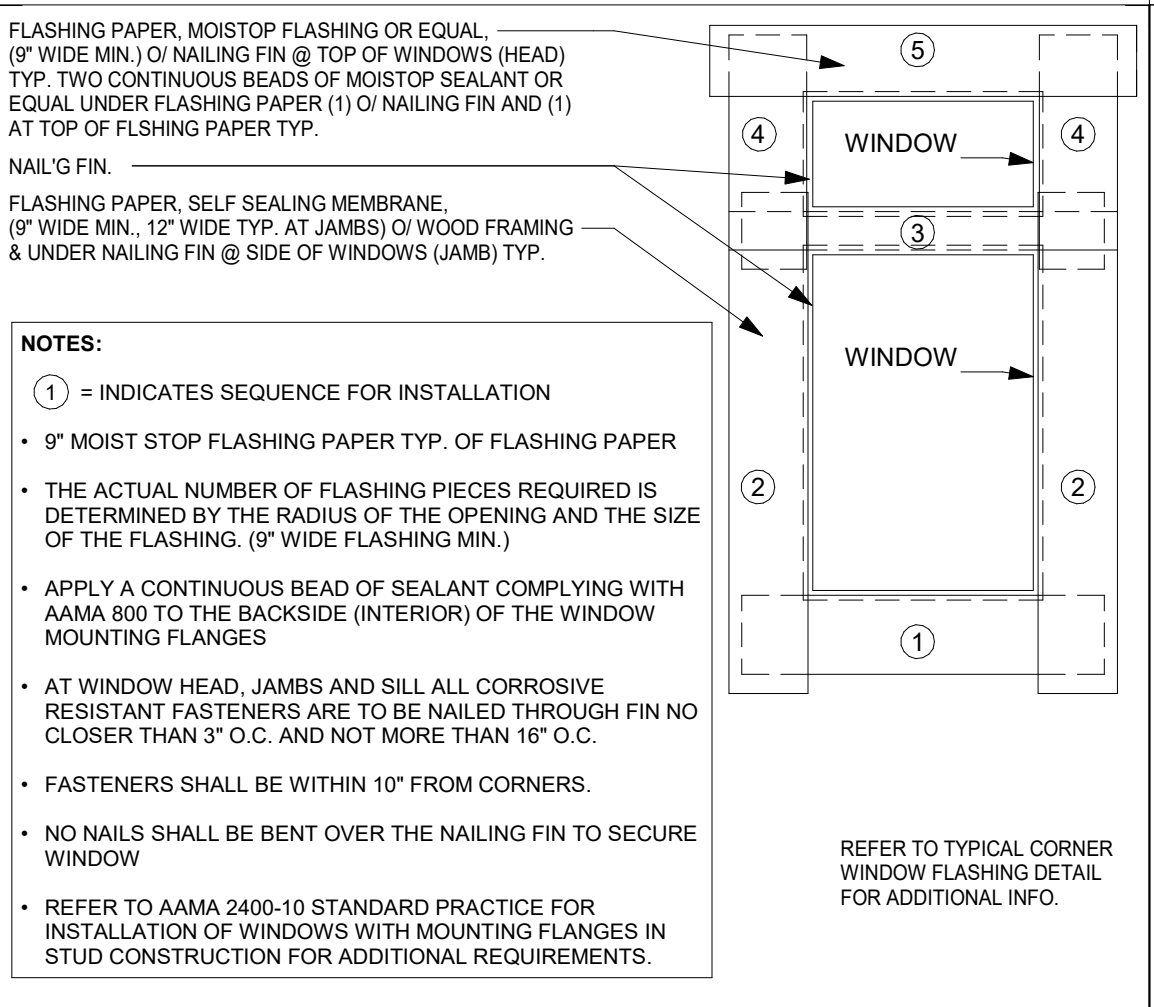
43 FLASHING - DETAILED PROTRUSION
SCALE: 1 1/2" = 1'-0"



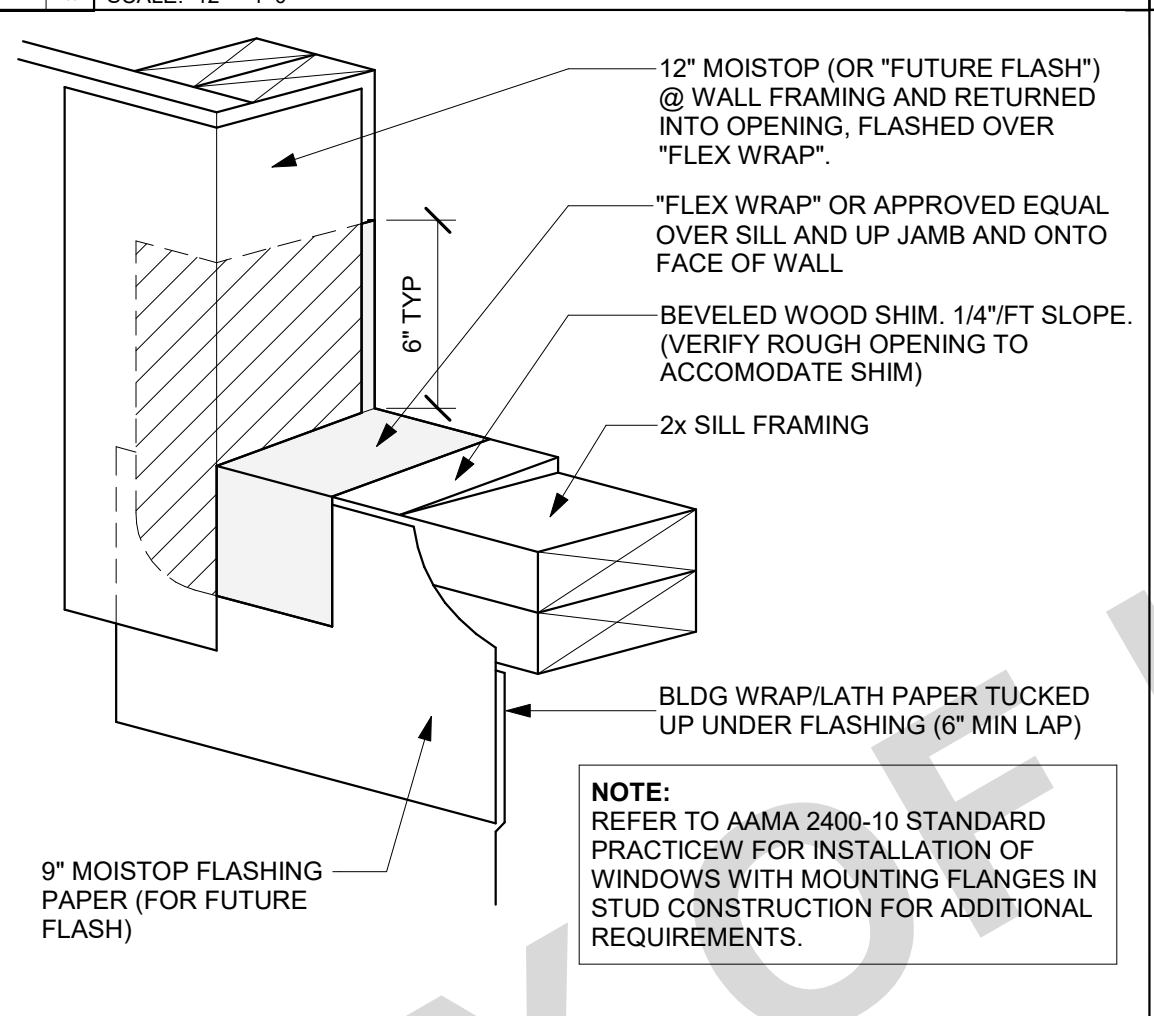
33 FLASHING - DOOR AT GRADE2
NTS



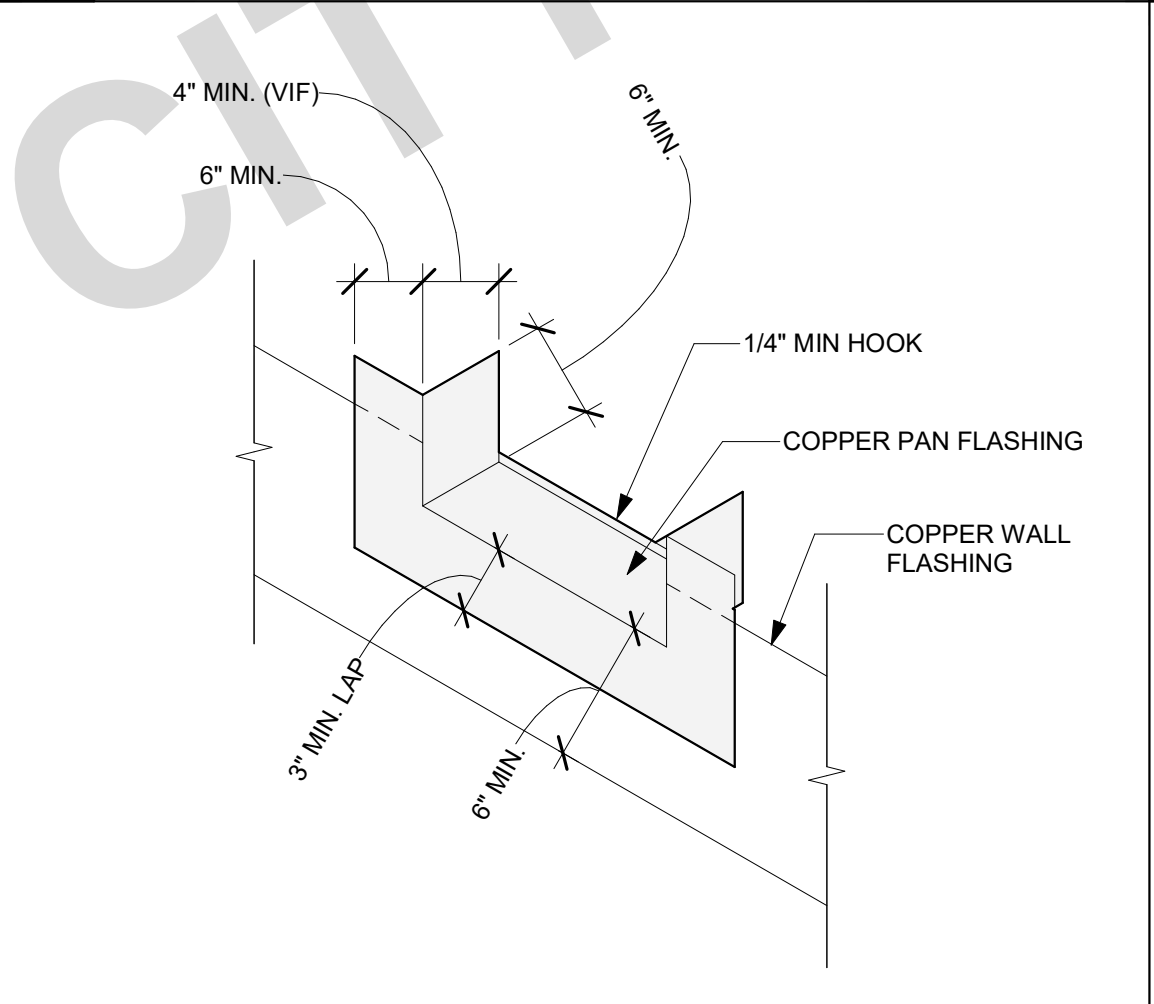
34 FLASHING - DOOR AT W.P. DECK2
NTS



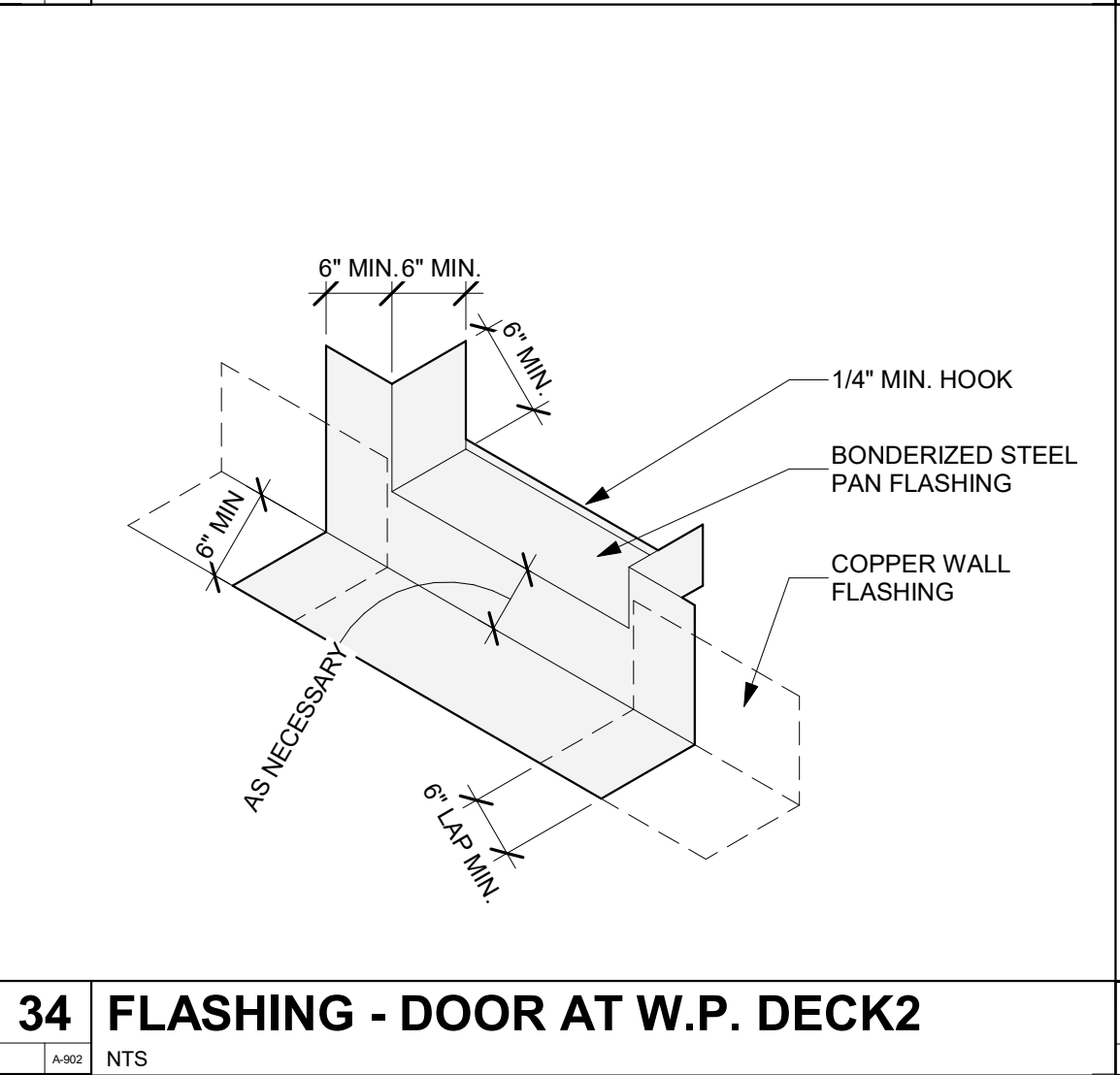
31 FLASHING - WINDOW TYP.
SCALE: 12" = 1'-0"



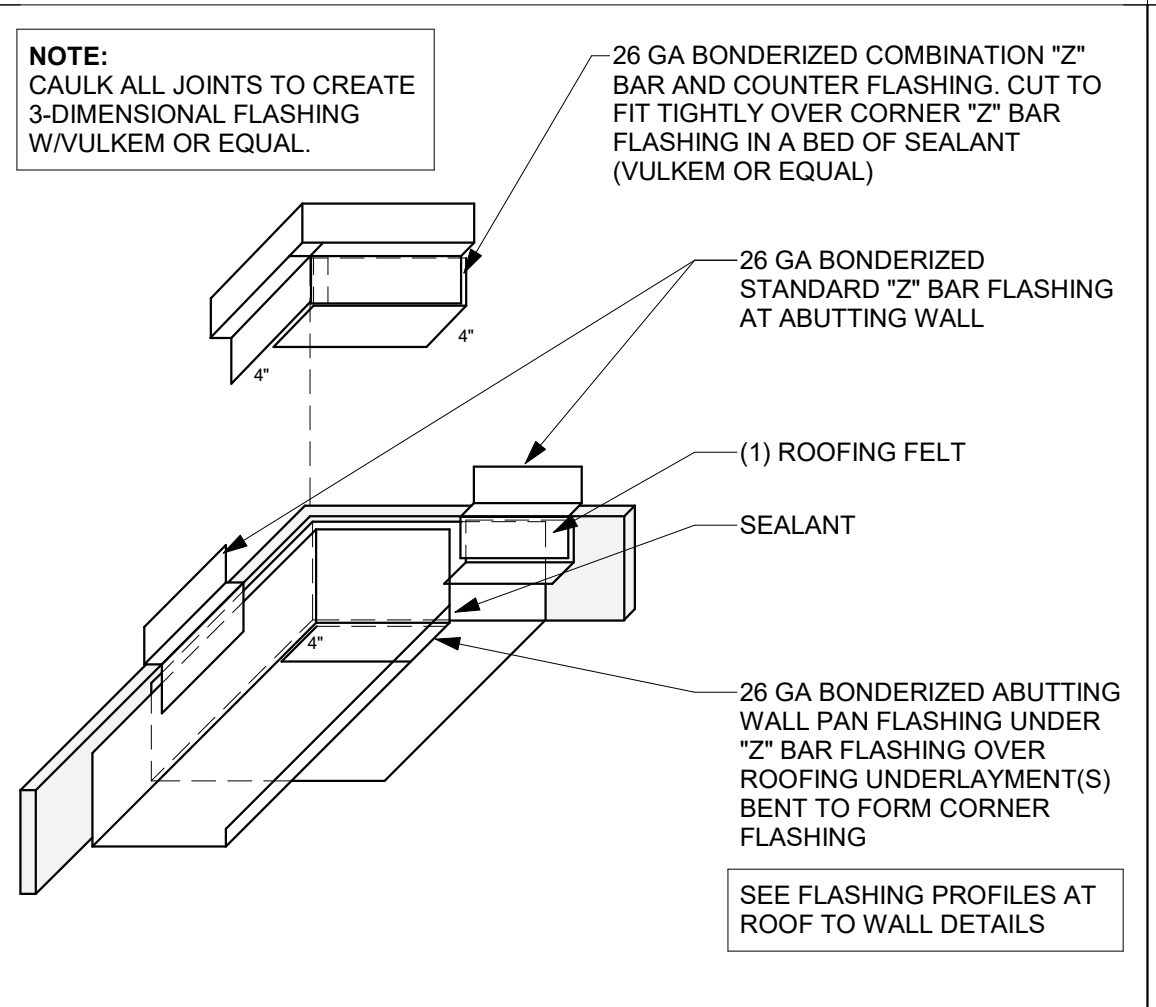
32 FLASHING - WINDOW CORNER TYP.
SCALE: 12" = 1'-0"



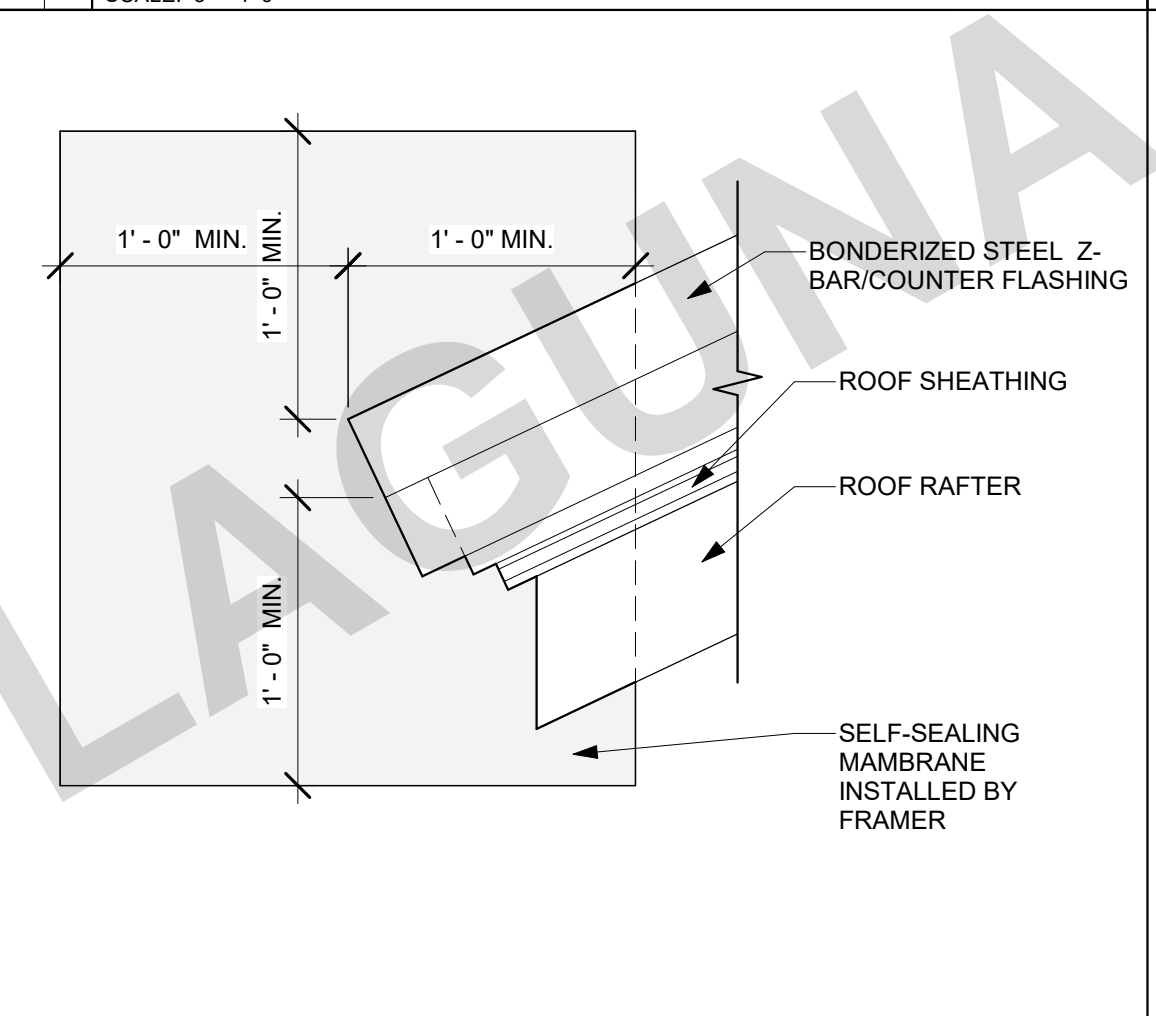
23 FLASHING PAN @ DOOR THRESHOLD
SCALE: 3" = 1'-0"



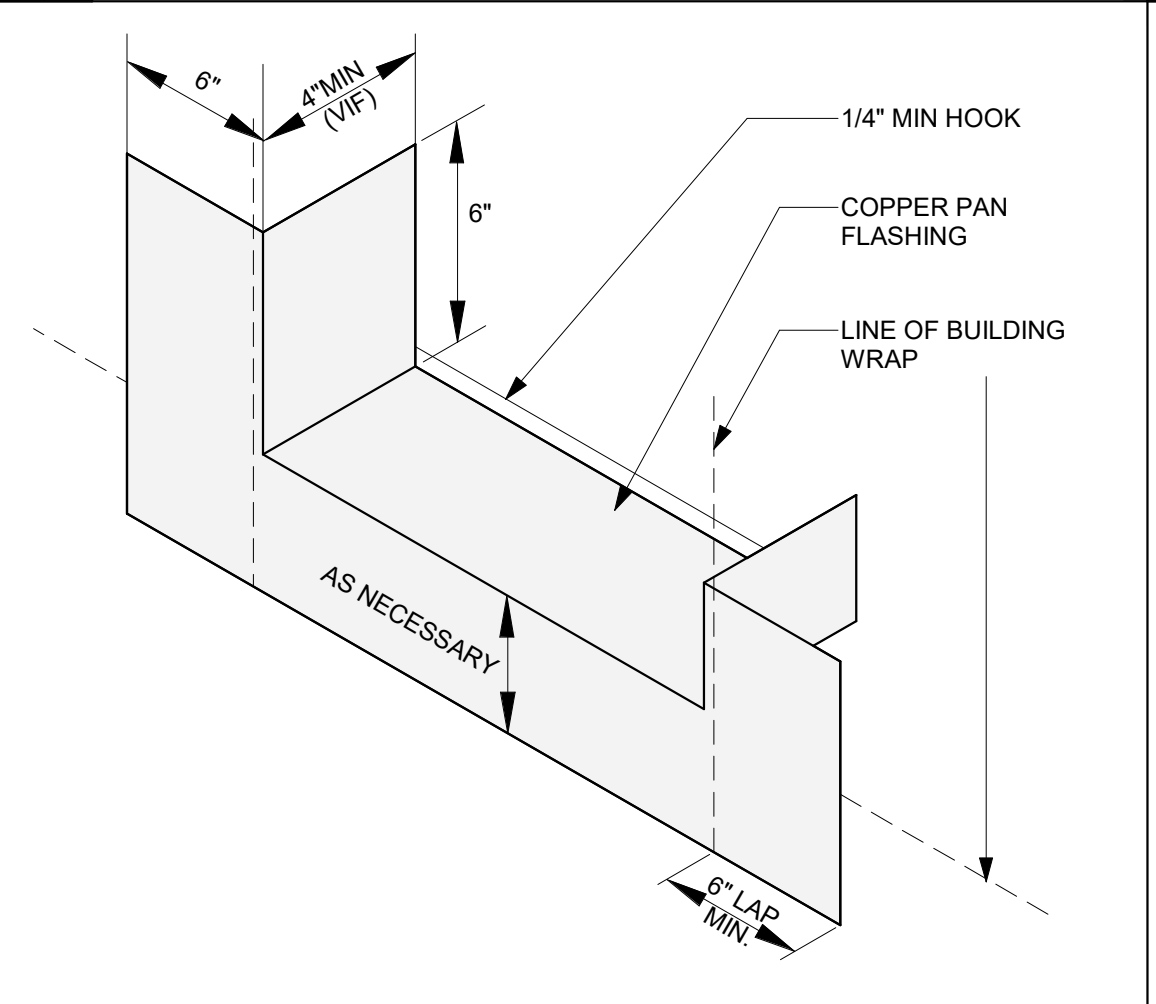
24 FLASHING - JAMB TO SILL TYP.
SCALE: 3" = 1'-0"



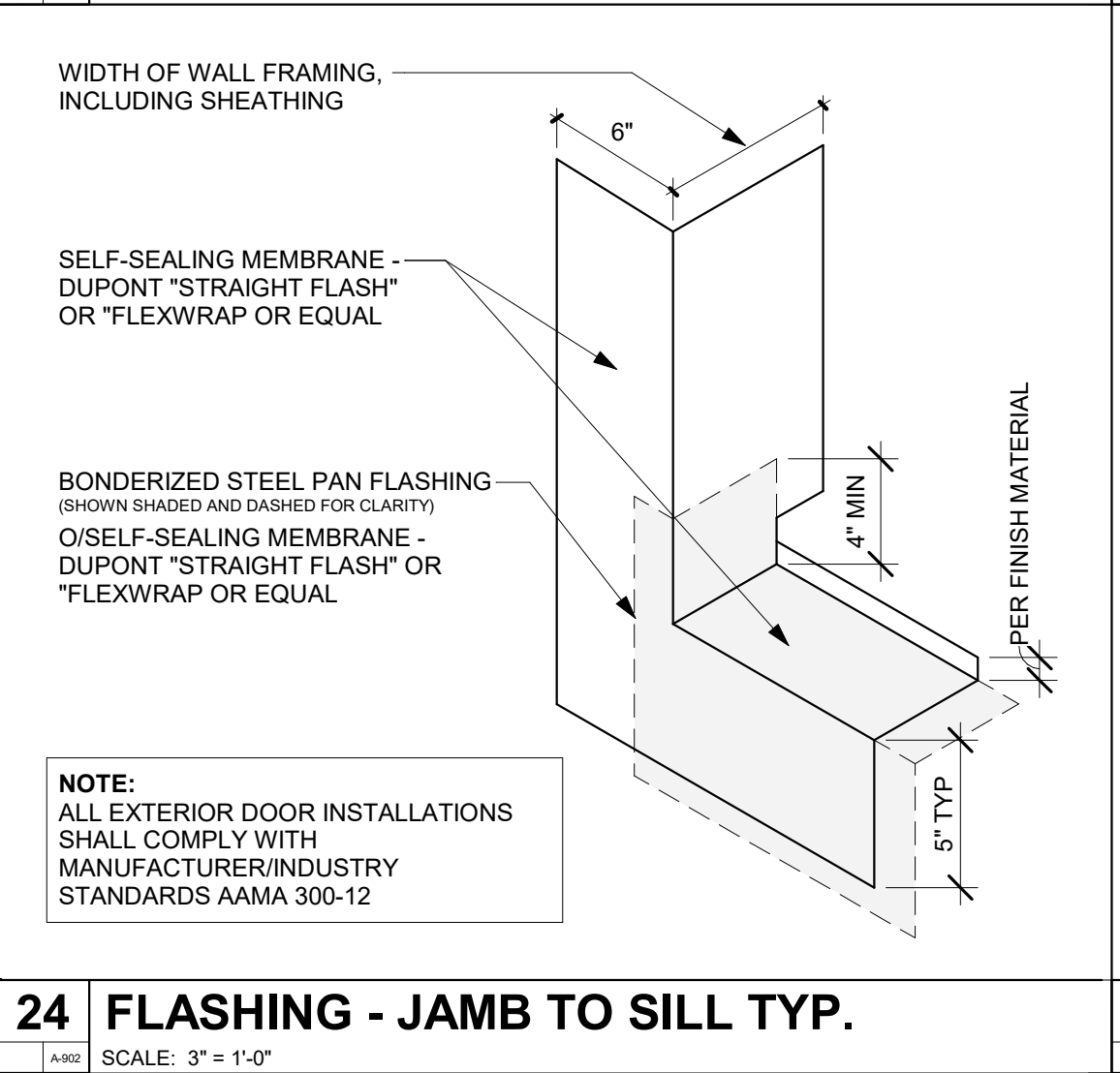
21 ROOF TO WALL TYP. FLASHING 5
SCALE: 3" = 1'-0"



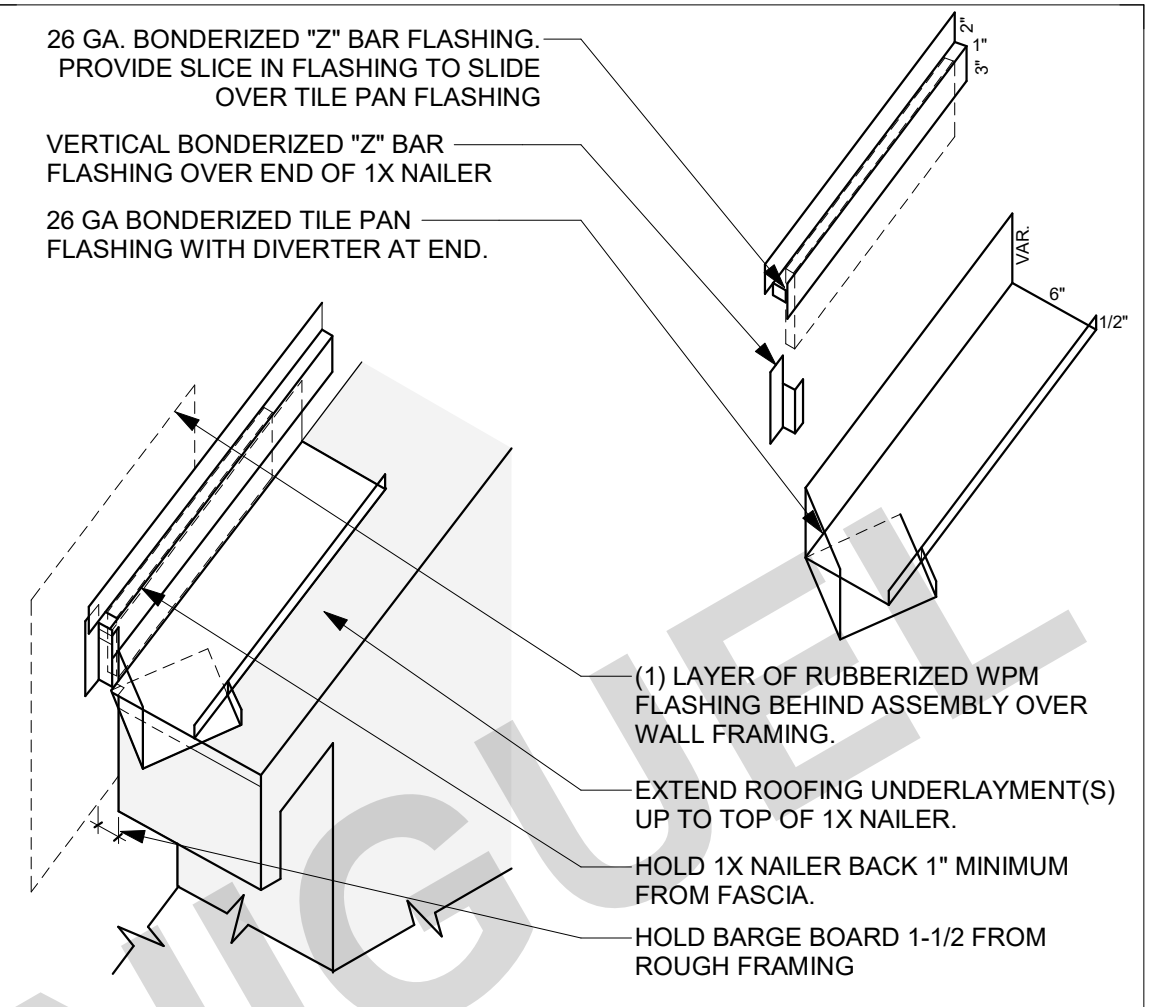
22 FLASHING - FASCIA TO WALL TYP.
SCALE: 1 1/2" = 1'-0"



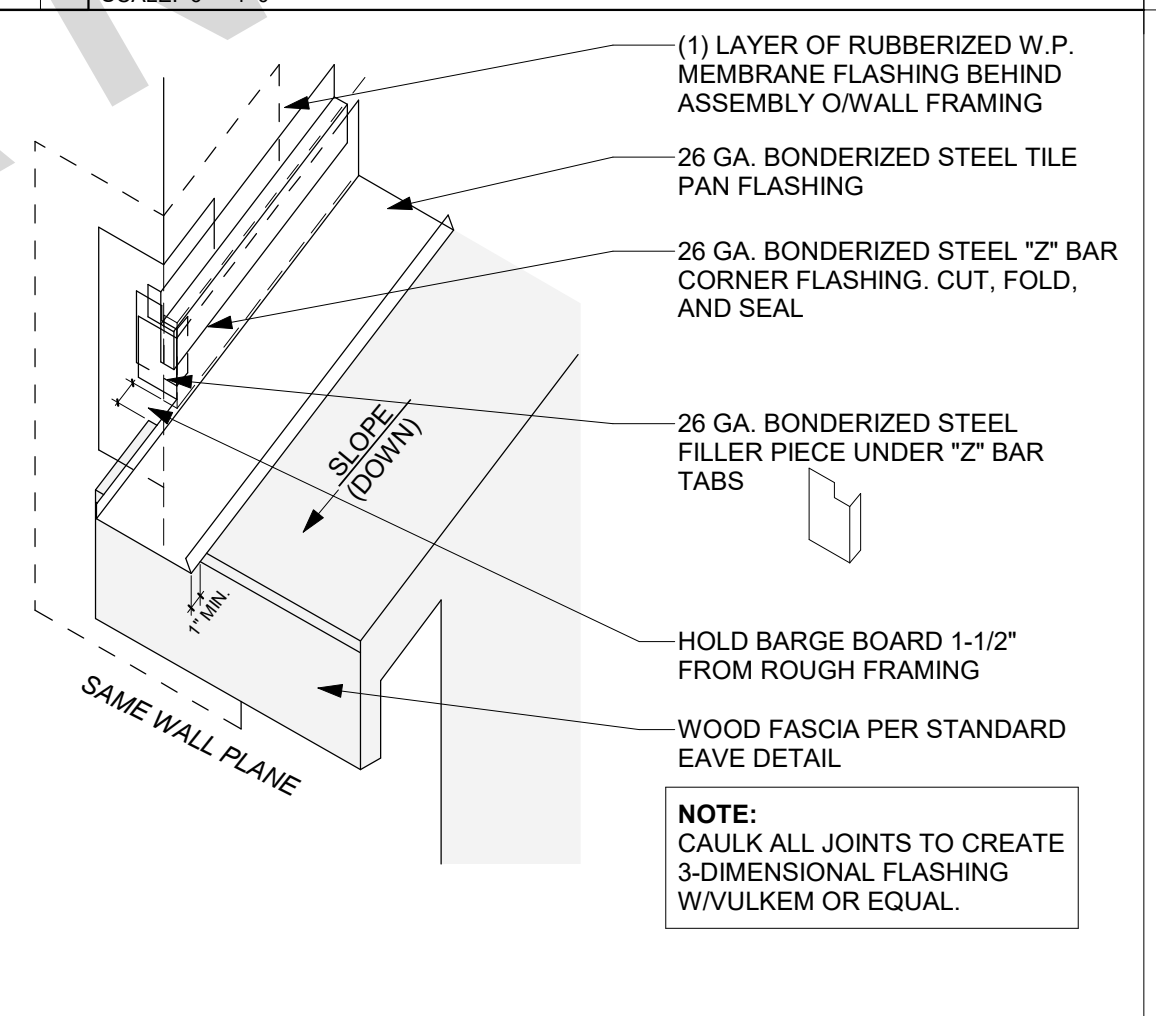
13 ROOF TO WALL TYP. FLASHING
SCALE: 3" = 1'-0"



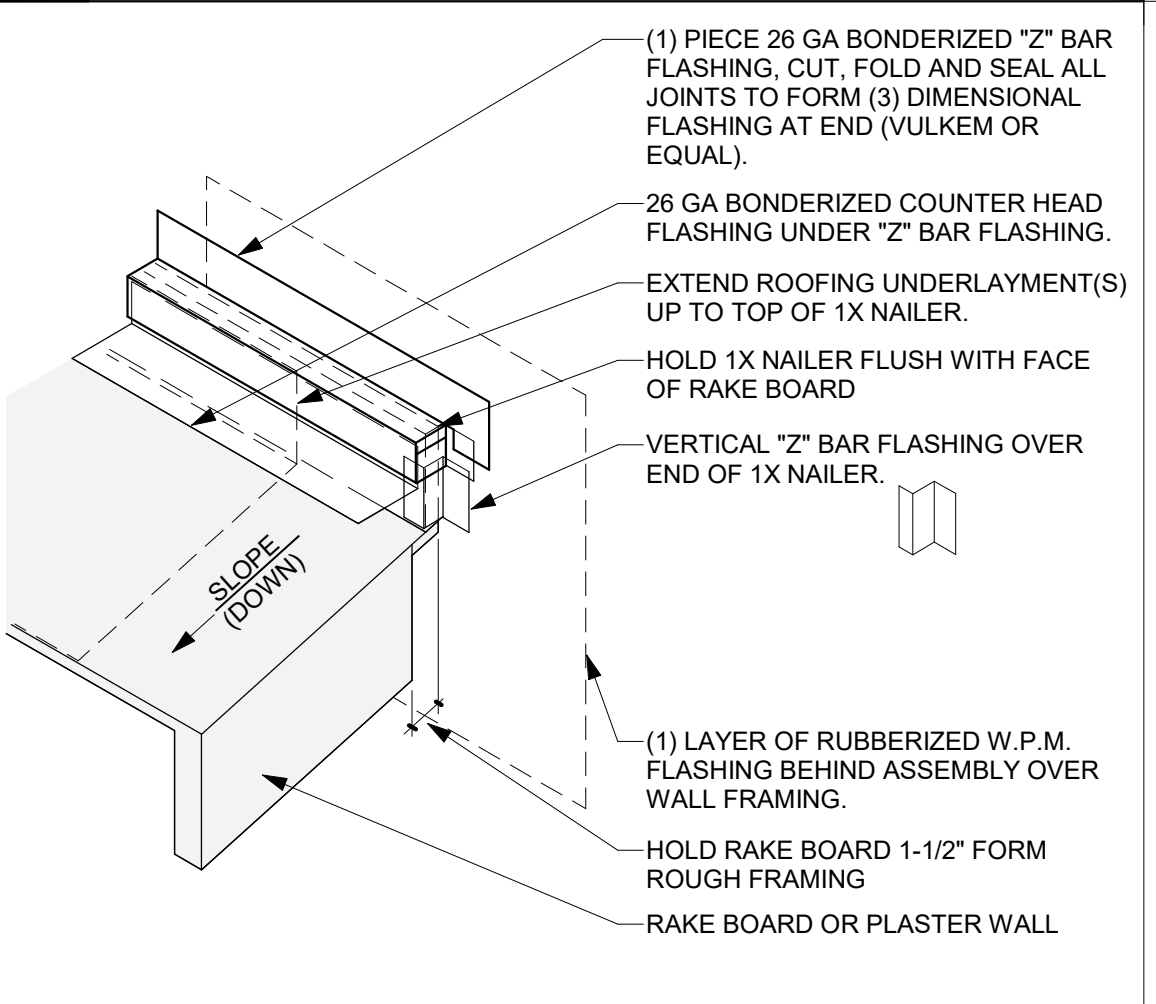
14 ROOF TO WALL TYP. FLASHING
SCALE: 3" = 1'-0"



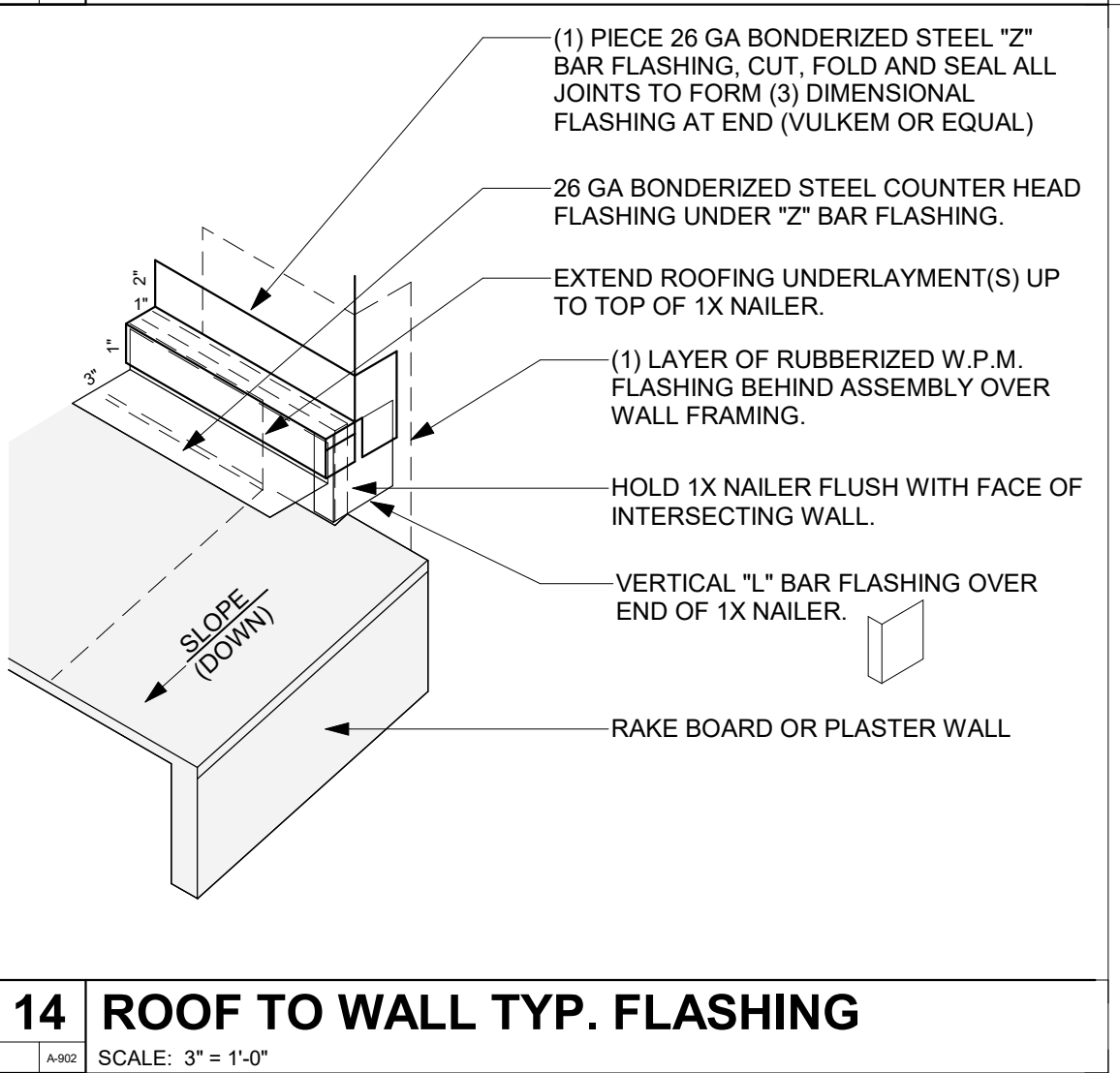
11 ROOF TO WALL TYP. FLASHING 1
SCALE: 6" = 1'-0"




12 ROOF TO WALL TYP. FLASHING 2
SCALE: 3" = 1'-0"



13 ROOF TO WALL TYP. FLASHING
SCALE: 3" = 1'-0"



14 ROOF TO WALL TYP. FLASHING
SCALE: 3" = 1'-0"



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PRE-APPROVED ADU
CITY OF LAGUNA NIGUEL
ARCHITECTURAL DETAILS -
COMMON

PUBLIC SET

DATE
02/05/2025

SHEET
A-902

AGING-IN-PLACE DESIGN

1. AGING-IN-PLACE DESIGN AND FALL PREVENTION. NEWLY CONSTRUCTED DWELLINGS SUBJECT TO THE REQUIREMENTS OF THIS CODE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTIONS R327.1.1 THROUGH R327.1.4
- A. **EXCEPTIONS**
1. COVERED MULTIFAMILY DWELLINGS DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH CHAPTER 11A OF CBC
2. REINFORCEMENT FOR GRAB BARS. AT LEAST ONE BATHROOM ON THE ENTRY LEVEL SHALL BE PROVIDED WITH REINFORCEMENT INSTALLED IN ACCORDANCE WITH THIS SECTION, WHERE THERE IS NO BATHROOM ON THE ENTRY LEVEL, AT LEAST ONE BATHROOM ON THE SECOND OR THIRD FLOOR OF THE DWELLING SHALL COMPLY WITH THIS SECTION
- A. REINFORCEMENT SHALL BE SOLID LUMBER OR OTHER CONSTRUCTION MATERIALS APPROVED BY THE ENFORCING AGENCY.
- B. REINFORCEMENTS SHALL NOT BE LESS THAN 2 BY 8 INCH (51 MM BY 203 MM) NOMINAL LUMBER, [1 1/2 INCH BY 7 1/4 INCH (38 MM BY 184 MM) ACTUAL DIMENSION] OR OTHER CONSTRUCTION MATERIAL PROVIDING EQUAL HEIGHT AND LOAD CAPACITY. REINFORCEMENT SHALL BE LOCATED BETWEEN 32 INCHES (812.8 MM) AND 39 1/4 INCHES (997 MM) ABOVE THE FINISHED FLOOR FLUSH WITH THE WALL FRAMING.
- C. WATER CLOSET REINFORCEMENT SHALL BE INSTALLED ON BOTH SIDE WALLS OF THE FIXTURE, OR ONE SIDE WALL AND THE BACK WALL.
- D. SHOWER REINFORCEMENT SHALL BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED
- E. BATHTUB AND COMBINATION BATHTUB/SHOWER REINFORCEMENT SHALL BE CONTINUOUS ON EACH END OF THE BATHTUB AND THE BACK WALL. ADDITIONALLY, BACK WALL REINFORCEMENT FOR A LOWER GRAB BAR SHALL BE PROVIDED WITH THE BOTTOM EDGE LOCATED NO MORE THAN 6 INCHES (152.4 MM) ABOVE THE BATHTUB RIM.

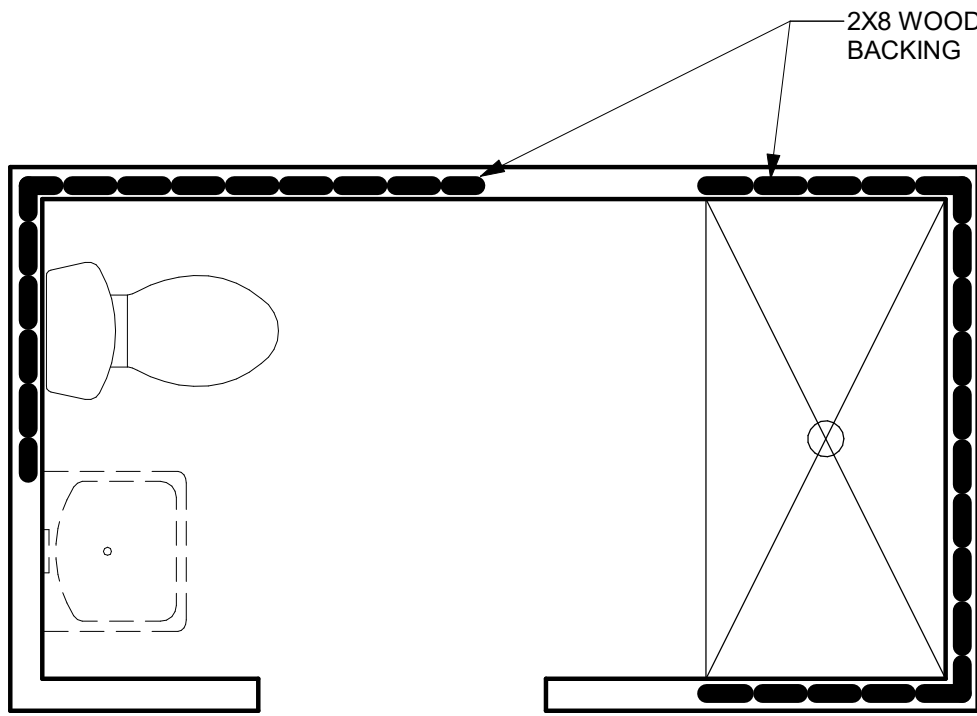
- F. **EXCEPTIONS**
- WHERE THE WATER CLOSET IS NOT PLACED ADJACENT TO A SIDE WALL CAPABLE OF ACCOMMODATING A GRAB BAR, THE BATHROOM SHALL HAVE PROVISIONS FOR INSTALLATION OF FLOOR-MOUNTED, FOLDAWAY OR SIMILAR ALTERNATE GRAB BAR REINFORCEMENT APPROVED BY THE ENFORCING AGENCY
1. REINFORCEMENT SHALL NOT BE REQUIRED IN WALL FRAMING FOR PRE-FABRICATED SHOWER ENCLOSURES AND BATHTUB WALL PANELS WITH INTEGRAL FACTORY-INSTALLED GRAB BARS OR WHEN FACTORY-INSTALLED REINFORCEMENT FOR GRAB BAR IS PROVIDED.
2. SHOWER ENCLOSURES THAT DO NOT PERMIT INSTALLATION OF REINFORCEMENT AND/OR GRAB BARS SHALL BE PERMITTED, PROVIDED REINFORCEMENT FOR INSTALLATION OF FLOOR-MOUNTED GRAB BARS ADJACENT TO THE BATHTUB OR AN ALTERNATE METHOD IS APPROVED BY THE ENFORCING AGENCY.
3. BATHTUBS WITH NO SURROUNDING WALLS, OR WHERE WALL PANELS DO NOT PERMIT THE INSTALLATION OF REINFORCEMENT SHALL BE PERMITTED, PROVIDED REINFORCEMENT FOR INSTALLATION OF FLOOR-MOUNTED GRAB BARS ADJACENT TO THE BATHTUB OR AN ALTERNATE METHOD IS APPROVED BY THE ENFORCING AGENCY.
4. REINFORCEMENT OF FLOORS SHALL NOT BE REQUIRED FOR BATHTUBS AND WATER CLOSETS INSTALLED ON CONCRETE SLAB FLOORS.

1. INFORMATION AND/OR DRAWINGS IDENTIFYING THE LOCATION OF GRAB BAR REINFORCEMENT SHALL BE PLACED IN THE OPERATION AND MAINTENANCE MANUAL IN ACCORDANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS CODE, CHAPTER 4, DIVISION 4.4.
- A. INFORMATION AND/OR DRAWINGS IDENTIFYING THE LOCATION OF GRAB BAR REINFORCEMENT SHALL BE PLACED IN THE OPERATION AND MAINTENANCE MANUAL IN ACCORDANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS CODE, CHAPTER 4, DIVISION 4.4

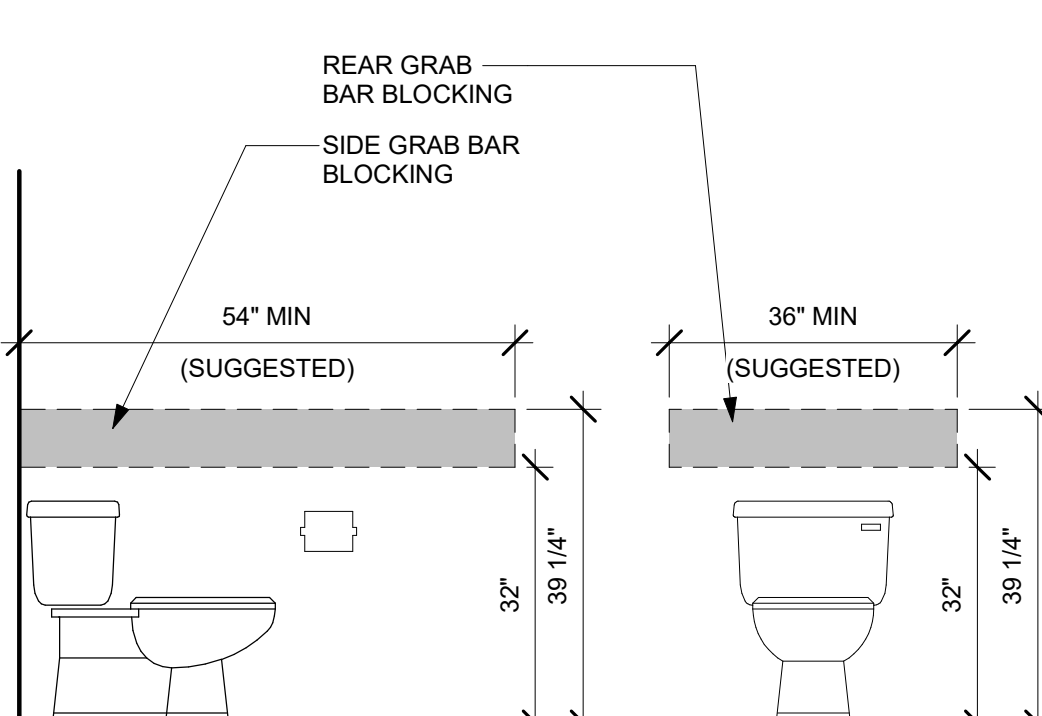
2. ELECTRICAL RECEPTACLE OUTLET, SWITCH AND CONTROL HEIGHTS SHALL BE COMPLIANT WITH **SECTION R327.1.2**
- A. ELECTRICAL RECEPTACLE OUTLETS, SWITCHES, AND CONTROLS (INCLUDING CONTROLS FOR HEATING, VENTILATION AND AIR CONDITIONING) INTENDED TO BE USED BY OCCUPANTS SHALL BE LOCATED NO MORE THAN 48 INCHES (1219.2 MM) MEASURED FROM THE TOP OF THE OUTLET BOX AND NOT LESS THAN 15 INCHES (381 MM) MEASURED FROM THE BOTTOM OF THE OUTLET BOX ABOVE THE FINISH FLOOR.
- B. **EXCEPTIONS:**
1. DEDICATED RECEPTACLE OUTLETS; FLOOR RECEPTACLE OUTLETS; CONTROLS MOUNTED ON CEILING FANS AND CEILING LIGHTS; AND CONTROLS LOCATED ON APPLIANCES.
2. RECEPTACLE OUTLETS REQUIRED BY THE CALIFORNIA ELECTRICAL CODE ON A WALL SPACE WHERE THE DISTANCE BETWEEN THE FINISHED FLOOR AND A BUILT-IN FEATURE ABOVE THE FINISH FLOOR, SUCH AS A WINDOW, IS LESS THAN 15 INCHES (381 MM).

3. INTERIOR DOORS SHALL COMPLY WITH **SECTION R327.1.3**
- A. EFFECTIVE JULY 1, 2024, AT LEAST ONE BATHROOM AND ONE BEDROOM ON THE ENTRY LEVEL SHALL PROVIDE A DOORWAY WITH A NET CLEAR OPENING OF NOT LESS THAN 32 INCHES (812.8 MM), MEASURED WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGREES FROM THE CLOSED POSITION; OR, IN THE CASE OF A TWO- OR THREE-STORY SINGLE FAMILY DWELLING, ON THE SECOND OR THIRD FLOOR OF THE DWELLING IF A BATHROOM OR BEDROOM IS NOT LOCATED ON THE ENTRY LEVEL.

4. DOORBELL BUTTONS SHALL COMPLY WITH **SECTION R327.1.4**
- A. DOORBELL BUTTONS OR CONTROLS, WHEN INSTALLED, SHALL NOT EXCEED 48 INCHES (1219.2 MM) ABOVE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL BUTTON ASSEMBLY, WHERE DOORBELL BUTTONS INTEGRATED WITH OTHER FEATURES ARE REQUIRED TO BE INSTALLED ABOVE 48 INCHES (1219.2 MM) MEASURED FROM THE EXTERIOR FLOOR OR LANDING, A STANDARD DOORBELL BUTTON OR CONTROL SHALL ALSO BE PROVIDED AT A HEIGHT NOT EXCEEDING 48 INCHES (1219.2 MM) ABOVE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL BUTTON OR CONTROL.

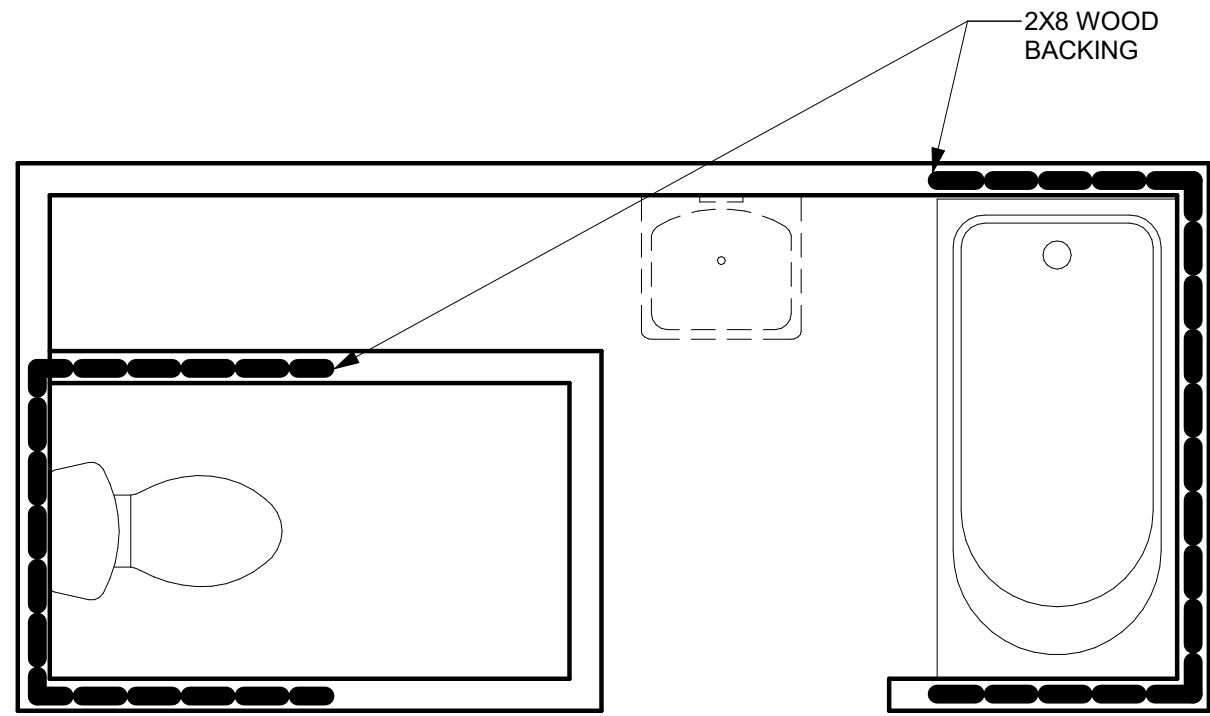


WATER CLOSET ADJACENT TO ONE SIDE WALL AND A BACK WALL

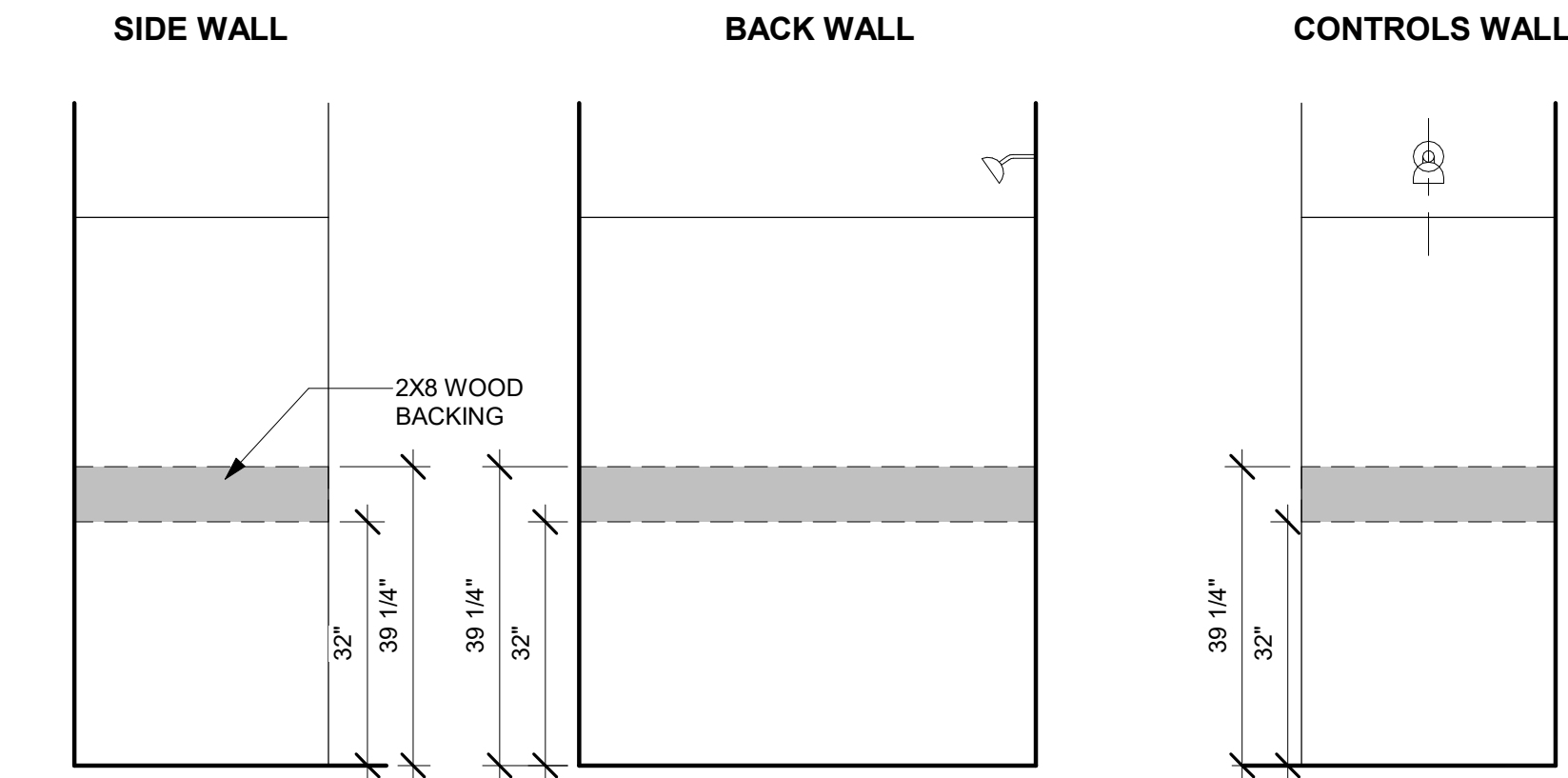


SIDE WALL

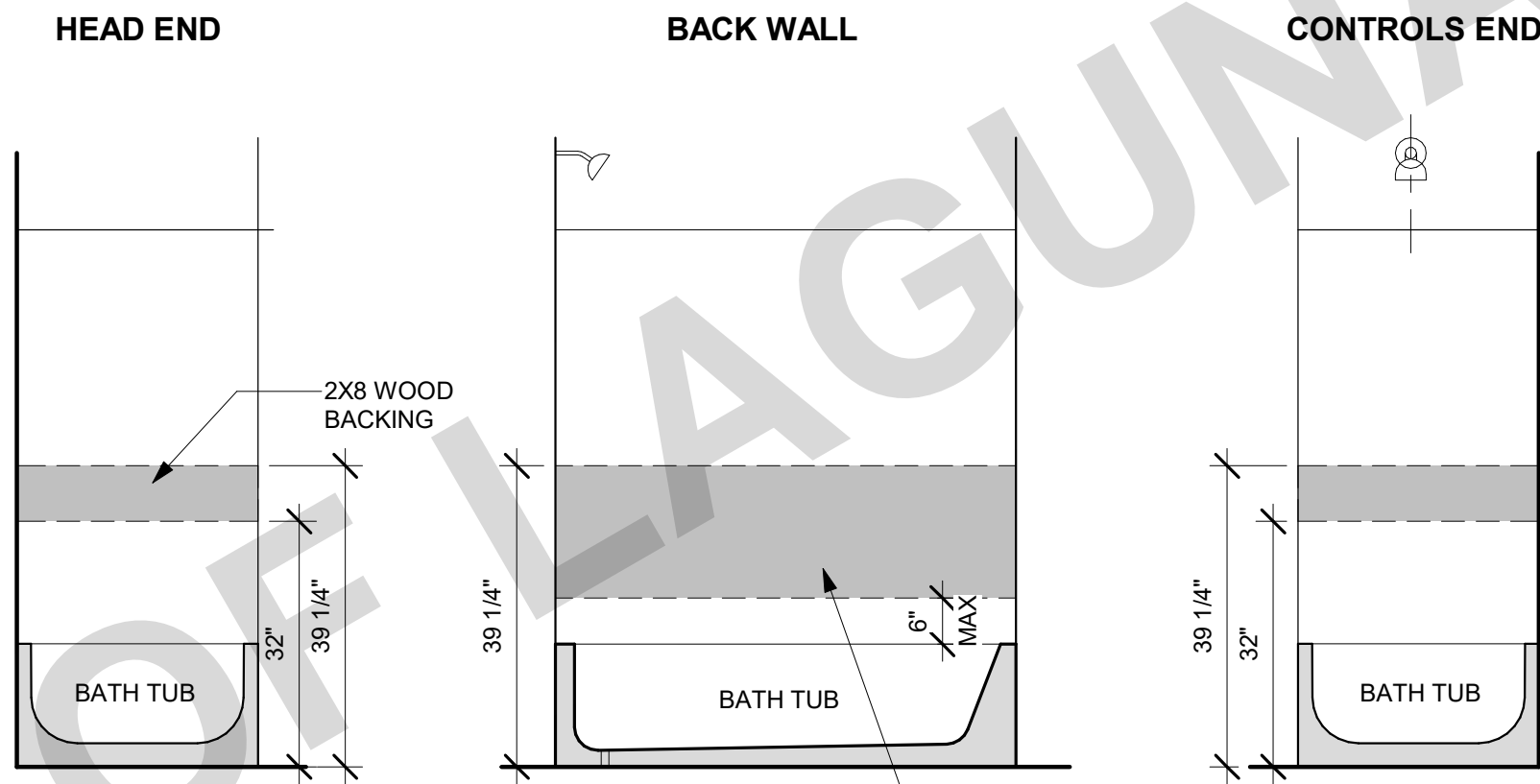
BACK WALL



WATER CLOSET ADJACENT TO TWO SIDE WALLS



SHOWER ENCLOSURE



BATHTUB OR TUB/SHOWER

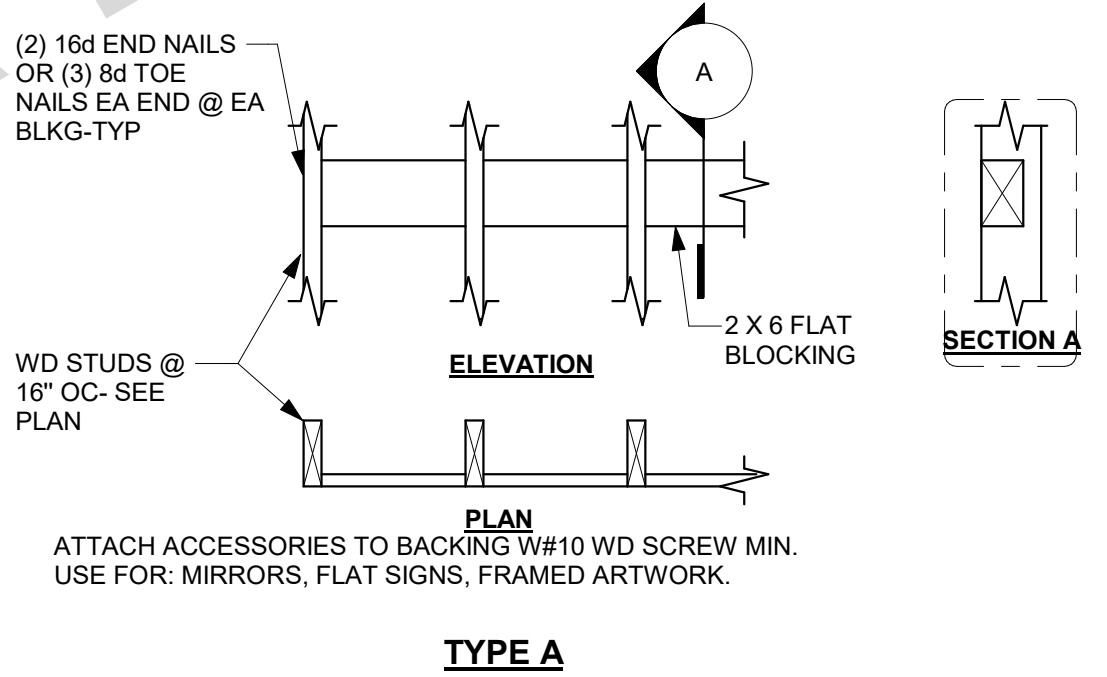
NOTES:

1. REINFORCEMENT MUST BE LOCATED BETWEEN THE DIMENSIONS SPECIFIED.
2. REINFORCEMENT SHALL BE CONTINUOUS IN BATHTUB, BATHTUB COMBO, AND SHOWER WALL ENCLOSURES, WHERE WALL FRAMING IS PROVIDED.
3. REINFORCEMENT MAY BE SOLID LUMBER OR OTHER CONSTRUCTION MATERIALS THAT PROVIDE EQUAL HEIGHT AND LOAD CAPACITY
4. THE LOCATION OF THE REINFORCEMENT MUST BE INCORPORATED IN THE OPERATION MANUAL (E.G. FLOOR PLAN AND ELEVATION DETAILS) REQUIRED BY CAL GREEN BUILDING CHAPTER 4 DIVISION 4.4
5. ADDITIONAL BACKWALL REINFORCEMENT MUST BE INSTALLED WITH THE BOTTOM EDGE NO MORE THAN 6-INCHES ABOVE THE BATHTUB RIM.
6. THE SUGGESTED DIMENSIONS ARE TO ACCOMMODATE THE MINIMUM REQUIRED 36 INCHES CLEARANCE, CENTER TO CENTER, AT A WATER CLOSET AND MINIMUM 24-INCHES CLEAR SPACE IN FRONT OF WATER CLOSET (CPC 402.5). AT THIS TIME CRC R327 DOES NOT SPECIFY THE MINIMUM LENGTHS AT THESE LOCATIONS. HOWEVER, THESE DRAWINGS RECOMMEND THAT THE BACKING SHOULD MEET THE SUGGESTED LENGTHS SHOWN IN THE DETAILS ABOVE (54" AND 36" MINIMUM).

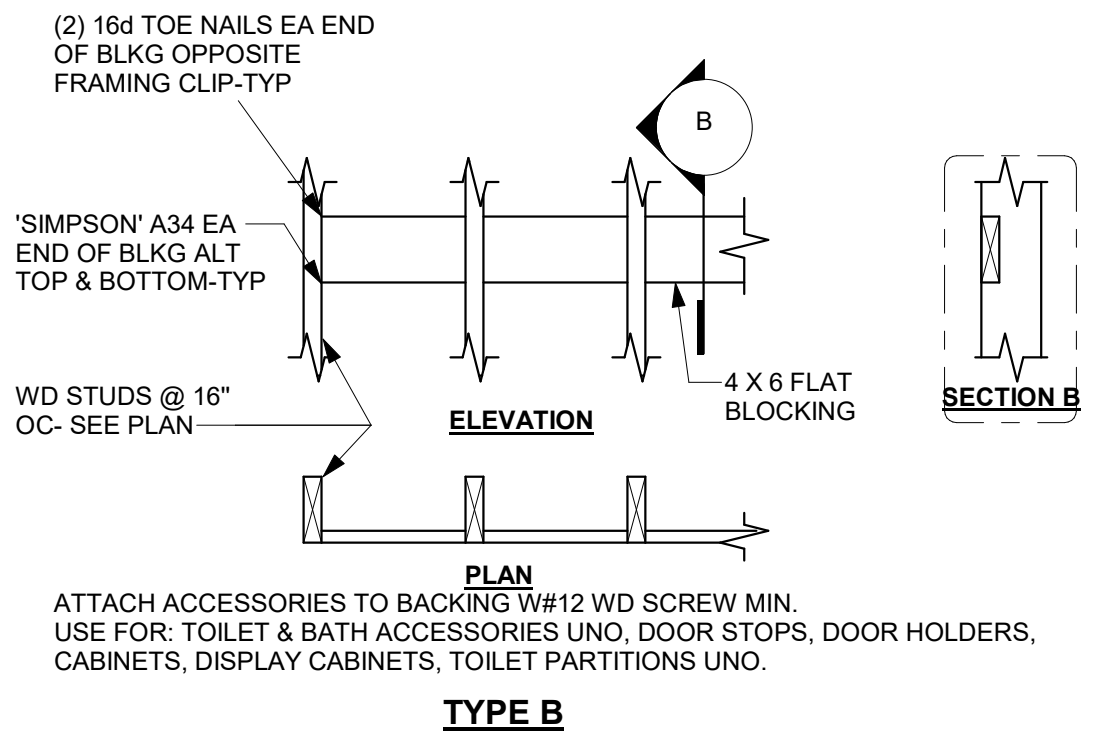
EXCEPTIONS:

1. REINFORCEMENT FOR FUTURE FLOOR-MOUNTED, FOLDAWAY OR SIMILAR ALTERNATED GRAB BAR MAY BE INSTALLED WITH PRIOR APPROVALS FROM THE ENFORCING AGENCY.
2. WALL REINFORCEMENT IS NOT REQUIRED WHERE PRE-FABRICATED SHOWER & BATHTUB PANELS THAT HAVE INTEGRAL FACTORY INSTALLED GRAB BARS, OR WHEN FACTORY-INSTALLED REINFORCEMENT FOR GRAB BARS IS PROVIDED.
3. REINFORCEMENT OF FLOOR IS NOT REQUIRED FOR BATHTUBS AND WATER CLOSETS INSTALLED ON CONCRETE FLOORS.
4. DEDICATED RECEPTACLE OUTLETS; FLOOR RECEPTACLE OUTLETS; CONTROLS MOUNTED ON CEILING FANS AND CEILING LIGHTS; CONTROLS LOCATED ON APPLIANCES. RECEPTACLE OUTLETS REQUIRED BY THE CALIFORNIA ELECTRICAL CODE ON A WALL SPACE WHERE THE DISTANCE BETWEEN FINISH FLOOR AND A BUILT-IN FEATURE ABOVE, SUCH AS A WINDOW, IS LESS THAN 15 INCHES.

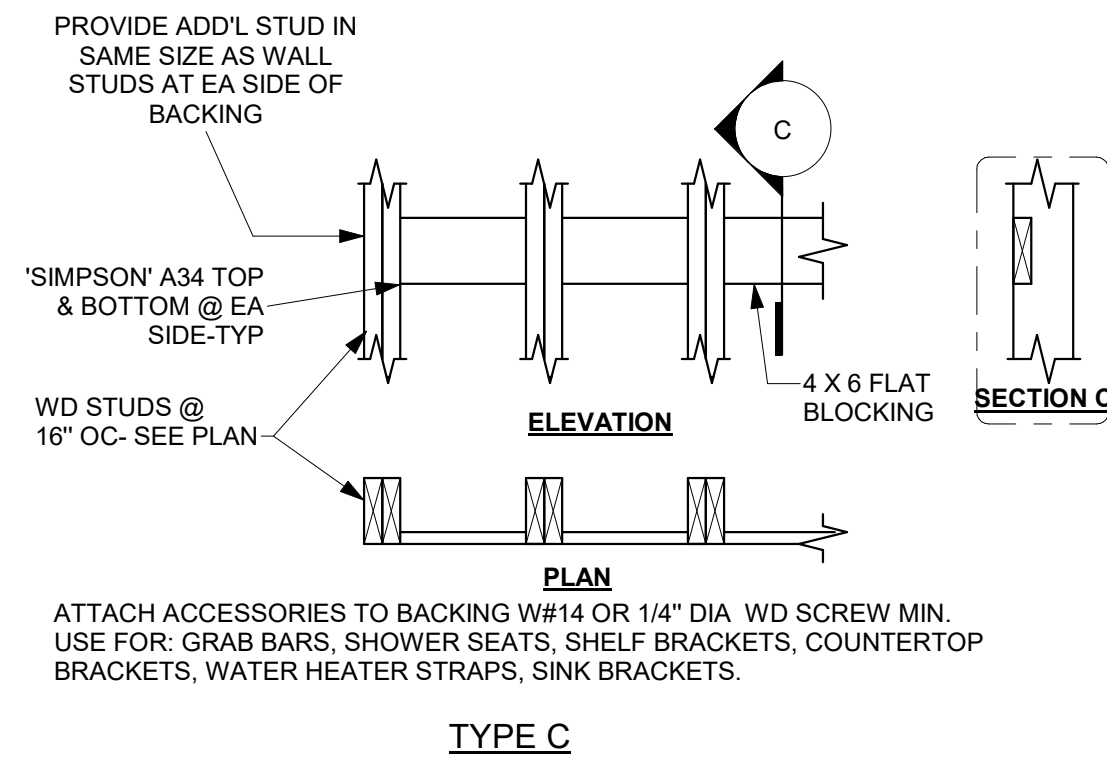
EFFECTIVE JULY 1, 2024 AT LEAST ONE BATHROOM AND ONE BEDROOM ON THE ENTRY LEVEL MUST PROVIDE A DOORWAY WITH A NET CLEAR OPENING OF NOT LESS THAN 32-INCHES MEASURED WITH THE DOOR POSITIONED AT AN 90 DEGREE ANGLE. IN A 2- OR 3-STORY DWELLING, WHERE THERE IS NO BATHROOM ON THE ENTRY LEVEL, AT LEAST ONE BATHROOM ON THE SECOND OR THIRD FLOOR OF THE DWELLING SHALL COMPLY WITH THIS SECTION.



TYPE A



TYPE B



TYPE C

- NOTES:
1. DO NOT CUT OR NOTCH STUDS TO INSTALL BACKING
 2. VERIFY LENGTH, HEIGHT, QUANTITY & LOCATION FO BACKING W/ARCH. DETAILS & ACCESSORY MANUFACTURER
 3. EXTEND BACKING TO FIRST STUD PAST END OF ACCESSORY



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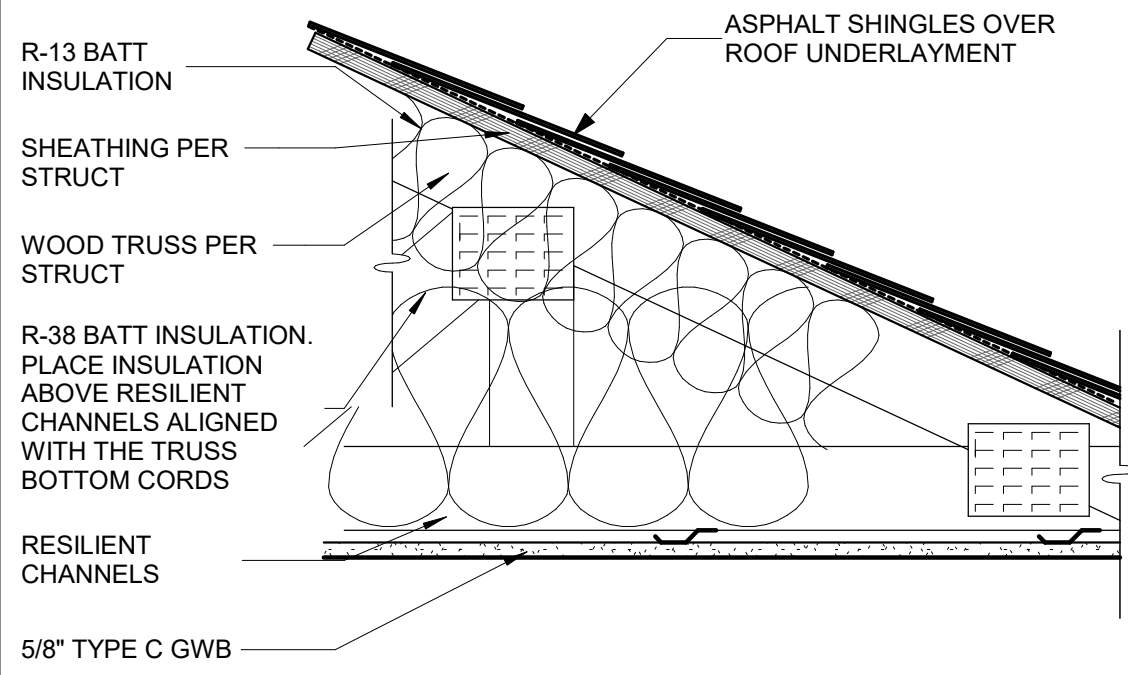
PRE-APPROVED ADU

CITY OF LAGUNA NIGUEL

ARCHITECTURAL DETAILS - COMMON

DATE
02/05/2025
SHEET

A-903

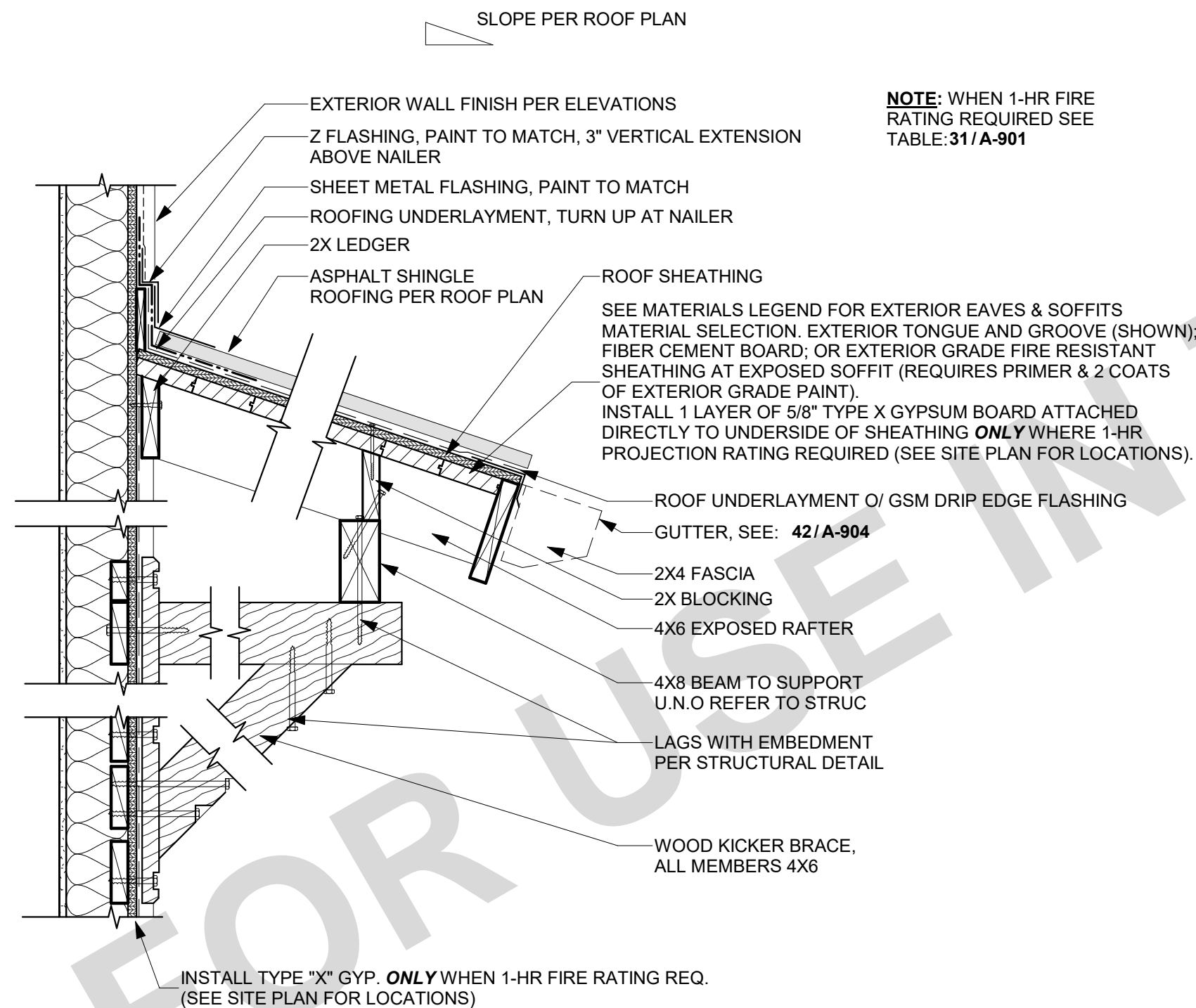


ONE LAYER 5/8" PROPRIETARY TYPE X GYPSUM WALLBOARD OR GYPSUM VENEER BASE APPLIED AT RIGHT ANGLES TO RESILIENT FURRING CHANNELS 16" O.C. (12" O.C. WHEN INSULATION IS DRAPED OVER CHANNELS) WITH 1" TYPE S DRYWALL SCREWS 12" O.C. GYPSUM BOARD END JOINTS ATTACHED WITH SCREWS 8" O.C. TO ADDITIONAL PIECES OF CHANNEL 60" LONG LOCATED 3" BACK ON EITHER SIDE OF END JOINT. RESILIENT CHANNELS APPLIED AT RIGHT ANGLES TO BOTTOM CHORD OF PITCHED WOOD TRUSSES 24" O.C. WITH 11/4" TYPE S OR W SCREWS. GLASS FIBER INSULATION SECURED TO WOOD STRUCTURAL PANELS OR DRAPED OVER CHANNELS. TRUSSES SUPPORTING 16/32" WOOD STRUCTURAL PANELS APPLIED AT RIGHT ANGLES TO TRUSSES WITH CONSTRUCTION ADHESIVE AND 6D RING SHANK NAILS 12" O.C. OPTIONAL CEILING DAMPER (REFER TO MANUFACTURER FOR INFORMATION ON THE TYPE OF DAMPER).

PROPRIETARY GYPSUM BOARD
UNITED STATES GYPSUM COMPANY · 5/8" SHEETROCK® BRAND FIRECODE® C
CORE GYPSUM PANELS

52 ROOF ASSEMBLY (1-HOUR)

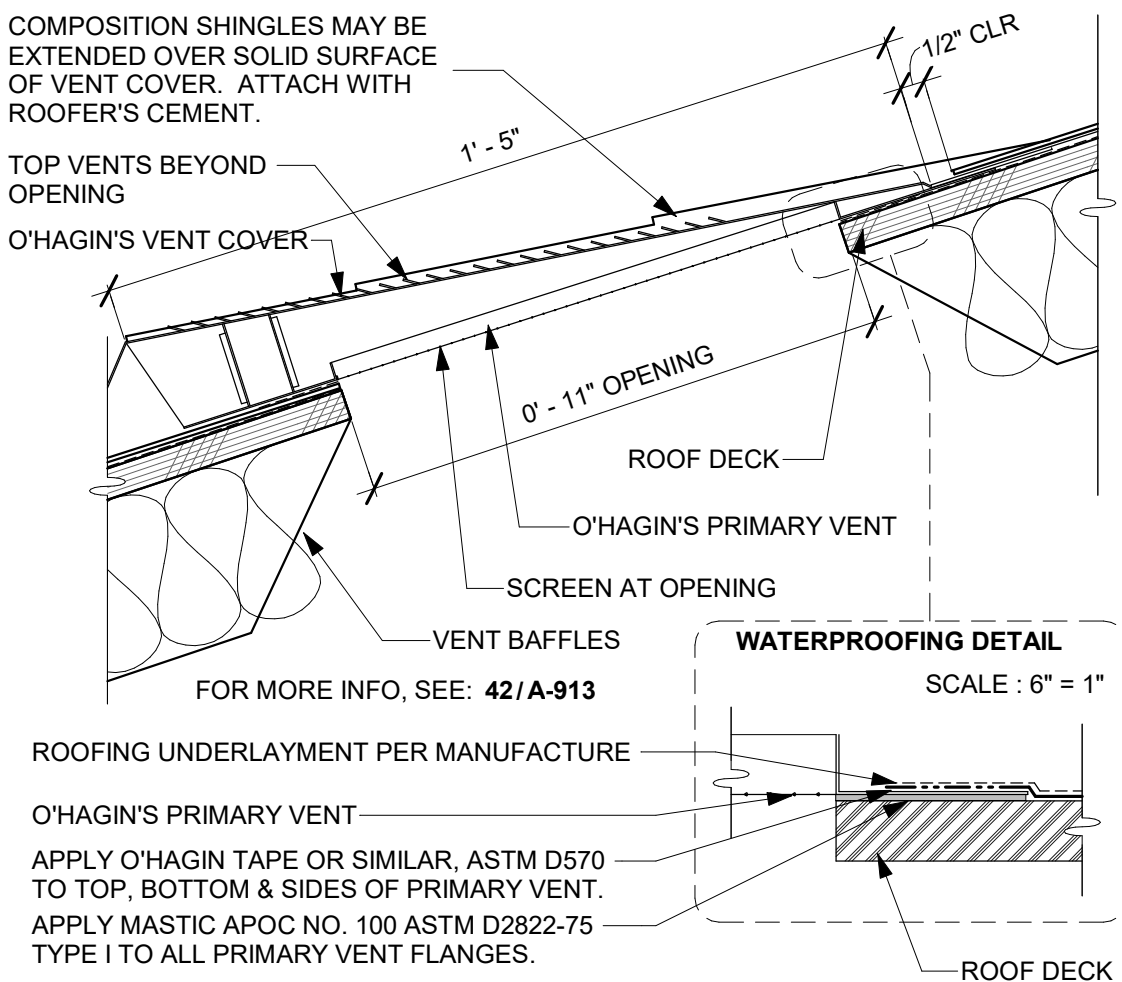
SCALE: 1 1/2" = 1'-0"



- NOTES**
- PRE-PRIME ALL SIDES OF BRACE FRAMING PRIOR TO INSTALLATION. TYPICAL
 - A SELF SEALING MEMBRANE SHALL BE INSTALLED BEHIND WALL TRIM & EXTEND 6" BEYOND WALL TRIM AND 4" MIN. LAP O'WEATHER BARRIER
 - CAULK AROUND TOP & SIDES OF 4X AT WALL PENETRATION.
 - A BITUTHENE MEMBRANE SHALL BE INSTALLED BEHIND 4X6 BRACE W/ 4" LAP MIN.

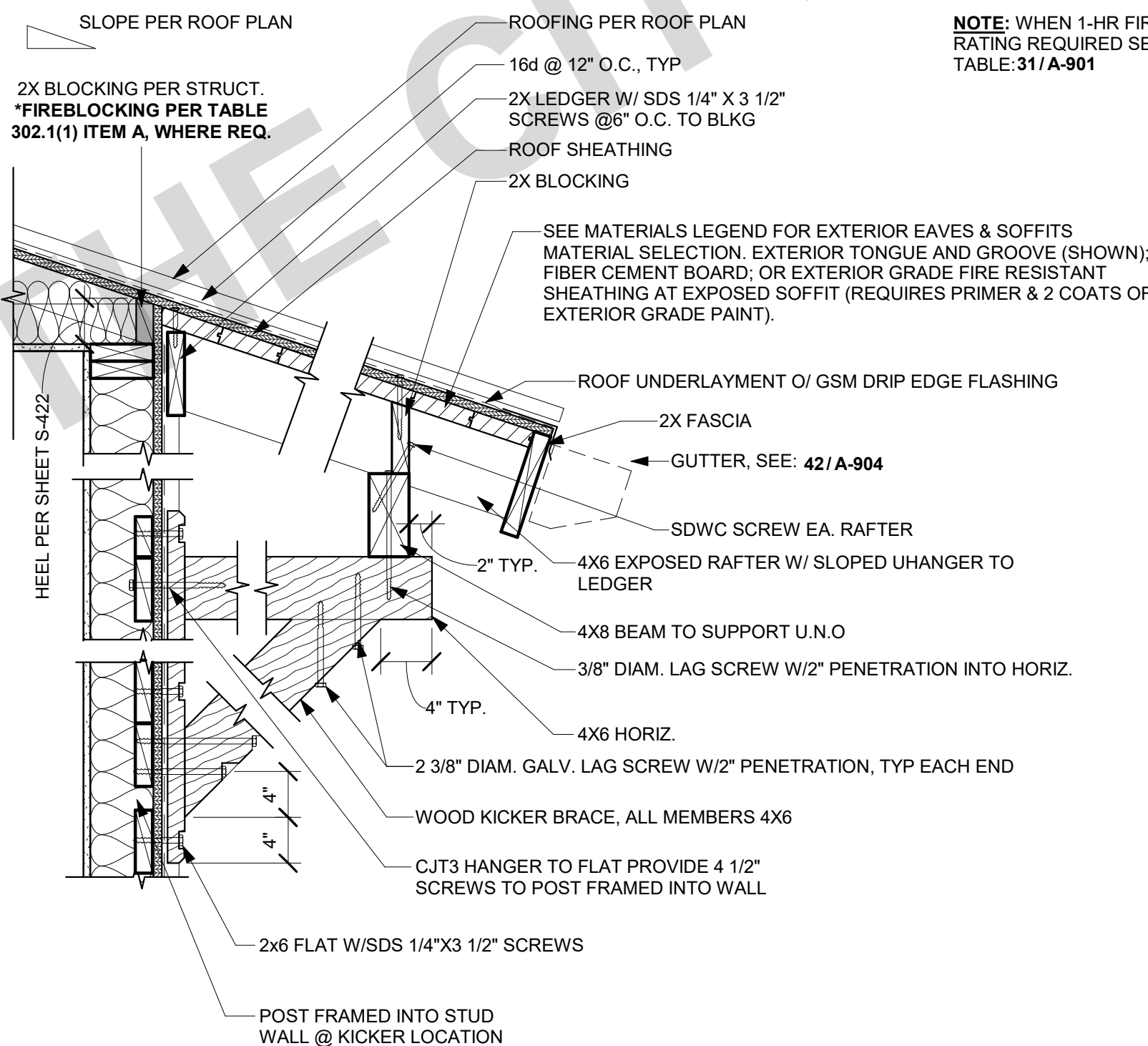
54 BRACE-SHED ROOF

SCALE: 1" = 1'-0"



42 ASPHALT SHINGLE-O'HAGIN ROOF VENT

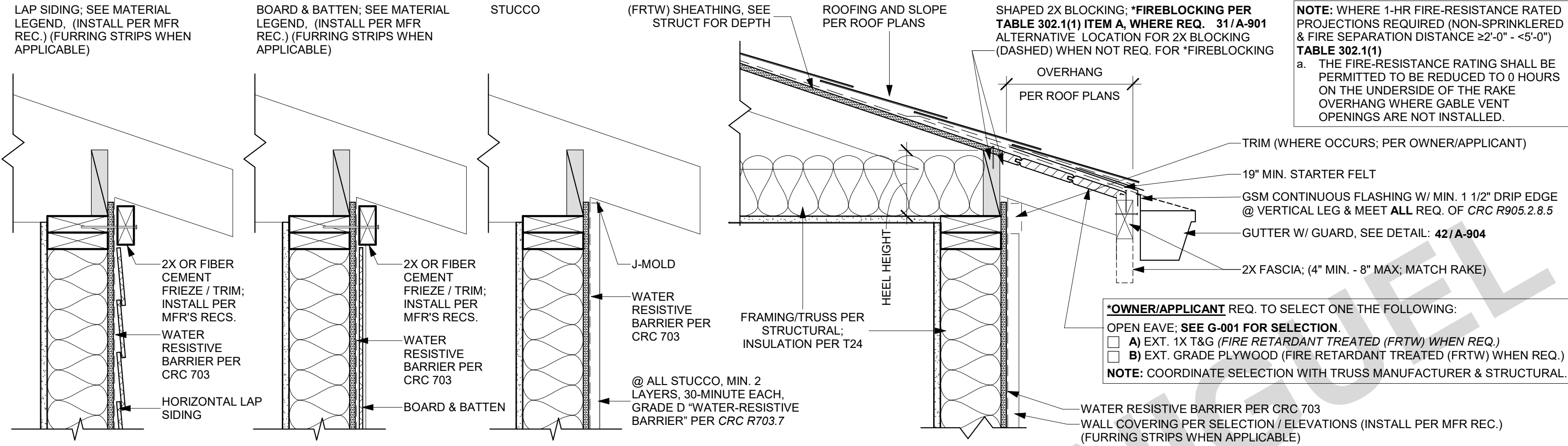
SCALE: 3" = 1'-0"



- NOTES**
- OVERHANG IS NOT PERMITTED WHEN PROPERTY LINE IS 5' - 0" OR LESS FROM THE EDGE OF OVERHANG
 - PRE-PRIME ALL SIDES OF BRACE FRAMING PRIOR TO INSTALLATION. TYPICAL
 - A SELF SEALING MEMBRANE SHALL BE INSTALLED BEHIND WALL TRIM & EXTEND 6" BEYOND WALL TRIM AND 4" MIN. LAP O'WEATHER BARRIER
 - CAULK AROUND TOP & SIDES OF 4X AT WALL PENETRATION.
 - A BITUTHENE MEMBRANE SHALL BE INSTALLED BEHIND 4X6 BRACE W/ 4" LAP MIN.
 - WHEN 1-HR FIRE RATING REQUIRED SEE TABLE:

44 BRACE-EXTENDED EAVE

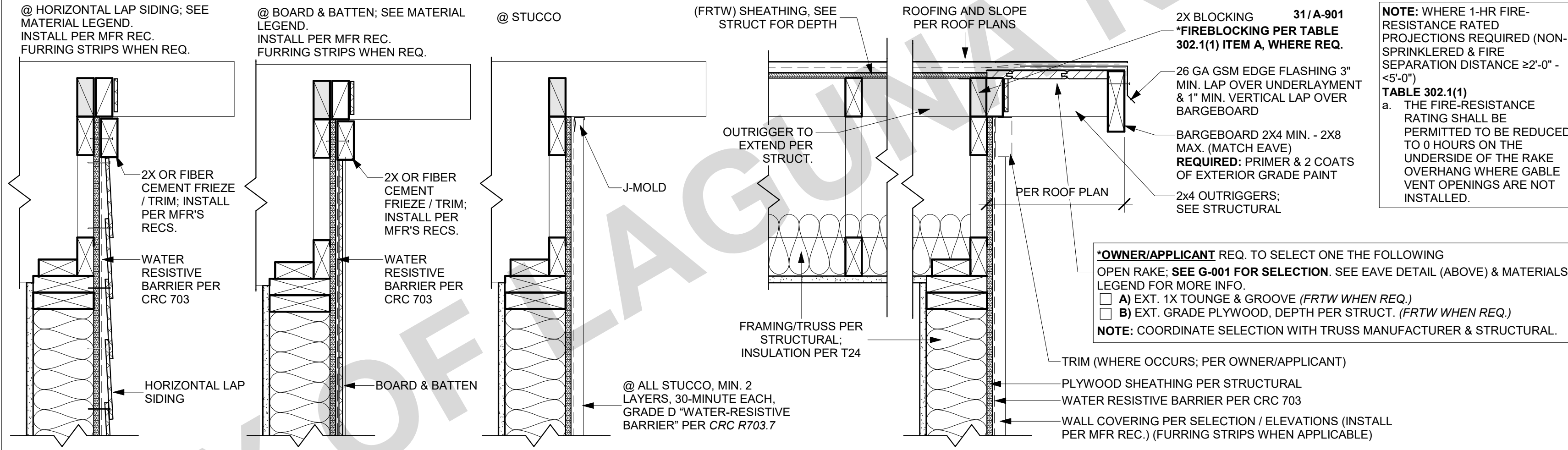
SCALE: 1" = 1'-0"



31 ASPHALT SHINGLE-EAVE

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

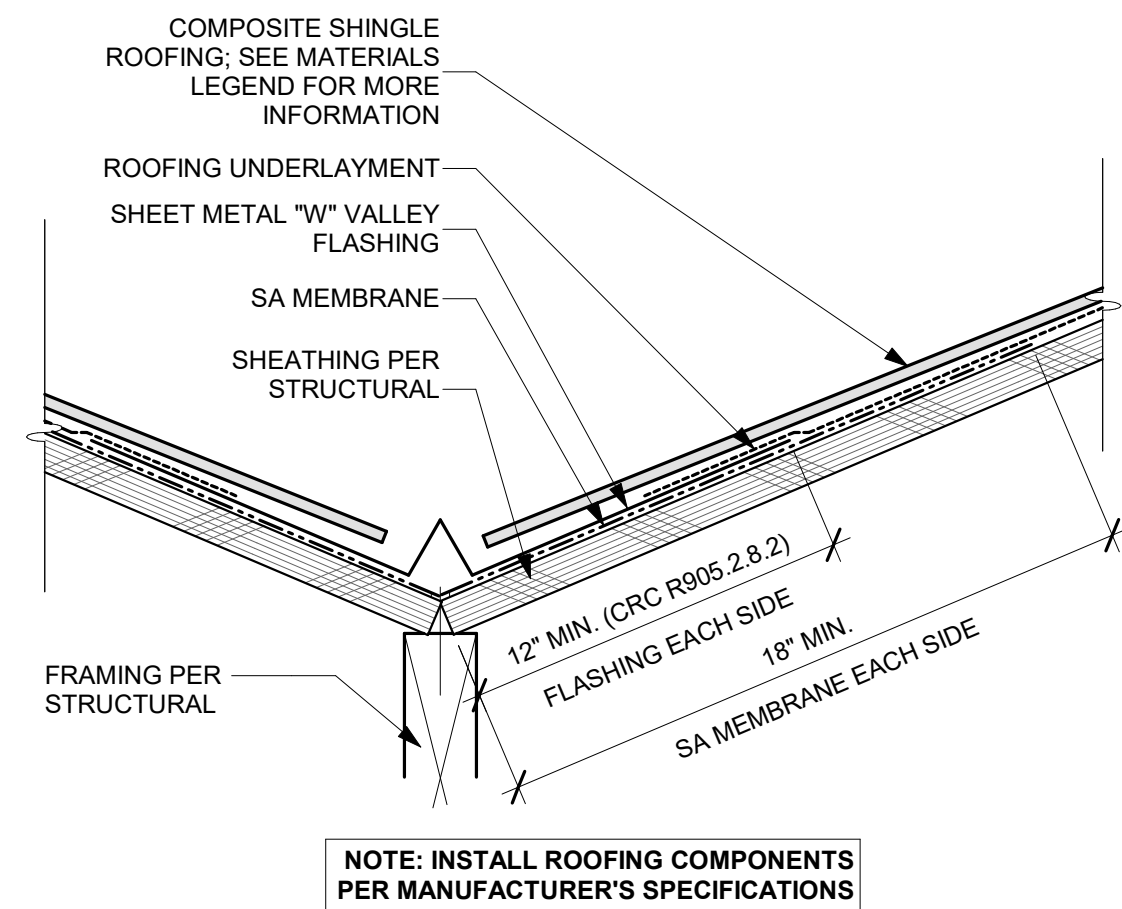
NOTE: PRIMER & 2 COATS OF EXTERIOR GRADE PAINT REQ. FOR ALL EXTERIOR LUMBER.
NOTE: FOR SIZING AND FASTENERS SEE STRUCTURAL



32 ASPHALT SHINGLE-RAKE

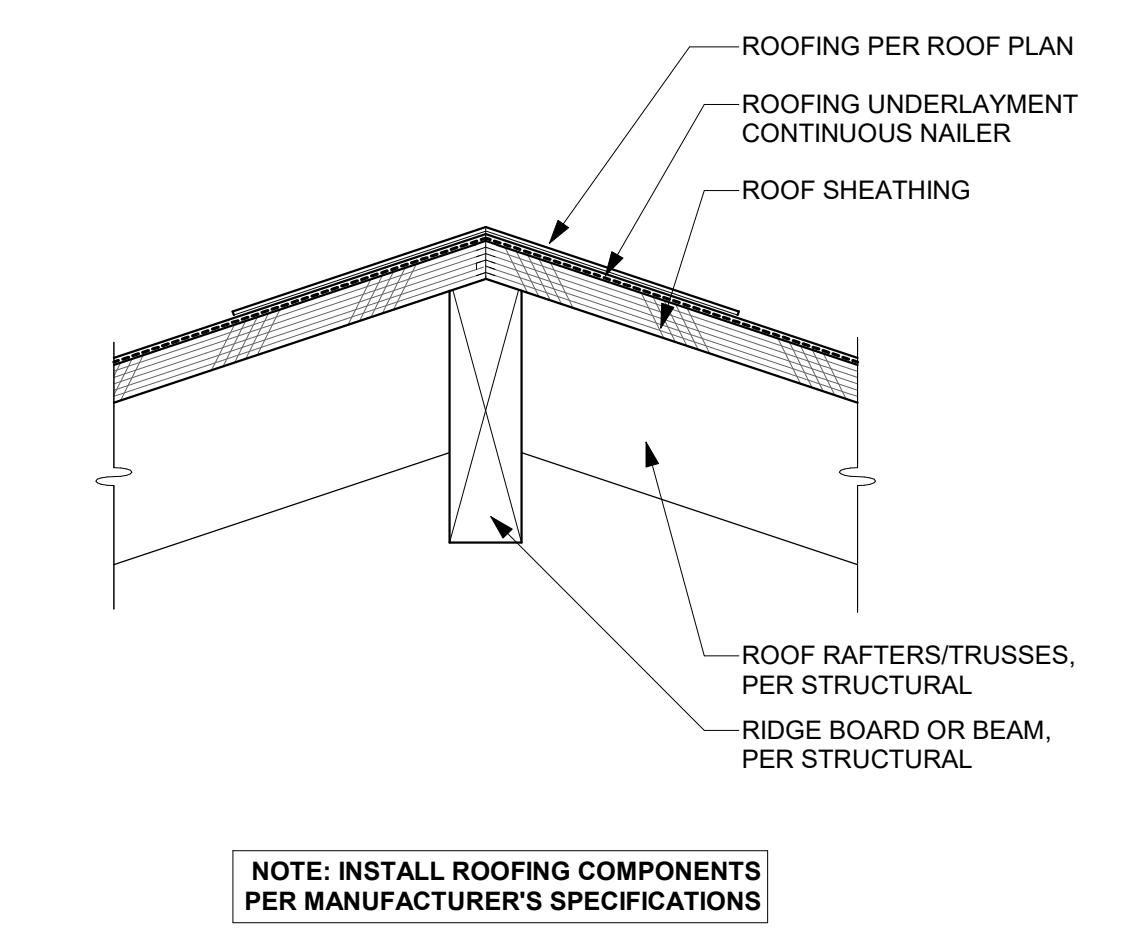
SCALE: 1 1/2" = 1'-0"

NOTE: PRIMER & 2 COATS OF EXTERIOR GRADE PAINT REQ. FOR ALL EXTERIOR LUMBER.
NOTE: FOR SIZING AND FASTENERS SEE STRUCTURAL



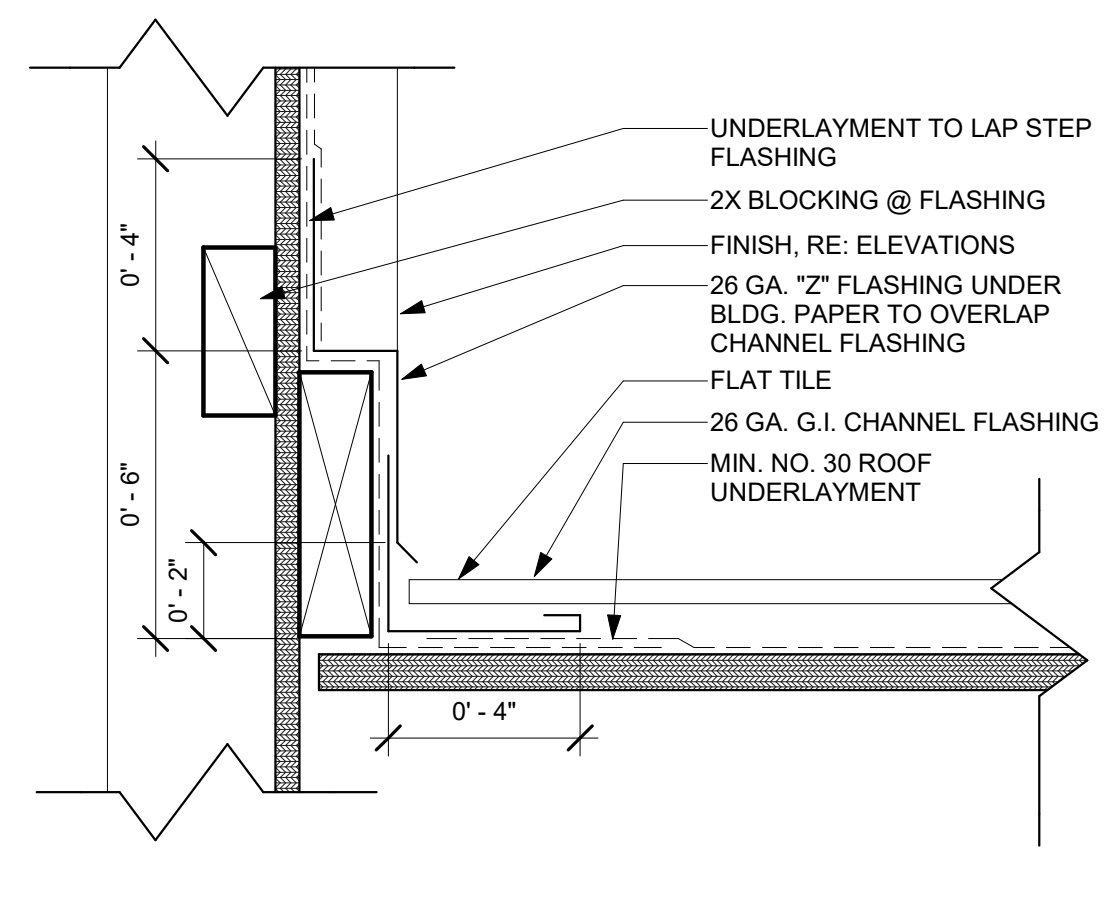
23 ASPHALT SHINGLE-ROOF VALLEY

SCALE: 3" = 1'-0"



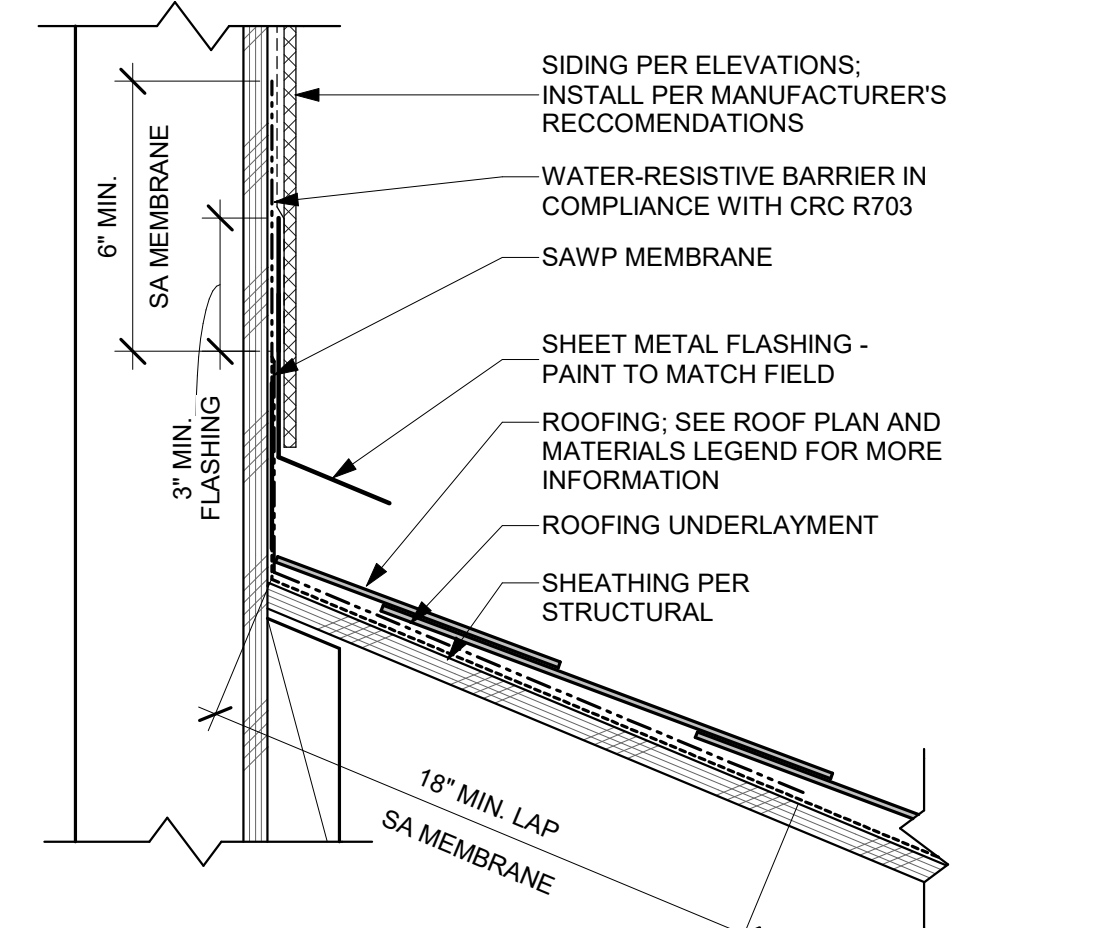
24 ASPHALT SHINGLE-ROOF RIDGE/HIP

SCALE: 3" = 1'-0"



13 ASPHALT SHINGLE-SIDEWALL @ STUCCO

SCALE: 3" = 1'-0"



14 HEADWALL FLASHING

SCALE: 3" = 1'-0"



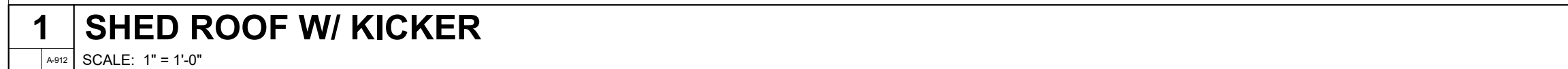
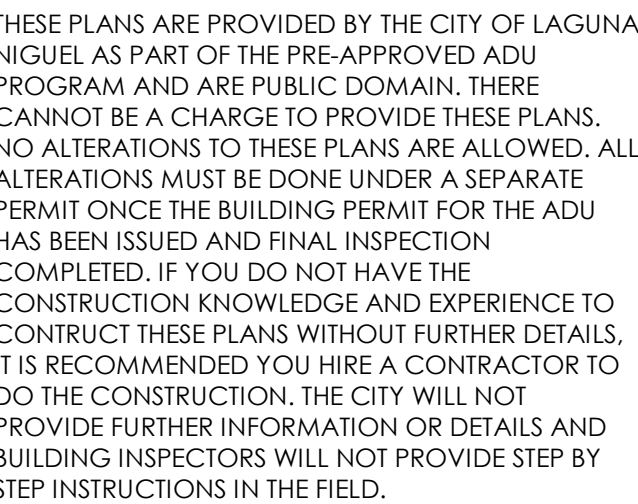
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PRE-APPROVED ADU
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ARCHITECTURAL DETAILS -
ASPHALT SHINGLE ROOF

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DISCLAIMER:
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O'HAGIN
THE TECHNOLOGICAL LEADER IN ATTIC VENTILATION

1. SELECT METAL

Standard:
26 Gauge, G-90 Galvanized Steel
20 Year Warranty

Upgrade Options:
.032" Aluminum
50 Year Warranty

16 Oz. Copper
50 Year Warranty

2. SELECT FINISH

Upgrade Options:
Pre-Painted Galvanized Steel Finish*

BLACK BROWN CHARCOAL GRAY TERRA COTTA WHITE

3. SELECT OPTIONS

Standard:
4" Flange

Upgrade Options:
6" Extended Flange
High Wind Diverter***

4. SELECT WIRE MESH

NFVA**

Standard:
1/4" Galvanized 72.00 sq. in.

Upgrade Options:
1/4" Stainless Steel 72.00 sq. in.

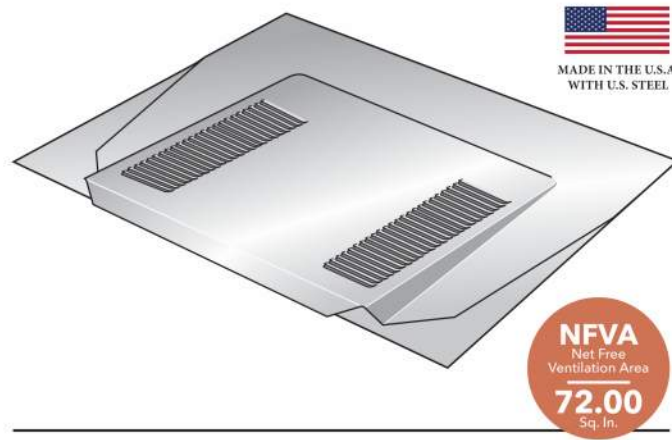
1/8" Galvanized 64.80 sq. in.
1/8" Stainless Steel 64.80 sq. in.

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MATERIAL: **COMPOSITION SHINGLE**
PRODUCT: **LOW PROFILE (TAPERED)**



**UNIQUE LOW-PROFILE DESIGN
FITS BELOW MOST ROOF MOUNTED
SOLAR PANEL INSTALLATIONS**

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WATCH OUR INSTALL VIDEOS
Scan this QR Code with your smart phone to watch easy step-by-step install videos.



If you live in a Wildland Urban Interface area (WUI), upgrade to our **FIRE&ICE**® product line. Scan the QR Codes below with your smart phone to learn more.

LOCAL AND NATIONAL APPROVALS
O'Hagin is a recognized leader in attic ventilation testing and design.

42 ROOF VENT - O'HAGEN - COMP SHINGLE - WUI APPROVED

APR3

NTS

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O'HAGIN
THE TECHNOLOGICAL LEADER IN ATTIC VENTILATION

1. SELECT METAL

Standard:
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20 Year Warranty

Upgrade Options:
.032" Aluminum
50 Year Warranty

16 Oz. Copper
50 Year Warranty

2. SELECT FINISH

Upgrade Options:
Pre-Painted Galvanized Steel Finish*

BLACK BROWN CHARCOAL GRAY TERRA COTTA WHITE

3. SELECT SUBFLASHING OPTIONS

Standard:
2" Flange

Upgrade Options:
4" Flange
6" Flange
Diverter***

4. SELECT WIRE MESH

NFVA**

Standard:
1/4" Galvanized 97.50 sq. in.

Upgrade Options:
1/4" Stainless Steel 97.50 sq. in.

1/8" Galvanized 87.75 sq. in.
1/8" Stainless Steel 87.75 sq. in.

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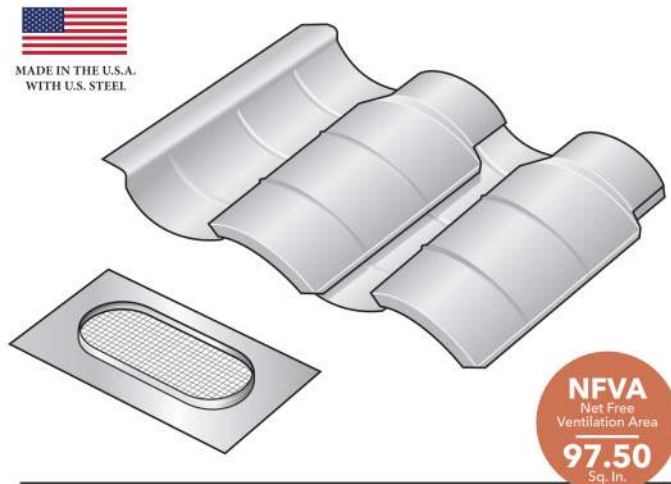
O'Hagin vents are manufactured and protected under one or more of the following patents: D456,531; D457,234; D458,391; D458,392; D469,889; D479,885; D504,172; D512,774; D549,316; 6,050,039; 6,129,628; 6,354,051; 6,390,914; 6,447,390; 6,491,579; 9,011,221. Other U.S. and foreign patents are pending. ©2021 O'Hagin. All rights reserved.

34 S-TILE-ROOF VENT-O'HAGEN-WUI APPROVED

APR3

NTS

MATERIAL: **CONCRETE TILE**
PRODUCT: **HIGH PROFILE (S)**



**UNIQUE LOW-PROFILE DESIGN
FITS BELOW MOST ROOF MOUNTED
SOLAR PANEL INSTALLATIONS**

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1. SELECT METAL

Standard:
26 Gauge, G-90 Galvanized Steel
20 Year Warranty

Upgrade Options:
.032" Aluminum
50 Year Warranty

16 Oz. Copper
50 Year Warranty

2. SELECT FINISH

Upgrade Options:
Pre-Painted Galvanized Steel Finish*

BLACK BROWN CHARCOAL GRAY TERRA COTTA WHITE

3. SELECT SUBFLASHING OPTIONS

Standard:
2" Flange

Upgrade Options:
4" Flange
6" Flange
Diverter***

4. SELECT WIRE MESH

NFVA**

Standard:
1/4" Galvanized 97.50 sq. in.

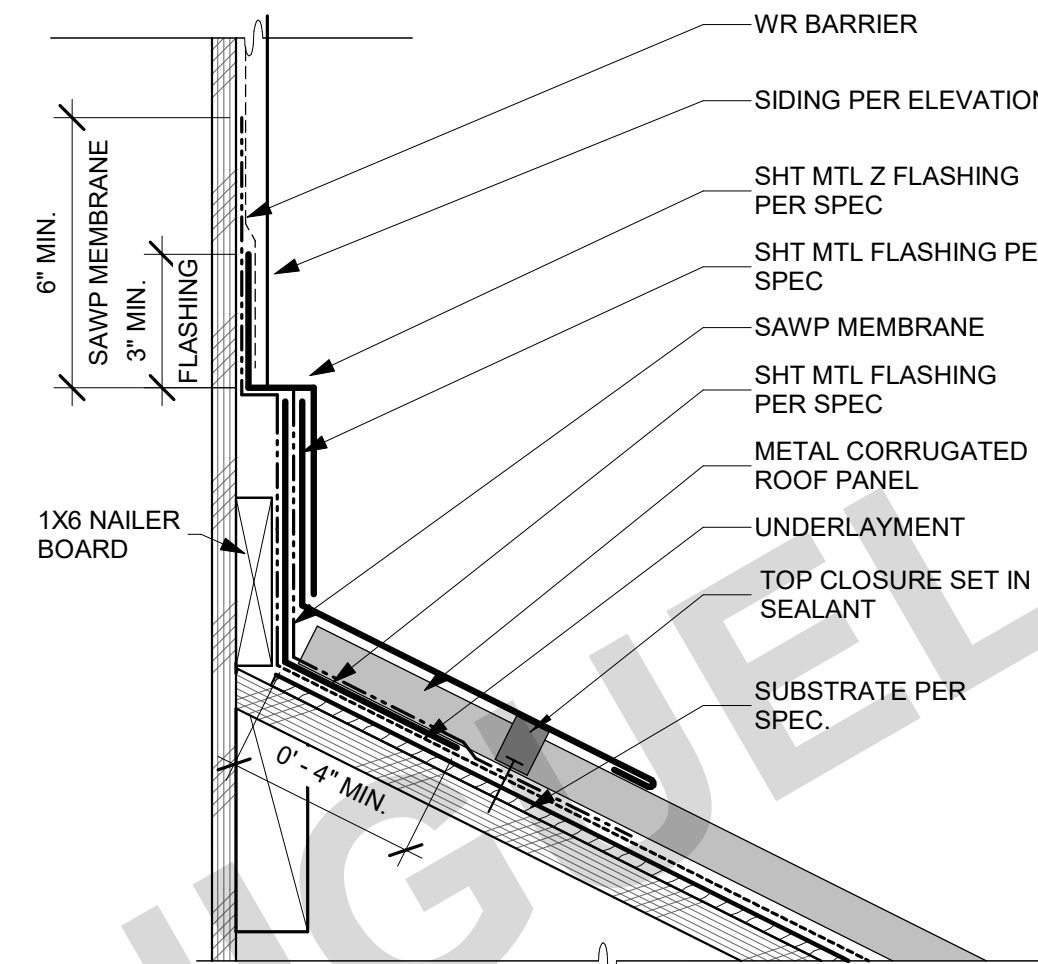
Upgrade Options:
1/4" Stainless Steel 97.50 sq. in.

1/8" Galvanized 87.75 sq. in.
1/8" Stainless Steel 87.75 sq. in.

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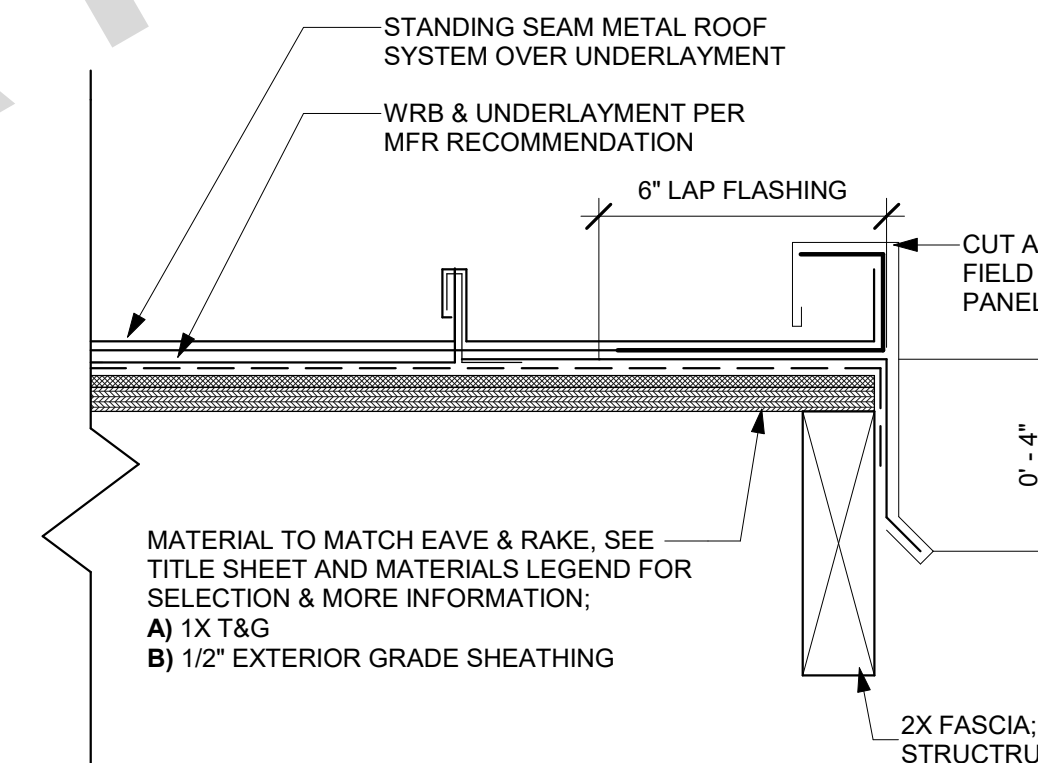
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11 METAL ROOF - HEADWALL

APR3

SCALE: 3" = 1'-0"



12 STANDING SEAM METAL - RAKE

APR3

SCALE: 3" = 1'-0"



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CITY OF LAGUNA NIGUEL

**ARCHITECTURAL DETAILS - METAL
ROOF & VENT REFERENCES**

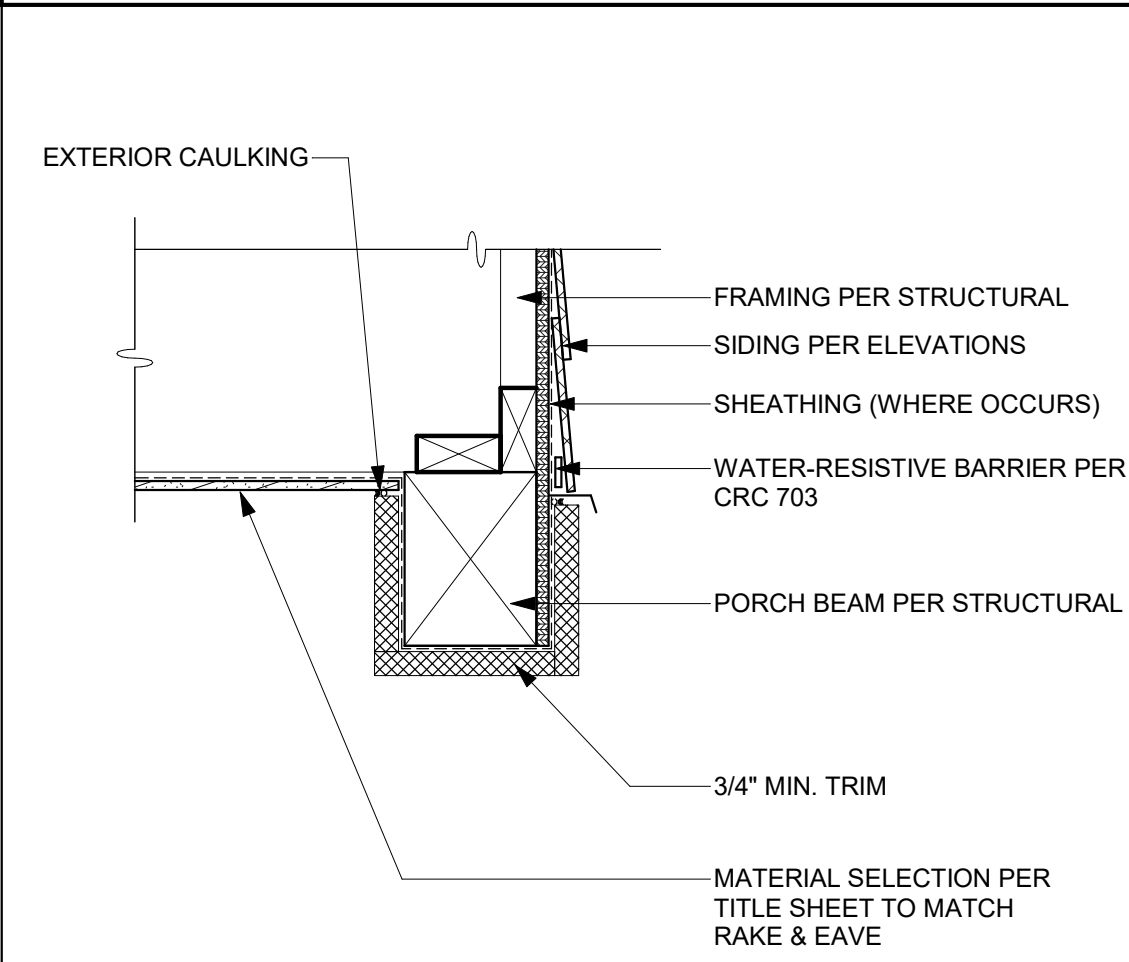
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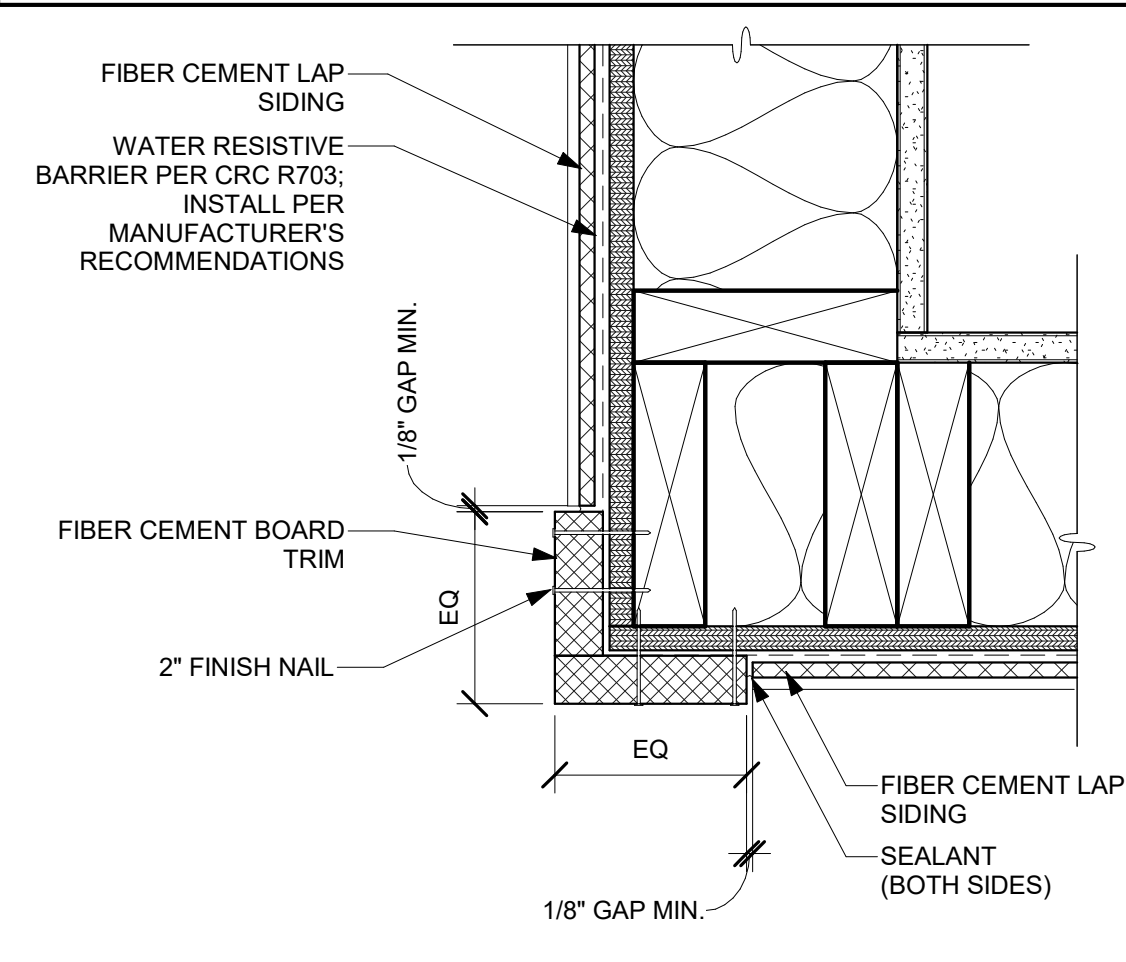
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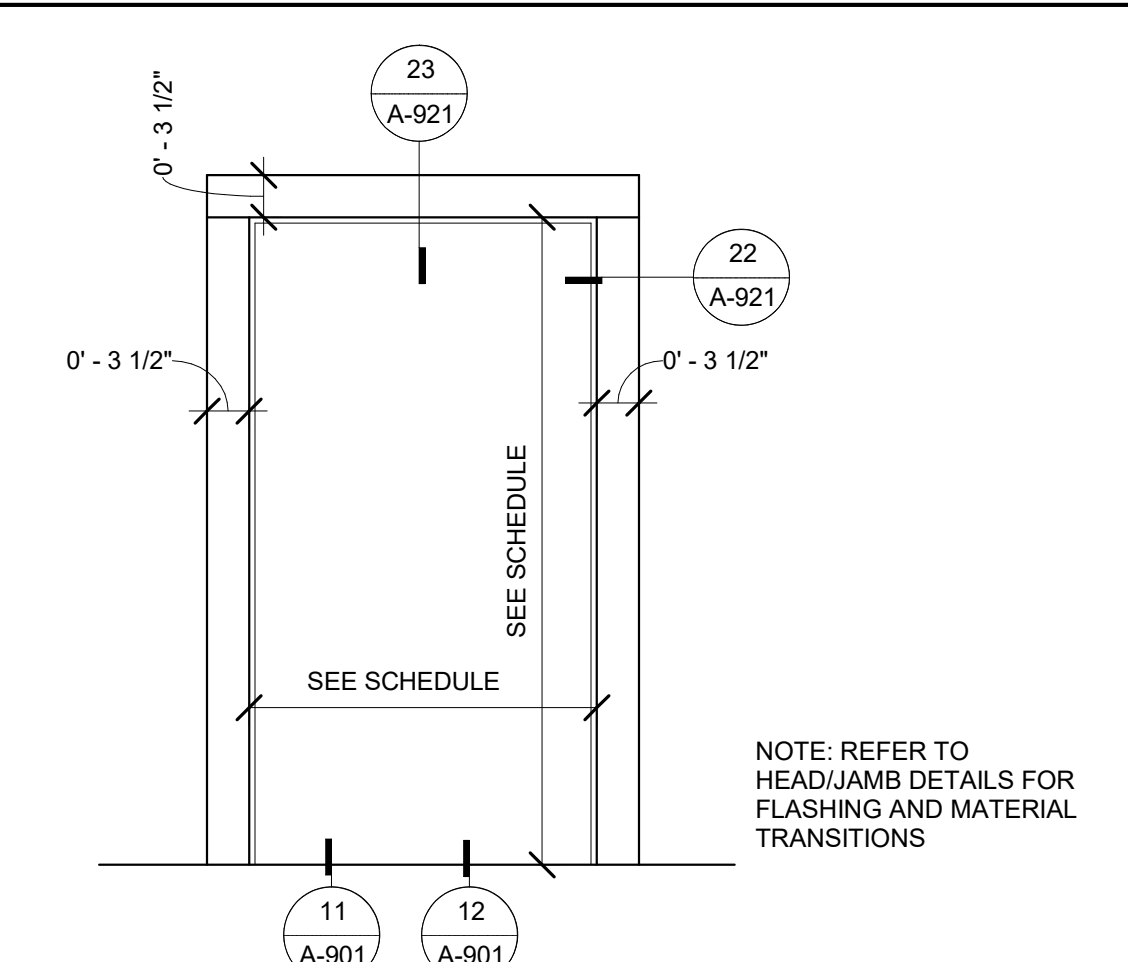
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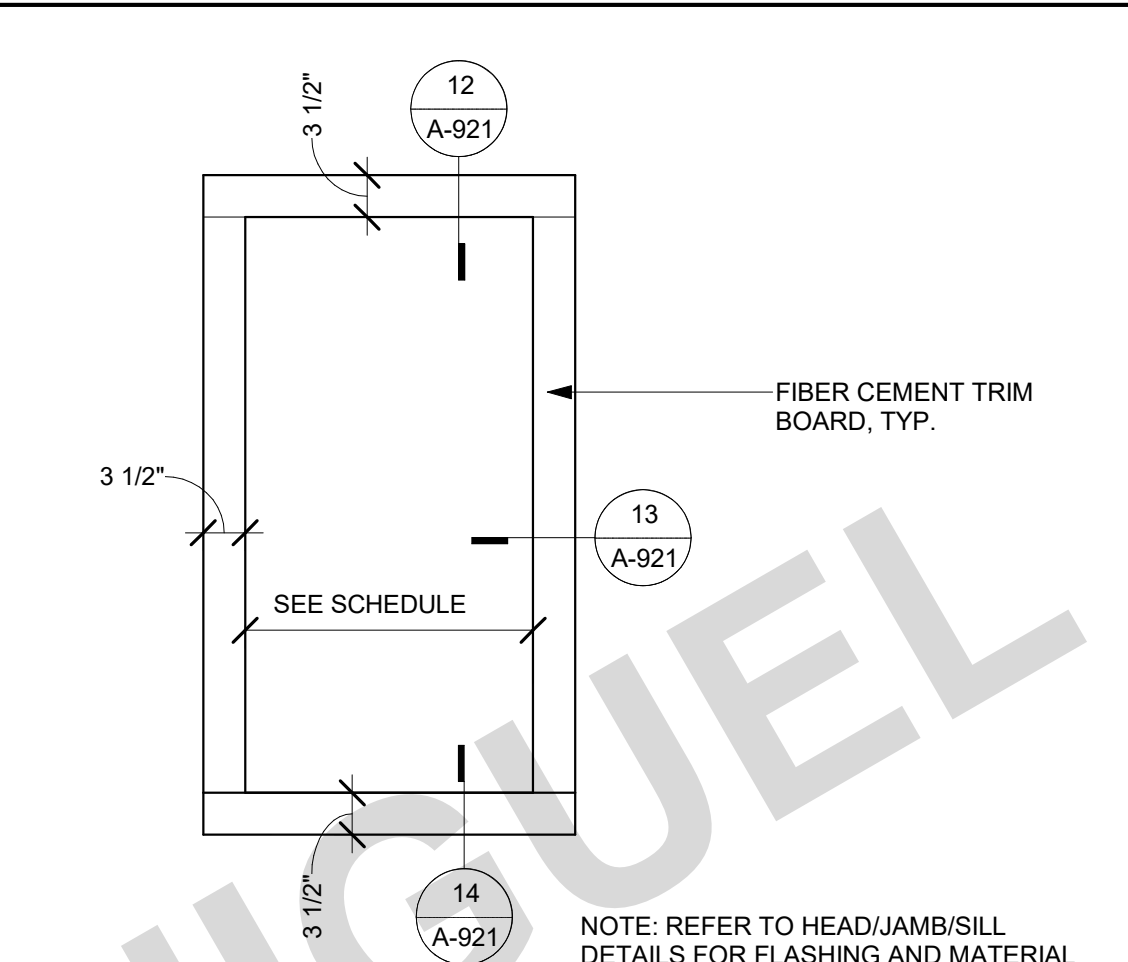
41 PORCH BEAM - HORIZONTAL LAP SIDING
SCALE: 1 1/2" = 1'-0"



FIBER CEMENT-OUTSIDE
31 CORNER-SIDING
SCALE: 3" = 1'-0"



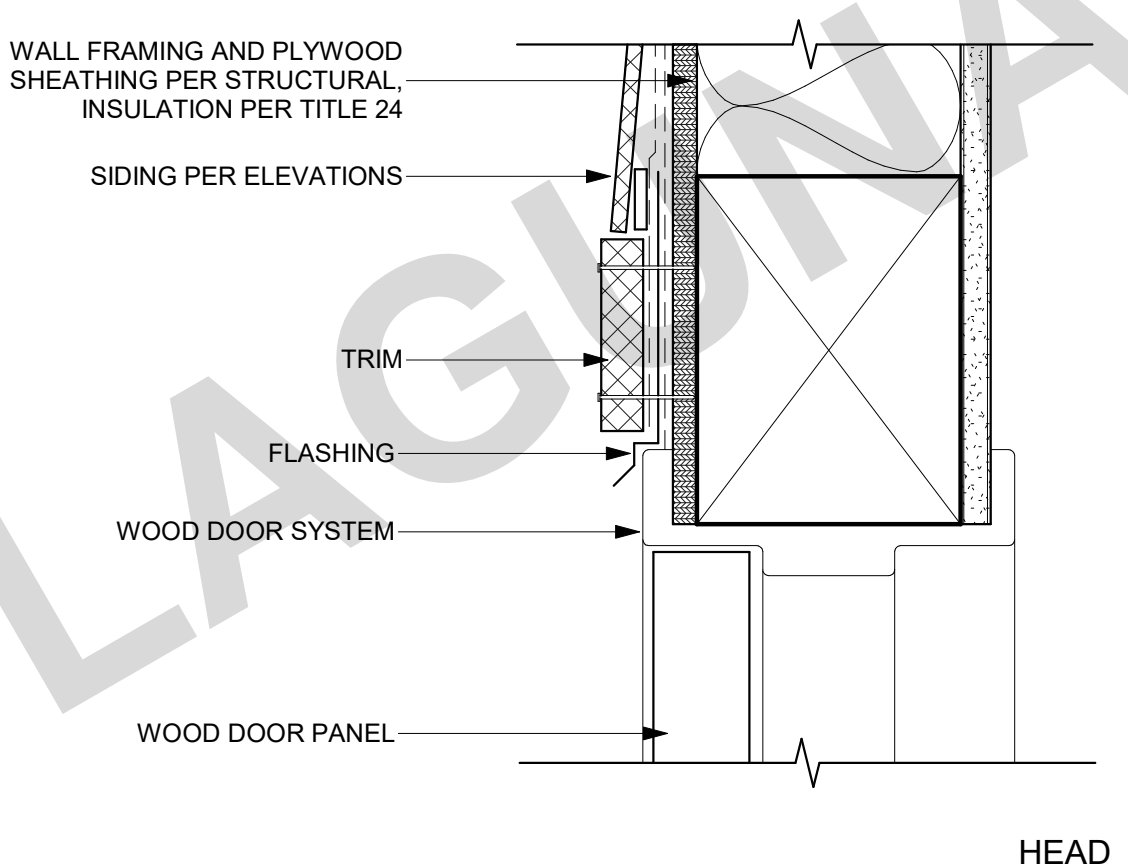
21 DR-TRIM 02
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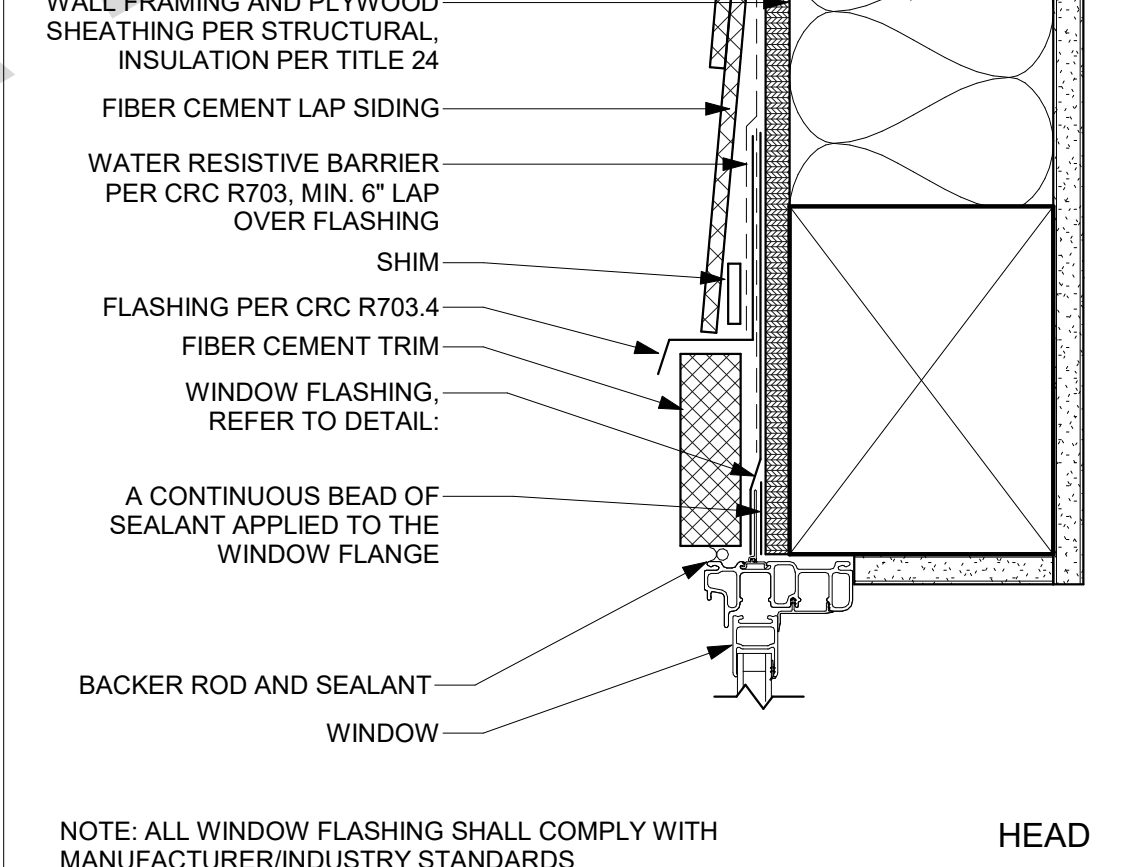
11 WIN-TRIM
SCALE: 3/4" = 1'-0"



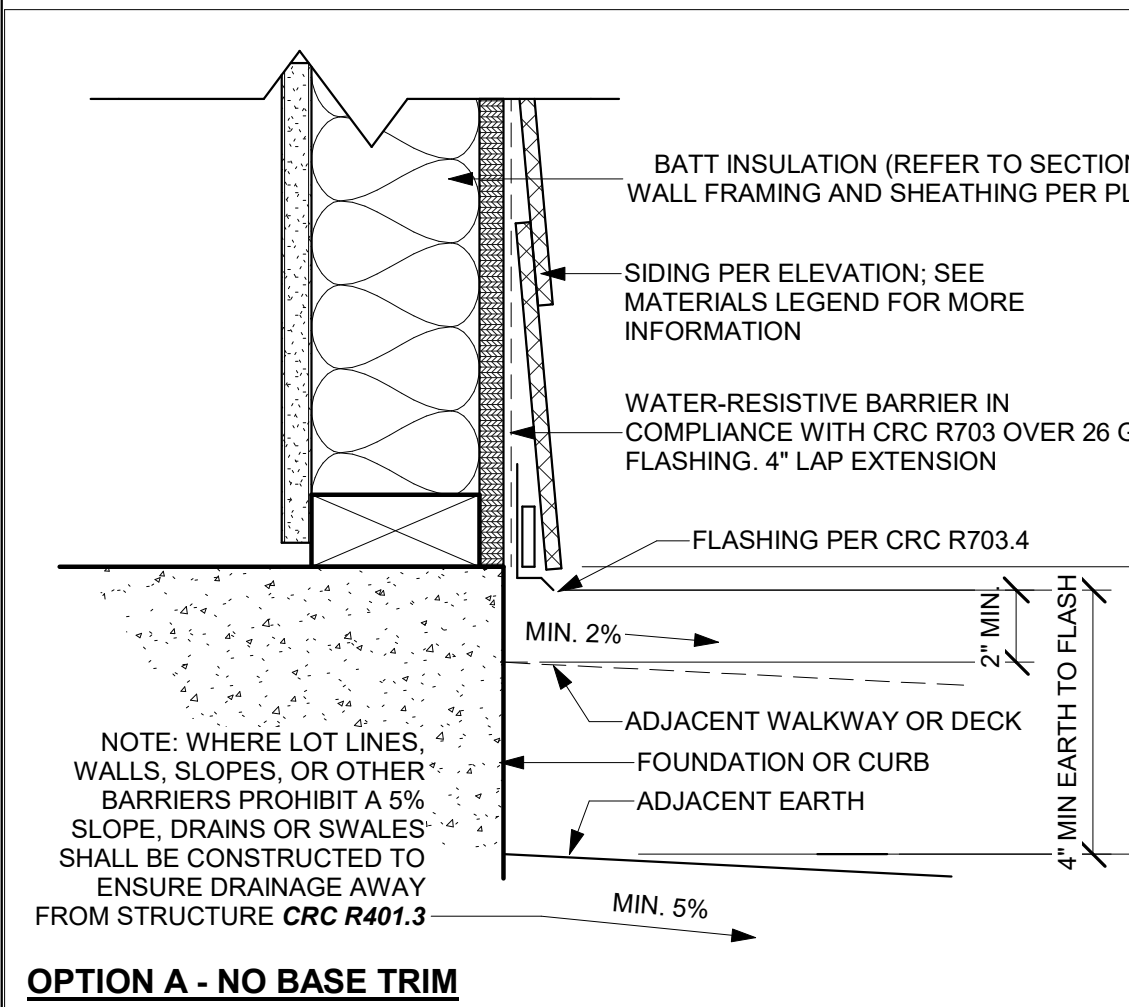
32 FIBER CEMENT-INSIDE CORNER-SIDING
SCALE: 3" = 1'-0"



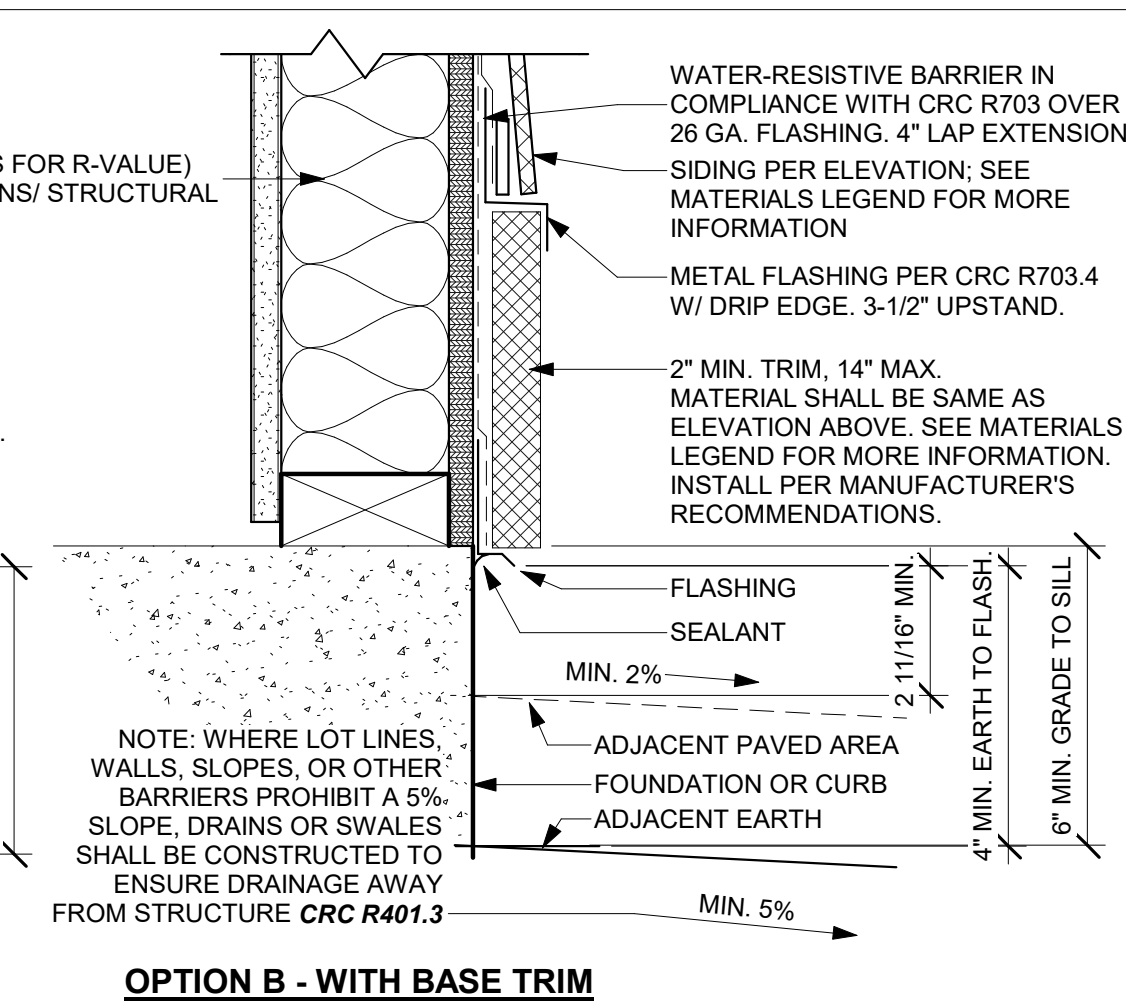
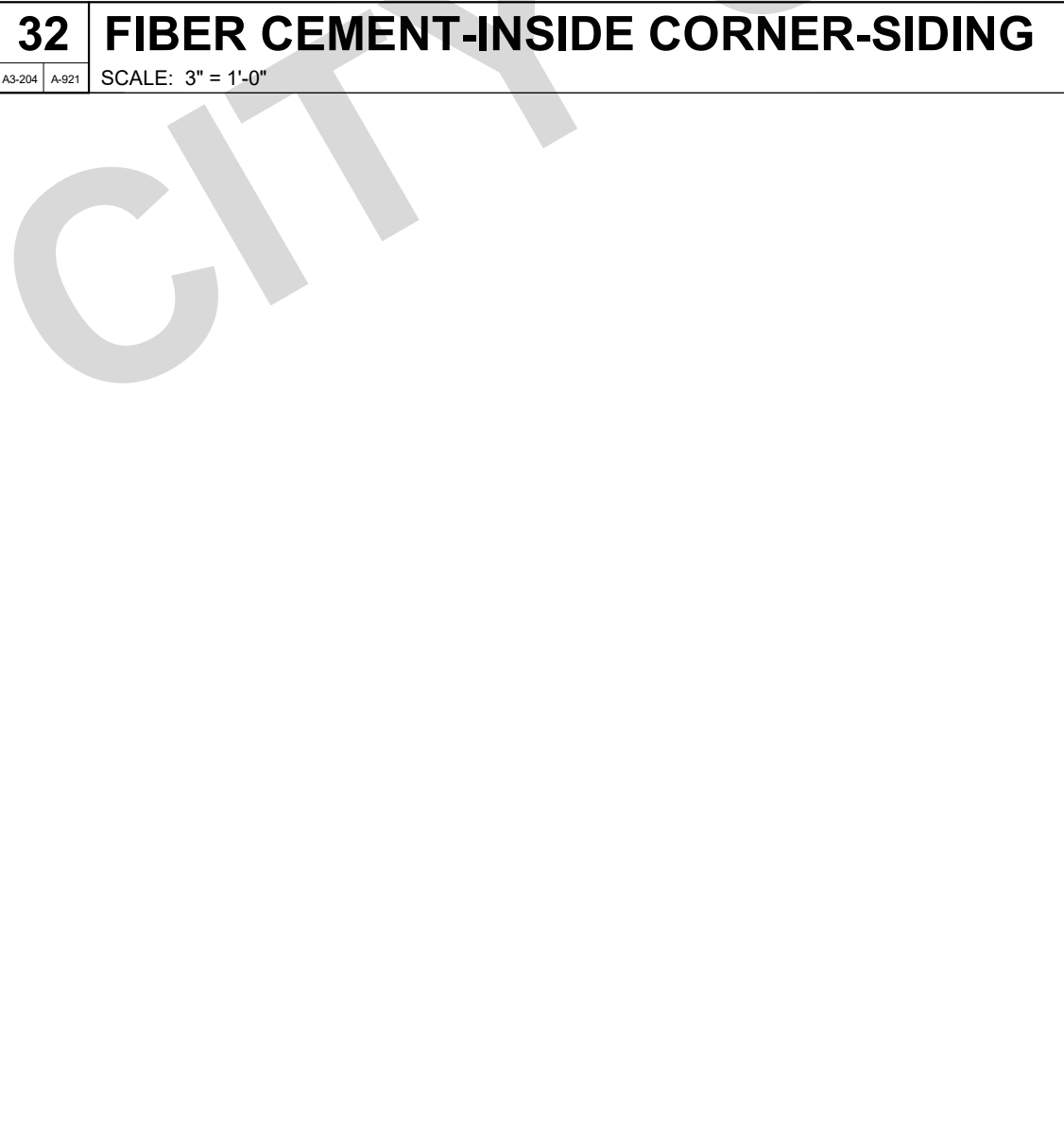
22 DR-WD (EXT)-STUD-HEAD @ SIDING
SCALE: 3" = 1'-0"



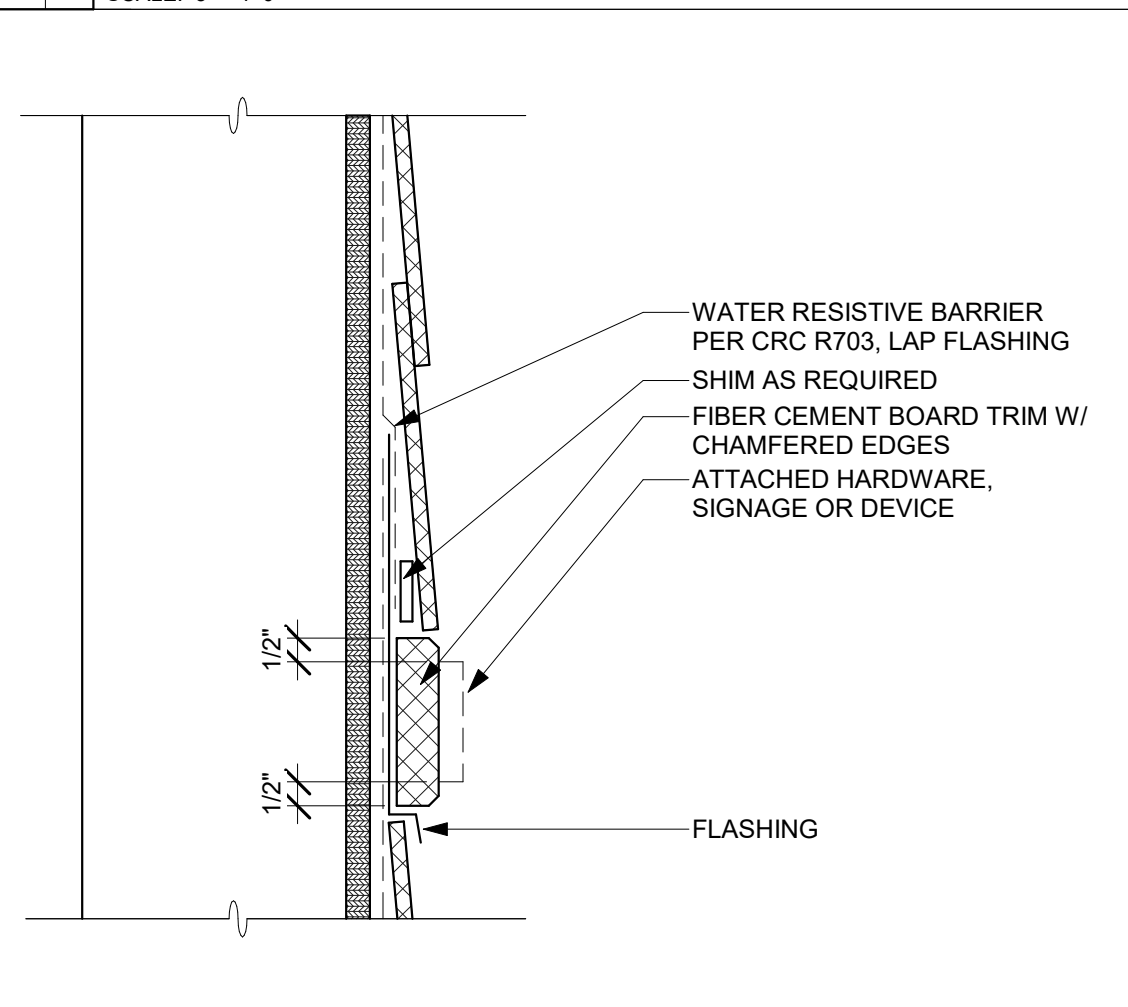
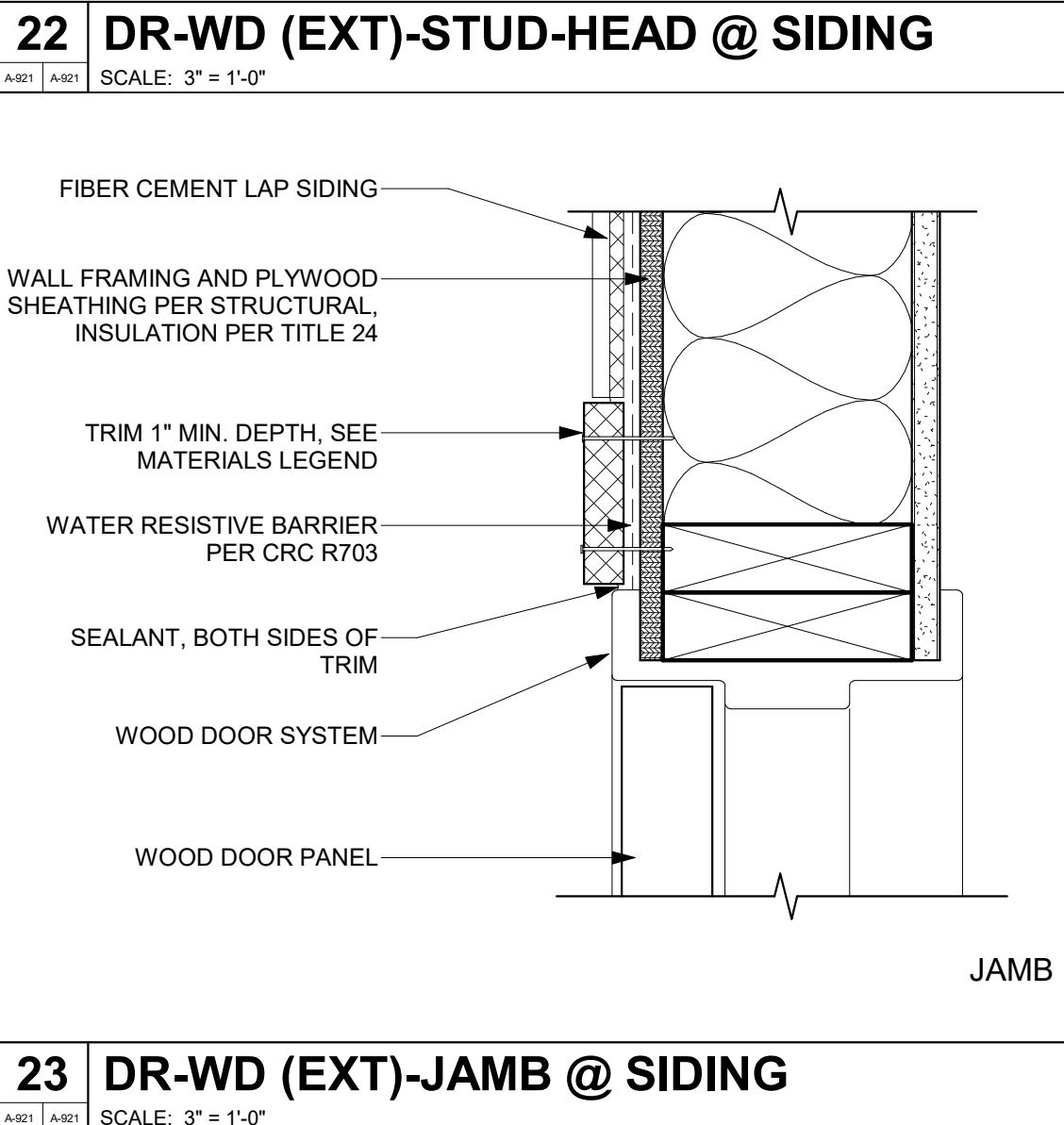
12 WIN-HEAD @ LAP SIDING W/ 1X4 TRIM
SCALE: 3" = 1'-0"



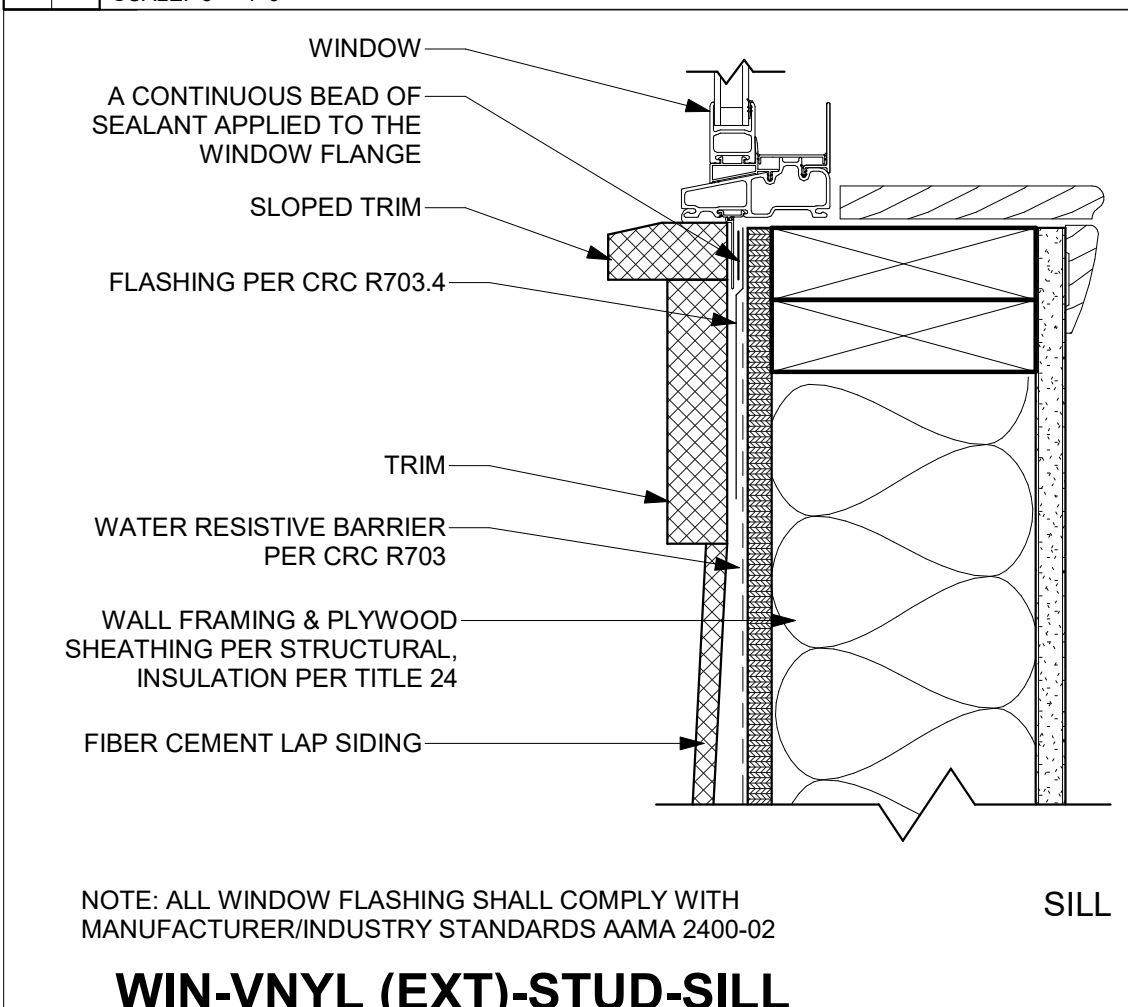
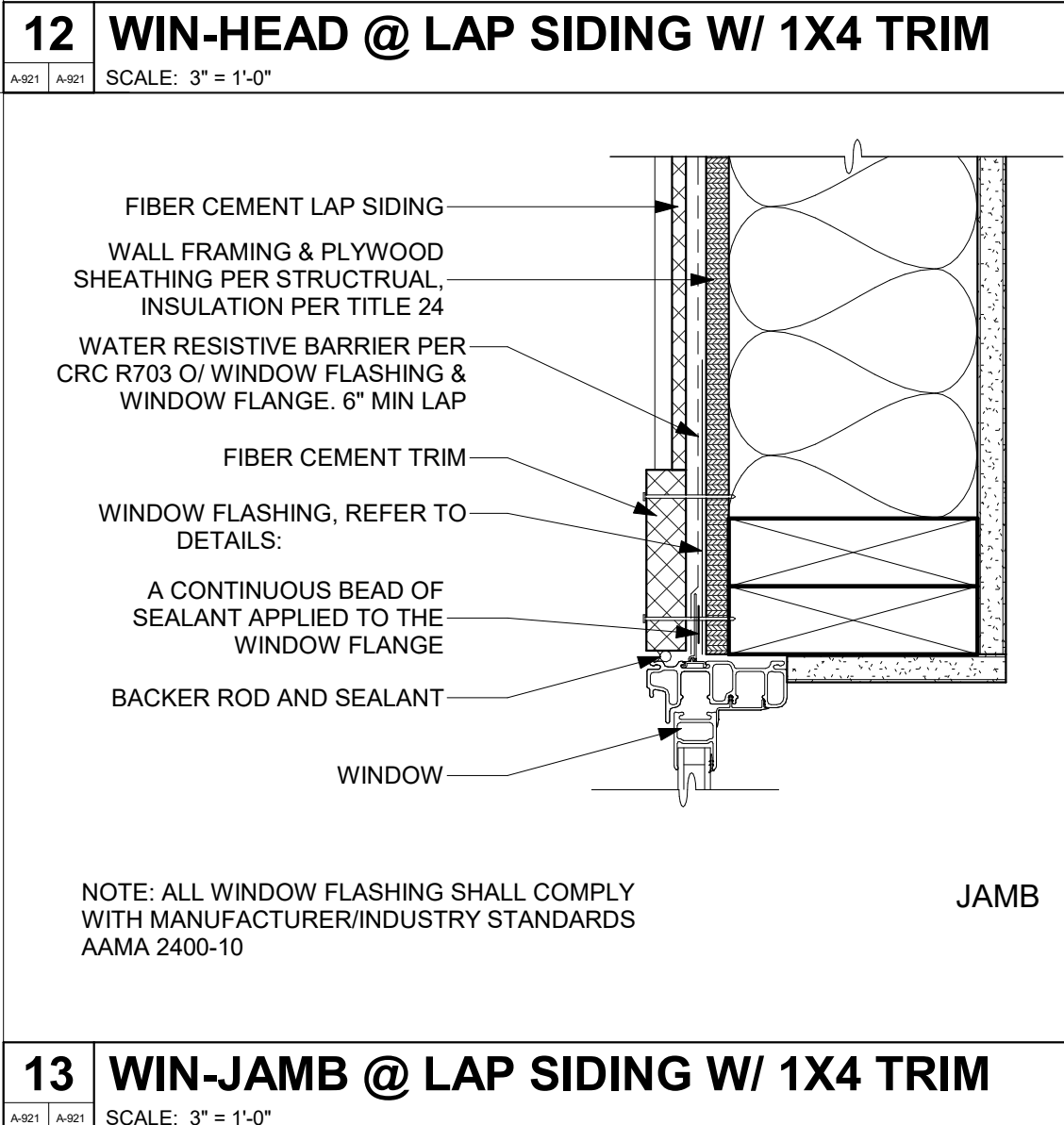
44 TYPICAL FOUNDATION - HORIZONTAL LAP SIDING
SCALE: 3" = 1'-0"



32 FIBER CEMENT-INSIDE CORNER-SIDING
SCALE: 3" = 1'-0"



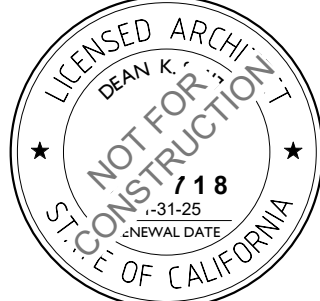
23 DR-WD (EXT)-JAMB @ SIDING
SCALE: 3" = 1'-0"



13 WIN-JAMB @ LAP SIDING W/ 1X4 TRIM
SCALE: 3" = 1'-0"



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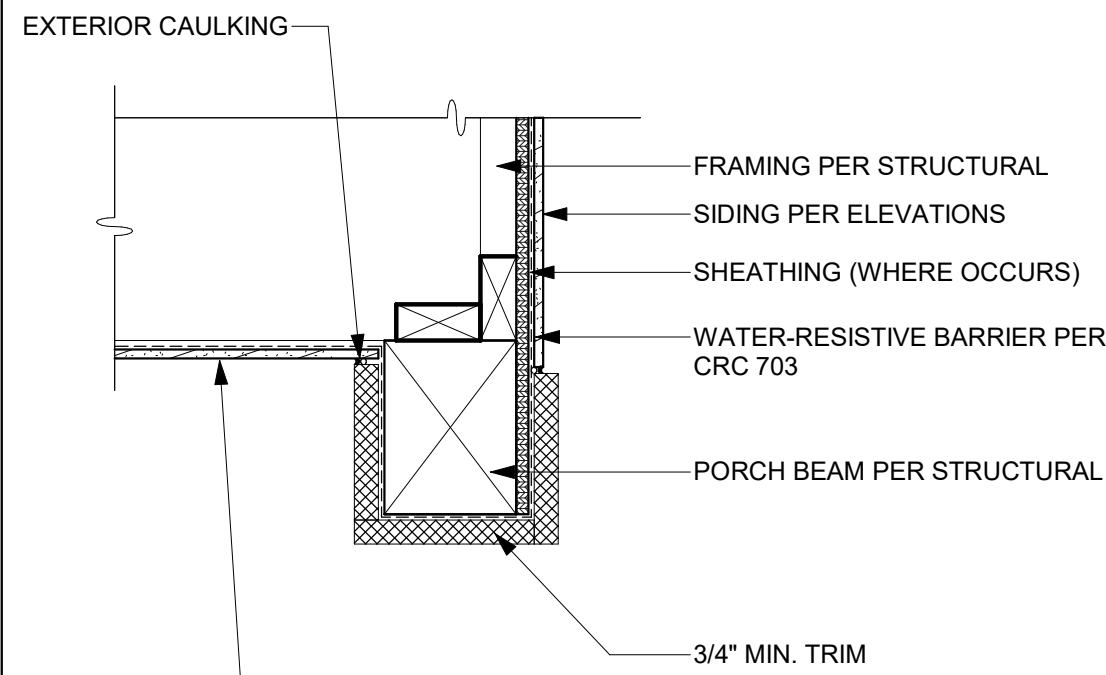
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2889-00-CU22
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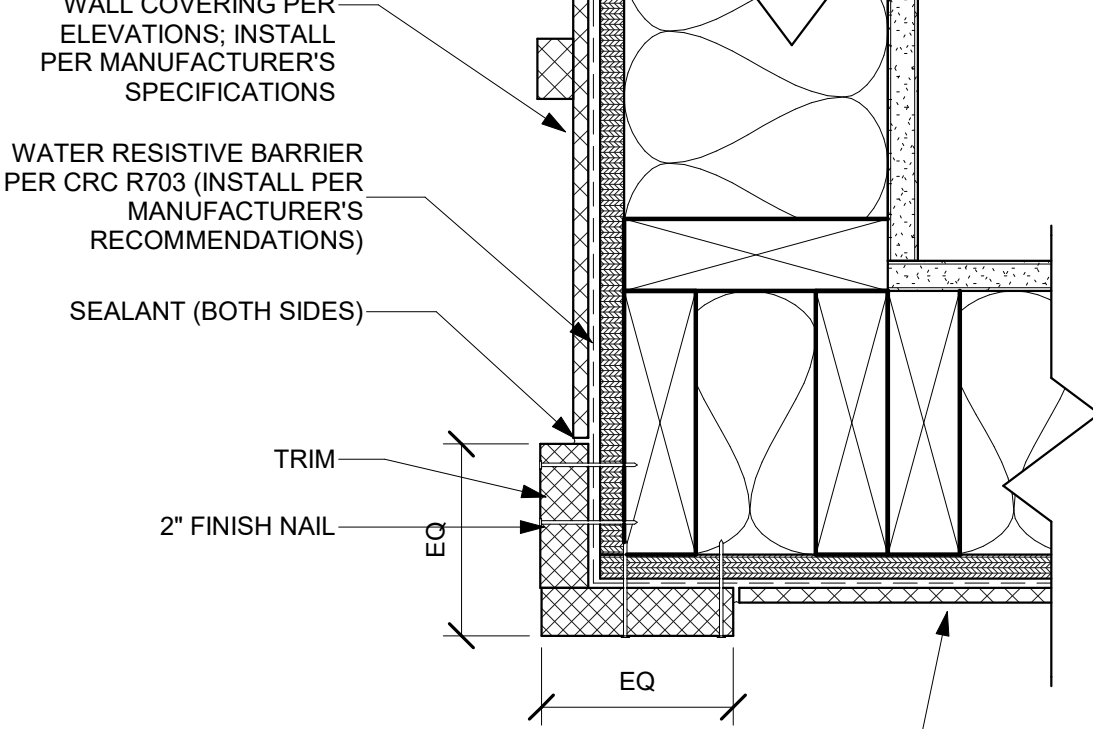
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MATERIAL SELECTION PER TITLE SHEET TO MATCH RAKE & EAVE:
A) T & G OR B) EXTERIOR GRADE PLYWOOD (FRTW WHEN REQ.)
SEE MATERIALS LEGEND FOR MORE INFORMATION.

41 PORCH BEAM - BOARD & BATTEN

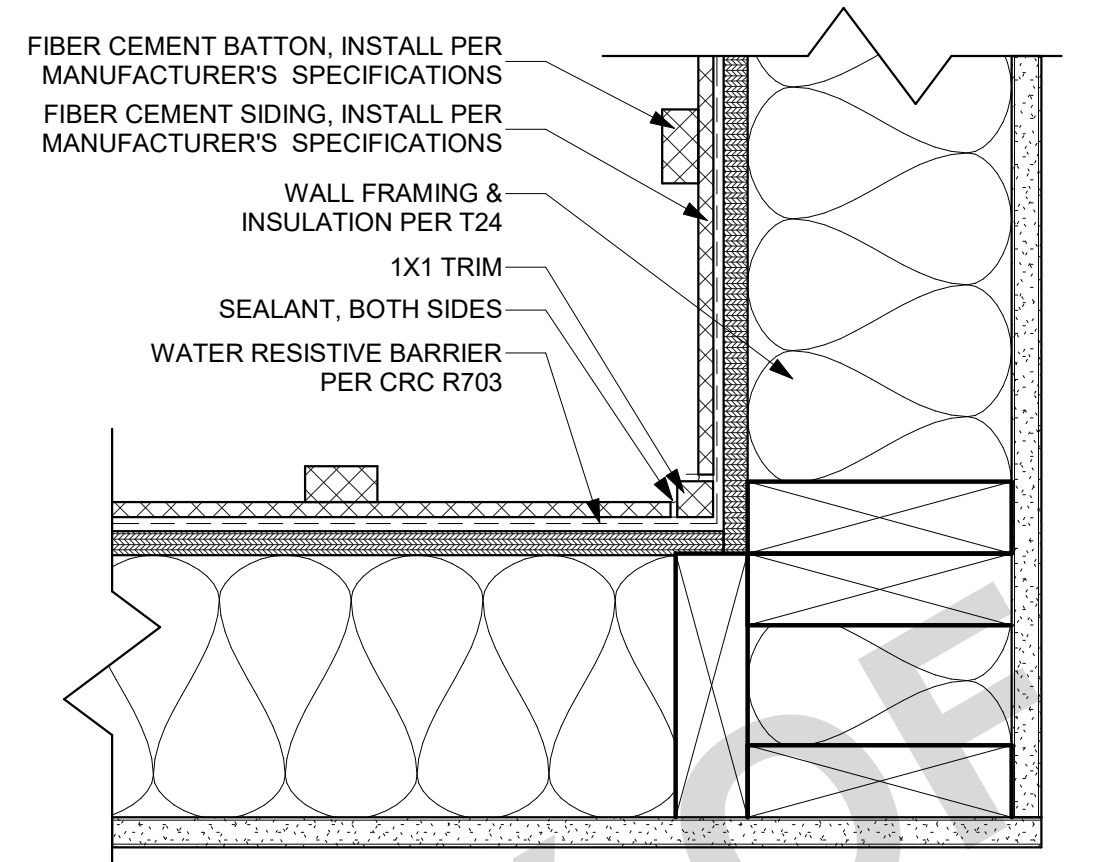
A-922 A-923 SCALE: 1 1/2" = 1'-0"



WALL COVERING PER ELEVATIONS: INSTALL PER MANUFACTURER'S SPECIFICATIONS

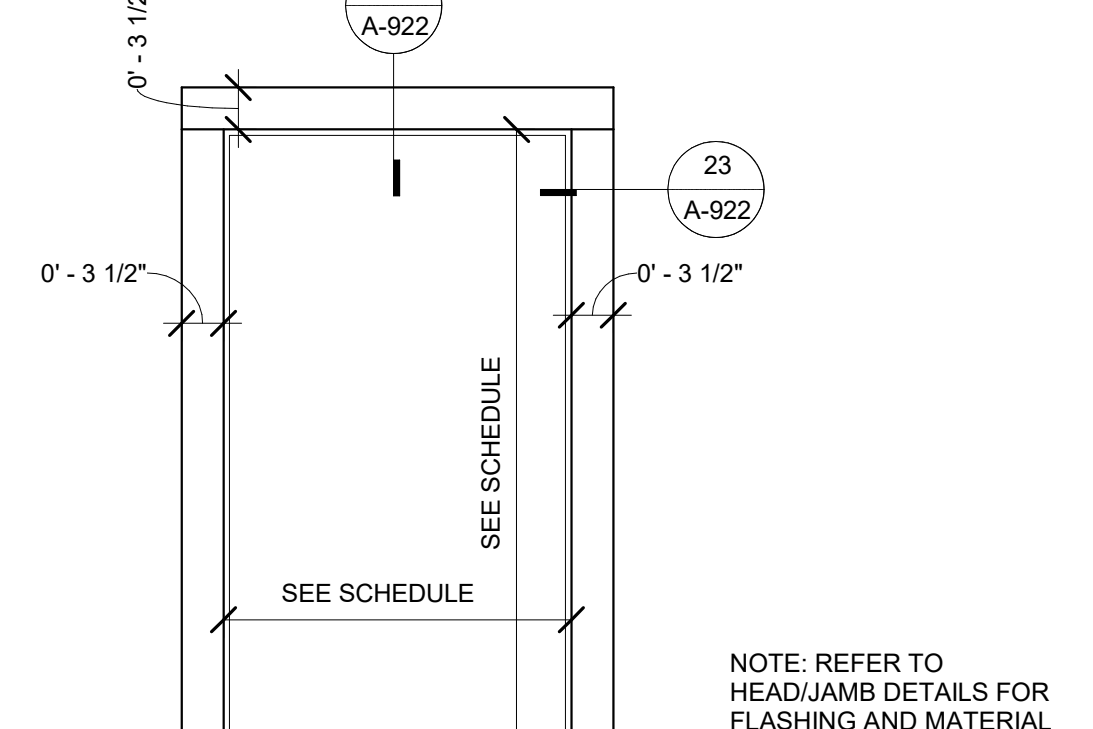
31 OUTSIDE CORNER - B&B

A-922 A-923 SCALE: 3" = 1'-0"



32 INSIDE CORNER - B&B

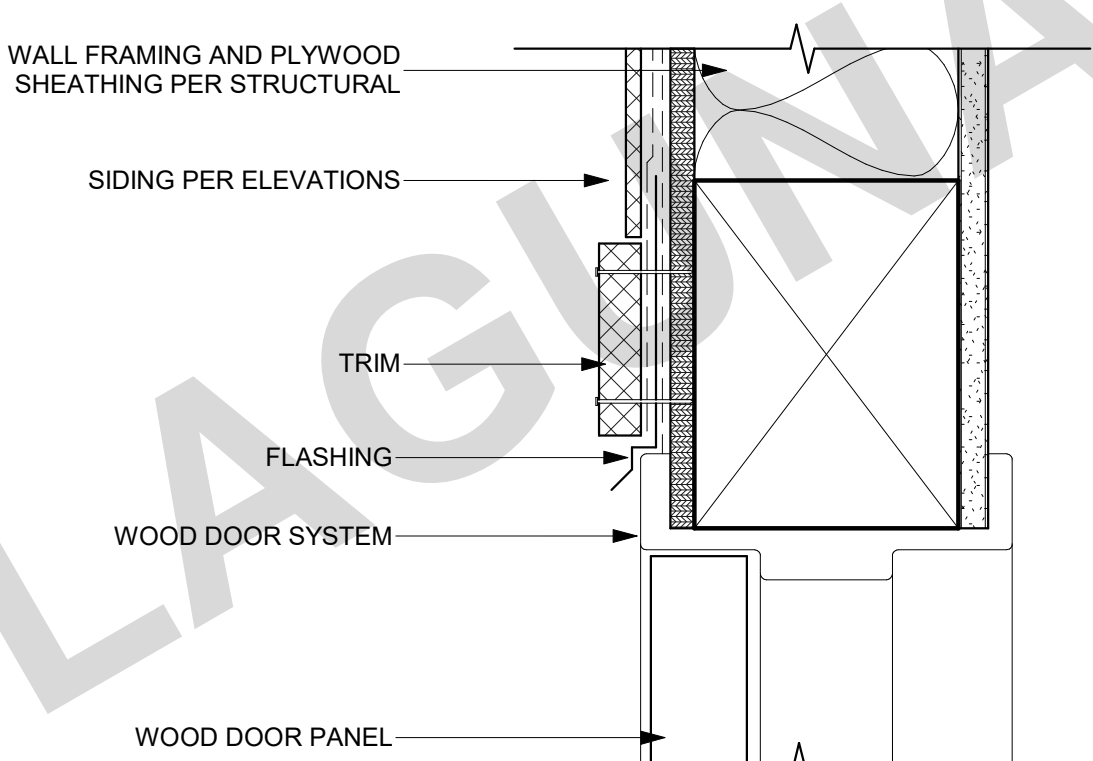
A-921 A-922 SCALE: 3" = 1'-0"



NOTE: REFER TO HEAD/JAMB DETAILS FOR FLASHING AND MATERIAL TRANSITIONS

21 DR-TRIM

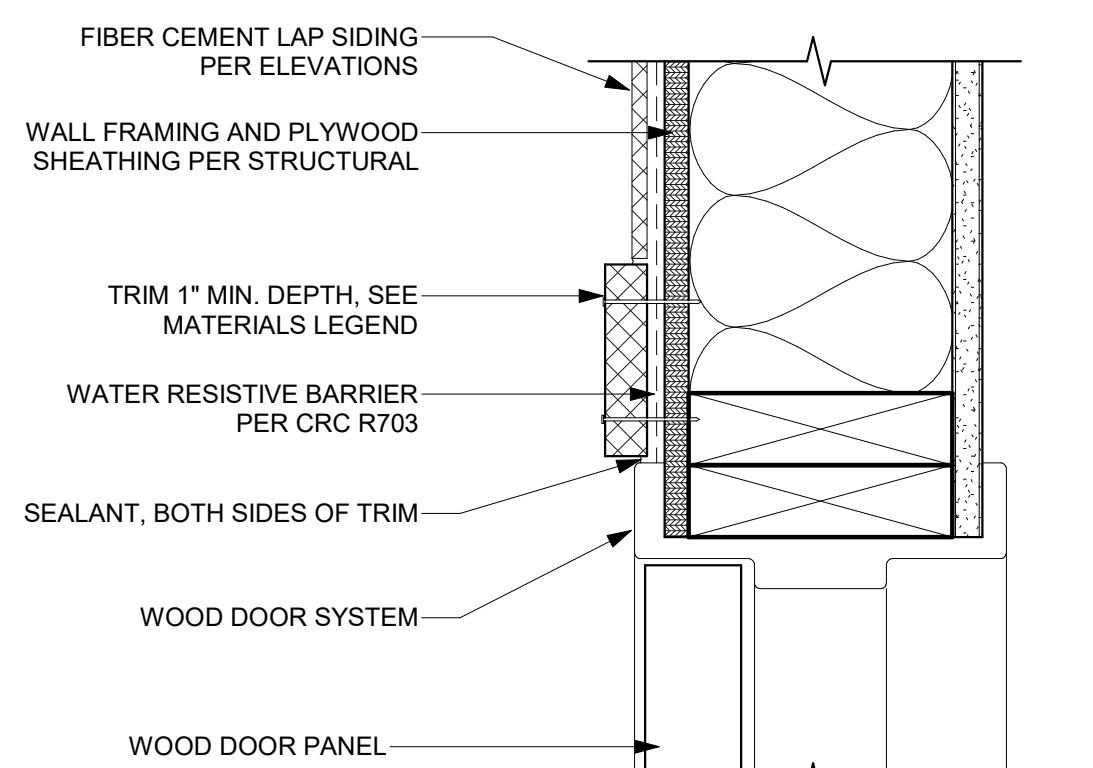
A-922 SCALE: 3/4" = 1'-0"



HEAD

22 DR-HEAD @ B&B

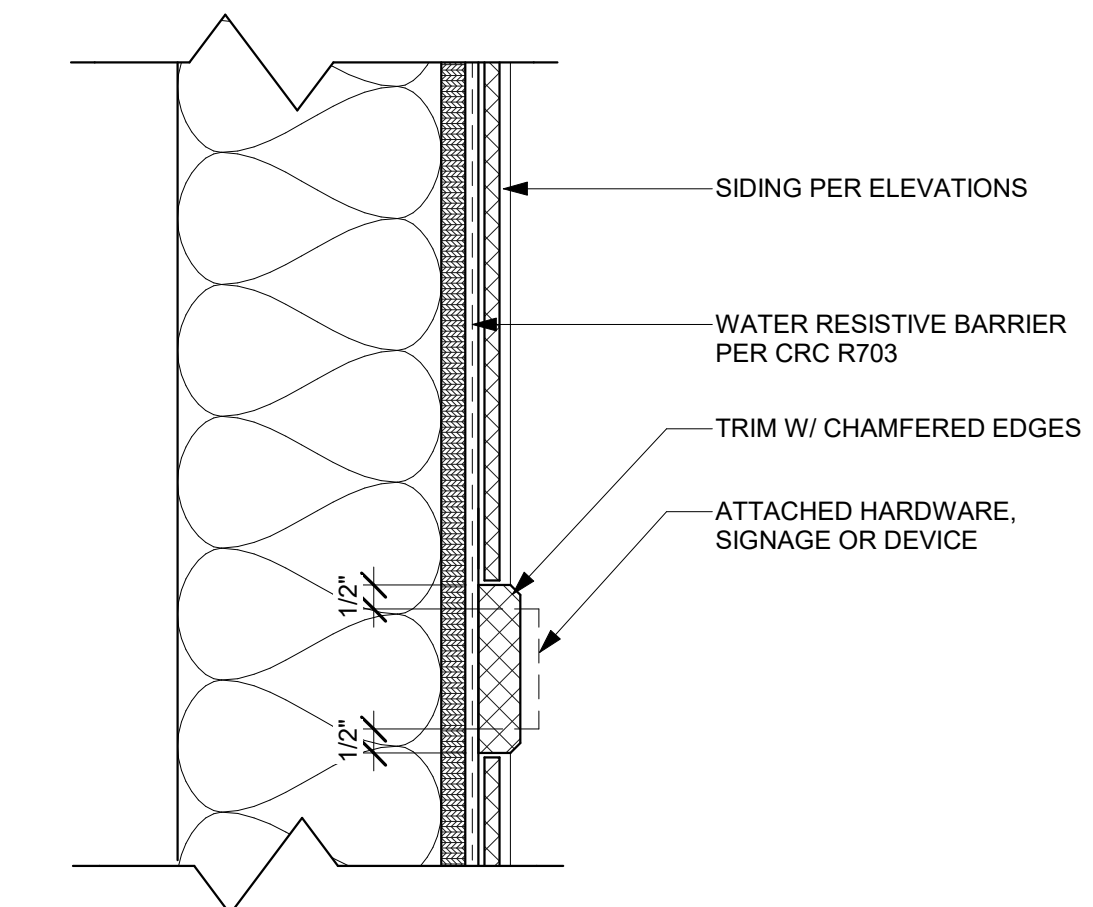
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JAMB

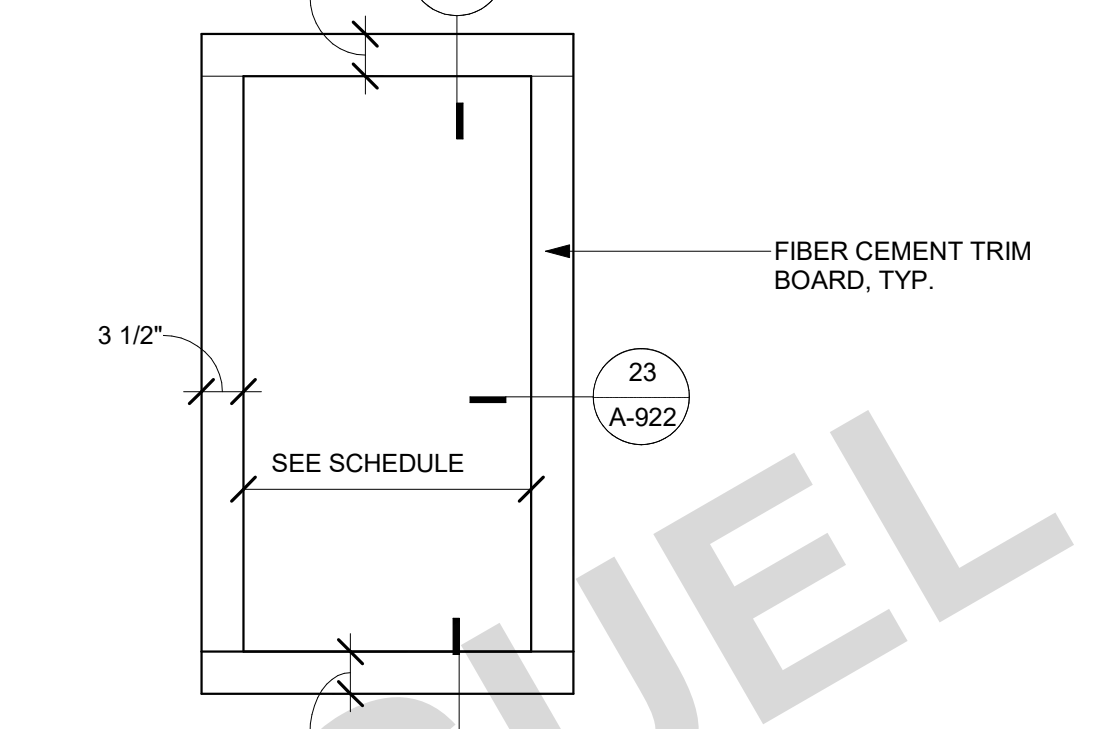
23 DR-JAMB - B&B

A-922 A-923 SCALE: 3" = 1'-0"



24 MOUNTING PAD - B&B

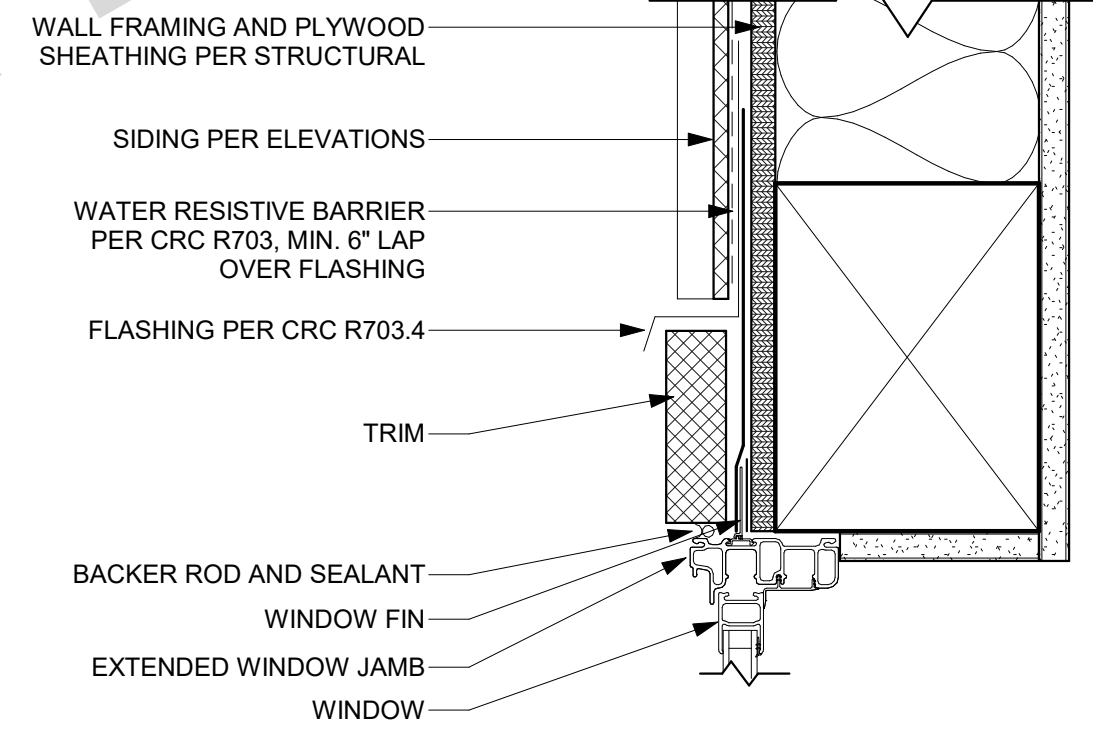
A-922 SCALE: 3" = 1'-0"



NOTE: REFER TO HEAD/JAMB/SILL DETAILS FOR FLASHING AND MATERIAL TRANSITIONS

11 WIN-TRIM

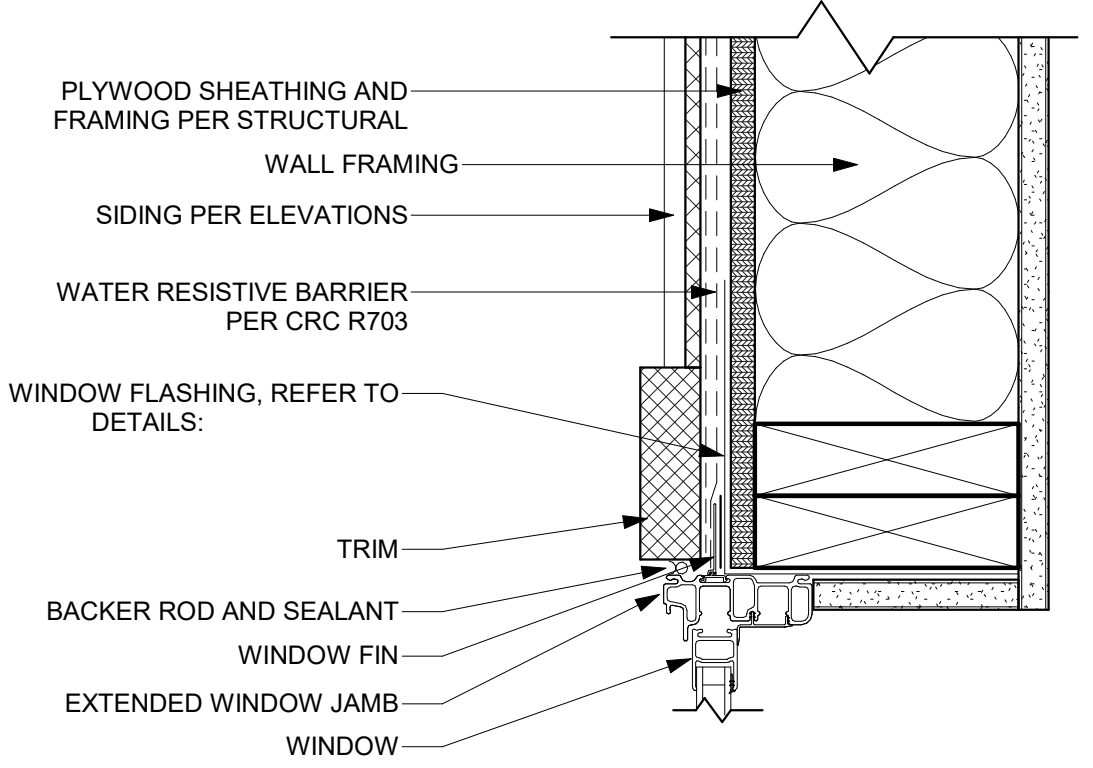
A-922 SCALE: 3/4" = 1'-0"



HEAD

12 WIN-HEAD @ B&B SIDING

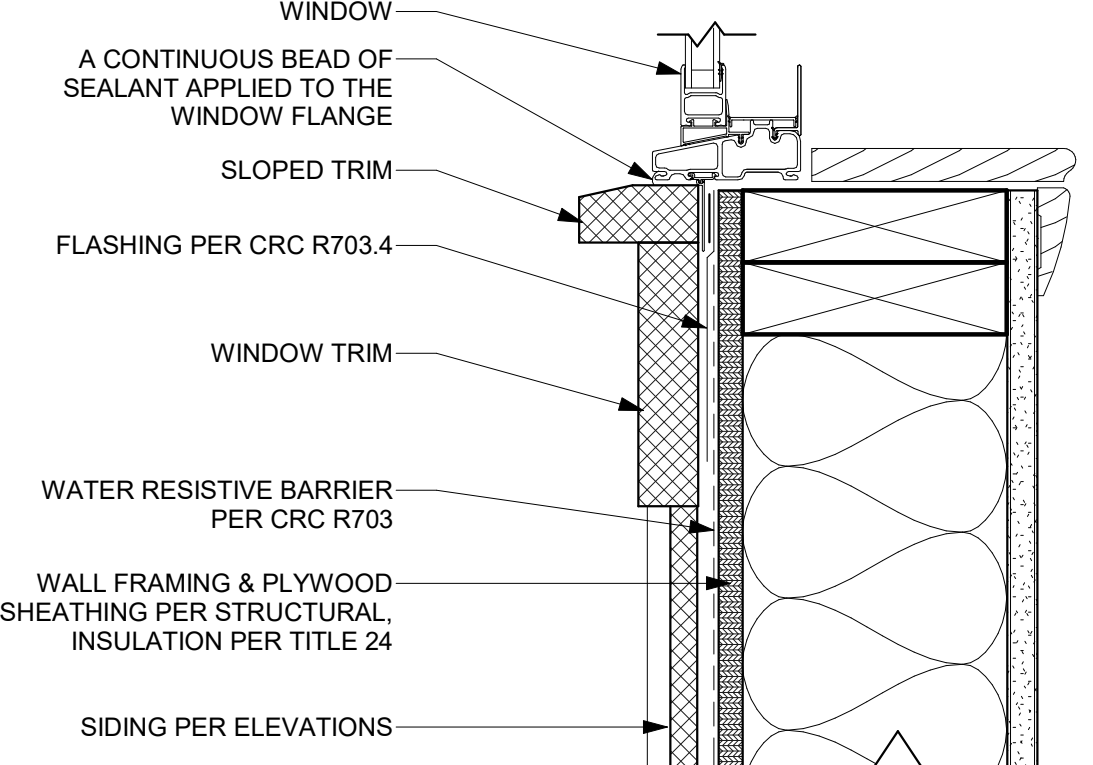
A-922 SCALE: 3" = 1'-0"



JAMB

13 WIN-JAMB @ B&B

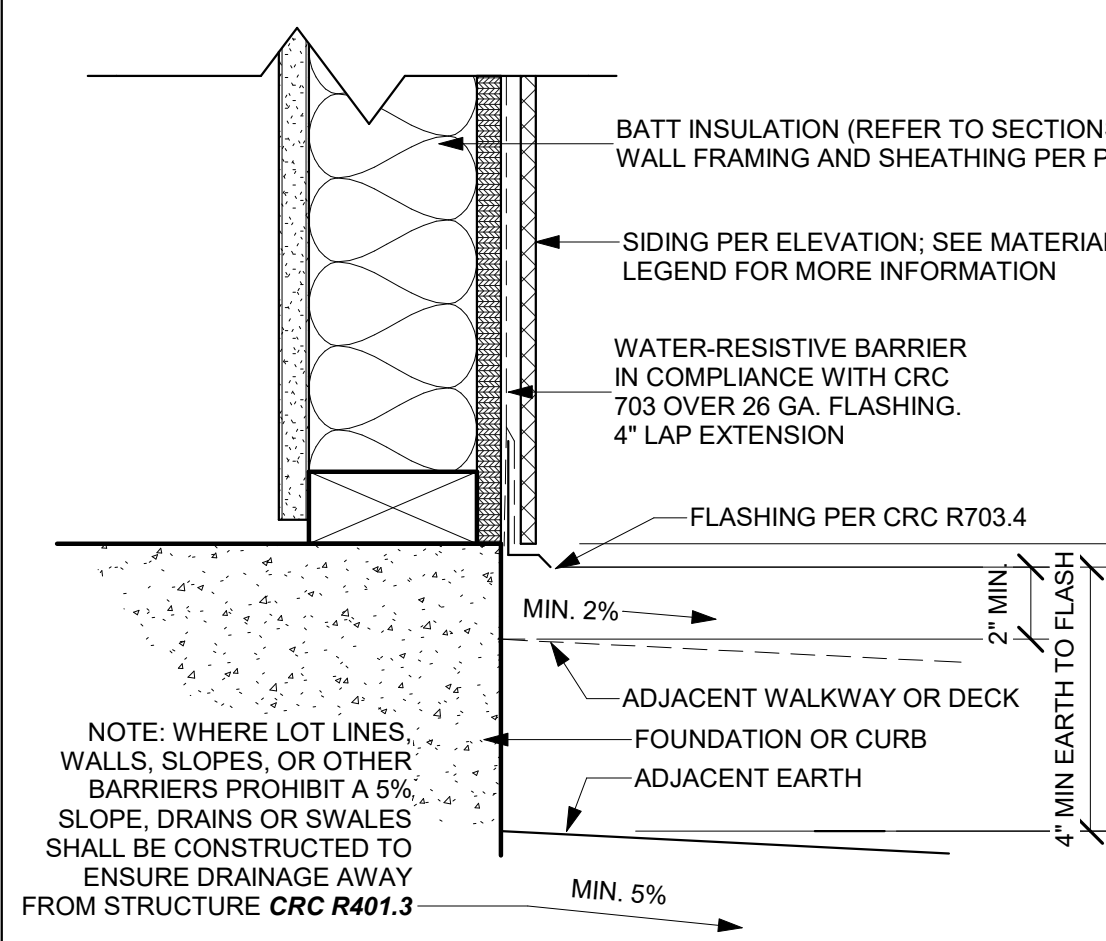
A-922 SCALE: 3" = 1'-0"



SILL

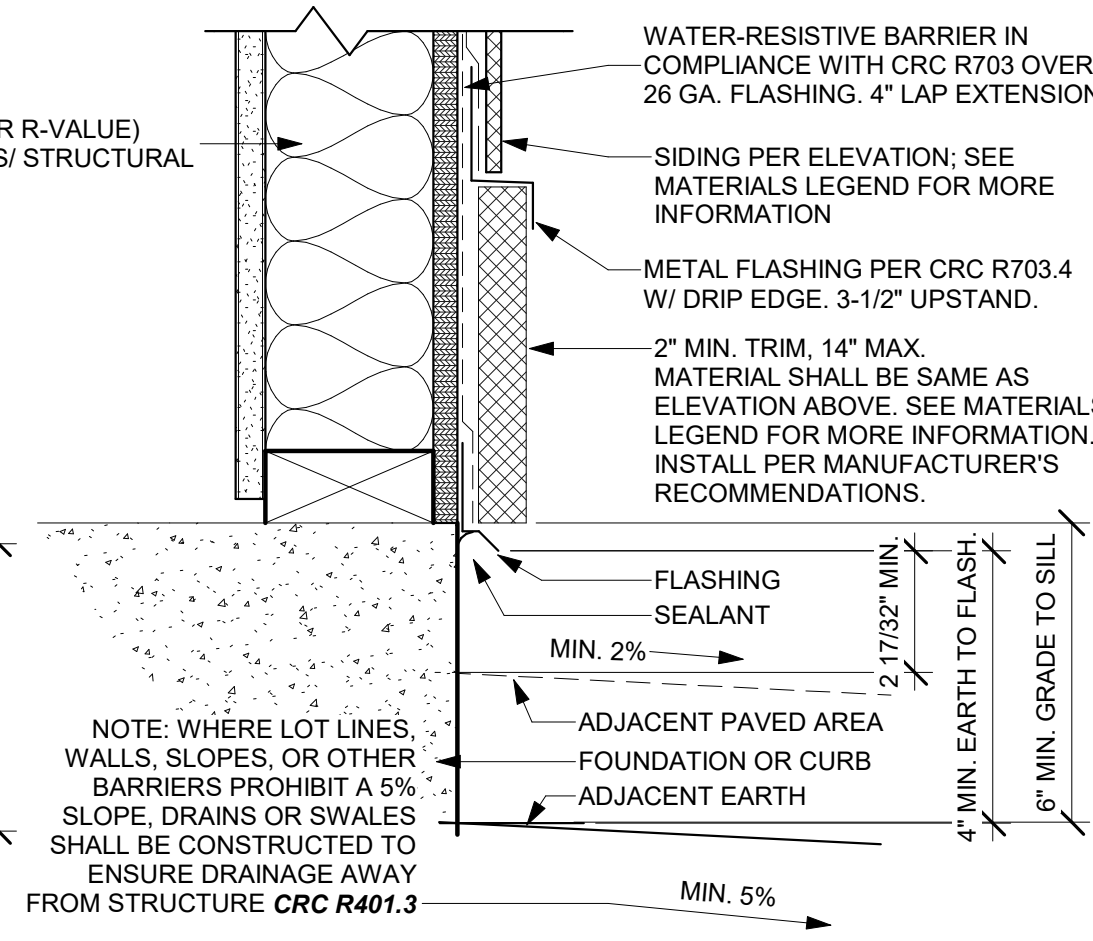
14 WIN-SILL @ B&B - CAPPED TRIM

A-922 SCALE: 3" = 1'-0"



44 TYP. FOUNDATION - B&B SIDING

A-922 A-923 SCALE: 3" = 1'-0"



OPTION B - WITH BASE TRIM



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PRE-APPROVED ADU

CITY OF LAGUNA NIGUEL

ARCHITECTURAL DETAILS -
BOARD & BATT SIDING

DATE
02/05/2025

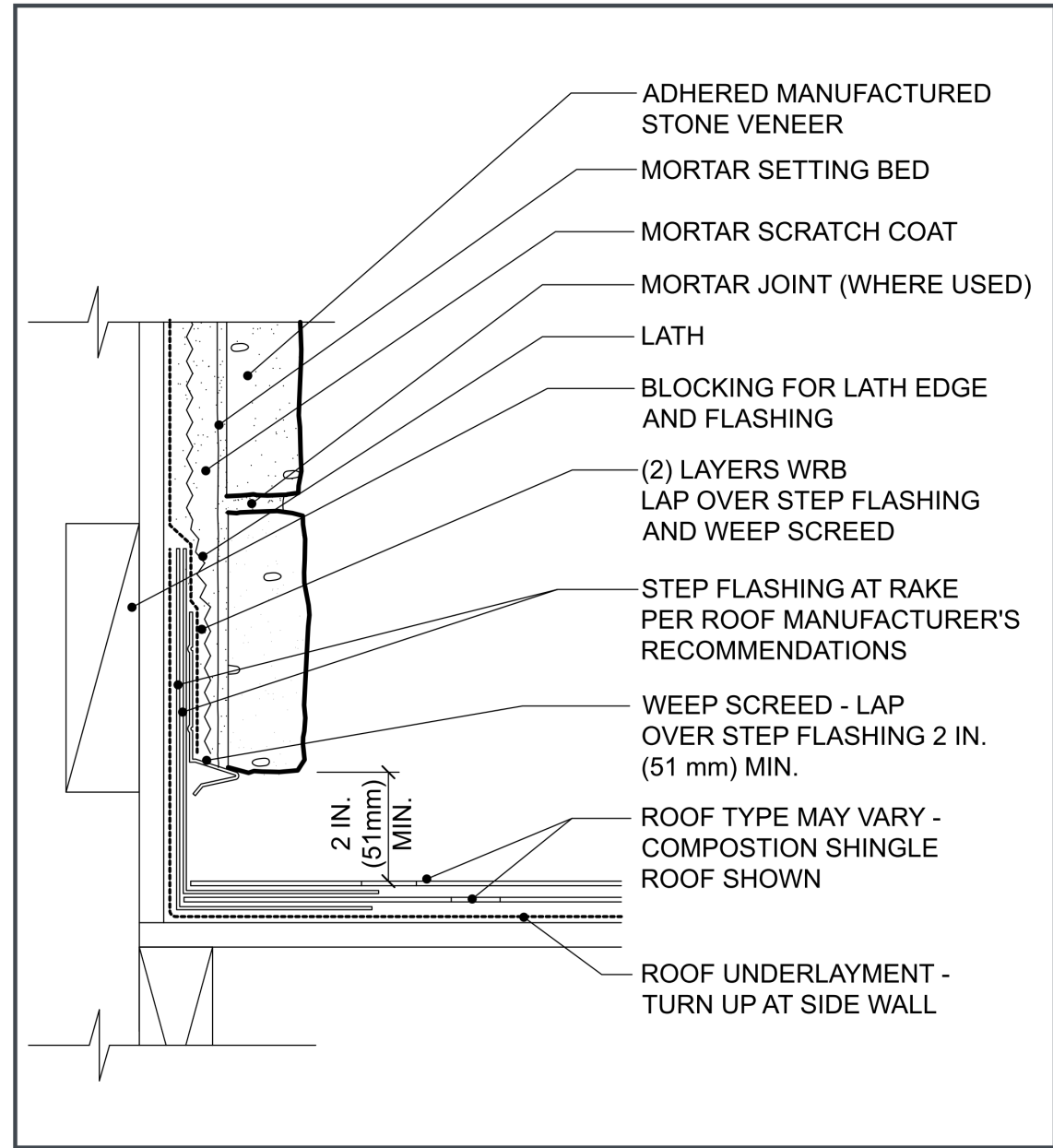
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Figure 17a. Side Wall - Composition Shingles

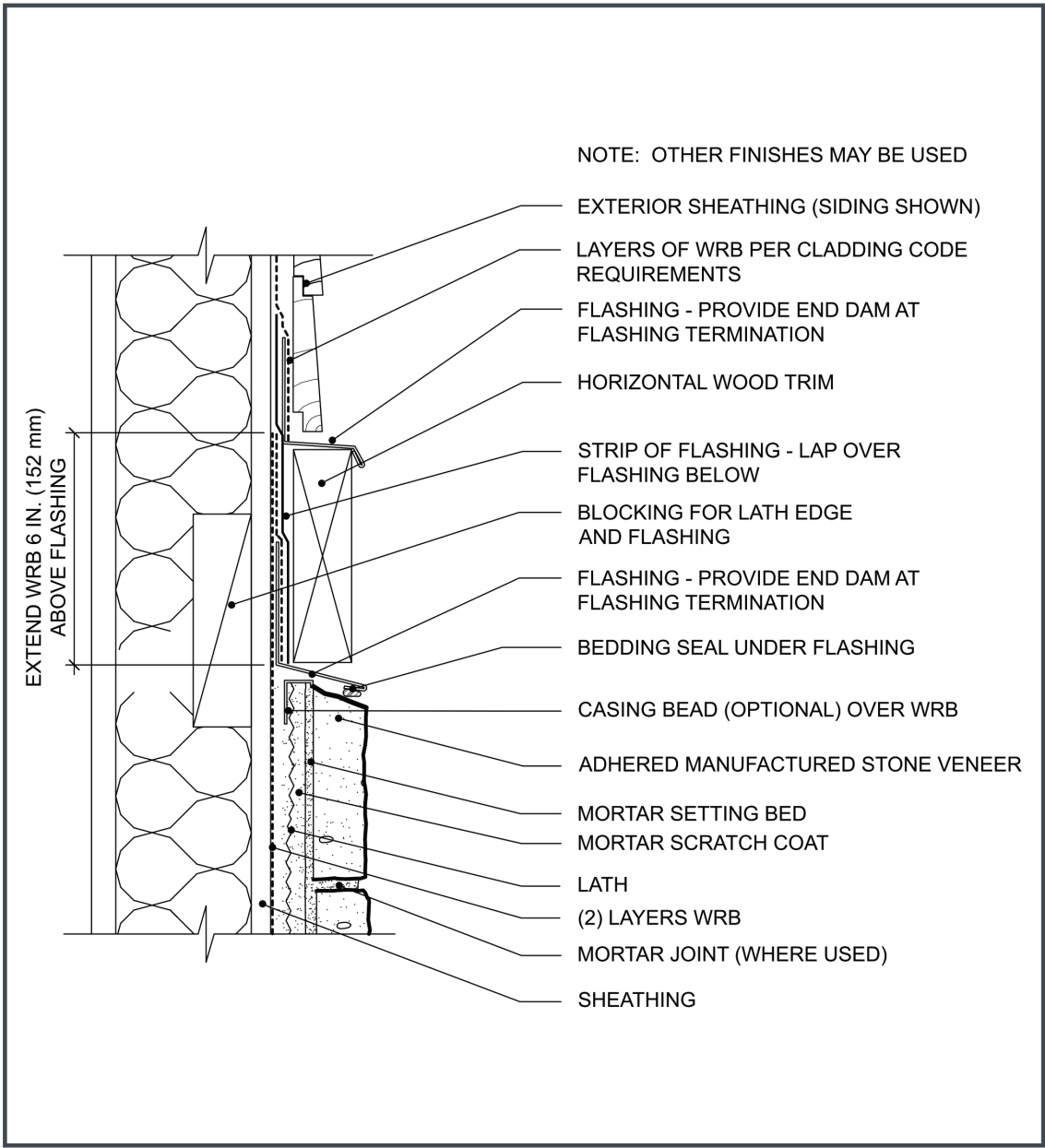


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NATIONAL CONCRETE MASONRY ASSOCIATION

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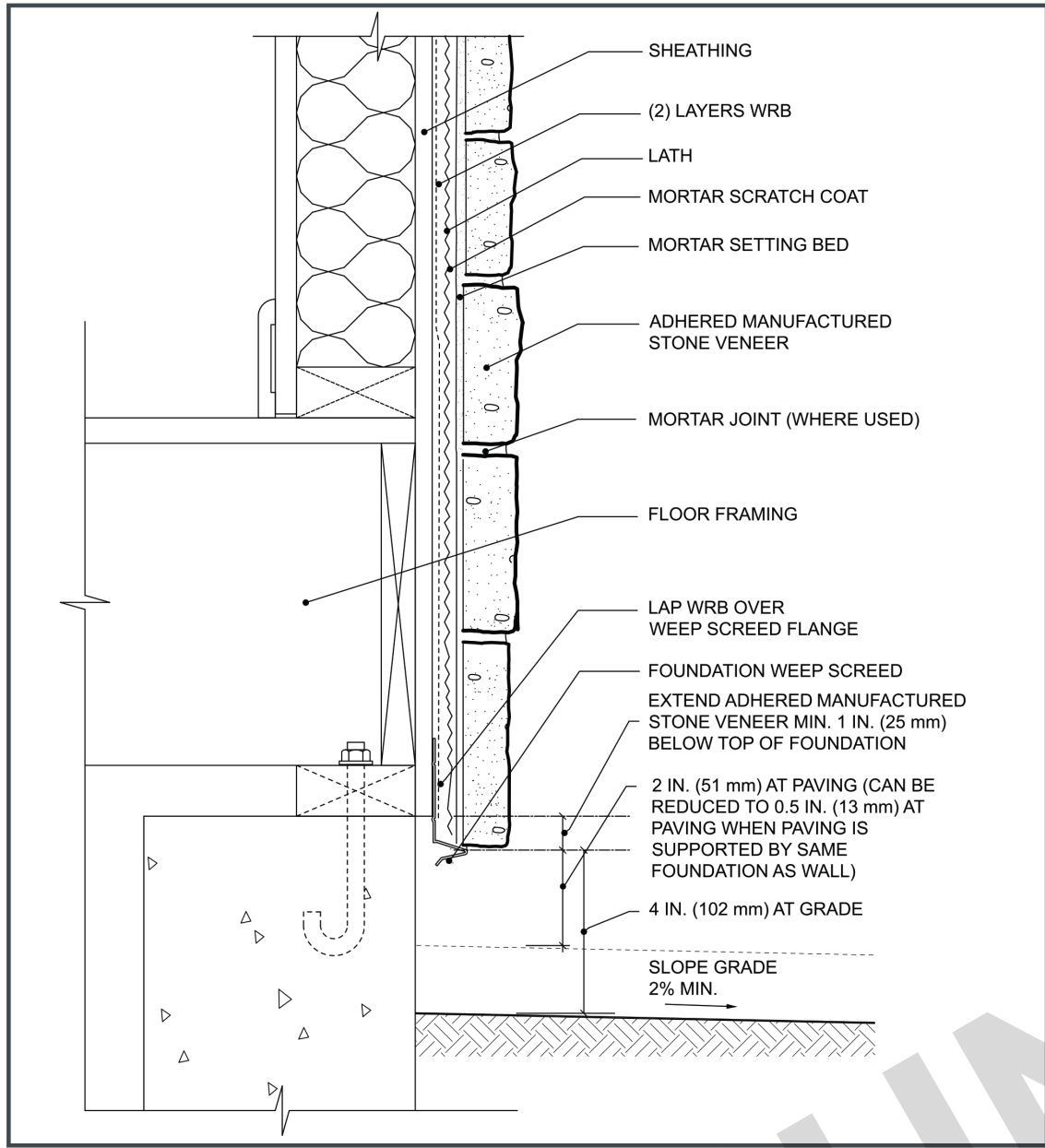
Figure 11a. Horizontal Transition



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39 INSTALLATION GUIDE FOR ADHERED MANUFACTURED STONE VENEER, 5TH EDITION, 5TH PRINTING, REVISED AUGUST 2021

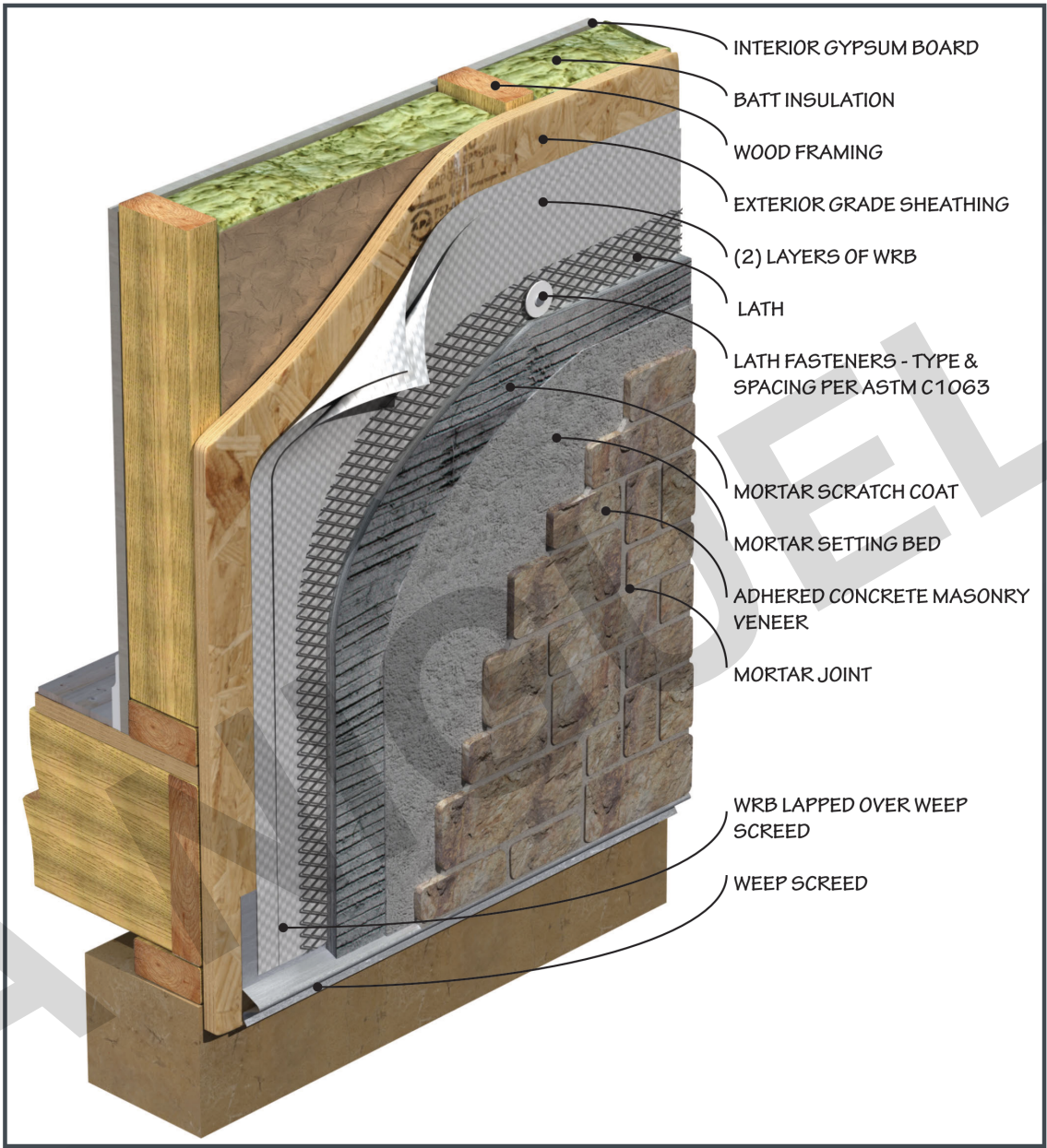
Figure 5a. Foundation Wall Base



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Figure 1. Installation Over Wood Framing



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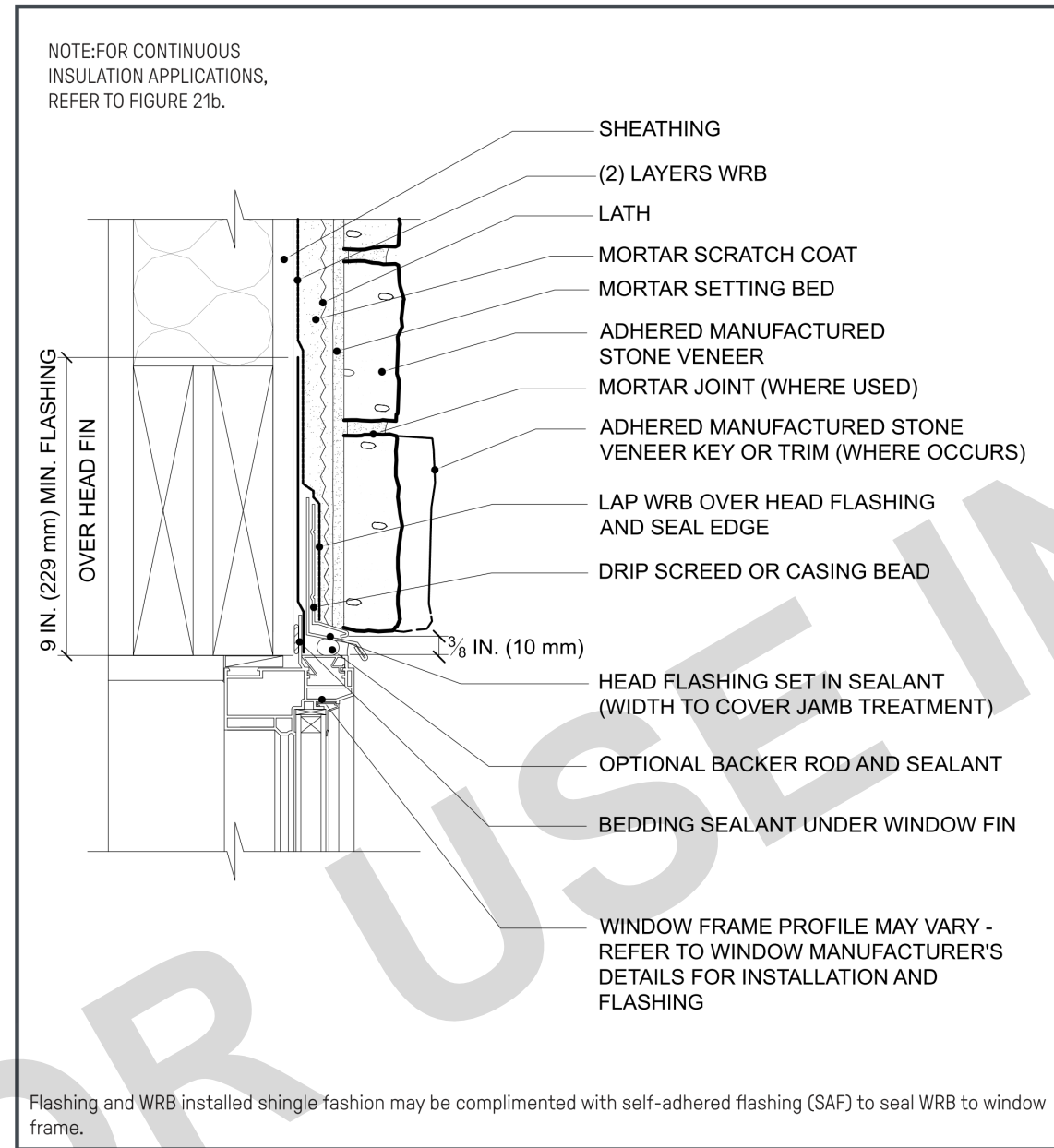
NATIONAL CONCRETE MASONRY ASSOCIATION

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Figure 23. Window Head

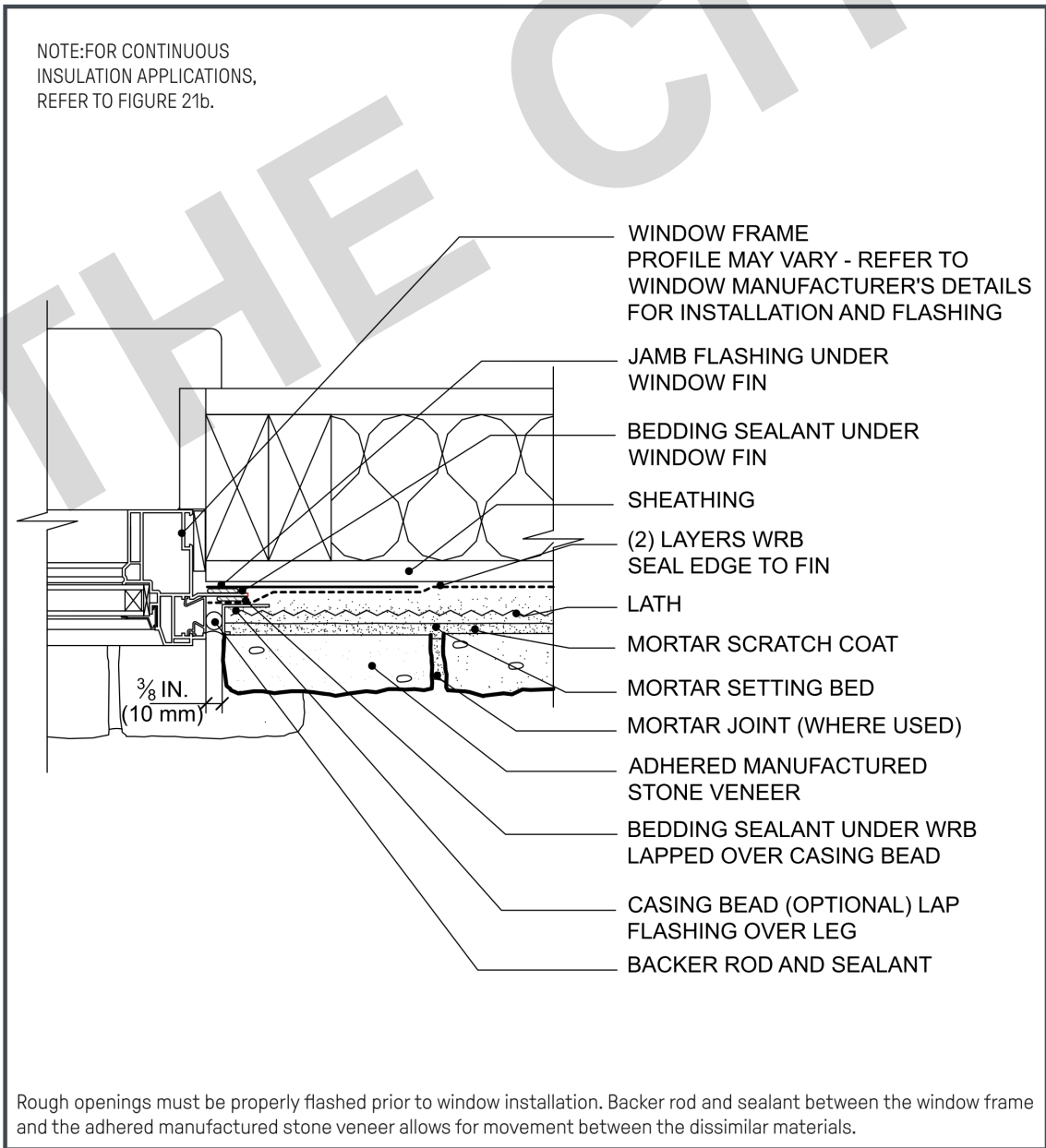


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NATIONAL CONCRETE MASONRY ASSOCIATION

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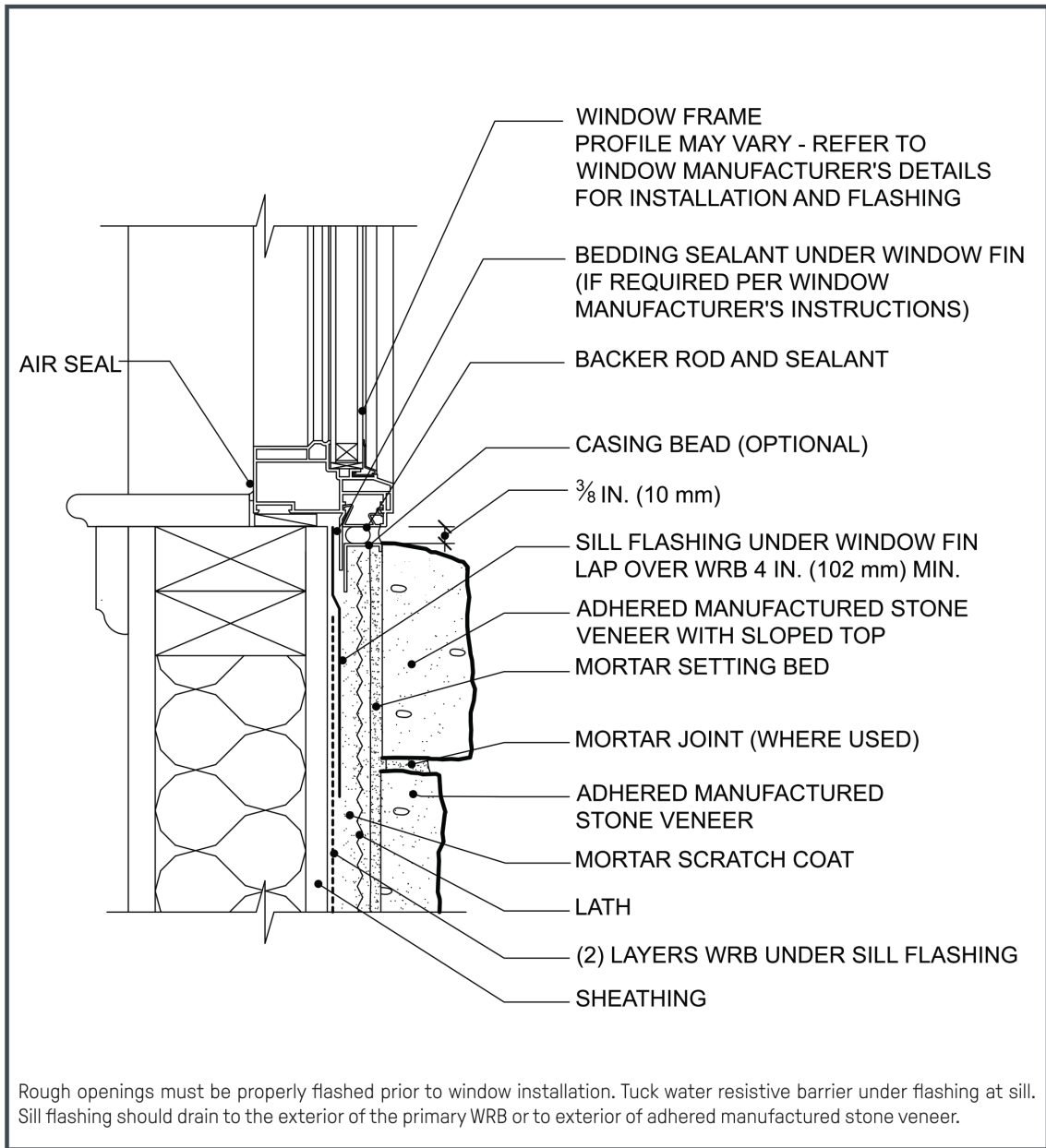
Figure 22. Window Jamb



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46 INSTALLATION GUIDE FOR ADHERED MANUFACTURED STONE VENEER, 5TH EDITION, 5TH PRINTING, REVISED AUGUST 2021

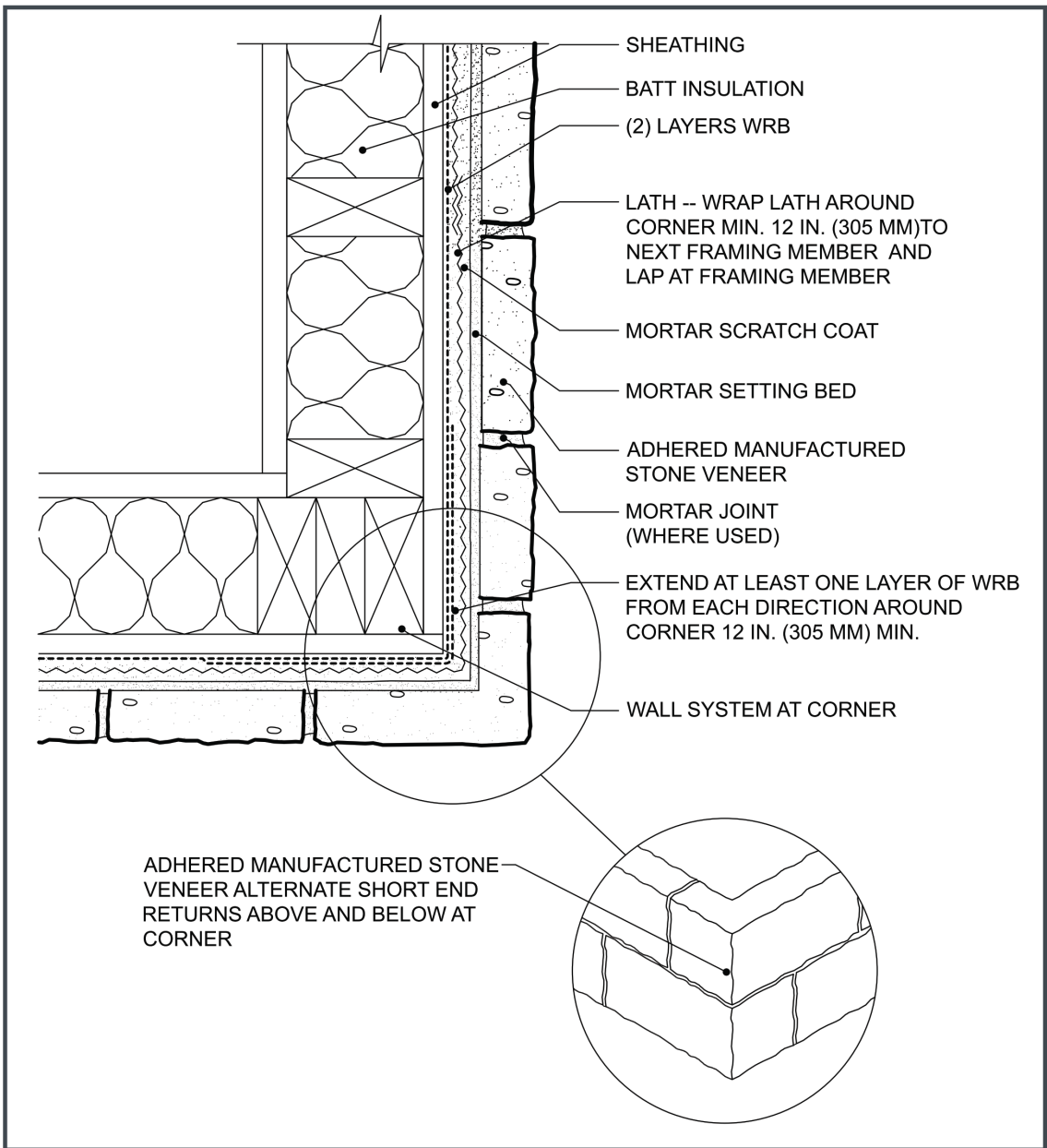
Figure 21a. Window Sill



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Figure 9a. Outside Corner



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PRE-APPROVED ADU

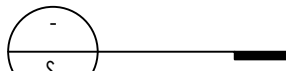

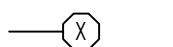
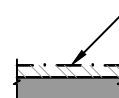

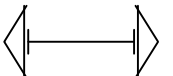


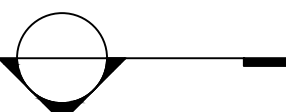
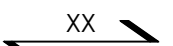

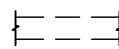
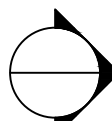
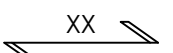



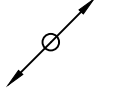


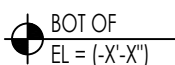

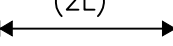
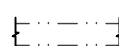


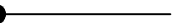
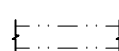
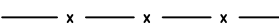
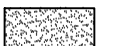





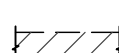

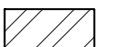











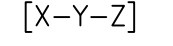
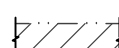

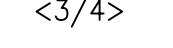








CITY OF LAGUNA NIGUEL

ARCHITECTURAL DETAILS -
ADHERED MASONRY VENEER

PUBLIC SET

DATE
02/05/2025
SHEET

A-924

SYMBOLS				WALL TYPES		SHEET INDEX			
	DETAIL REFERENCE BUBBLE WITH LEADER		INDICATES SHEAR WALL TYPE AND LENGTH, PER SHEAR WALL SCHEDULE		INDICATES TOP PLATE SPLICE NAILING PER SCHEDULE		INDICATES PLYWOOD SIDE FOR SHEARWALL	S-101	SHEET INDEX, ABBREVIATIONS, & SYMBOLS
	DETAIL REFERENCE BUBBLE		INDICATES SPAN AND DIRECTION OF PREFABRICATED ROOF TRUSS (BY OTHERS)		INDICATES SHEAR WALL STRAP / HOLDOWN TYPE PER SCHEDULE		INDICATES BEARING WOOD WALL BELOW	S-102	GENERAL NOTES
	FULL HEIGHT SECTION INDICATOR		INDICATES SPAN AND DIRECTION OF ROOF RAFTER OR FLOOR JOIST WITH WEB STIFFENER		INDICATES PAD FOOTING TYPE PER SCHEDULE		INDICATES BEARING WOOD WALL ABOVE	S-201	ROOF & FOUNDATION FRAMING PLAN - CALIFORNIA RANCH
	ELEVATION OF WALL OR FRAME		INDICATES SPAN AND DIRECTION OF ROOF RAFTER OR FLOOR JOIST		INDICATES CONTINUOUS FOOTING TYPE PER SCHEDULE		INDICATES NON-BEARING WOOD WALL BELOW	S-202	ROOF & FOUNDATION FRAMING PLAN - MEDITERRANEAN
	NORTH ARROW		INDICATES EXTENTS OF FRAMING OR OTHER STRUCTURAL ELEMENT		ANGLE BRACE		INDICATES EXISTING BEARING WOOD WALL	S-203	ROOF & FOUNDATION FRAMING PLAN - MODERN FARM
	TOP/BOTTOM OF ELEVATIONS		INDICATES HEADER @ OPENING PER HEADER SCHEDULE		DOUBLE ANGLE BRACE		INDICATES EXISTING NON-BEARING WOOD WALL	S-301	TYPICAL CONCRETE DETAILS
	SLOPE		EARTH LAYER		DRAG STRUT CONNECTION		INDICATES BEARING CMU WALL BELOW	S-311	CONCRETE DETAILS
	WELDED WIRE FABRIC (WWF LAYER)		INDICATES SAND OR GROUT		FULL HEIGHT STIFFENER CONNECTION		INDICATES BEARING CMU WALL ABOVE	S-401	TYPICAL WOOD DETAILS
	STEPPED SURFACE: FLOOR DEPRESSION		INDICATES GRAVEL		MOMENT CONNECTION		INDICATES NON-BEARING CMU WALL BELOW	S-402	TYPICAL WOOD DETAILS
	SLOPED SURFACE		STEEL IN CROSS SECTION		MEMBER SPLICE		INDICATES NON-BEARING CMU WALL ABOVE	S-403	TYPICAL WOOD DETAILS
	STEPPED FOOTING		INDICATES BEARING WALL		TOP OF STEEL ± ELEVATION		INDICATES EXISTING BEARING CMU WALL	S-421	ROOF FRAMING DETAILS
	BOTTOM STEPPED FOOTING		SHADED AREA INDICATES CALIFORNIA FRAMING		NUMBER OF EVENLY SPACED SHEAR STUDS		INDICATES EXISTING NON-BEARING CMU WALL	S-422	ROOF FRAMING DETAILS
			SHADED AREA INDICATES FOOTPRINT OF FLOOR ABOVE		SPECIAL STUD SPACING SEE TYPICAL STEEL DETAILS		INDICATES BEARING CONCRETE WALL BELOW		
			STEEL HSS TUBE COLUMN		BEAM CAMBER AT MID-SPAN		INDICATES BEARING CONCRETE WALL ABOVE		
			STEEL HSS OR PIPE COLUMN				INDICATES NON-BEARING CONCRETE WALL BELOW		
			WIDE FLANGE STEEL COLUMN				INDICATES NON-BEARING CONCRETE WALL ABOVE		
			WOOD POST				INDICATES EXISTING BEARING CONCRETE WALL		
							INDICATES EXISTING NON-BEARING CONCRETE WALL		

A & B	ABOVE AND BELOW	CJ FT	CUBIC FOOT	H or HORIZ	HORIZONTAL	OSB	ORIENTED STRAND BOARD	TB	TIE BEAM
AB	ANCHOR BOLT	d	PENNY (NAIL OR BAR DIA)	HDR	HEADER	PA	POST ABOVE	T & B	TOP AND BOTTOM
ABV	ABOVE	DBL	DOUBLE	HGR	HANGER	PARA OR //	PARALLEL	T & G	TONGUE & GROOVE
ACI	AMERICAN CONCRETE INSTITUTE	DEPT	DEPARTMENT	HP	HIGH POINT	PC	PRECAST: PIECE	TO	TOP OF
ADDL	ADDITIONAL	DET	DETAIL	HSB	HORIZONTALLY SLOTTED HOLES	PERP	PERPENDICULAR	TOC	TOP OF CURB; TOP OF CONCRETE
ADJ	ADJACENT	DF	DOUGLAS FIR/LARCH	HT	HEIGHT	PI	PLYWOOD INDEX	TOF	TOP OF FOOTING
AESS	ARCHITECTURAL EXPOSED STRUCTURAL STEEL	DIA OR Ø	DIAMETER	ID	INSIDE DIAMETER	PL OR PL.	PLATE	TEMP	TEMPERATURE: TEMPORARY
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	DIAG	DIAGONAL	IF	INSIDE FACE	PL	PROPERTY LINE	THRU	THROUGH
ALT	ALTERNATE	DIAPH	DIAPHRAGM	I-JST	I-JOIST	PLF	PONDS PER LINEAL FOOT	THK	THICKNESS/THICK
ALUM	ALUMINUM	DM	DIMENSION	IN	INCH	PLCS	PLACES	THR	THREADED
ANCH	ANCHOR	DN	DOWN	INCL	INCLUDE	PLY	PLYWOOD	TOP or T	TOP
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	DO	DO OVER	INFO	INFORMATION	PROP	PROPERTY	TOS	TOP OF STEEL/TOP OF SLAB
APA	ENGINEERED WOOD ASSOCIATION (FORMERLY THE AMERICAN PLYWOOD ASSOCIATION)	DWG	DRAWING	INSP	INSPECTION	PT	PRESSURE TREATED	TOW	TOP OF WALL
APPROX	APPROXIMATE	DWL	DOWEL	INT	INTERIOR	PW	PLATE WASHER	TS	TRIMMER STUD
ARCH	ARCHITECTURAL: ARCHITECT	EA	EACH	JST	JOIST	PJP	PARTIAL JOINT PENETRATION WELD	TYP	TYPICAL
AWPA	AMERICAN WOOD PRESERVERS ASSOCIATION	EF	EACH FACE	JT	JOINT	PREFAB	PREFABRICATED	UNO	UNLESS NOTED OTHERWISE
AWS	AMERICAN WELDING SOCIETY	EJ	EXPANSION JOINT	K	KIPS	PSF	POUNDS PER SQUARE FOOT	UT	ULTRA-SONIC TEST
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION	EL	ELEVATION	KS	KING STUD	PSI	POUNDS PER SQUARE INCH	VERT	VERTICAL
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	ELEC	ELECTRICAL	KP	KING POST	PSL	PARALLEL STRAND LUMBER	VSH	VERTICAL SLOTTED HOLES
BEL	BELOW	ELEV	ELEVATOR	KSI	KIPS PER SQUARE INCH	PVMT	PAVEMENT	W/	WITH
BLDG	BUILDING	EMB	EMBEDMENT	LB(S) OR #	POUND(S)	#	POUND: NUMBER	W/O	WITHOUT
BLK	BLOCK	EN	EDGE NAIL	LF	LINEAL FOOT	REF	REFERENCE	WO	WHERE OCCURS
BLKG	BLOCKING	ENR	ENGINEER	LN	LINEAL: LINEAR	RENF	REINFORCE: REINFORCING	WD	WOOD
BM	BEAM	EQ	EQUAL OR EQUIVALENT	LLH	LONG LEG HORIZONTAL	REQD	REQUIRED	WP	WORK POINT; WATERPROOF
BN	BOUNDARY NAIL	EQUIP	EQUIPMENT	LLV	LONG LEG VERTICAL	RF	ROOF	WWF	WELDED WIRE FABRIC
BOT OR B	BOTTOM	ES	EACH SIDE	LP	LOW POINT	RR	ROOF RAFTER		
BRC	BRACE	EW	EACH WAY	LSH	LONG SLOTTED HOLES	Ø	ROUND: DIAMETER		
BRG	BEARING	EXIST or (E)	EXISTING	LSL	LAMINATED STRAND LUMBER	SCHED	SCHEDULE		
BTWN	BETWEEN	EXT	EXTERIOR	LT WT	LIGHTWEIGHT	SECT	SECTION	W	W SHAPE
CANT	CANTILEVER	FDN	FOUNDATION	LVL	LEVEL OR LAMINATED VENEER LUMBER	SEP	SEPARATION	C	AMERICAN STD CHANNEL SHAPE
CAM OR C	CAMBER	FIN	FINISH	MAS	MASONRY	SHT	SHEET	MC	MISC CHANNEL SHAPE
CC	CENTER TO CENTER	FJ	FLOOR JOIST	MATL	MATERIAL	SHTG	SHEATHING	L	ANGLE SHAPE
CG	CENTER OF GRAVITY	FLG	FLANGE	MAX	MAXIMUM	SIM	SIMILAR	WT, ST, MT	STRUCT TEE SHAPE
CIP	CAST-IN-PLACE	FLR	FLOOR	MB	MACHINE BOLT	SOG	SLAB ON GRADE	PIPE	STANDARD PIPE SHAPE
CJ	CONSTRUCTION JOINT; CONTROL JOINT	FN	FIELD NAIL	MECH	MECHANICAL	SN	SHEAR NAIL	PIPE-X	EXTRA STRONG PIPE SHAPE
CL	CENTER LINE	FOC	FACE OF CONCRETE	MFR	MANUFACTURER	SPCG	SPACING	PIPE-XX	DBL EXTRA STRONG PIPE SHAPE
CLR	CLEARANCE: CLEAR	FOM	FACE OF MASONRY	MIN	MINIMUM; MINUTE	SPCS	SPECIFICATIONS	HSS	HOLLOW STRUCTURAL SECTION
CMU	CONCRETE MASONRY UNIT	FOS	FACE OF STUD	MISC	MISCELLANEOUS	SQ	SQUARE		
COL	COLUMN	FOW	FACE OF WALL	[N]	NEW	SS	STAINLESS STEEL		
COMP	COMPRESSION	FRMG	FRAMING	N	NORTH	SSL	SHORT SLOTTED HOLES		
CONC	CONCRETE	FT	FOOT: FEET	NO or #	NUMBER	STD	STANDARD		
CONN	CONNECTION: CONNECT	FTA	FLOOR TIE ABOVE	NTS	NOT TO SCALE	STGR	STAGGER		
CONSTR	CONSTRUCTION	FTG	FOOTING	OC	ON CENTER	STIFF	STIFFENERS		
CONT	CONTINUE: CONTINUOUS	GA	GAUGE	OD	OUTSIDE DIAMETER	STIRR	STIRRUP		
CONTR	CONTRACTOR	GALV	GALVANIZED	OF	OUTSIDE FACE	STL	STEEL		
CJP	COMPLETE JOINT PENETRATION WELD	GB	GRADE BEAM	OH	OPPOSITE HAND	STRUCT	STRUCTURAL		
CTR	CENTER	GLB	GLUED LAMINATED BEAM	OPNG	OPENING	SW	SHEAR WALL		
CTSK	COUNTERSINK; COUNTERSUNK	GR	GRADE	OPP	OPPOSITE	SYM	SYMMETRICAL		
		GRND	GROUND	ORIG	ORIGINAL				



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LAGUNA NIGUEL
PRE - APPROVED ADU
CITY OF LAGUNA NIGUEL

SHEET INDEX,
ABBREVIATIONS, & SYMBOLS

PUBLIC SET

DATE	02/05/2025
SHEET	

SHEET

S-101

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REINFORCING STEEL

- REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 19 OF THE CODE AND WITH THE PROVISIONS OF ACI 318-19. ASTM A706, GRADE 60 UNO, ASTM A615 GR 60 STEEL MAY BE SUBSTITUTED FOR ASTM A706 GR60 STEEL PER ACI 318-19 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 PSI.
 - 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 26.6.4 OF ACI 318-19.
- BARS SHALL BE CLEAN OF RUST, GREASE, OR OTHER MATERIALS LIKELY TO IMPAIR BOND. ALL REINFORCING BAR BENDS 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 A1064. ALL WWR FOR STAIR PANS AND ALL WWR FOR CONCRETE FILL ON METAL DECK TO BE PLAIN WWR. PROVIDE LAPS PER ACI 318-19 SECTION 25.5.3 OR 25.5.4 MINIMUM. WWR SHALL BE SUPPORTED ON APPROVED CHAIRS.
- REINFORCING BAR LAP SPLICES SHALL BE MADE AS INDICATED ON THE DRAWINGS. LAP ALL HORIZONTAL BARS AT CORNERS AND INTERSECTIONS. STAGGER ALL SPLICES UNLESS NOTED OTHERWISE ON PLANS.
 - MINIMUM LAP SPLICE LENGTH FOR REINFORCING STEEL BARS IN CONCRETE SHALL BE PER ACI 318-19 SECTION 25.5.2 AND THE REINFORCING SCHEDULE ON THE DRAWINGS.
 - MINIMUM LAP SPLICE LENGTH FOR REINFORCING STEEL BARS IN MASONRY SHALL BE PER TMS 042-16 SECTION 6.1.6.1.1 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 E60XX 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, ADEQUATELY SUPPORTED AND SHALL BE SECURED AGAINST DISPLACEMENT, AND TIED BEFORE THE CONCRETE IS PLACED 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 SPLICES, 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 318-19.
- MILL TEST REPORTS FOR GRADE 60 BARS SHALL BE SUBMITTED TO THE INSPECTOR OF RECORD PRIOR TO PLACEMENT OF CONCRETE PER ACI 318-19 SECTION 26.13.2.3 OF THE CODE.
- WHEN REQ'D, 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 1½
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	1½ ¾ 1½

- MECHANICAL BAR SPLICE CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-19 SECTION 25.5.7. USE OF MECHANICAL CONNECTIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. SPLICES MUST BE TESTED AS INDICATED IN THE CONCRETE REINFORCEMENT SPECIFICATION. ACCEPTABLE PRODUCTS INCLUDE:

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

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

ALL MECHANICAL BAR SPLICE CONNECTIONS IN SPECIAL STRUCTURAL WALLS, SPECIAL MOMENT FRAMES AND CONCRETE DIAPHRAGMS SHALL BE TYPE 2 CONFORMING TO THE REQUIREMENTS OF ACI 318-19 SECTION 18.2.7 & 18.12.7.4

CONCRETE

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

MATERIAL	ASTM STANDARD
PORTLAND CEMENT (TYPE V)	C150
CONCRETE AGGREGATES (HARDROCK)	C33
CONCRETE AGGREGATES (LIGHTWEIGHT)*	C330
WATER [#]	C1602
COAL FLY ASH OR POZZOLAN (CLASS F)	C618
NATURAL OR MANUFACTURED SAND	C33
SLAG	C989

 - WATER SHOULD ONLY BE ADDED AT THE BATCH PLANT. IN NO CASE SHALL THE DESIGN WATER/ CEMENT RATIO BE EXCEEDED.
 - PUMICE AGGREGATE SHALL NOT BE USED.
- CONCRETE MIXES SHALL BE PROPORTIONED BASED ON SECTION 26.4.3 OF ACI 318-19, WHICH REFERENCES ACI 301-20 ARTICLE 4.2.3. MIX DESIGNS SHALL INCLUDE DOCUMENTATION OF MIX AVERAGE COMPRESSIVE STRENGTH THROUGH FIELD TEST DATA OR TRAIL MIXTURES IN ACCORDANCE WITH ACI 301-20 ARTICLE 4.2.3.4 SCHEDULE OF STRUCTURAL CONCRETE STRENGTHS AND LOCATIONS (UNO):

LOCATION IN STRUCTURE	MINIMUM STRENGTH [PSI]	DENSITY [PCF]	MAX SLUMP [IN±]	MAX WATER/CEMENT RATIO	SLAG/ FLY ASH [#] [MAX]
CONCRETE FOUNDATIONS, GRADE BEAMS, TIE BEAMS	4,500	150	4	0.45	0.15
CONCRETE SLAB ON GRADE	4,500	150	4	0.45	0.15

- AS MEASURED BY CEMENTITIOUS WEIGHT
- READY MIXED CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM C94 OR C685.
 - DEPOSITING AND CONVEYING OF CONCRETE SHALL CONFORM TO SECTION 26.5 OF ACI 318-19 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 BOLT HOLDDOWNS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED AND TIED IN POSITION PRIOR TO PLACING CONCRETE. IN NO CASE SHALL ANY REINFORCING BARS, ANCHOR BOLTS, HOLDOWNS OR OTHER CONCRETE INSERTS BE "WET SET" OR "WET-STABBED" INTO CONCRETE DURING THE POUR.
 - 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:
 - PIPES LARGER THAN 1-1/2" DIAMETER SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY SEOR.
 - NO CONDUITS SHALL BE PLACED IN CONCRETE FILL OVER METAL DECK.
 - 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.

FOUNDATION

- GEOTECHNICAL INFORMATION AND FOUNDATION DESIGN IS BASED ON THE FOLLOWING:
 - DESIGN LATERAL SOIL LOADS ARE IN ACCORDANCE WITH 2022 CBC TABLE 1601.1
 - ALLOWABLE FOUNDATION BEARING AND LATERAL PRESSURES ARE IN ACCORDANCE WITH 2022 CBC TABLE 1806.2
- SPREAD OR CONTINUOUS FOOTINGS:

ELEMENT	ALLOWABLE BEARING CAPACITY [PSF] ¹	ALLOWABLE LATERAL RESISTANCE ⁸	
		PASSIVE RESISTANCE [PSF/FT BELOW GRADE] ¹	COHESION [PSF]
CONT FOOTING	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 0 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 (2022 CBC 1804.8)
 - MAY BE DOUBLED FOR ISOLATED POLES PER 2022 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, STREETS, 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.
- EXCAVATION FOR FOOTINGS SHALL BE APPROVED BY THE INSPECTOR OR GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE AND REINFORCING.
- 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 IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT AND APPROVED BY THE GEOTECHNICAL ENGINEER. FLOODING WILL NOT BE PERMITTED. ALL FILLS USED TO SUPPORT FOUNDATIONS SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER REPRESENTATIVE PER SECTION 1705.6 OF THE CODE.
- ALL ABANDONED FOOTINGS, UTILITIES, ETC., SHALL BE REMOVED. NEW FOOTINGS MUST EXTEND INTO UNDISTURBED SOILS.
- PIPES WITHIN THE ZONE OF INFLUENCE OF BUILDING OR SITE ELEMENT FOUNDATIONS SHALL BE ENCASED IN LEAN CONCRETE.

EXISTING CONDITIONS

- ALL INFORMATION SHOWN ON THE PLANS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE FROM PLANS SUPPLIED BY THE OWNER, BUT WITHOUT GUARANTEE OF ACCURACY.
- WHERE ACTUAL CONDITIONS ARE NOT IN ACCORDANCE WITH THE INFORMATION PRESENTED, THE ARCHITECT AND/OR STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY. NO MODIFICATIONS OF THE PLANS FOR NEW CONSTRUCTION SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT.

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.

DEMOLITION

- ALL DEMOLITION SHALL BE CARRIED ON IN SUCH A WAY AS NOT TO DAMAGE EXISTING ELEMENTS, WHICH ARE TO REMAIN IN THE FINISHED STRUCTURE.
- ALL ELEMENTS OF THE STRUCTURE, WHICH ARE TO REMAIN, AND WHICH ARE DAMAGED DURING DEMOLITION WORK SHALL BE REPLACED AT NO ADDITIONAL COST. EXISTING ELEMENTS SHALL BE PROTECTED TO THE FULLEST EXTENT POSSIBLE, IN ORDER TO MITIGATE DAMAGE.
- CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF ALL EXISTING ELEMENTS THAT ARE NECESSARY FOR THE INSTALLATION OF ALL NEW WORK.
- WHERE EXISTING PARTITION WALLS ARE TO BE DEMOLISHED, CONTRACTOR SHALL VERIFY WALLS ARE NON-BEARING. PRIOR TO DEMOLITION, IF WALLS ARE FOUND TO BE BEARING, CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY

DESIGN INFORMATION

- DEAD LOADS:

DEAD LOADS			
LOCATIONS		UNIFORM [PSF]	
ROOF:	CLAY TILE OVER PRE-FAB TRUSSES W/ GYP CEILING	27	
ROOF:	CLAY TILE OVER PRE-FAB TRUSSES W/ STUCCO CEILING	33	
EXTERIOR BEARING WALLS:	2x STUDS W/ STUCCO EXT FINISH + INT GYP BOARD	18	
INTERIOR NON BEARING WALLS:	2x STUDS W/ GYP BOARD EACH FACE	9	
- ROOF LIVE LOADS (2022 CBC SECTION 1603.1.2)

ROOF LIVE LOADS			
OCCUPANCY OR USE	UNIFORM [PSF]	CONC. [LBS]	REFERENCE
ROOF ORDINARY PITCH, FLATTED AND CURVED ROOFS (THAT ARE NOT OCCUPIABLE)	20	—	2022 CBC TABLE 1607.1

- WIND DESIGN DATA (2022 CBC SECTION 1603.1.4) :

WIND DESIGN DATA			
PARAMETER	VALUE	REFERENCE	
ULTIMATE DESIGN WIND SPEED (3-SEC GUST)	V _{ult} = 95 MPH	2022 CBC FIG. 1609.3	
NOMINAL DESIGN WIND SPEED (3-SEC GUST)	V _{mb} = 74 MPH	2022 CBC 1609.3.1	
EXPOSURE CATEGORY	C	2022 CBC 1609.4.3	
INTERNAL PRESSURE COEFFICIENT:	GCPi = ± 0.18	ASCE 7-16 TABLE 26.13-1	

COMPONENTS & CLADDING WIND PRESSURES (PSF)				
LOCATION		COMPONENT TRIBUTARY AREA (SQ FT)		
		10	100	500
ROOF	ZONE 1	-28.0	-21.3	-16.3
	ZONE 2a	-28.0	-21.3	-16.3
	ZONE 2b	-44.7	-26.3	-23.0
	ZONE 2c	-44.7	-26.3	-23.0
	ZONE 3a	-44.7	-26.3	-23.0
	ZONE 3b	-48.8	-33.0	-33.0
	ALL ZONES	16.0	16.0	16.0
OVERHANG	ZONE 1	-36.3	-34.7	-33.0
	ZONE 2a	-36.3	-34.7	-33.0
	ZONE 2b	-53.0	-42.2	-39.7
	ZONE 2c	-53.0	-42.2	-39.7
	ZONE 3a	-63.0	-43.0	-43.0
	ZONE 3b	-63.0	-43.0	-43.0
	ZONE 4	-21.3	-18.5	-16.3
WALL	ZONE 5	-26.3	-20.5	-16.3
	POSITIVE	19.7	16.3	16.0

- EARTHQUAKE DESIGN DATA (2022 CBC SECTION 1603.1.5):

SITE AND OCCUPANCY PARAMETERS		
PARAMETER	VALUE	REFERENCE
RISK CATEGORY	II	2022 CBC TABLE 1604.5
SEISMIC IMPORTANCE FACTOR	I = 1.0	ASCE 7-16 TABLE 1.5-2
MAPPED SPECTRAL RESPONSE ACCELERATIONS:	S _s = 1.375 S ₁ = 0.5	2022 CBC 1613.2.1
SITE CLASS		2022 CBC 1613.2.2
SPECTRAL RESPONSE COEFFICIENTS:	S _{DS} = 1.1 S _{D1} = 0.6	2022 CBC 1613.2.4

BUILDING PARAMETERS		
PARAMETER	VALUE	REFERENCE
SEISMIC DESIGN CATEGORY	SDC = D	2022 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 = 6½	
SYSTEM OVERSTRENGTH FACTOR	Ω _o = 3	
DEFLECTION AMPLIFICATION FACTOR	C _d = 4	
DESIGN BASE SHEAR	V = 4.3 k	ASCE 7-16 12.8.1
SEISMIC RESPONSE COEFFICIENTS	C _s = 0.169	ASCE 7-16 12.8.1.1
ANALYSIS PROCEDURE USED	EQUIVALENT LATERAL FORCE PROCEDURE	ASCE 7-16 12.8

- GEOTECHNICAL INFORMATION (2022 CBC SECTION 1603.1.6):
REFER TO FOUNDATION GENERAL NOTES

GENERAL

- ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES AND STANDARDS:
 - 2022 CALIFORNIA BUILDING CODE, PART 2, VOLUME 2 OF 2, AND TITLE 24 C.C.R. 2022 EDITION AND LATEST REVISIONS (INCLUDING SUPPLEMENTS AND ERRATA) HEREIN 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.
- SEE CIVIL DRAWINGS FOR THE FOLLOWING:
 - HEIGHT AND/OR ELEVATION OF:
 - FINISHED SURFACE
 - TOP OF WALL
 - TOP OF GRADE
 - FINISHED GRADE
 - SLOPE
 - SITE CONCRETE WALKWAYS, CURBS & PAVING
- 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 PROVISION OF TEMPORARY SHORING AND OTHER CONSTRUCTION AIDS, INCLUDING ALL ENGINEERING OF SUCH SYSTEMS, FOR TEMPORARY SUPPORT OF NEW AND/OR EXISTING STRUCTURAL ELEMENTS AS REQUIRED FOR ERECTION AND OTHER CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION (UNO). OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS OR CONCERN CONSTRUCTION MEANS AND METHODS OR CONSTRUCTION SAFETY.
- BACKFILL SHALL NOT BE PLACED BEHIND EXTERIOR AND INTERIOR RETAINING WALLS UNTIL THE CONCRETE / CMU HAS ACHIEVED FULL DESIGN STRENGTH. FOR BRACED WALLS SUPPORTED BY STRUCTURAL DIAPHRAGMS, BACKFILL SHALL NOT BE PLACED BEHIND THE WALL UNTIL THE DIAPHRAGM HAS BEEN INSTALLED, AND FOR CONCRETE DIAPHRAGMS, HAS ACHIEVED FULL DESIGN STRENGTH.
- THE CONTRACT STRUCTURAL DRAWINGS SHOW THE BUILDING IN ITS FINAL INTENDED POSITION. CONTRACTOR SHALL MAKE PROVISIONS IN THE LAYOUT OF THE BUILDING TO TAKE INTO ACCOUNTS SHRINKAGE, CREEP, SHORTENING, ETC..
- OPENINGS, POCKETS, ETC., LARGER THAN 6" SHALL NOT BE PLACED IN CONCRETE SLABS, DECKS, WALLS, UNLESS SPECIALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., LARGER THAN 6" NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS.
- ASTM SPECIFICATIONS ON THE DRAWINGS SHALL BE THE VERSION REFERENCED IN CHAPTER 35 OF THE CODE OR AS REFERENCED IN THE APPLICABLE DESIGN STANDARD.
- CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES, SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, THE STRUCTURAL ENGINEER AND GEOTECHNICAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED ROOF OR FLOOR. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. THE CONTRACTOR TO DESIGN AND PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
- CONTRACTOR SHALL COORDINATE SHORING WITH DRAWINGS OF RECORD TO INSURE PROVISIONS FOR POCKETS, BLOCKOUTS, OFFSETS, STEPPED FOOTINGS AND ANY OTHER ITEMS AFFECTED BY THE SHORING. SHORING IS NOT THE RESPONSIBILITY OF THE SEOR. CONTRACTOR TO SUBMIT ANY SHORING DESIGN AND DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- 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.

DIMENSIONS

- DIMENSIONS SHALL BE DEFINED TO INCLUDE BOTH HORIZONTAL DIMENSIONS AND VERTICAL DIMENSIONS (ELEVATIONS).
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE. DRAWINGS SHALL NOT BE SCALED.
- SEE ARCHITECTURAL DRAWINGS FOR DIMENSION NOT NOTED ON STRUCTURAL DRAWINGS.
- SEE ARCHITECTURAL AND/OR CIVIL DRAWINGS FOR FINISH FLOOR ELEVATIONS.
- SEE ARCHITECTURAL DRAWINGS FOR ALL TOP OF SHEATHING AND/OR ROOF ELEVATIONS.
- THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES OR INCONSISTENCIES.



THESE PLANS ARE PROVIDED BY THE CITY OF LAGUNA NIGUEL AS PART OF THE PRE-APPROVED ADU PROGRAM AND ARE PUBLIC DOMAIN. THERE CANNOT BE A CHARGE TO PROVIDE THESE PLANS. NO ALTERATIONS TO THESE PLANS ARE ALLOWED. ALL ALTERATIONS MUST BE DONE UNDER A SEPARATE PERMIT ONCE THE BUILDING PERMIT FOR THE ADU HAS BEEN ISSUED AND FINAL INSPECTION COMPLETED. IF YOU DO NOT HAVE THE CONSTRUCTION KNOWLEDGE AND EXPERIENCE TO CONTRUCT THESE PLANS WITHOUT FURTHER DETAILS, IT IS RECOMMENDED YOU HIRE A CONTRACTOR TO DO THE CONSTRUCTION. THE CITY WILL NOT PROVIDE FURTHER INFORMATION OR DETAILS AND BUILDING INSPECTORS WILL NOT PROVIDE STEP BY STEP INSTRUCTIONS IN THE FIELD.

LAGUNA NIGUEL
PRE - APPROVED ADU
CITY OF LAGUNA NIGUEL

GENERAL NOTES

DATE
02/05/2025
SHEET

\\EgnylDrive\on-site\2800\2889-00_CU22-Laguna Niguel-Structural\ConDocs\Sheet-Files\2889-00_CU22- \$103.dwg, PLAN 1 - \$103, Feb 05, 2025, 2:34pm, jldjong

REQUIRED VERIFICATION AND INSPECTIONS				
CONCRETE CONSTRUCTION CODE TABLE 1705.3				
SPECIAL INSPECTION OR TEST	CONTINUOUS	PERIODIC	REFERENCED STANDARD	CBC REFERENCE
3. INSPECT ANCHORS CAST IN CONCRETE	—	X	ACI 318: 26.7	—
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS ^(a) (a) ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS (b) MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.0.	X	X	ACI 318: 26.7.1 ACI 318: 26.7.1	— —

WOOD CODE CHAPTER 17 AND REFERENCED 2018 NDS AND AWC SDPWS-2021				
SPECIAL INSPECTION OR TEST	CONTINUOUS	PERIODIC		CBC REFERENCE
3. WOOD LATERAL FORCE-RESISTING SYSTEM WITH FASTENER SPACING OF THE SHEATHING LESS THAN OR EQUAL TO 4" O.C. - WOOD SHEAR WALLS - WOOD DIAPHRAGMS - DRAG STRUTS - SHEAR PANELS - HOLD-DOWNS	—	X		1705.12.2 1705.13.2
4. WOOD LATERAL FORCE-RESISTING SYSTEM WITH FASTENER SPACING OF THE SHEATHING GREATER THAN 4" O.C. (NOT REQUIRED) - WOOD SHEAR WALLS - WOOD DIAPHRAGMS - DRAG STRUTS - SHEAR PANELS - HOLD-DOWNS	—	—		1705.12.2 1705.13.2

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		

STATEMENT OF SPECIAL INSPECTIONS	
1.	THIS STATEMENT OF SPECIAL INSPECTIONS HAS BEEN PREPARED PURSUANT TO SECTION 1704.3 OF THE CODE. THIS SECTION DETAILS BOTH REQUIRED SPECIAL INSPECTIONS AND TESTS INCLUDING TESTING PER SECTION 1705 OF THE CODE. THE FOLLOWING SHALL BE OBSERVED DURING THEIR IMPLEMENTATION: A. GENERAL: a. STRUCTURAL VERIFICATIONS, INSPECTIONS AND TESTS SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 17 OF THE CODE AND/OR THE APPLICABLE REFERENCE STANDARD. B. OWNER REQUIREMENTS: a. THE OWNER OR OWNER'S AGENT SHALL EMPLOY ONE OR MORE APPROVED AGENCIES TO PERFORM INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED IN SECTION 1705 OF THE CODE AND IN THIS STATEMENT OF INSPECTIONS. C. SPECIAL INSPECTOR QUALIFICATIONS: a. THE SPECIAL INSPECTIONS SHALL PROVIDE WRITTEN DOCUMENTATION TO THE BUILDING OFFICIAL DEMONSTRATING HIS OR HER COMPETENCE AND RELEVANT EXPERIENCE OR TRAINING. THE EXPERIENCE OR TRAINING SHALL BE CONSIDERED RELEVANT WHEN THE DOCUMENTED EXPERIENCE OR TRAINING IS RELATED IN COMPLEXITY TO THE SAME TYPE OF SPECIAL INSPECTION ACTIVITIES FOR PROJECTS OF SIMILAR COMPLEXITY AND MATERIAL QUANTITIES. D. CONTRACTOR REQUIREMENTS: a. SPECIAL INSPECTION IS IN ADDITION TO THE CONTRACTOR'S QUALITY CONTROL INSPECTIONS AND TESTING. THE CONTRACTOR'S QUALITY CONTROL INSPECTIONS AND TESTING SHALL OCCUR PRIOR TO SPECIAL INSPECTION AND REPORTS SHALL BE AVAILABLE TO THE SPECIAL INSPECTOR. b. THE CONTRACTOR SHALL ENSURE THAT THE WORK FOR WHICH SPECIAL INSPECTION IS REQUIRED REMAINS ACCESSIBLE AND EXPOSED FOR SPECIAL INSPECTION PURPOSES UNTIL COMPLETION OF THE REQUIRED SPECIAL INSPECTION. c. ANY CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF THE MAIN WIND OR SEISMIC FORCE RESISTING SYSTEM SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER PRIOR TO COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL INSPECTION REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS. E. SPECIAL INSPECTOR REPORT REQUIREMENTS: a. THE SPECIAL INSPECTOR SHALL KEEP RECORD OF INSPECTIONS b. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND TO THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD. c. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. d. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. e. IF NOT CORRECTED DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD PRIOR TO THE COMPLETION OF THAT PHASE OF WORK. f. A FINAL REPORT DOCUMENTING SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED SHALL BE SUBMITTED TO THE BUILDING OFFICIAL.

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 BUILDINGS
 - PREFABRICATED WOOD TRUSSES
- TRUSS DESIGNER REQUIREMENTS:
 - THE TRUSS DESIGNER SHALL MEET ALL THE REQUIREMENTS LISTED IN SECTION 2.3.5 OF ANS/PTI 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 ANS/PTI 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.
 - CONTRACTOR REQUIREMENTS:
 - THE CONTRACTOR SHALL MEET ALL THE REQUIREMENTS LISTED IN SECTION 2.3.4 OF ANS/PTI 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 (BCS3-B1)
 - TRUSS INSTALLATION SHALL COMPLY WITH INSTALLATION TOLERANCES SHOWN IN BCS3-B1
 - TEMPORARY INSTALLATION RESTRAINT/BRACING FOR THE TRUSS SYSTEM AND THE PERMANENT TRUSS SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH BCS3-B2.
 - CONSTRUCTION LOADING ON TRUSSES SHALL BE DONE IN ACCORDANCE WITH BCS3-B4.
 - TRUSS DAMAGE, JOBSITE MODIFICATIONS & INSTALLATION ERRORS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE EOR AND THE TRUSS DESIGNER. REFERENCE BCS3-B5.
 - SUBMIT THE DRAWINGS FROM THE TRUSS DESIGNER/MANUFACTURER TO THE BUILDING DEPARTMENT PRIOR TO FABRICATION FOR APPROVAL. 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 ANS/PTI 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 ANS/PTI 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.

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-2021)
 - THE NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION (ANS/PTI 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:
CLAY TILE W/ GYP CEILING: 19.9 PSF * (18.2 PSF SUPERIMPOSED)
TOP-CHORD DEAD LOAD: 8.6 PSF (6.7 PSF SUPERIMPOSED)
BOT CHORD DEAD LOAD: 20 PSF
ROOF - LIVE LOAD: 20 PSF

ROOF TRUSS LOADING AT PORCH:
CLAY TILE W/ STUCCO CEILING: 19.9 PSF * (18.2 PSF SUPERIMPOSED)
TOP-CHORD DEAD LOAD: 14.6 PSF (13.0 PSF SUPERIMPOSED)
BOT CHORD DEAD LOAD: 20 PSF
ROOF - LIVE LOAD: 20 PSF

DEFECTION CRITERIA:
DEAD + LIVE LOAD L/240
LIVE LOAD ONLY L/360

*INCLUDES 4 PSF ALLOWANCE FOR PV PANELS
 - (#-) EQUALS DRAG FORCE IN LBS. DRAG FORCE IS 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. 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 ANS/PTI 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 (BCS3-B1)
 - TRUSS INSTALLATION SHALL COMPLY WITH INSTALLATION TOLERANCES SHOWN IN BCS3-B1
 - TEMPORARY INSTALLATION RESTRAINT/BRACING FOR THE TRUSS SYSTEM AND THE PERMANENT TRUSS SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH BCS3-B2.
 - CONSTRUCTION LOADING ON TRUSSES SHALL BE DONE IN ACCORDANCE WITH BCS3-B4.
 - TRUSS DAMAGE, JOBSITE MODIFICATIONS & INSTALLATION ERRORS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE EOR AND THE TRUSS DESIGNER. REFERENCE BCS3-B5.
 - SUBMIT THE DRAWINGS FROM THE TRUSS DESIGNER/MANUFACTURER TO THE BUILDING DEPARTMENT PRIOR TO FABRICATION FOR APPROVAL. 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 ANS/PTI 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 ANS/PTI 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 ^C	SHEATHING GRADE	PERFORMANCE RATING	SPAN RATING	RATING ^B REFERENCE ^A
ROOF	5	EXPOSURE 1	REFER TO TYPICAL DIAPHRAGM SCHEDULE			APA 2022 CBC 2303.1.5 (DOC PS 1-19 OR PS 2-18)
FLOOR	5	EXPOSURE 1				APA
WALL ^D	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 ANSI/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 PANELS AWAY FROM HIGH TRAFFIC AREAS
 - HANDLING
 - ALWAYS PROTECT ENDS AND EDGES, ESPECIALLY TONGUE AND GROOVE PRODUCTS, FROM PHYSICAL DAMAGE.
 - ACCUMULATE 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 1/2" 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: ALL 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 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 4" 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.

SAWN LUMBER

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

SAWN LUMBER PROPERTIES				
USE	SIZE	SPECIES	GRADE	REFERENCE
MUDSILLS	2x4	D.F.	STANDARD OR BETTER PRESSURE TREATED	2022 CBC 2303.1.9
	2x6 AND LARGER	D.F.	NO. 2 OR BETTER PRESSURE TREATED	
	2x	REDWOOD	FOUNDATION GRADE	
HORIZONTAL FRAMING LUMBER				
ROOF JOISTS AND RAFTERS	2x	D.F.	NO. 2	WCLB & WHPA
FLOOR JOISTS	2x	D.F.	NO. 2	
HEADERS AND BEAMS	4x	D.F.	NO. 2	
ANY OTHER HORIZONTAL	4x4 AND SMALLER	D.F.	NO. 2	WCLB & WHPA
	6x6 AND LARGER	D.F.	NO. 1	
VERTICAL FRAMING LUMBER				
TOP PLATES	2x	D.F.	NO. 2	WCLB & WHPA
STUDS	2x4 & 3x4	D.F.	STUD	
	2x6 & 2x8	D.F.	NO. 2	
POSTS	4x4 & 4x6 POSTS	D.F.	NO. 2	WCLB & WHPA
	6x6 & LARGER POSTS	D.F.	NO. 1	
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 AT BUILDINGS WITH 4 OR MORE STORES.
 - 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 2304.10.2. ALL NAILS SHALL BE COMMON WIRE NAILS. REDRILL 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" 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 PINS 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).
 - PRESERVATIVE TREATMENT:
 - WOOD MEMBERS SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH ATC 109-07, STANDARD FOR PRESERVATIVE TREATMENT, BASED ON THE SERVICE CONDITION PER THE USE CATEGORIES (JIC#) SPECIFIED IN AWP A1-20.
 - 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 OR INJURIES SUCH AS ABRASIONS OR HOLES FROM REMOVAL OF NAILS AND SPIRES, WHICH MAY PENETRATE THE TREATED ZONE SHALL BE FIELD TREATED IN ACCORDANCE WITH AWP A1-15. THE FOLLOWING FIELD TREATMENTS SHALL BE USED:
 - BORED HOLES: HOLES FOR CONNECTORS OR BOLTS MAY BE TREATED BY PUMPING COAL TAR ROOFING CEMENT MEETING ASTM D5643 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.
 - ALL LUMBER IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED LUMBER WITH AWP A TREATMENT C2 USING EITHER ALKALINE QUAT (AQ) TYPE B AND D), COPPER AZOLE (CBA-A, CA-B), OR SODIUM BORATES (SBX). ANCHOR BOLTS, FASTENERS, AND METAL FRAMING CONNECTORS IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT-DIPPED GALVANIZED TO A RATING OF G-165 PER ASTM A653.
 - PROVIDE 2 STUDS UNDER ALL 4" X 10" AND LARGER BEAMS OR HEADERS AT SPANS 4 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:
2x FULL DEPTH SOLID BLOCKING BETWEEN JOISTS OVER SUPPORT.
2x 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 MANUFACTURERS WITH EQUIVALENT LOAD CARRYING CHARACTERISTICS MAY BE USED WITH APPROVAL BY SEOR.
 - FIRE STOPPING, BACKING FOR INTERIOR FINISHES, NONBEARING WALLS, AND OTHER NON-STRUCTURAL FRAMING ARE NOT NECESSARILY SHOWN ON STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS.
 - THE TOP OF NON-BEARING WALLS SHALL NOT BE IN CONTACT WITH JOISTS/TRUSSES/RAFTERS ABOVE. REFER TO THE REFERENCED DETAILS FOR REQUIRED GAP, 1/2" MINIMUM, UNLESS NOTED OTHERWISE IN DETAIL.

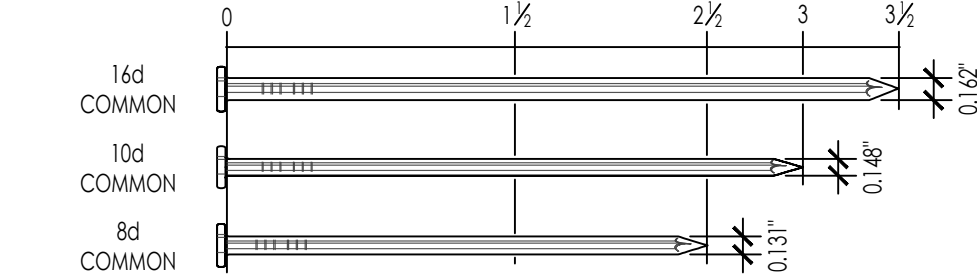
HARDWARE AND CONNECTORS

- GENERAL:
USE ALL SPECIFIED FASTENERS AS SPECIED ON PLANS. IF NOT INDICATED ON PLANS PROVIDE FASTENERS PER MFR'S APPROVED ICC-ESR REPORT OR PRODUCT LITERATURE
- HOLD-DOWNS:
1. DO NOT OVER TIGHTEN NUTS ON TIE-DOWN ANCHOR RODS OR BOLTS. TIGHTEN ANCHOR ROD NUTS ONE-THIRD TO ONE-HALF TURN BEYOND FINGER TIGHT
2. INSTALL ALL HOLD-DOWNS TIGHT TO END STUDS/POST. DO NOT USE FILLER BLOCKS. FOR MISALIGNED ANCHOR BOLTS, EXTEND THE ANCHOR ROD AT A 1:6 (HORIZ/VERT) USING A COUPLER WITH EQUIVALENT ANCHOR ROD AND INSTALL THE HOLD-DOWN HIGHER ON END STUD / POST
3. 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

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

FASTENER INFORMATION

- ALL NAILS SPECIFIED TO BE COMMON NAILS, UNLESS SPECIFIED OTHERWISE.



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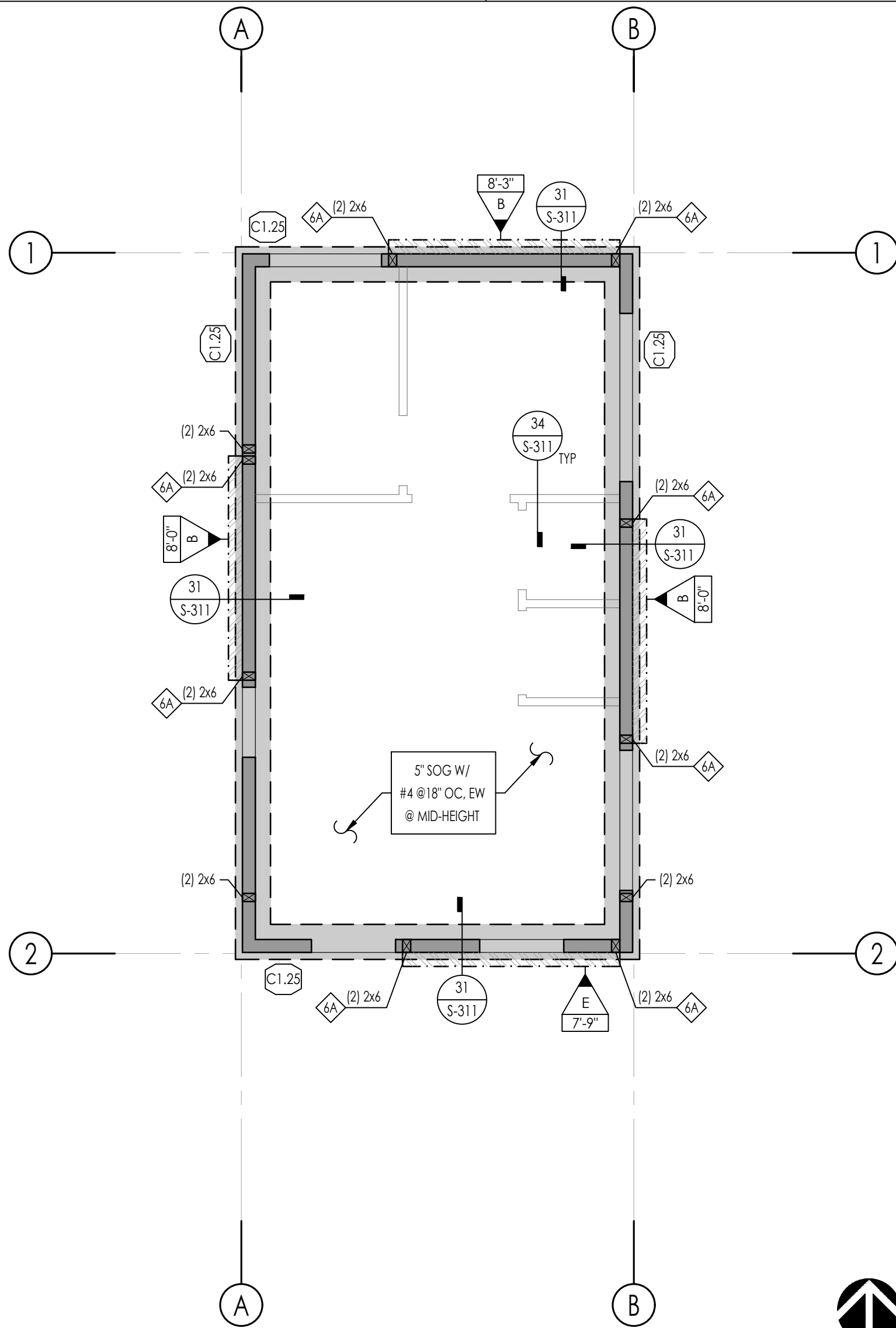
LAGUNA NIGUEL
PRE - APPROVED ADU
CITY OF LAGUNA NIGUEL
GENERAL NOTES, SPECIAL
INSPECTION & TESTS

DATE
02/05/2025
SHEET

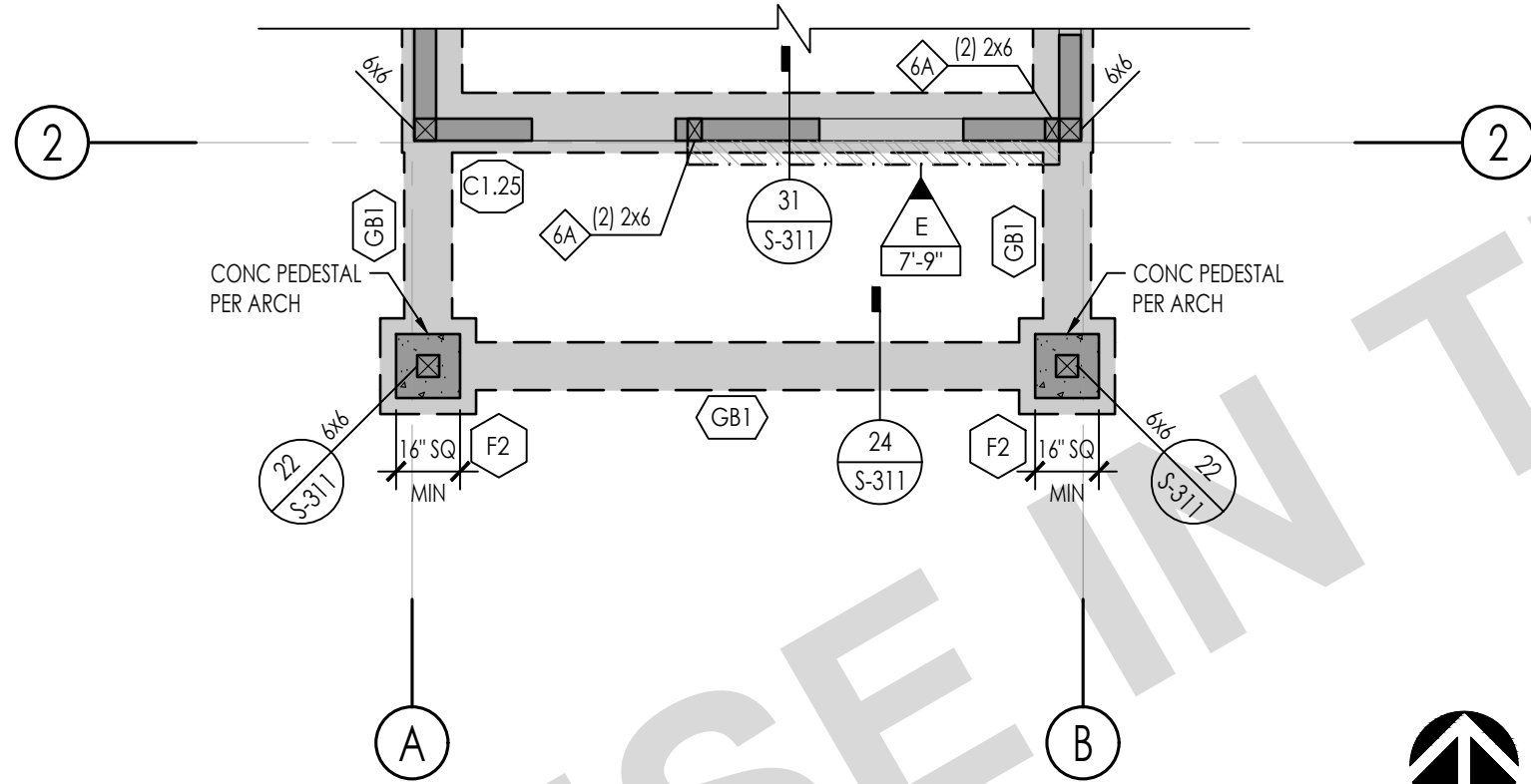
S-103

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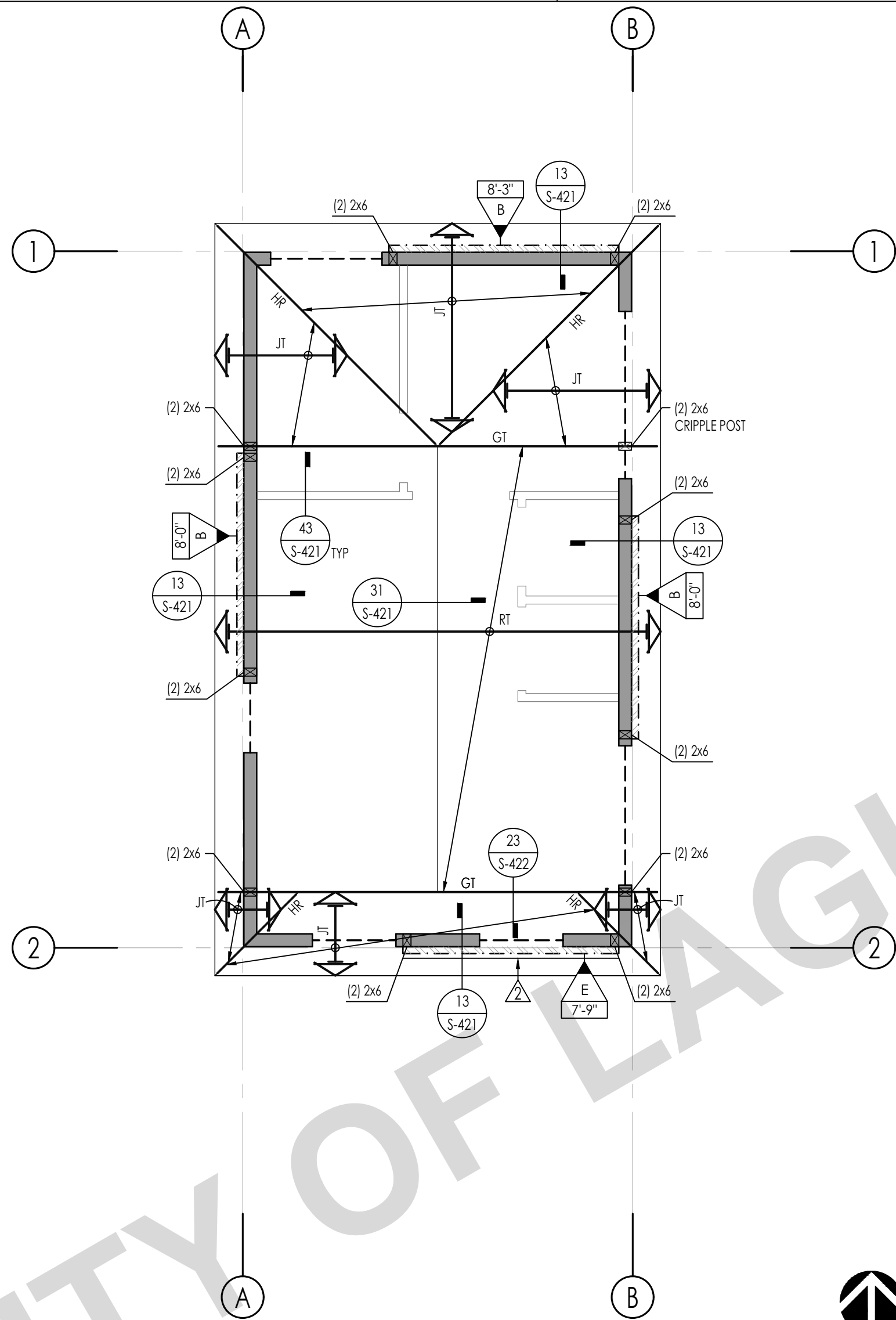
\\EgnylDrive\on-site\2889-00-CL22-Laguna Niguel-On-Call-Arch-Peer Review Services\Structural\ConDocs\Sheet-Files\Plan\1-2889-00-CL22-Plan.dwg, PLAN 1 - S-201, Feb 05, 2025, 2:34pm, jldong



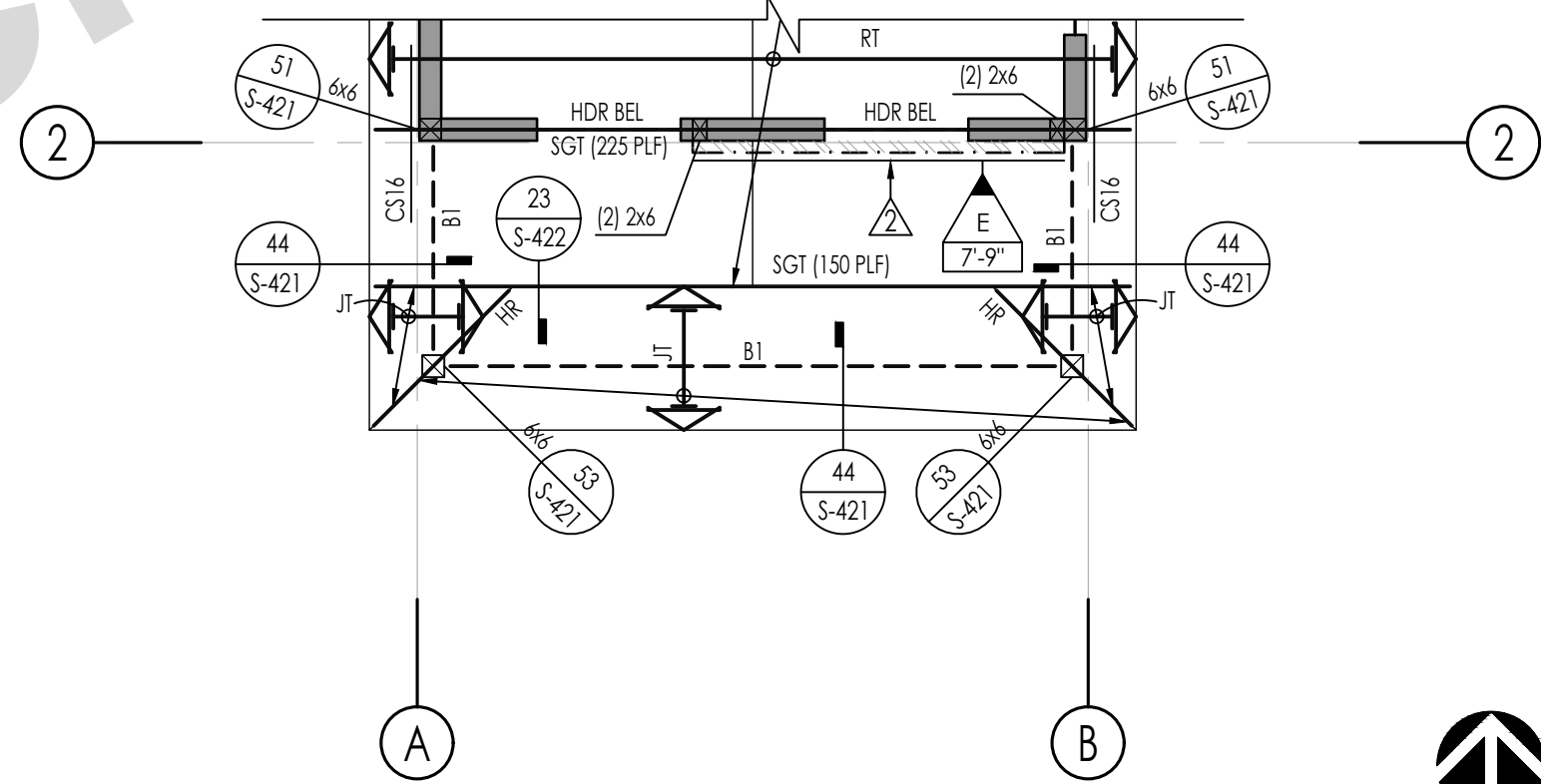
1 FOUNDATION PLAN - CALIFORNIA RANCH
SCALE: 1/4" = 1'-0"



3 FOUNDATION PLAN - CALIFORNIA RANCH PORCH OPTION
SCALE: 1/4" = 1'-0"



2 ROOF FRAMING PLAN - CALIFORNIA RANCH
SCALE: 1/4" = 1'-0"



4 ROOF FRAMING PLAN - CALIFORNIA RANCH PORCH OPTION
SCALE: 1/4" = 1'-0"

FOUNDATION SCHEDULES

PAD FOOTING SCHEDULE						
TYPE	WIDTH	LENGTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	TOP REINF	BOT REINF
F2	2'-0"	2'-0"	2'-0"	SEE NOTE 16	(3) #5, EW	(3) #5, EW

GRADE BEAM SCHEDULE						
TYPE	WIDTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	LONG REINF	TRANS REINF	DETAIL
GB1	1'-0"	1'-0"	SEE NOTE 16	(2) #4 @ TOP (2) #4 @ BOT	#3 @ 24" OC	24/S-311

NOTE: FOOTING MUST BE DEEPENED LOCALLY PER DETAIL 32/S-301 TO ACCOMMODATE A8 HOLDDOWN EMBED DEPTHS

CONTINUOUS FOOTING SCHEDULE					
MARK	WIDTH	MIN EMBED BELOW LOWEST PAD GRADE	LONG REINF	TRANS REINF	DETAIL
C1.23	1'-3"	SEE NOTE 16	(2) #5 188	#3 @ 12" OC, BOT	PER PLAN

SHEARWALL HOLDOWN SCHEDULE		
SPECIES HOLDOWN/STRAP DETAIL	INDICATES HOLDOWN/STRAP TYPE	DETAIL
6x	INDICATES SIMPSON HOLDOWN W/ SSTB TO: CONCRETE FOUNDATION:	12/S-311

ROOF FRAMING SCHEDULES

ROOF BEAM SCHEDULE		
MARK	SIZE	REMARKS
B1	6x8	
B2	6x10	

ROOF JOIST/RAFTER SCHEDULE		
MARK	SIZE	REMARKS
J1	2x6 @ 24" OC	

ROOF HEADER SCHEDULE		
MARK	SIZE	REMARKS
H1	6x8	

PREFABRICATED ROOF TRUSS

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

ROOF TRUSS SCHEDULE		
MARK	DESCRIPTION	REMARKS
RT	ROOF TRUSS (COMMON)	24" OC MAX
SGT	STRUCTURAL GABLE 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	
MGJ	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 FORCE 6 AT A FACTORED LEVEL (D7E) 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

GENERAL PLAN NOTES

GENERAL

1. SEE THE FOLLOWING SHEETS FOR GENERAL NOTES AND 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-403

2. SEE ARCHITECTURAL DRAWINGS FOR FINISHED FLOOR ELEVATIONS. REFERENCE FINISHED FLOOR ELEVATION + 0'-0" CORRESPONDS TO FINISHED FLOOR ELEVATION.
3. SEE ARCHITECTURAL DRAWINGS FOR ALL EXTERIOR CONCRETE PAVING: SLABS, BASES, CURBS, ETC.
4. FOR ANY DIMENSIONAL INFORMATION NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
5. ALL DIMENSIONS SHOWN ARE FACE OF SHEATHING, OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE, ALL COLUMNS ARE CENTERED IN STUD WALLS.
6. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS IN BEARING AND NON-BEARING WALLS.
7. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF INTERIOR NON-BEARING PARTITIONS.
8. ALL POSTS IN 6" WALLS SHALL BE 6x6, UNLESS NOTED OTHERWISE.

FOUNDATION

9. SEE PLANS AND ARCHITECTURAL DRAWINGS FOR DEPRESSIONS AND/OR SLOPES IN CONCRETE SLABS.
 10. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL EMBEDDED ITEMS AND SLAB PENETRATIONS.
 11. FOR TYPICAL SLAB-ON-GRADE REQUIREMENTS, INCLUDING SLAB JOINTS, SEE DETAIL 31/S-301
 12. PLATE WASHERS ARE REQUIRED FOR ALL SILL PLATE ANCHOR BOLTS
 13. ALL HOLDDOWN ANCHOR NUTS SHALL BE TIGHTENED TO FINGER TIGHT PLUS ONE-HALF WRENCH TURN JUST PRIOR TO COVERING
 14. ALL BOLT HOLES, IN WOOD MEMBERS, SHALL BE DRILLED A MAXIMUM OF 1/16" OVERSIZED, INSPECTOR TO VERIFY
 15. THE BUILDING PAD SHALL BE PREPARED AS OUTLINED IN DETAIL 53/S-301. THE BUILDING OFFICIAL SHALL REQUIRE PAD CERTIFICATION BY A GEOTECHNICAL ENGINEER AT THEIR DISCRETION.
 16. BOTTOM OF FOOTING SHALL BE, UNLESS DEEPER FOUNDATIONS ARE REQUIRED BY THE BUILDING OFFICIAL:
 - A. 24" BELOW PAD OR ADJACENT GRADE AT PERIMETER, WHICHEVER IS DEEPER, UNO
 - B. 24" 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 HOLDDOWN EMBED DEPTHS

FRAMING

17. SEE ARCHITECTURAL DRAWINGS FOR ALL TOP OF SHEATHING AND TOP OF WALL ELEVATIONS.
18. ALL LINES OR MEMBERS INDICATED AS 'STRUT' SHALL RECEIVE (2) ROWS OF BOUNDARY NAILING (BN), STAGGERED.
19. 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.
20. PLYWOOD SHEATHED DIAPHRAGM TYPES:

ALL ROOF DIAPHRAGMS SHALL BE TYPE A, UNO
REFER TO 12/S-403
21. 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.
22. 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.

SYMBOL LEGEND

	INDICATES SHEAR WALL TYPE AND LENGTH, PER SCHEDULE ON DETAIL 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, UNLESS NOTED OTHERWISE
	INDICATES BEARING STUD WALL PER PLAN, 2x6 NO 2 STUDS @ 16" OC, UNO
	INDICATES TOP PLATE SPLICE NAILING PER DETAILS 31/S-403, NAILING APPLIES TO ENTIRE LENGTH OF TOP PLATE, PROVIDE TYPE (C) SPLICE, UNLESS NOTED OTHERWISE
	INDICATES STRAP PER 52/S-403 OR 54/S-403, UNO



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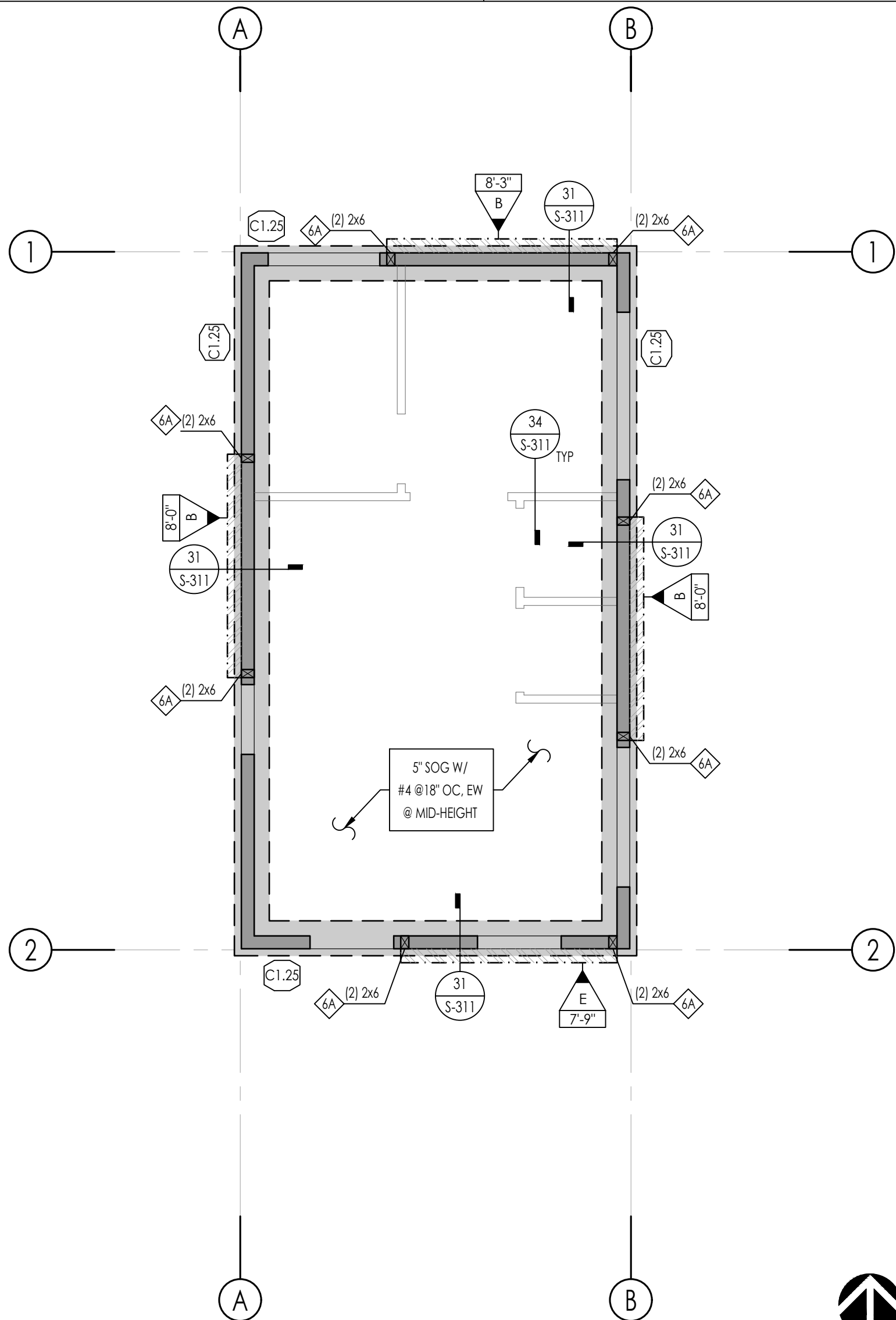
LAGUNA NIGUEL
PRE - APPROVED ADU
CITY OF LAGUNA NIGUEL
ROOF & FOUNDATION FRAMING
PLAN - CALIFORNIA RANCH

DATE
02/05/2025
SHEET

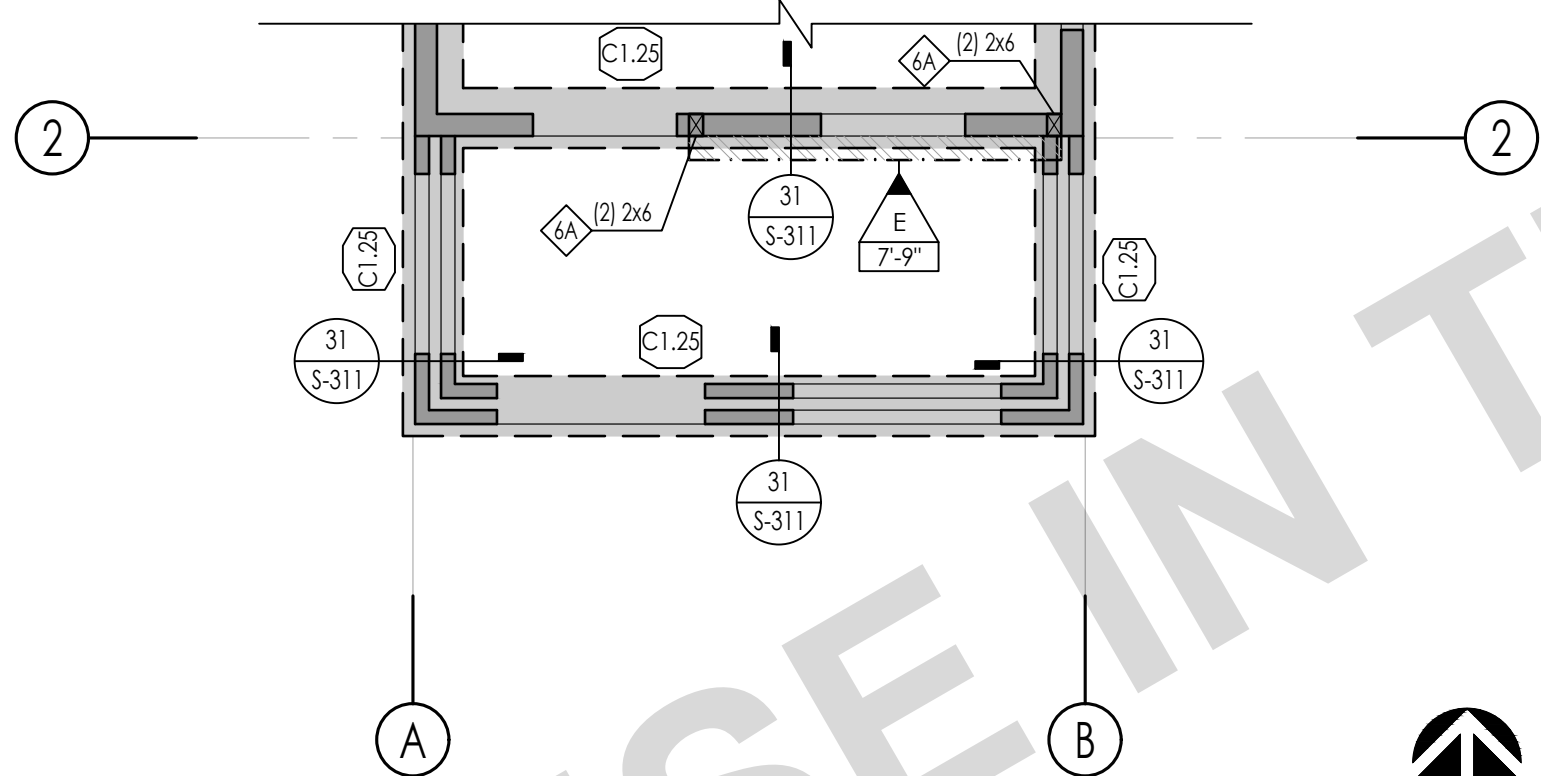
S-201

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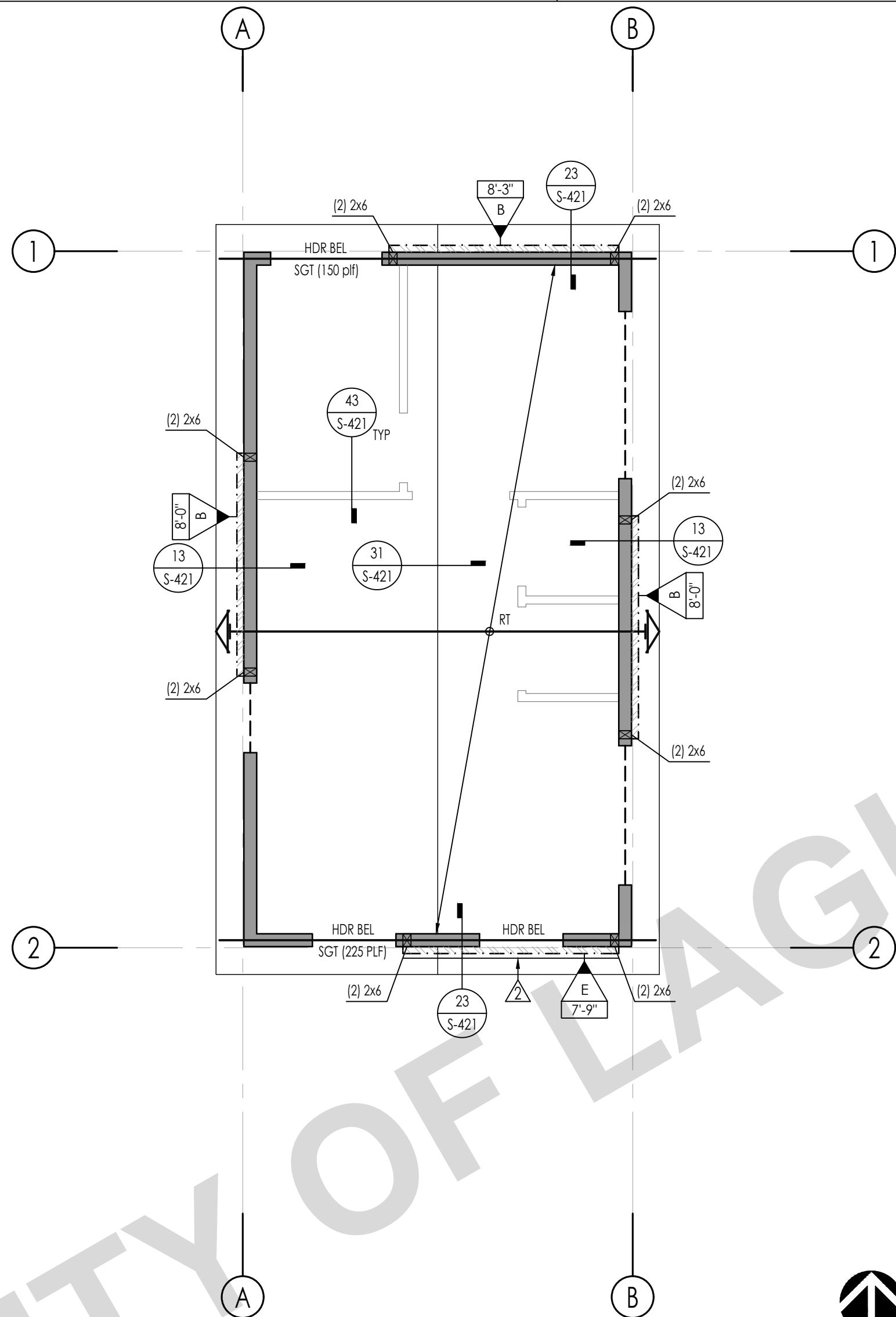
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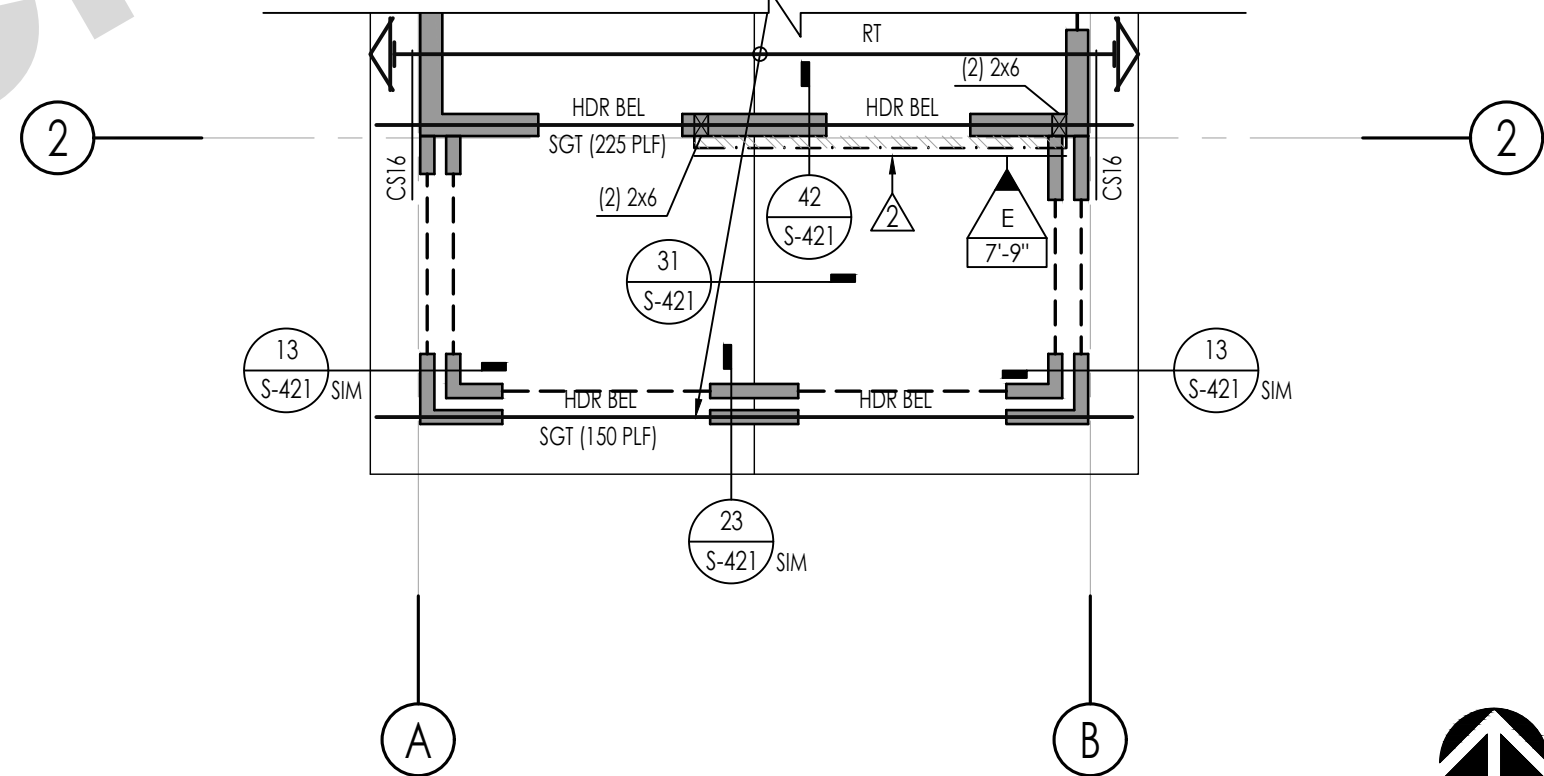
1 FOUNDATION PLAN - MEDITERRANEAN
SCALE: 1/4" = 1'-0"



3 FOUNDATION PLAN - MEDITERRANEAN PORCH OPTION
SCALE: 1/4" = 1'-0"



2 ROOF FRAMING PLAN - MEDITERRANEAN
SCALE: 1/4" = 1'-0"



4 ROOF FRAMING PLAN - MEDITERRANEAN PORCH OPTION
SCALE: 1/4" = 1'-0"

FOUNDATION SCHEDULES

PAD FOOTING SCHEDULE						
TYPE	WIDTH	LENGTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	TOP REINF	BOT REINF
F2	2'-0"	2'-0"	2'-0"	SEE NOTE 16	(3) #5, EW	(3) #5, EW

GRADE BEAM SCHEDULE						
TYPE	WIDTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	LONG REINF	TRANS REINF	DETAIL
GB1	1'-0"	1'-0"	SEE NOTE 16	(2) #4 @ TOP (2) #4 @ BOT	#3 @ 24" OC	24/S-311

NOTE: FOOTING MUST BE DEEPENED LOCALLY PER DETAIL 32/S-301 TO ACCOMMODATE A8 HOLDOWN EMBED DEPTHS

CONTINUOUS FOOTING SCHEDULE					
MARK	WIDTH	MIN EMBED BELOW LOWEST PAD GRADE	LONG REINF	TRANS REINF	DETAIL
C1.23	1'-3"	SEE NOTE 16	(2) #5 188	#3 @ 12" OC, BOT	PER PLAN

SHEARWALL HOLDOWN SCHEDULE		
SPECIFIES HOLDOWN/STRAP DETAIL	INDICATES HOLDOWN/STRAP TYPE	DETAIL
6x	INDICATES SIMPSON HOLDOWN W/ SS18 TO CONCRETE FOUNDATION:	12/S-311

ROOF FRAMING SCHEDULES

ROOF BEAM SCHEDULE		
MARK	SIZE	REMARKS
B1	6x8	
B2	6x10	

ROOF JOIST/RAFTER SCHEDULE		
MARK	SIZE	REMARKS
J1	2x6 @ 24" OC	

ROOF HEADER SCHEDULE		
MARK	SIZE	REMARKS
H1	6x8	

PREFABRICATED ROOF TRUSS

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

ROOF TRUSS SCHEDULE		
MARK	DESCRIPTION	REMARKS
RT	ROOF TRUSS (COMMON)	24" OC MAX
SGT	STRUCTURAL GABLE 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	
MG1	MONO PITCH GIRDER TRUSS	
DT (#*)	DRAW TRUSS	
CGT	CALIFORNIA GIRDER TRUSS	
HR	HIP RAFTER / JACK RAFTER	
CHT	CALIFORNIA HIP TRUSS	24" OC MAX

(#*) - EQUALS DRAG FORCE IN LBS. DRAG FORCE 6 AT A FACTORED LEVEL (D7E) 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

GENERAL PLAN NOTES

GENERAL

1. SEE THE FOLLOWING SHEETS FOR GENERAL NOTES AND 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-403

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3. SEE ARCHITECTURAL DRAWINGS FOR ALL EXTERIOR CONCRETE PAVING: SLABS, BASES, CURBS, ETC.
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5. ALL DIMENSIONS SHOWN ARE FACE OF SHEATHING, OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE, ALL COLUMNS ARE CENTERED IN STUD WALLS.
6. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS IN BEARING AND NON-BEARING WALLS.
7. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF INTERIOR NON-BEARING PARTITIONS.
8. ALL POSTS IN 6" WALLS SHALL BE 6x6, UNLESS NOTED OTHERWISE.

FOUNDATION

9. SEE PLANS AND ARCHITECTURAL DRAWINGS FOR DEPRESSIONS AND/OR SLOPES IN CONCRETE SLABS.
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 13. ALL HOLDOWN ANCHOR NUTS SHALL BE TIGHTENED TO FINGER TIGHT PLUS ONE-HALF WRENCH TURN JUST PRIOR TO COVERING
 14. ALL BOLT HOLES, IN WOOD MEMBERS, SHALL BE DRILLED A MAXIMUM OF 1/16" OVERSIZED. INSPECTOR TO VERIFY
 15. THE BUILDING PAD SHALL BE PREPARED AS OUTLINED IN DETAIL 53/S-301. THE BUILDING OFFICIAL SHALL REQUIRE PAD CERTIFICATION BY A GEOTECHNICAL ENGINEER AT THEIR DISCRETION.
 16. BOTTOM OF FOOTING SHALL BE, UNLESS DEEPER FOUNDATIONS ARE REQUIRED BY THE BUILDING OFFICIAL:
 - A. 24" BELOW PAD OR ADJACENT GRADE AT PERIMETER, WHICHEVER IS DEEPER, UNO
 - B. 24" 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 HOLDOWN EMBED DEPTHS

FRAMING

17. SEE ARCHITECTURAL DRAWINGS FOR ALL TOP OF SHEATHING AND TOP OF WALL ELEVATIONS.
18. ALL LINES OR MEMBERS INDICATED AS 'STRUT' SHALL RECEIVE (2) ROWS OF BOUNDARY NAILING (BN), STAGGERED.
19. 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.
20. PLYWOOD SHEATHED DIAPHRAGM TYPES:

ALL ROOF DIAPHRAGMS SHALL BE TYPE A, UNO
REFER TO 12/S-403
21. 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.
22. 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.

SYMBOL LEGEND

	INDICATES SHEAR WALL TYPE AND LENGTH, PER SCHEDULE ON DETAIL 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, UNLESS NOTED OTHERWISE
	INDICATES BEARING STUD WALL PER PLAN, 2x6 NO 2 STUDS @ 16" OC, UNO
	INDICATES TOP PLATE SPLICE NAILING PER DETAILS 31/S-403. NAILING APPLIES TO ENTIRE LENGTH OF TOP PLATE, PROVIDE TYPE (C) SPLICE, UNLESS NOTED OTHERWISE
	INDICATES STRAP PER 52/S-403 OR 54/S-403, UNO



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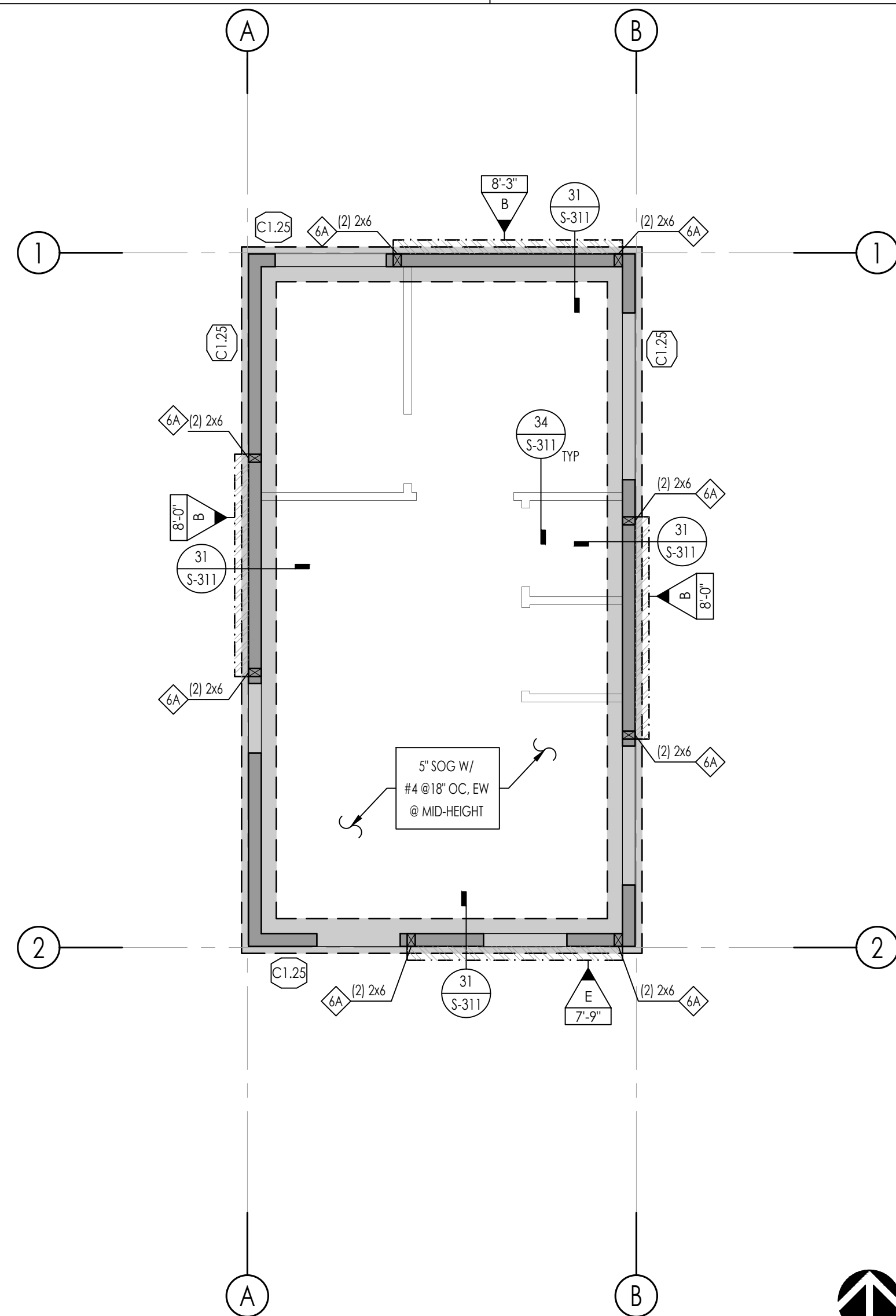
LAGUNA NIGUEL
PRE - APPROVED ADU
CITY OF LAGUNA NIGUEL

ROOF & FOUNDATION FRAMING
PLAN - MEDITERRANEAN

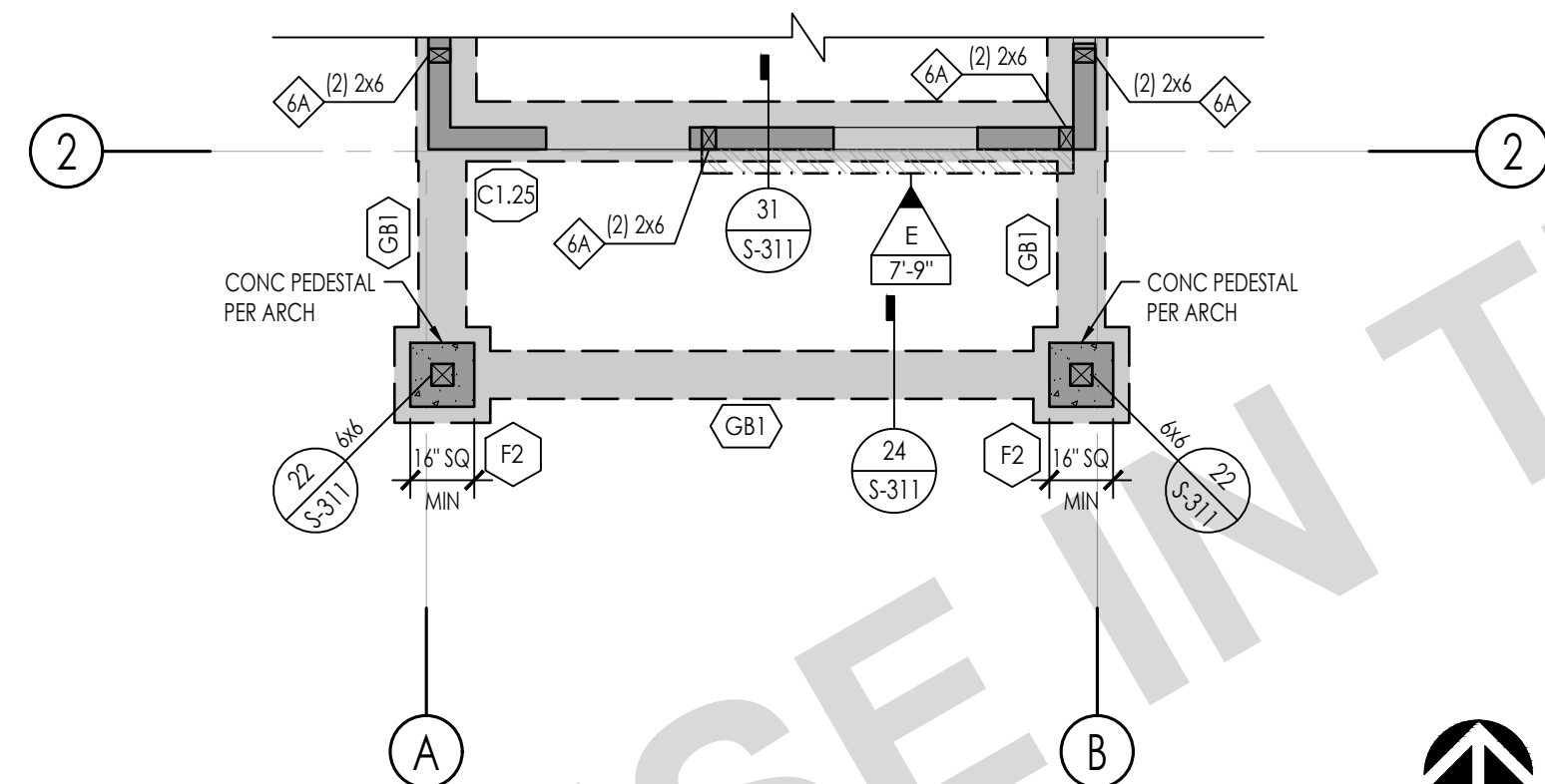
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SHEET

S-202

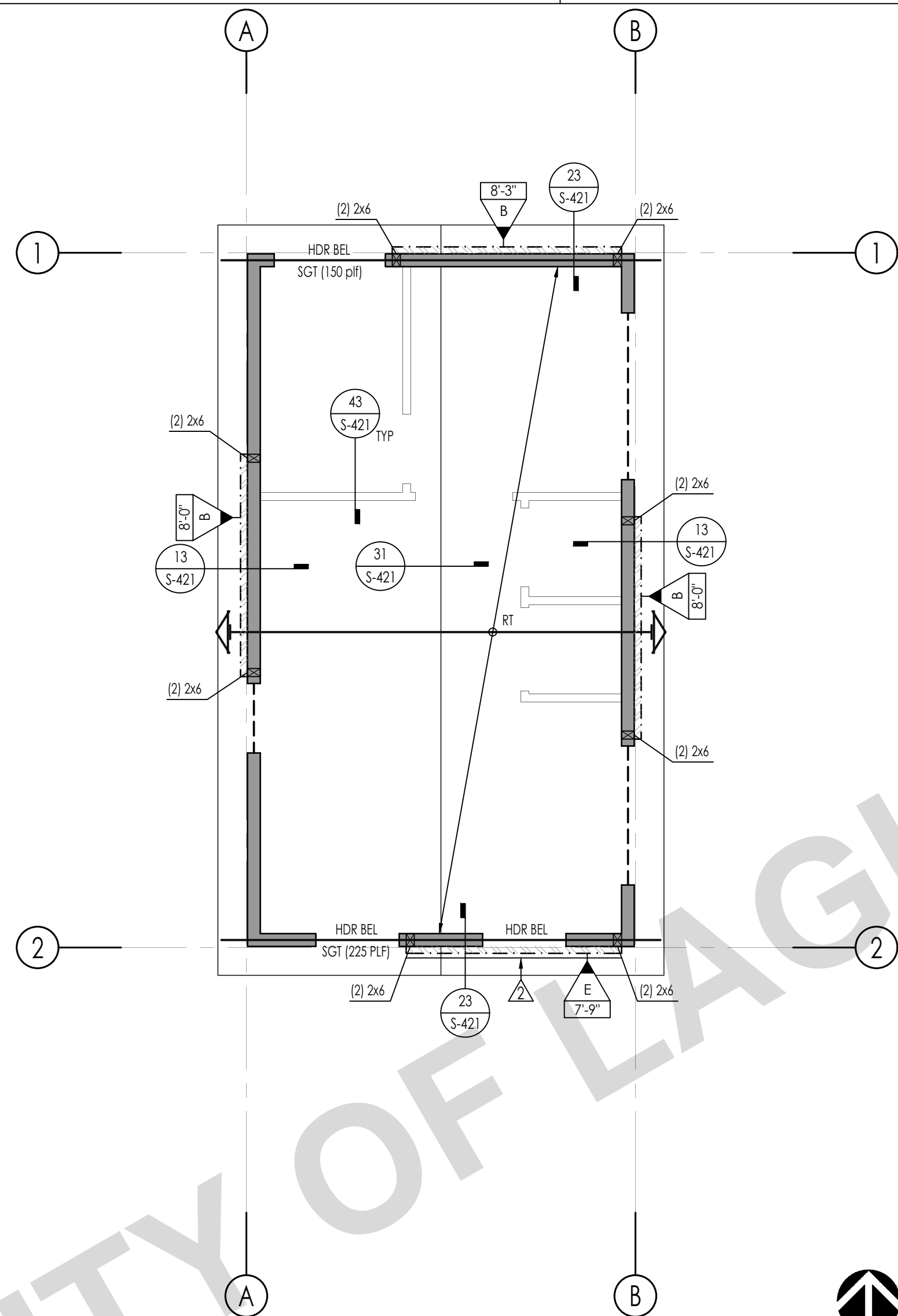
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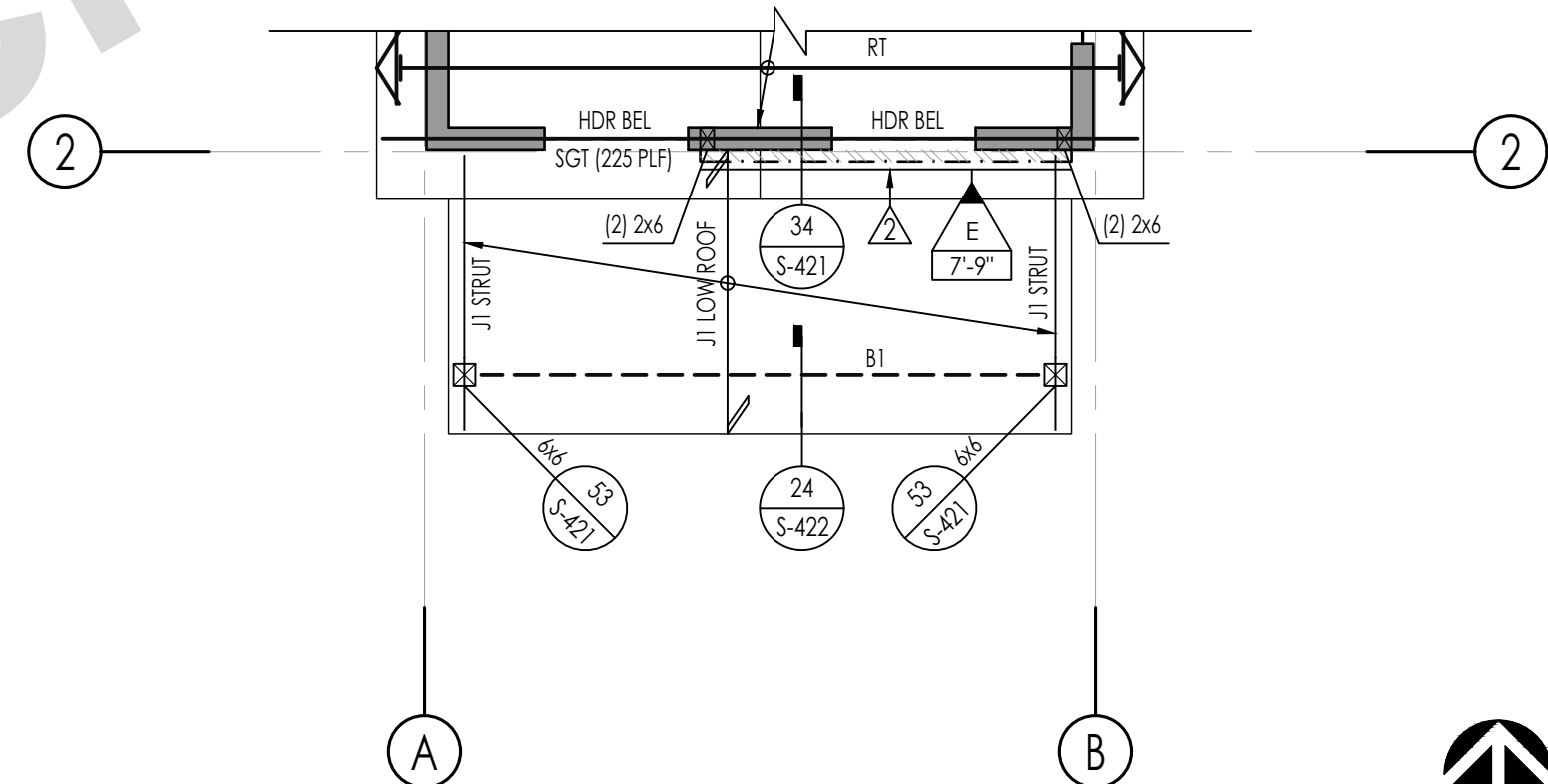
1 FOUNDATION PLAN - MODERN FARM
SCALE: 1/4" = 1'-0"



3 FOUNDATION PLAN - MODERN FARM PORCH OPTION
SCALE: 1/4" = 1'-0"



2 ROOF FRAMING PLAN - MODERN FARM
SCALE: 1/4" = 1'-0"



4 ROOF FRAMING PLAN - MODERN FARM PORCH OPTION
SCALE: 1/4" = 1'-0"



FOUNDATION SCHEDULES

PAD FOOTING SCHEDULE							
TYPE	WIDTH	LENGTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	TOP REINF	BOT REINF	DETAIL UNO
F2	2'-0"	2'-0"	2'-0"	SEE NOTE 16	(3) #5 EW	(3) #5 EW	PER PLAN

GRADE BEAM SCHEDULE							
TYPE	WIDTH	THICKNESS	MIN EMBED BELOW LOWEST PAD GRADE	LONG REINF	TRANS REINF	DETAIL	
GB1	1'-0"	1'-0"	SEE NOTE 16	(2) #4 @ TOP (2) #4 @ BOT	#3 @ 24" OC	24/S-311	

NOTE: FOOTING MUST BE DEEPENED LOCALLY PER DETAIL 32/S-301 TO ACCOMMODATE A8 HOLDOWN EMBED DEPTHS

CONTINUOUS FOOTING SCHEDULE					
MARK	WIDTH	MIN EMBED BELOW LOWEST PAD GRADE	LONG REINF	TRANS REINF	DETAIL
C1.23	1'-3"	SEE NOTE 16	(2) #5 T&B	#3 @ 12" OC, BOT	PER PLAN

SHEARWALL HOLDOWN SCHEDULE		
SPECIFIES HOLDOWN/ STRAP DETAIL	 INDICATES HOLDOWN/ STRAP TYPE	DETAIL
	INDICATES SIMPSON HOLDOWN W/ SSTB TO: CONCRETE FOUNDATION:	12/S-311

ROOF FRAMING SCHEDULES		
ROOF BEAM SCHEDULE		
MARK	SIZE	REMARKS
B1	6x8	
B2	6x10	
ROOF JOIST/RAFTER SCHEDULE		
MARK	SIZE	REMARKS
J1	2x6 @ 24" OC	
ROOF HEADER SCHEDULE		
MARK	SIZE	REMARKS
H1	6x8	

PREFABRICATED ROOF TRUSS		
1. FOR PREFABRICATED ROOF TRUSS NOTES SEE NOTES ON SHEET S-103		
ROOF TRUSS SCHEDULE		
MARK	DESCRIPTION	REMARKS
RT	ROOF TRUSS (COMMON)	24" OC MAX
SGT	STRUCTURAL GABLE 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 FORCE IS 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

GENERAL PLAN NOTES

GENERAL

1. SEE THE FOLLOWING SHEETS FOR GENERAL NOTES AND 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-403

2. SEE ARCHITECTURAL DRAWINGS FOR FINISHED FLOOR ELEVATIONS. REFERENCE FINISHED FLOOR ELEVATION = 0'-0" CORRESPONDS TO FINISHED FLOOR ELEVATION.
3. SEE ARCHITECTURAL DRAWINGS FOR ALL EXTERIOR CONCRETE PAVING, SLABS, BASES, CURBS, ETC.
4. FOR ANY DIMENSIONAL INFORMATION NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
5. ALL DIMENSIONS SHOWN ARE FACE OF SHEATHING, OR CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE. ALL COLUMNS ARE CENTERED IN STUD WALLS.
6. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS IN BEARING AND NON-BEARING WALLS.
7. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF INTERIOR NON-BEARING PARTITIONS.
8. ALL POSTS IN 6" WALLS SHALL BE 6x6, UNLESS NOTED OTHERWISE.


FOUNDATION

9. SEE PLANS AND ARCHITECTURAL DRAWINGS FOR DEPRESSIONS AND/OR SLOPES IN CONCRETE SLABS.
 10. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL EMBEDDED ITEMS AND SLAB PENETRATIONS.
 11. FOR TYPICAL SLAB-ON-GRADE REQUIREMENTS, INCLUDING SLAB JOINTS, SEE DETAIL 31/S-301.
 12. PLATE WASHERS ARE REQUIRED FOR ALL SILL PLATE ANCHOR BOLTS
 13. ALL HOLDDOWN ANCHOR NUTS SHALL BE TIGHTENED TO FINGER TIGHT PLUS ONE-HALF" WRENCH TURN JUST PRIOR TO COVERING
 14. ALL BOLT HOLES, IN WOOD MEMBERS, SHALL BE DRILLED A MAXIMUM OF 1/16" OVERSIZED. INSPECTOR TO VERIFY
 15. THE BUILDING PAD SHALL BE PREPARED AS OUTLINED IN DETAIL 53/S-301. THE BUILDING OFFICIAL SHALL REQUIRE PAD CERTIFICATION BY A GEO TECHNICAL ENGINEER AT THEIR DISCRETION.
 16. BOTTOM OF FOOTING SHALL BE, UNLESS DEEPER FOUNDATIONS ARE REQUIRED BY THE BUILDING OFFICIAL:
 - A. 24" BELOW PAD OR ADJACENT GRADE AT PERIMETER, WHICHEVER IS DEEPER, UNO
 - B. 24" BELOW PAD OR ADJACENT GRADE AT INTERIOR GRADE BEAMS, WHICHEVER IS DEEPER, UNO
- NOTE: FOOTING MUST BE DEEPEH LOCALLY PER DETAIL 32/S-301 TO ACCOMMODATE ANCHOR BOLT HOLDOWN EMBED DEPTHS


FRAMING

17. SEE ARCHITECTURAL DRAWINGS FOR ALL TOP OF SHEATHING AND TOP OF WALL ELEVATIONS.
18. ALL LINES OR MEMBERS INDICATED AS "STIRUP" SHALL RECEIVE (2) ROWS OF BOUNDARY NAILING (BN), STAGGERED.
19. 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 43/5-401, UNO.
20. PLYWOOD SHEATHED DIAPHRAGM TYPES:
ALL ROOF DIAPHRAGMS SHALL BE TYPE A, UNO
REFER TO 12/5-403
21. 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.
22. 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.


SYMBOL LEGEND




INDICATES SHEAR WALL TYPE AND LENGTH.
PER SCHEDULE ON DETAIL 13/5-402



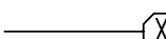
INDICATES BLOCKING & STRAPPING ABOVE & BELOW
WINDOW OPENINGS PER DETAIL 44/5-402




INDICATES HEADER @ OPENING. REFER TO 32/5-401
FOR HEADER SIZE, UNLESS NOTED OTHERWISE



INDICATES BEARING STUD WALL PER PLAN. 2x6 NO 2
STUDS @ 16" O.C. UNO



INDICATES TOP PLATE SPLICING PER DETAILS 51/5-403
NAILING APPLIES TO ENTIRE LENGTH OF TOP PLATE. PROVIDE
TYPE (C) SPLICE, UNLESS NOTED OTHERWISE



INDICATES STRAP PER 52/5-403 OR 54/5-403, UNO



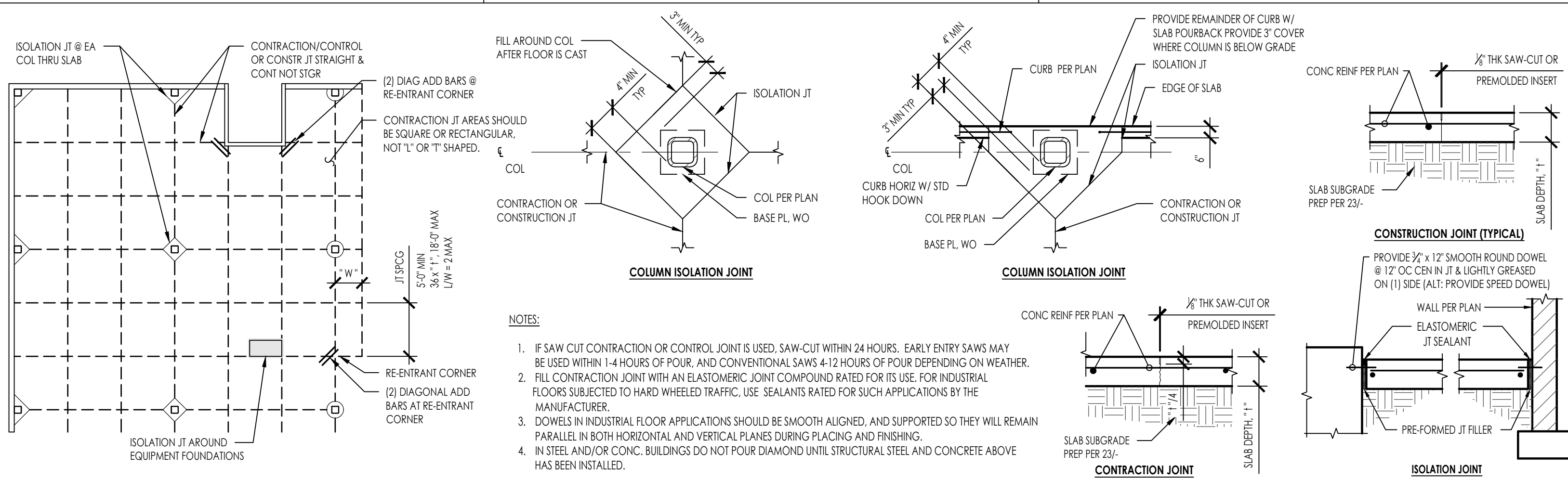
THESE PLANS ARE PROVIDED BY THE CITY OF LAGUNA NIGUEL AS PART OF THE PRE-APPROVED ADU PROGRAM AND ARE PUBLIC DOMAIN. THERE CANNOT BE A CHARGE TO PROVIDE THESE PLANS, NO ALTERATIONS TO THESE PLANS ARE ALLOWED. ALL ALTERATIONS MUST BE DONE UNDER A SEPARATE PERMIT ONCE THE BUILDING PERMIT FOR THE ADU HAS BEEN ISSUED AND FINAL INSPECTION COMPLETED. IF YOU DO NOT HAVE THE CONSTRUCTION KNOWLEDGE AND EXPERIENCE TO CONTRACT THESE PLANS WITHOUT FURTHER DETAILS, IT IS RECOMMENDED YOU HIRE A CONTRACTOR TO DO THE CONSTRUCTION. THE CITY WILL NOT PROVIDE FURTHER INFORMATION OR DETAILS AND BUILDING INSPECTORS WILL NOT PROVIDE STEP BY STEP INSTRUCTIONS IN THE FIELD.

LAGUNA NIGUEL
PRE - APPROVED ADU
CITY OF LAGUNA NIGUEL

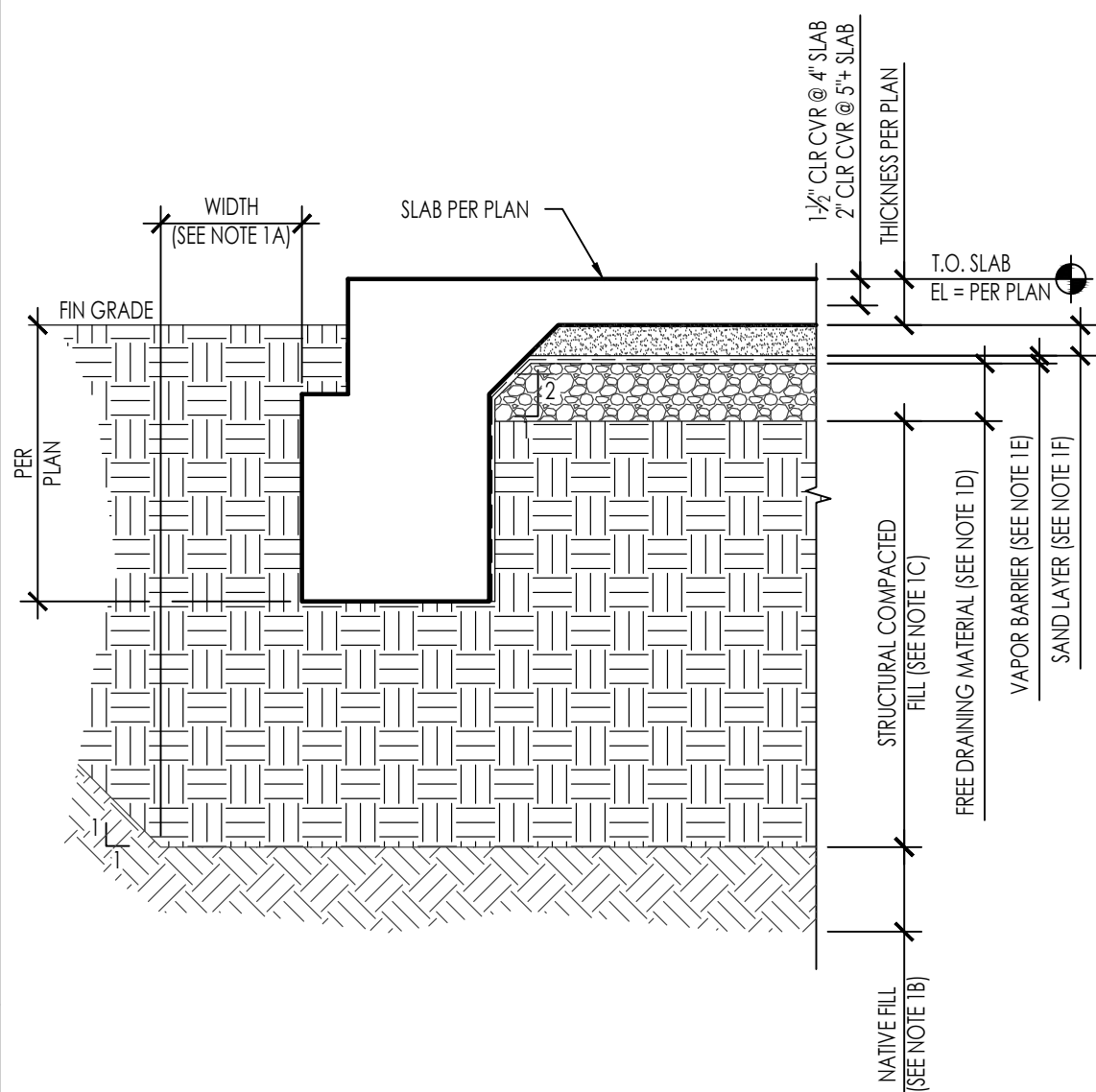
ROOF & FOUNDATION FRAMING
PLAN - MODERN FARM

02/05/2025
SHEET

S-203



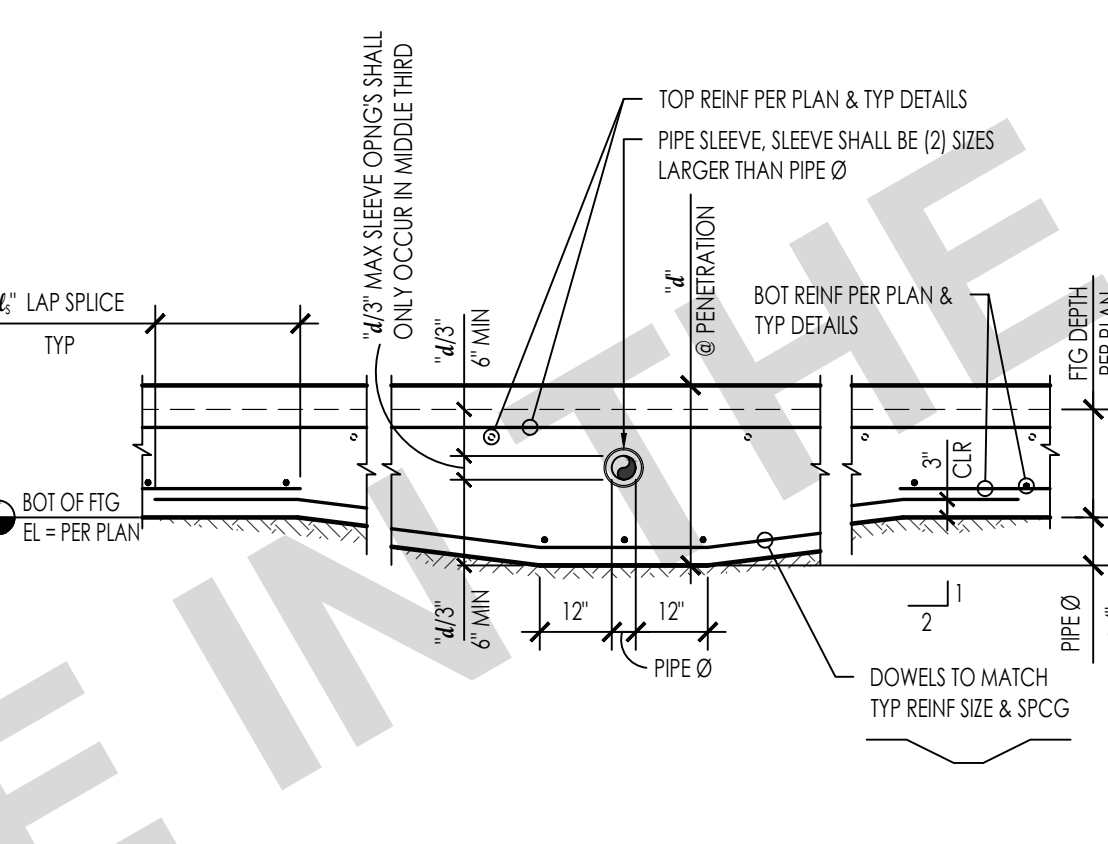
SLAB ON GRADE JOINTS



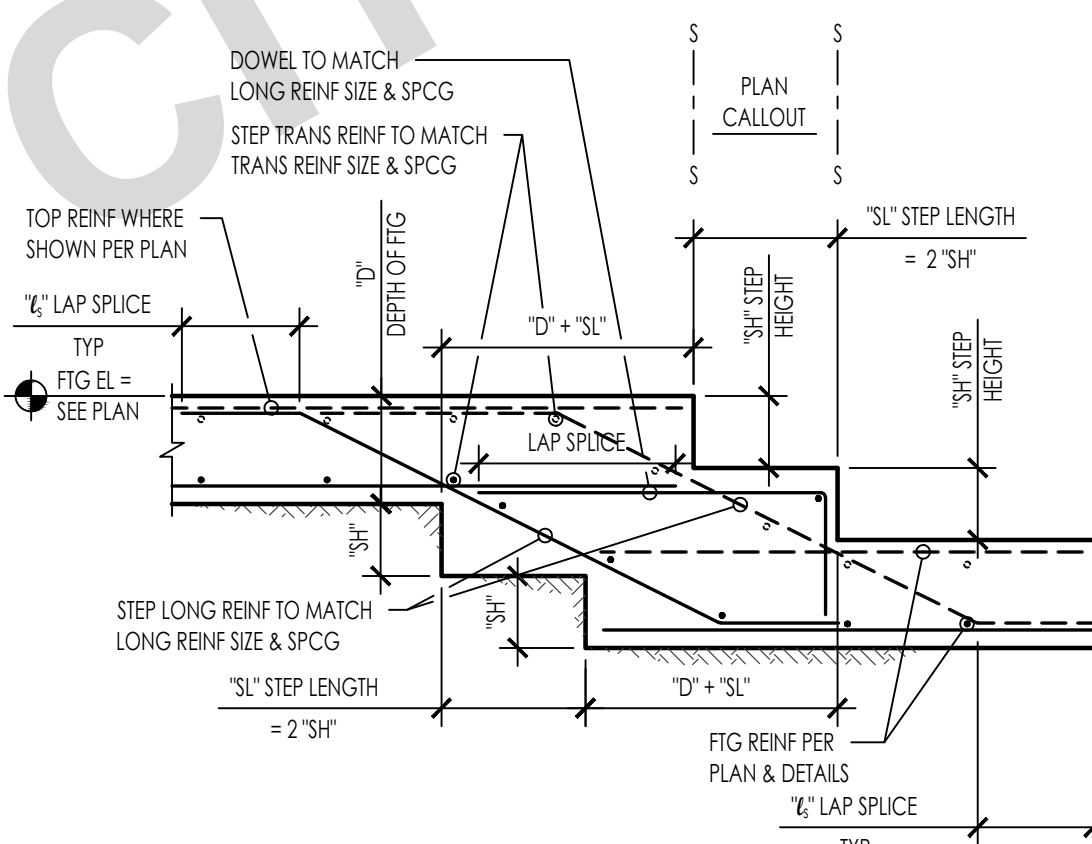
NOTES:

- PREPARATION OF THE SLAB UPGRADE SHALL BE BASED ON THE GEOTECHNICAL INVESTIGATION REPORT AS REFERENCED IN THE FOUNDATION GENERAL NOTES. THE FOLLOWING INFORMATION IS FOR REFERENCE ONLY.
- A. OVER-EXCAVATION SHALL EXTEND 5 FEET BEYOND PERIMETER FOOTING, TO PROPERTY LINES OR EXISTING IMPROVEMENTS, WHICHEVER IS LEAST.
- B. NATIVE MATERIALS
 - a. SHALL BE OVER-EXCAVED 36" BELOW [E] GRADE OR 18" BELOW BOTTOM OF FOOTINGS, WHICHEVER IS GREATEST.
 - b. THE EXPOSED SURFACE SHALL BE SCARIFIED TO A DEPTH OF 6". MOISTURE CONDITIONED TO 3 PERCENT OVER OPTIMUM MOISTURE CONTENT AND COMPACTED TO A MINIMUM RELATIVE DENSITY OF 90 PERCENT (ASTM D1557)
- C. ENGINEERED COMPACTED FILL
 - a. STRUCTURAL FILL SHALL BE PLACED IN HORIZONTAL LAYERS, EACH APPROXIMATELY 8" THICK BEFORE COMPACTION, AND SHOULD BE CONDITIONED WITH WATER TO PRODUCE A SOIL WATER CONTENT NEAR OPTIMUM MOISTURE AND COMPACTED TO A MINIMUM RELATIVE DENSITY OF 90 PERCENT (ASTM D1557)
- D. 2" THICK SAND LAYER AND 4" THICK, CLEAN FREE-DRAINING MATERIAL, SUCH AS 3/4" COARSE AGGREGATE TO BE APPLIED BY THE BUILDING OFFICE.
- E. REFER TO ARCH DRAWINGS FOR VAPOR BARRIER. INSTALL PER MANUFACTURER'S RECOMMENDATIONS FOR SEALING OF PENETRATIONS, JOINTS AND EDGES.
- f. VAPOR BARRIER IS NOT TO BE PUNCTURED DURING CONSTRUCTION OF SLAB ON GRADE.
- F. SAND LAYER, SHALL BE LIGHTLY MOISTENED PRIOR TO PLACING CONCRETE.

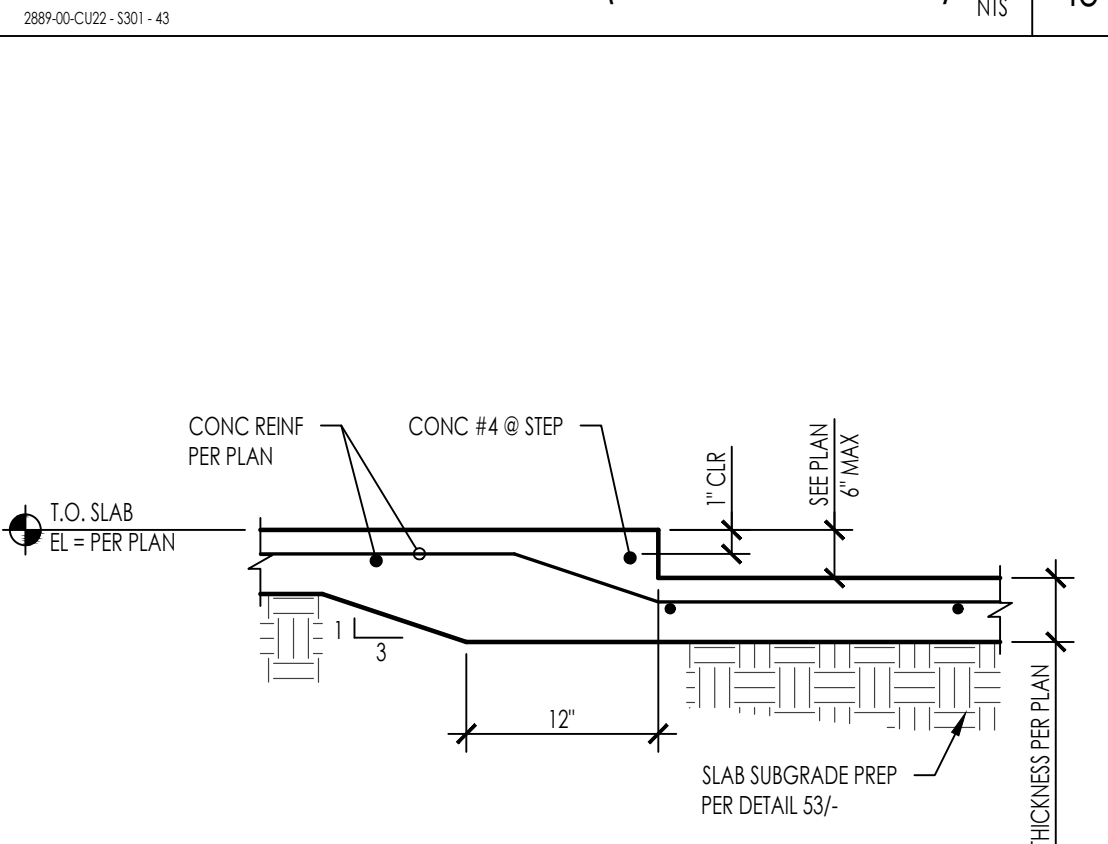
SLAB ON GRADE EDGE AND SUBGRADE PREP



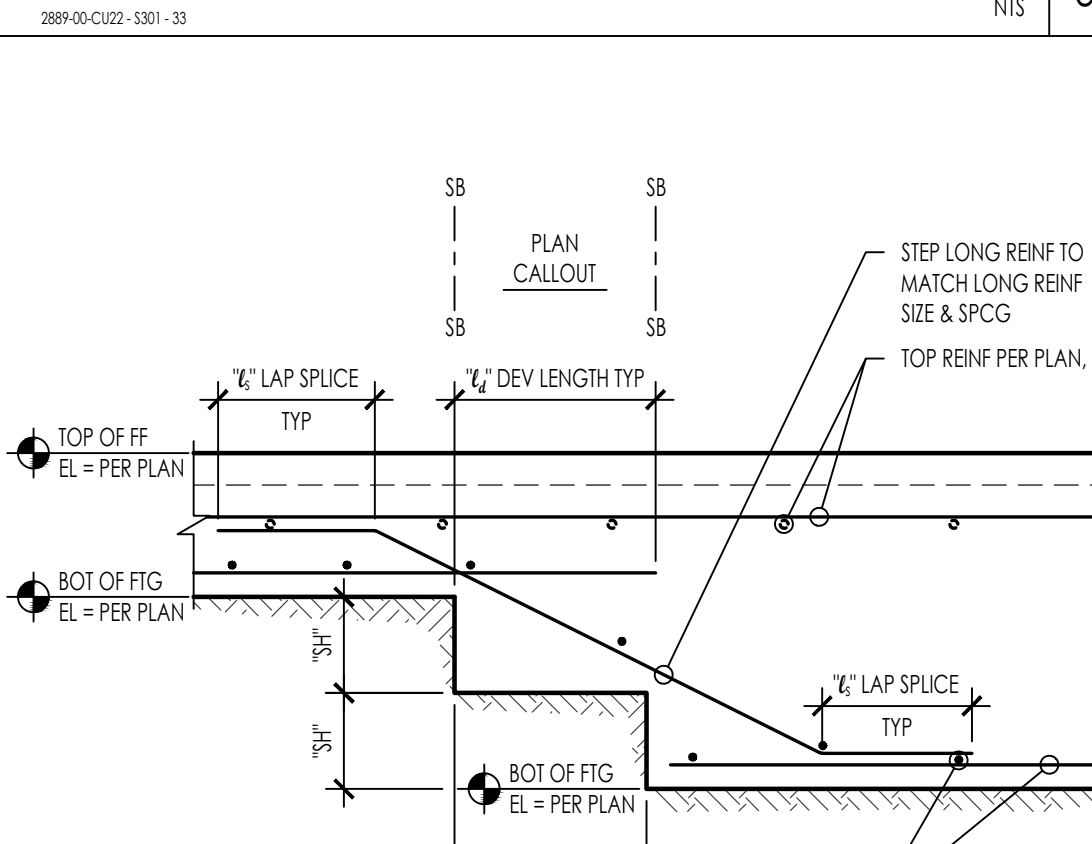
SLEEVE THROUGH FOUNDATION (SLAB TURN-DOWN)



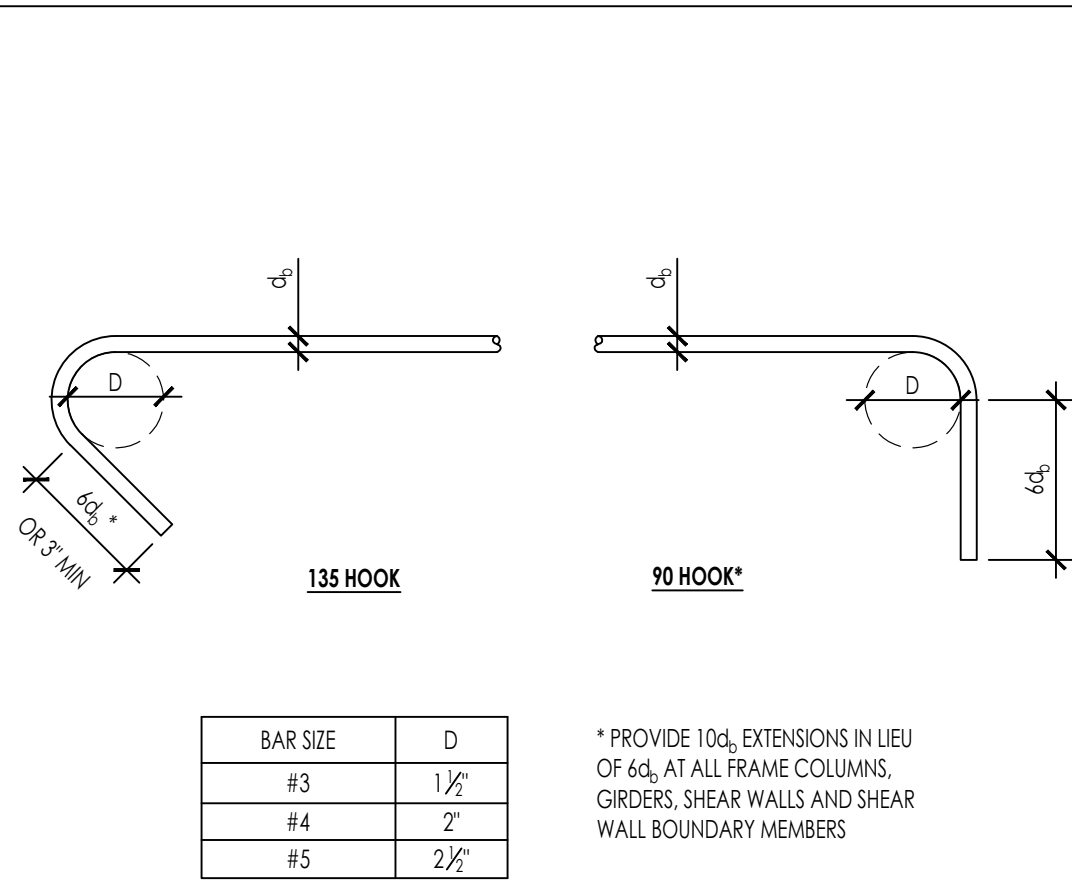
STEP FOOTING



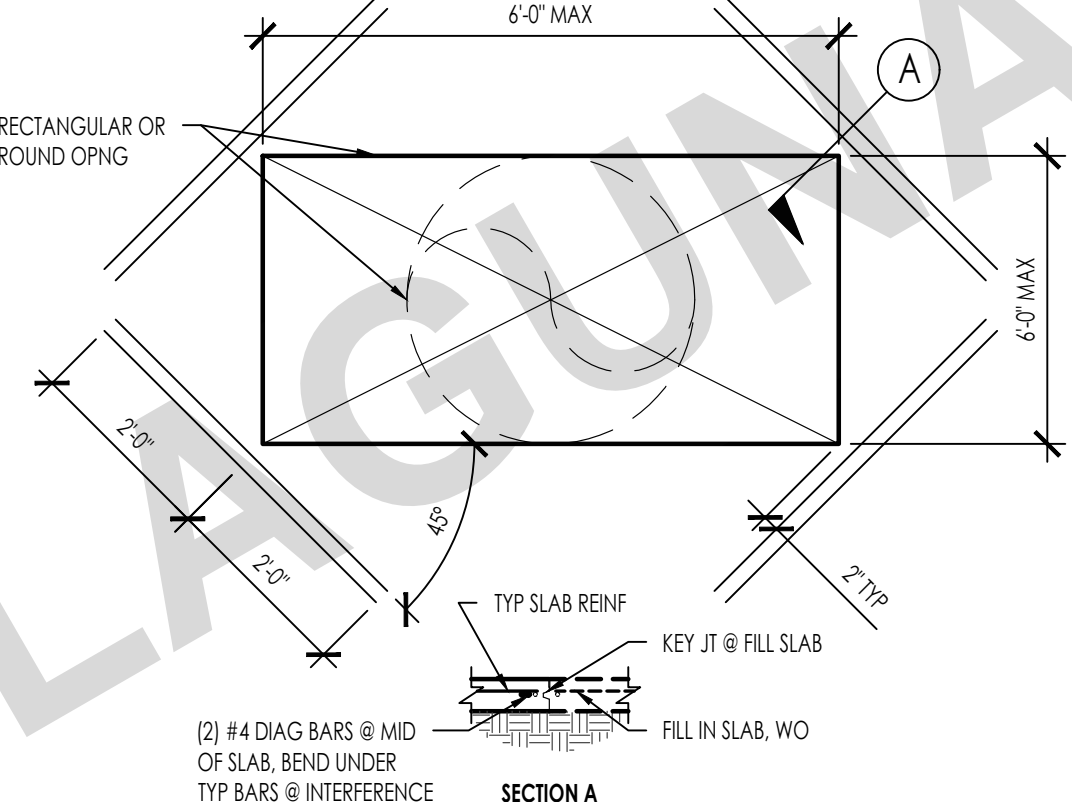
SLAB ON GRADE DEPRESSION



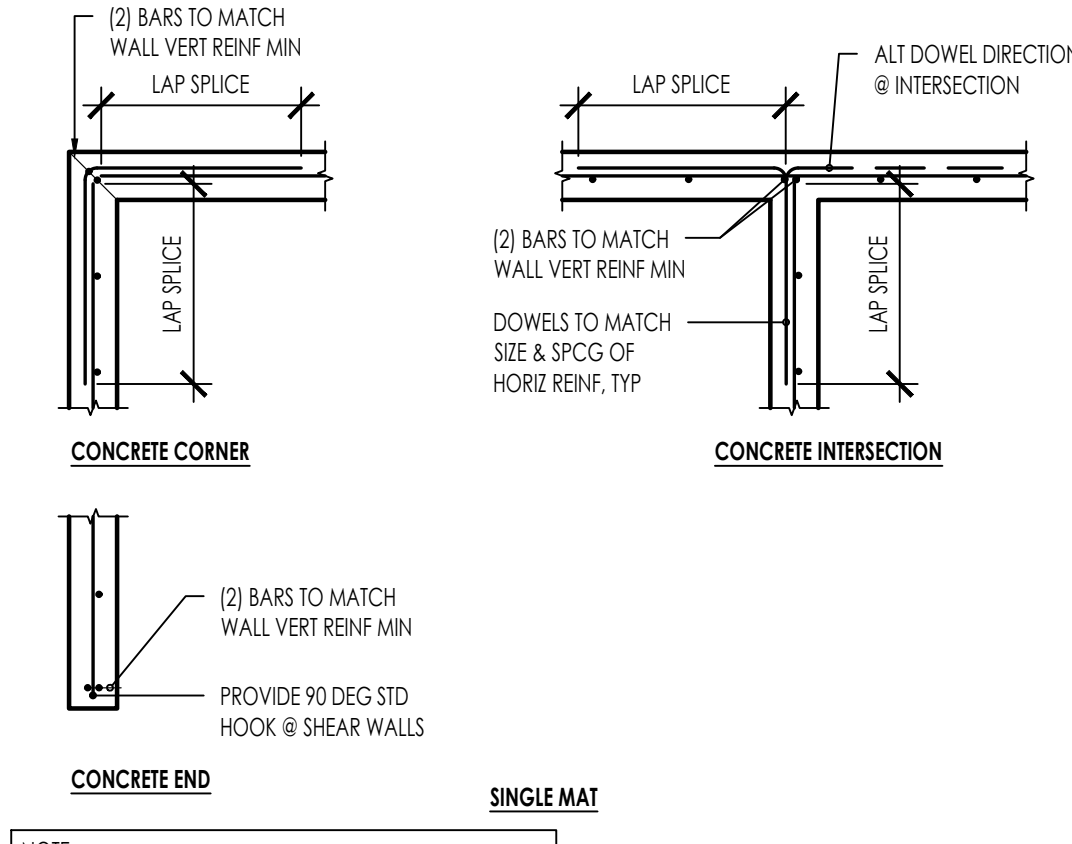
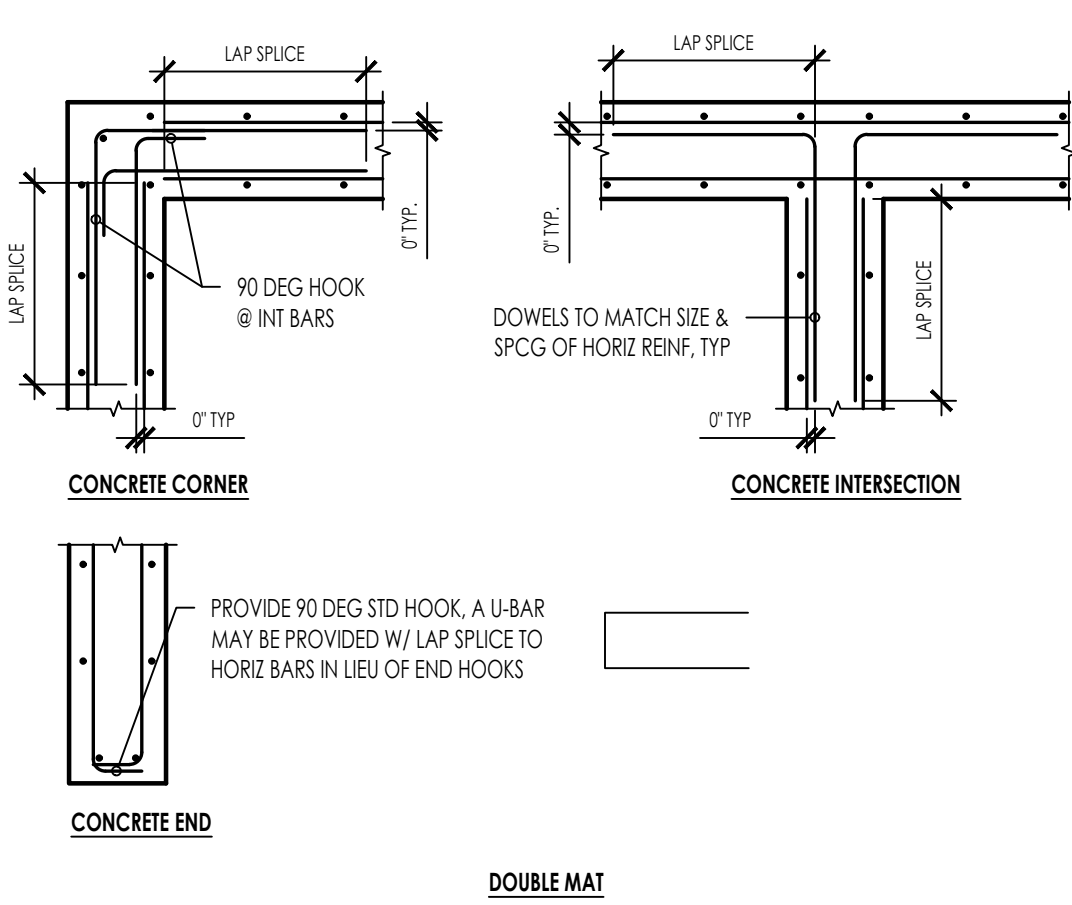
STEPPED FOOTING (BOTTOM ONLY)



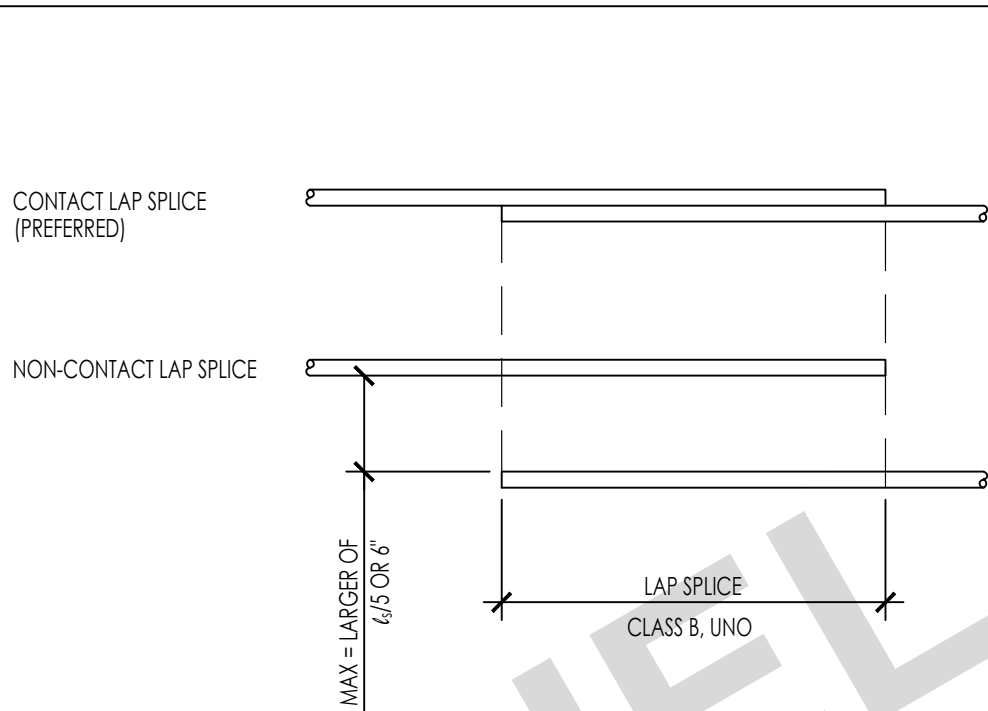
REINF TIES AND STIRRUPS



SOG OPENING



CONC REINF @ INTERSECTION



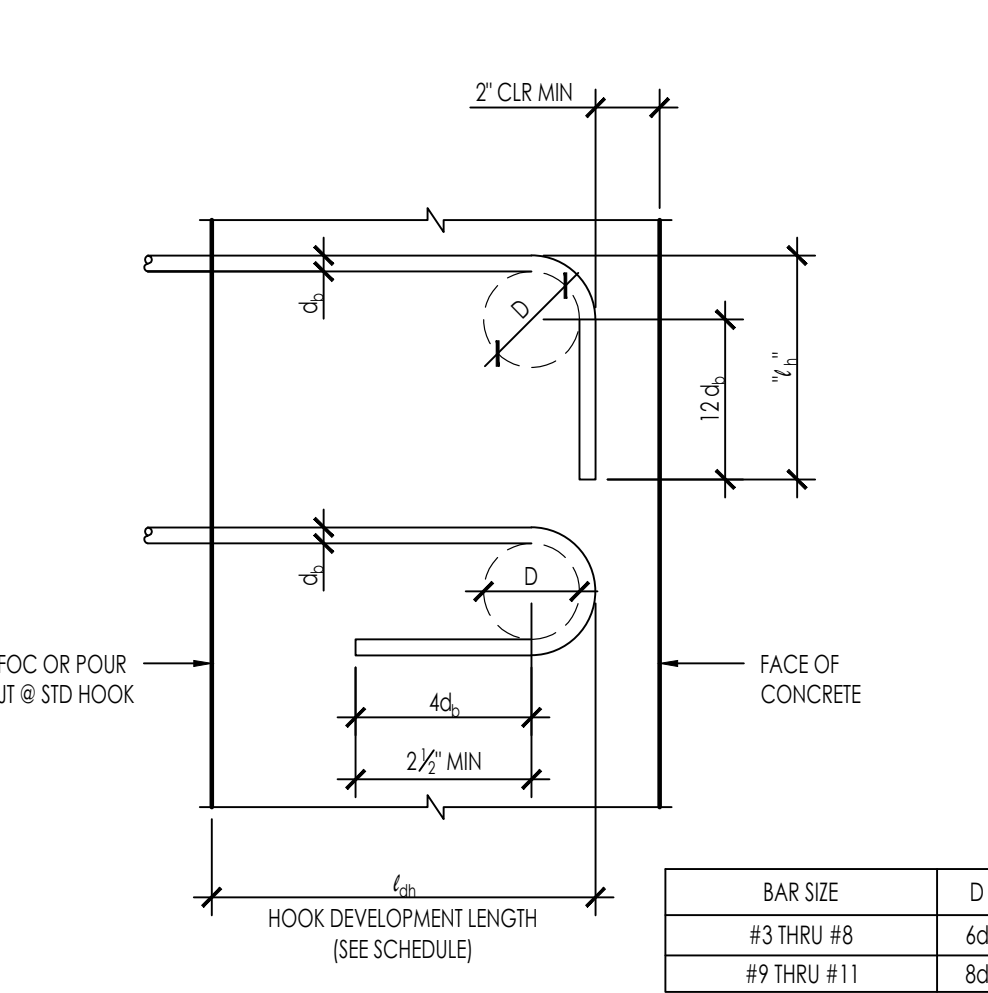
REINFORCING TENSION DEVELOPMENT LENGTH AND LAP SPLICE SCHEDULE

BAR SIZE	DEVELOPMENT LENGTH, l_d (CLASS A LAP SPICE)			LAP SPICE, s (CLASS B LAP SPICE)		
	f_c (psi)			f_c (psi)		
	2,500	3,000	4,000	2,500	3,000	4,000
#3	1'-4"	1'-5"	1'-3"	2'-0"	1'-10"	1'-7"
#4	2'-0"	1'-10"	1'-7"	2'-8"	2'-5"	2'-11"
#5	2'-4"	2'-4"	2'-0"	3'-3"	3'-0"	2'-7"
#6	3'-0"	2'-9"	2'-5"	3'-11"	3'-7"	3'-2"
#7	4'-5"	4'-0"	3'-6"	5'-9"	5'-2"	4'-6"
#8	5'-0"	4'-7"	4'-0"	6'-6"	5'-11"	5'-2"
#9	5'-8"	5'-2"	4'-6"	7'-4"	6'-9"	5'-10"
#10	6'-5"	5'-10"	5'-1"	8'-3"	7'-7"	6'-7"
#11	7'-1"	6'-6"	5'-7"	9'-2"	8'-5"	7'-3"

NOTES:

1. VALUES ABOVE ARE FOR REINFORCEMENT WITH THE FOLLOWING PARAMETERS:
 - A. GRADE 60 REINFORCEMENT
 - B. NORMAL WEIGHT CONCRETE
 - a. FOR LIGHTWEIGHT CONCRETE MULTIPLY THE VALUES ABOVE BY 1.3
 - C. NON-EPOXY COATED REINFORCEMENT
 - D. HORIZONTAL BARS WITHOUT 12" OF CONCRETE BELOW (BOTTOM BARS), AND VERTICAL BARS
 - a. FOR TOP BARS WITH 12" OR MORE OF CONCRETE BELOW THE BAR MULTIPLY THE VALUES ABOVE BY 1.3
 - E. CLEAR SPACING NOT LESS THAN d_b , CLEAR COVER NOT LESS THAN d_b AND STIRRUPS $16d_b$ NOT LESS THAN MIN
 - OR
 1. CLEAR SPACING NOT LESS THAN $2d_b$ AND CLEAR COVER NOT LESS THAN db
 - a. FOR OTHER SPACING AND COVER CONDITIONS MULTIPLY THE VALUES ABOVE BY 1.5
 - F. REINFORCEMENT NOT IN SHEAR WALLS
 - a. FOR REINFORCEMENT IN SHEAR WALLS MULTIPLY THE VALUES ABOVE BY 1.25
2. THE MULTIPLIERS LISTED IN NOTE 1 ABOVE ARE CUMULATIVE INCREASES IN DEVELOPMENT/ LAP SPICE LENGTH.
3. ALL LAP SPICES REFERENCED IN THE PLANS SHALL BE CLASS B UNLESS NOTED OTHERWISE.
4. WHEN REINFORCING BARS OF TWO SIZES ARE LAP SPICED IN TENSION, USE THE LARGER OF THE TENSION CLASS B.
5. LAP SPACING (s) OF THE SMALLER BAR, AND THE CLASS A, TENSION DEVELOPMENT LENGTH (l_d) OF THE LARGER BAR.

REINF DEVELOPMENT LENGTH AND SPLICES



STANDARD HOOK DEVELOPMENT LENGTH l_{dh}^*					
BAR SIZE	D	l_{dh}	NORMAL WEIGHT		
			2,500	3,000	4,000
#3	2 1/4"	6"	0'-9"	0'-9"	0'-8"
#4	3"	8"	1'-0"	1'-0 11"	0'-10"
#5	3 3/4"	10"	1'-3"	1'-2"	1'-0"
#6	4 1/2"	12"	1'-6"	1'-5"	1'-3"
#7	5 1/2"	1'-2"	1'-9"	1'-8"	1'-5"
#8	6"	1'-4"	2'-0"	1'-10"	1'-7"
#9	9 1/2"	1'-7 1/2"	2'-3"	2'-11"	1'-10"
#10	10 3/4"	1'-10"	2'-7"	2'-4"	2'-1"
#11	12"	2'-0 1/2"	2'-10"	2'-7"	2'-3"

NOTES:

1. ALL HOOKED BARS SHALL EXTEND AS FAR AS POSSIBLE WITH A MINIMUM 2" END COVER AND WITH EMBEDMENT NOT LESS THAN SHOWN ON THE SCHEDULE UNLESS NOTED OTHERWISE ON PLANS.
2. MINIMUM SIDE COVER = $2\frac{1}{2}$ ".
3. FOR LIGHTWEIGHT CONCRETE MULTIPLY LENGTHS IN SCHEDULE BY 1.3.

REINF HOOK DEVELOPMENT LENGTH AND BENDS



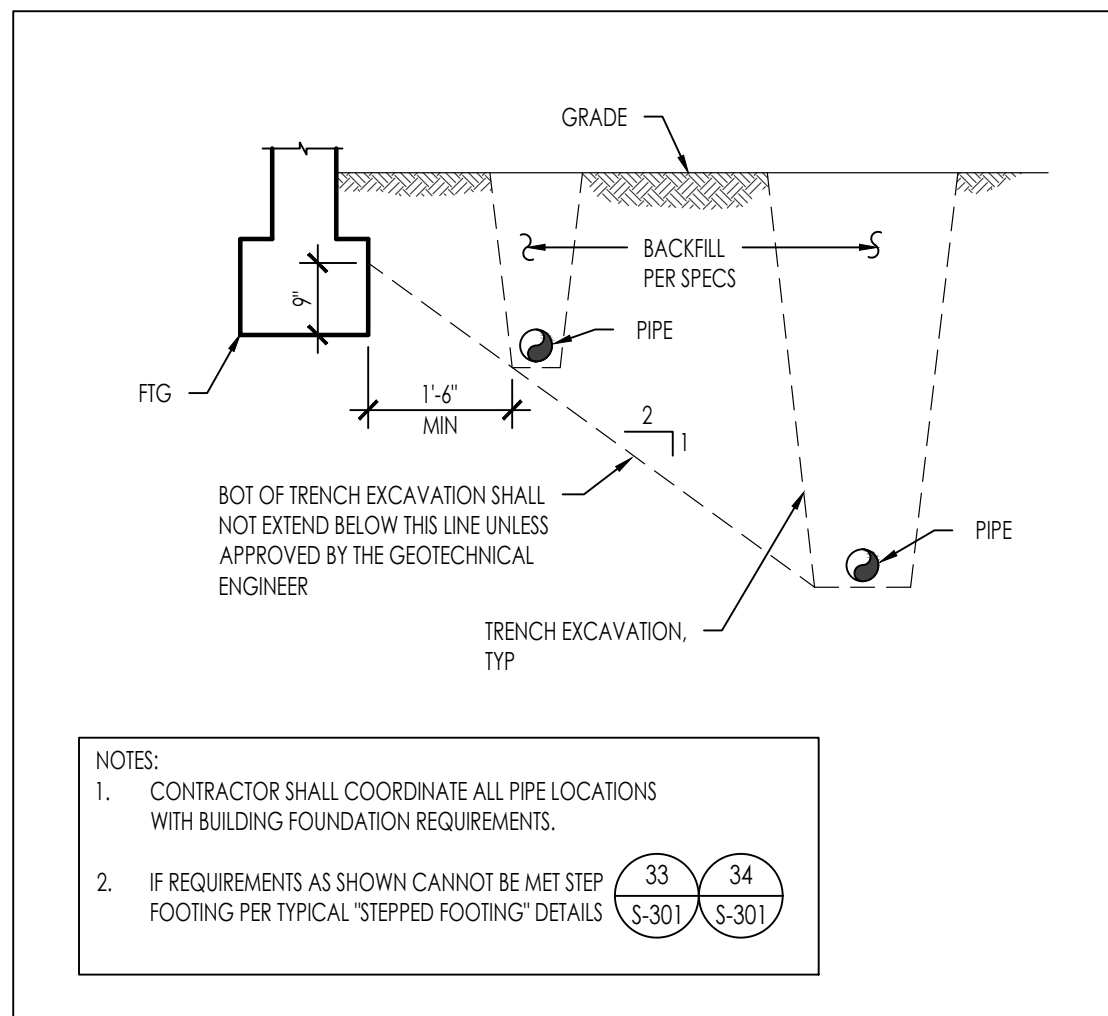
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LAGUNA NIGUEL
PRE - APPROVED ADU
CITY OF LAGUNA NIGUEL

TYPICAL CONCRETE DETAILS

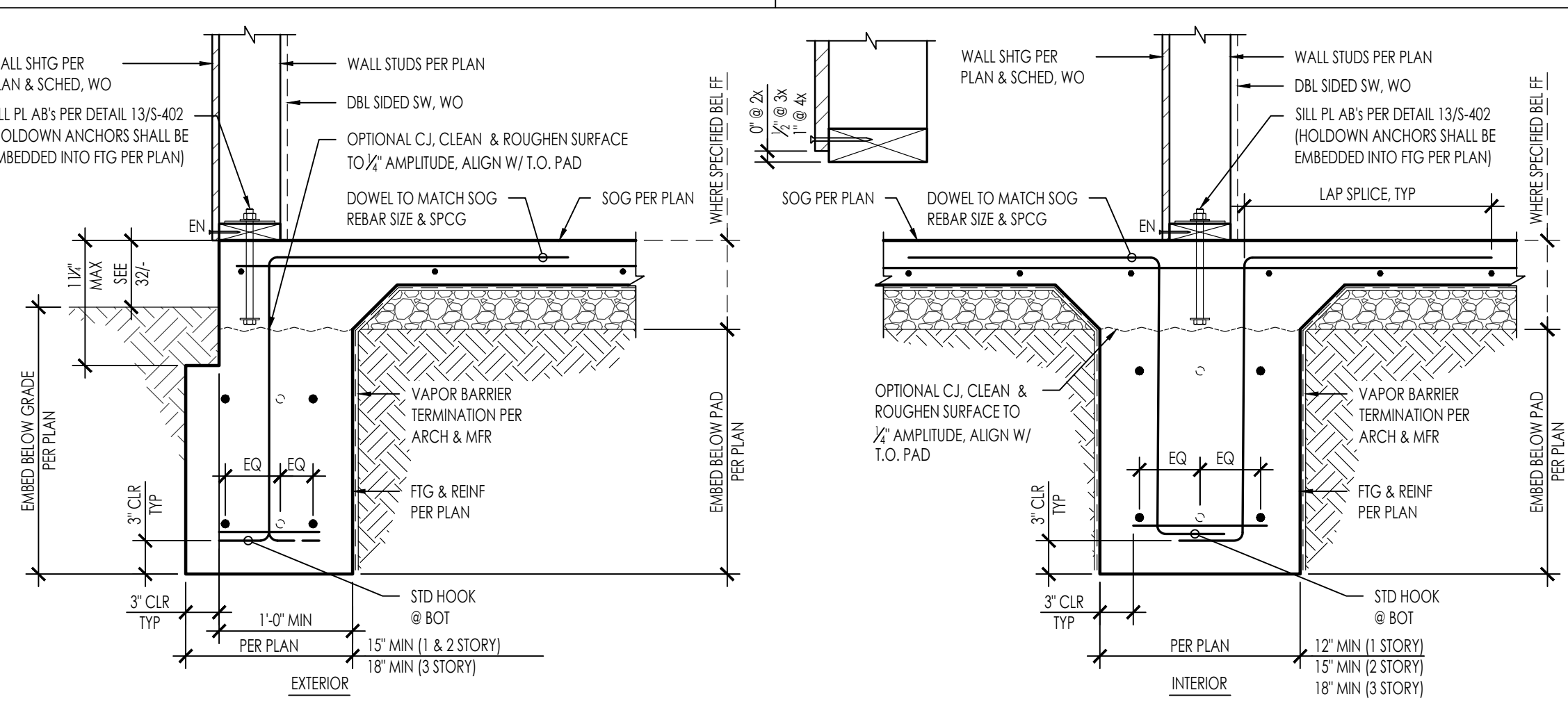
S-301

\\EgnylDrive\on-disk\2800\2889-00-CU22-Laguna Niguel-On-Call-Arch-Peer-Review-Service\Structural\ConDoc\Sheet-Files\2889-00-CU22 - S311.dwg, PLAN 1 - S311, Feb 05, 2025 2:34pm, jlang



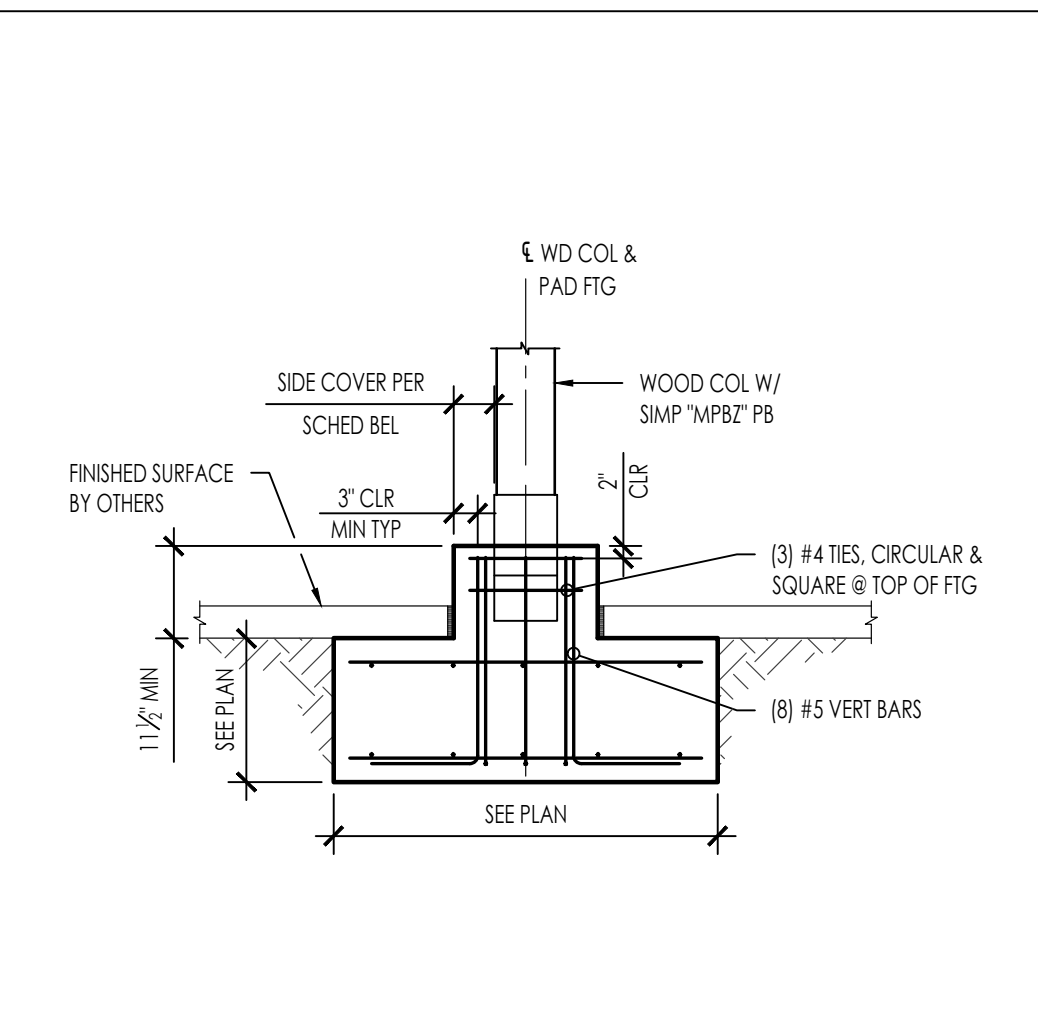
PIPES PARALLEL TO FOOTINGS

NTS 51



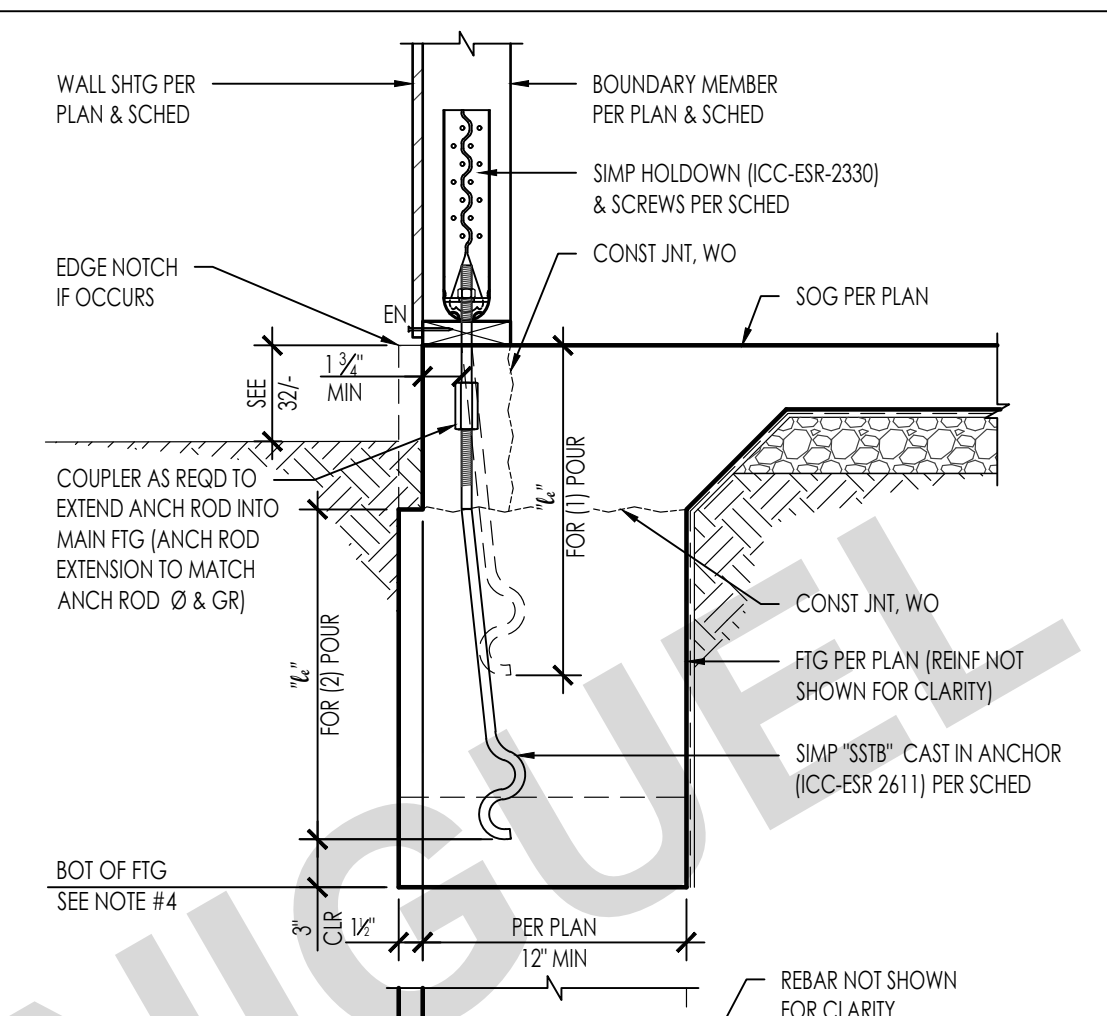
CONTINUOUS WALL FOOTING

NTS 31



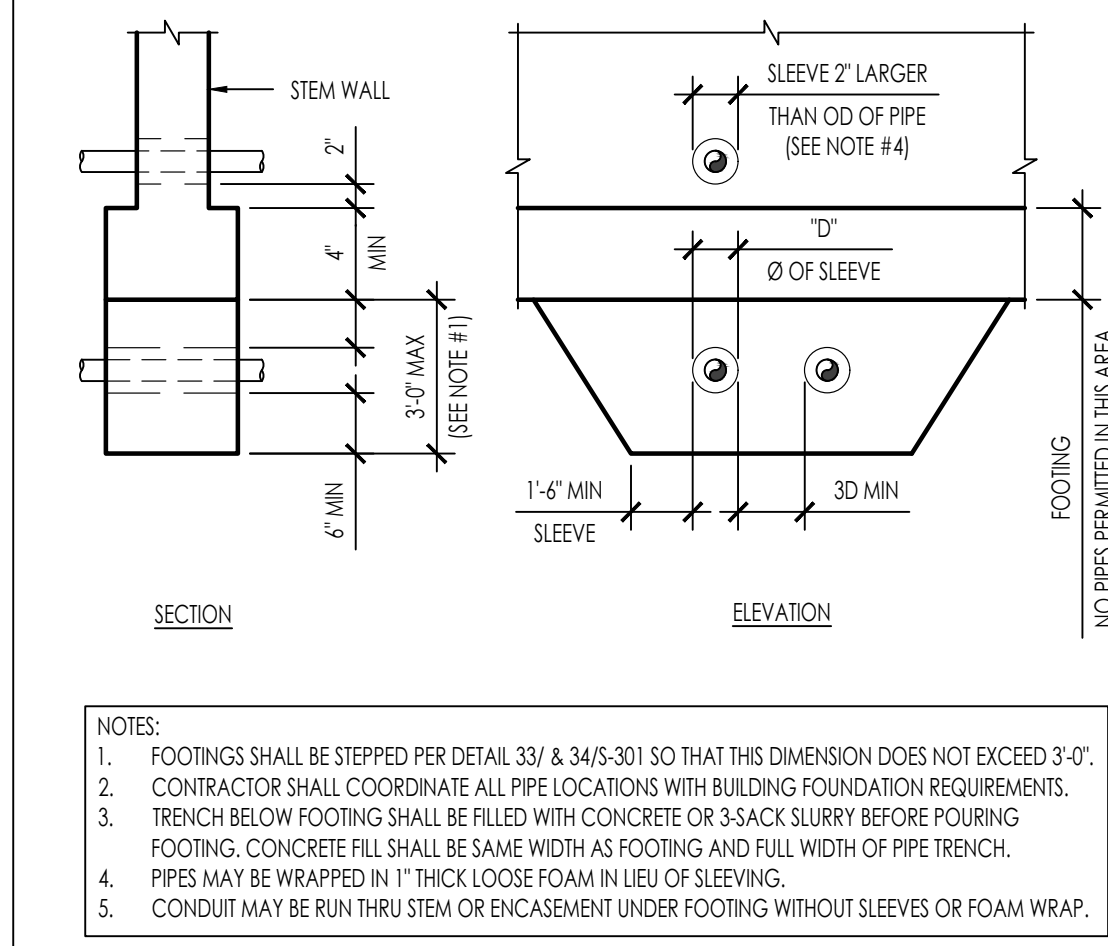
MOMENT BASE POST @ POLE FOOTING

1/2" = 1'-0" 22



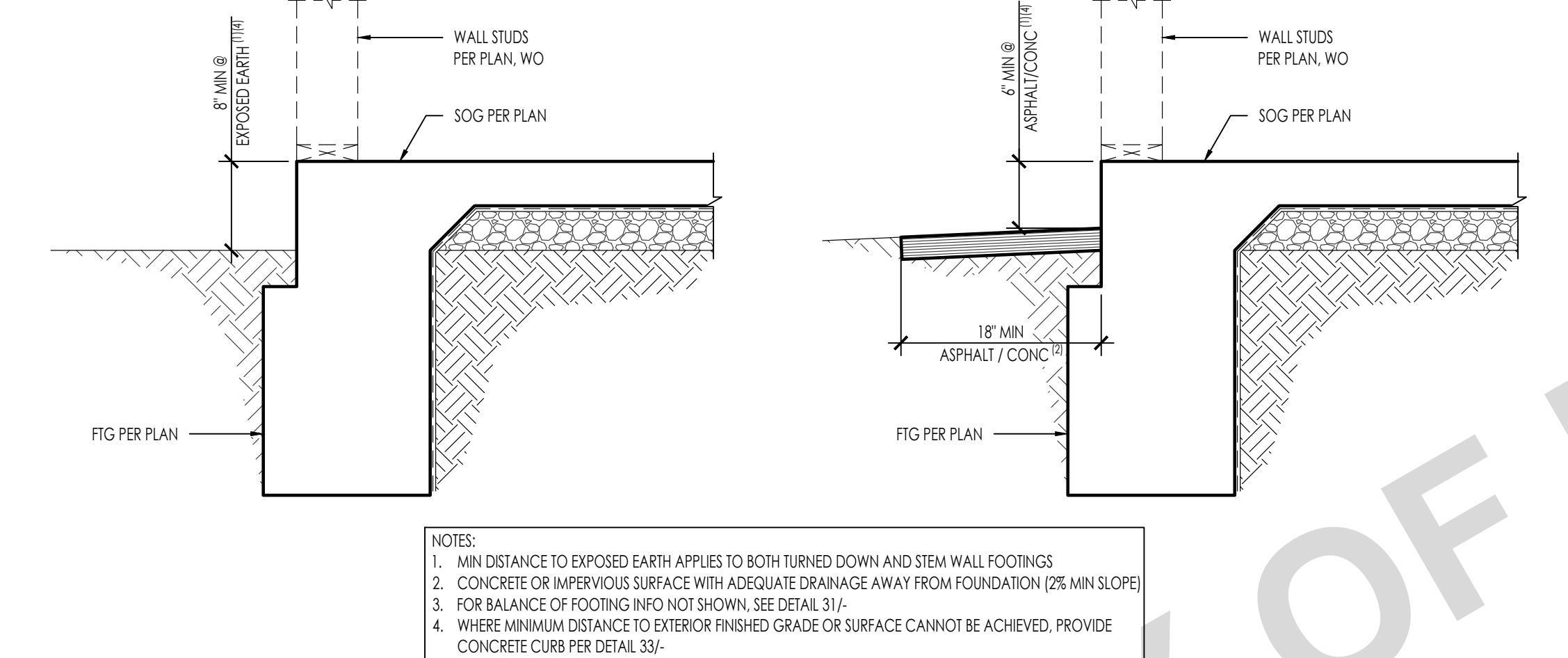
SSB ANCHOR & HOLDOWN @ FOUNDATION

NTS 12



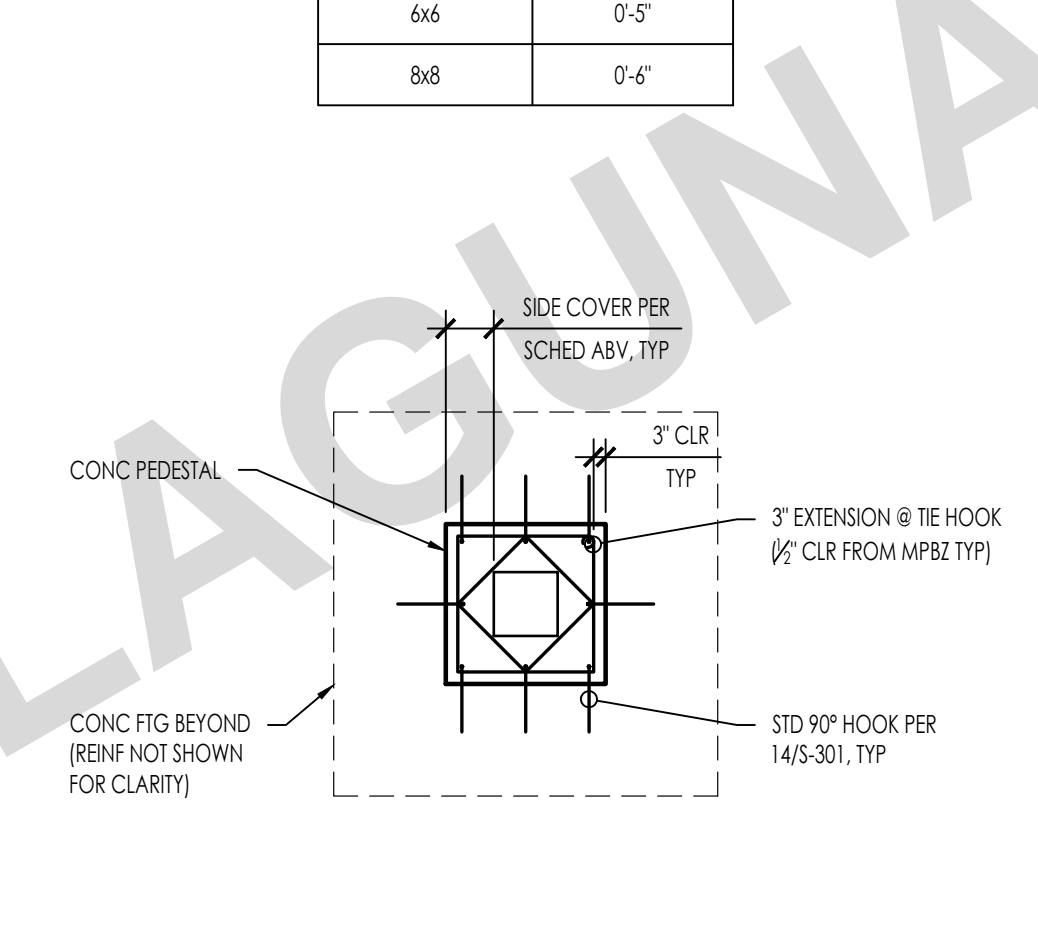
PIPES PERPENDICULAR TO FOOTINGS W/ STEM WALL

NTS 52



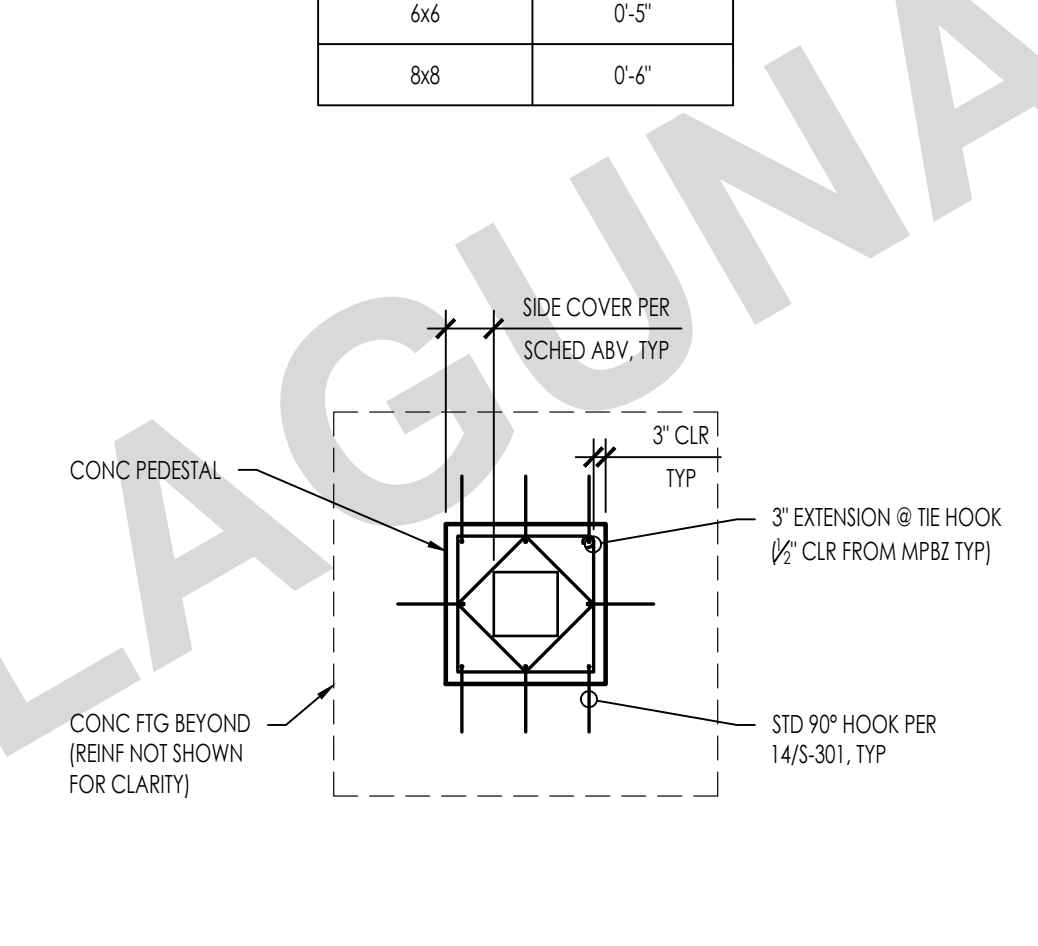
MINIMUM DISTANCE FROM GRADE TO WOOD FRAMING

NTS 32



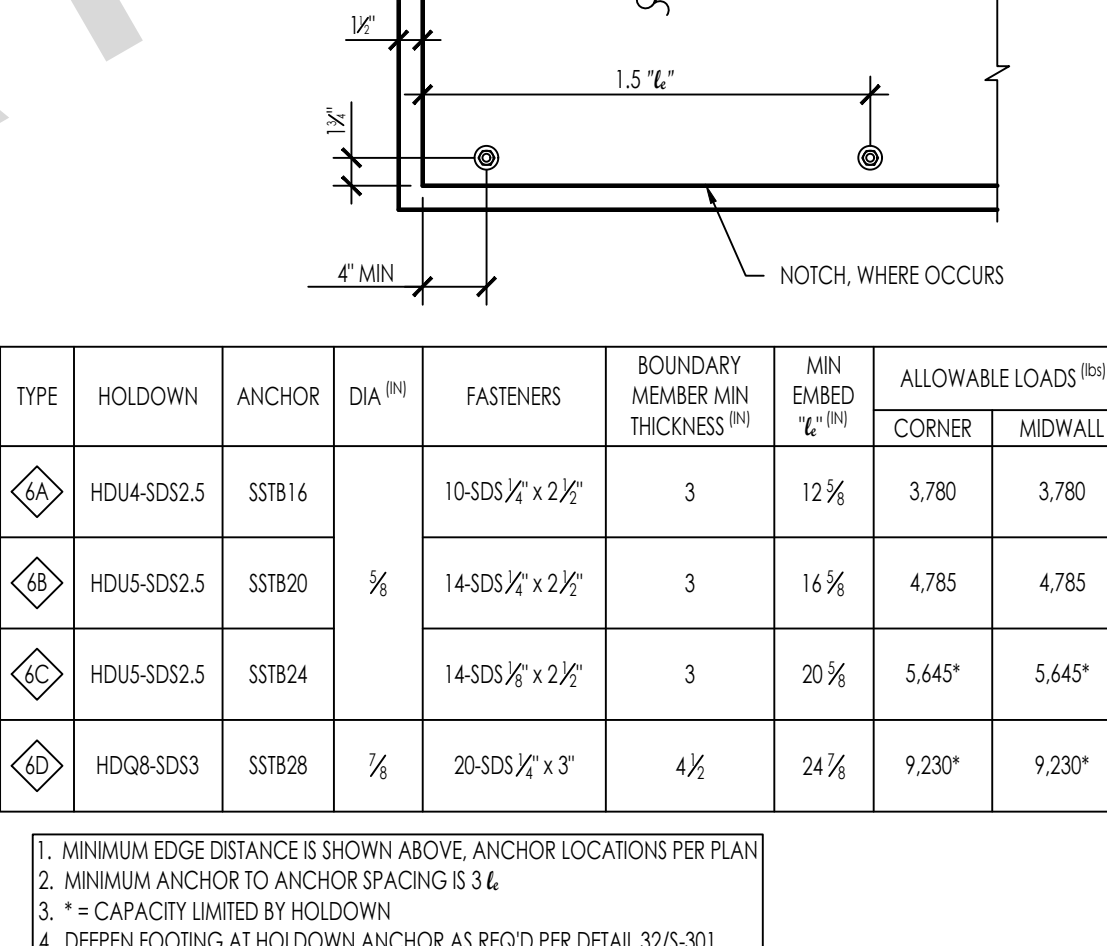
EXTERIOR CONTINUOUS WALL FTG W/ CURB

NTS 33



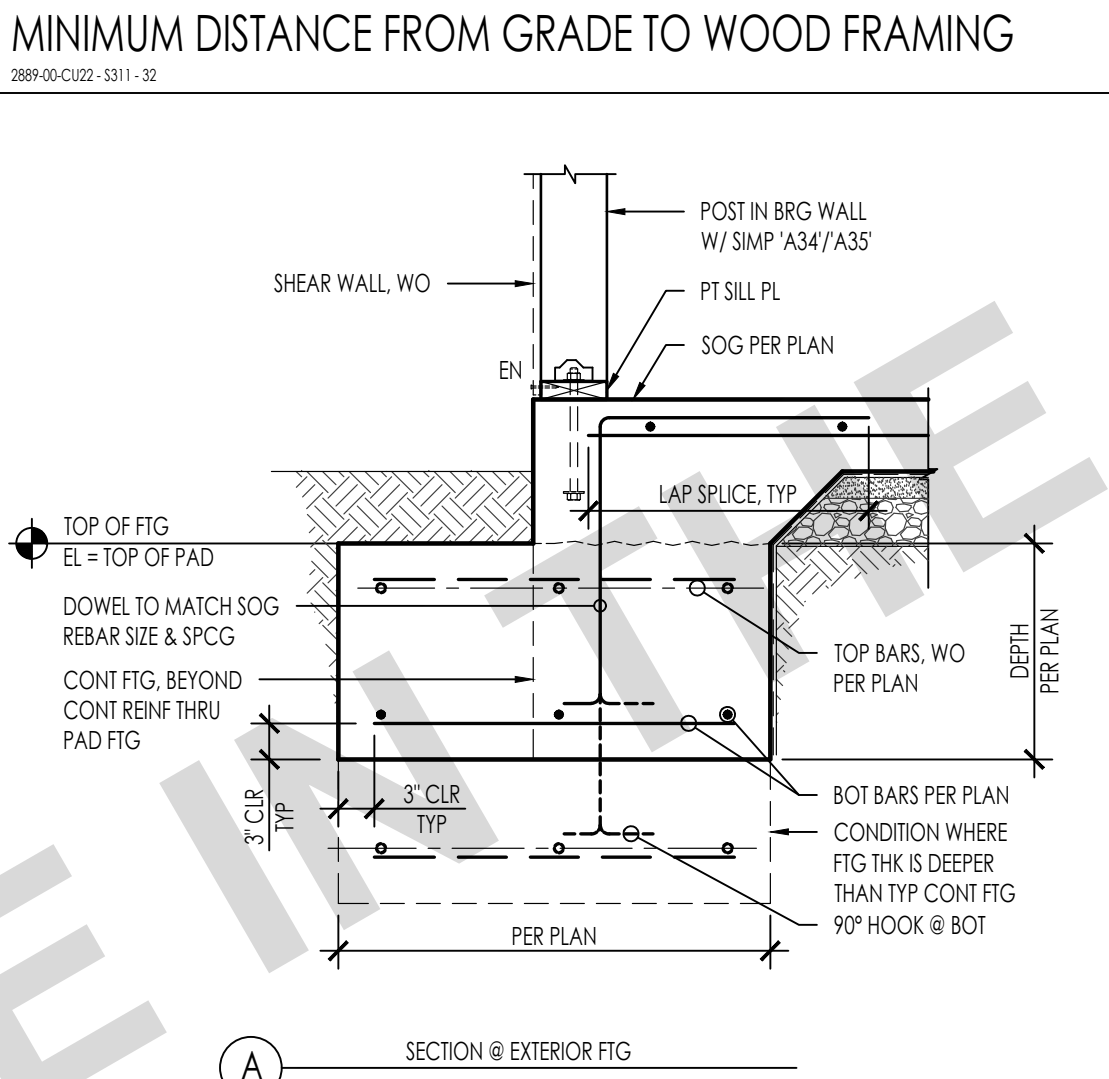
GRADE BEAM

NTS 24



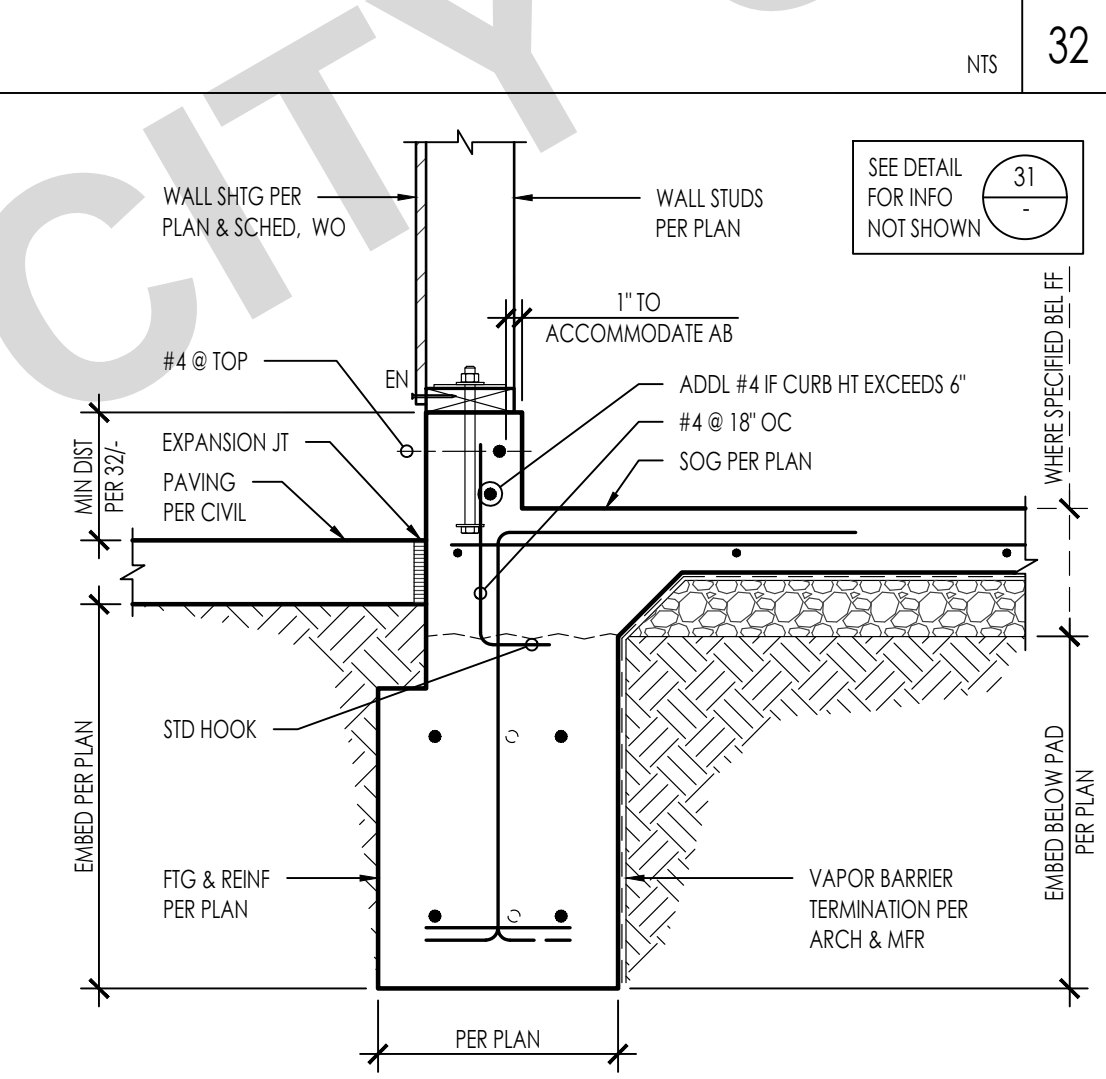
SB ANCHOR & HOLDOWN @ FOUNDATION

NTS 14



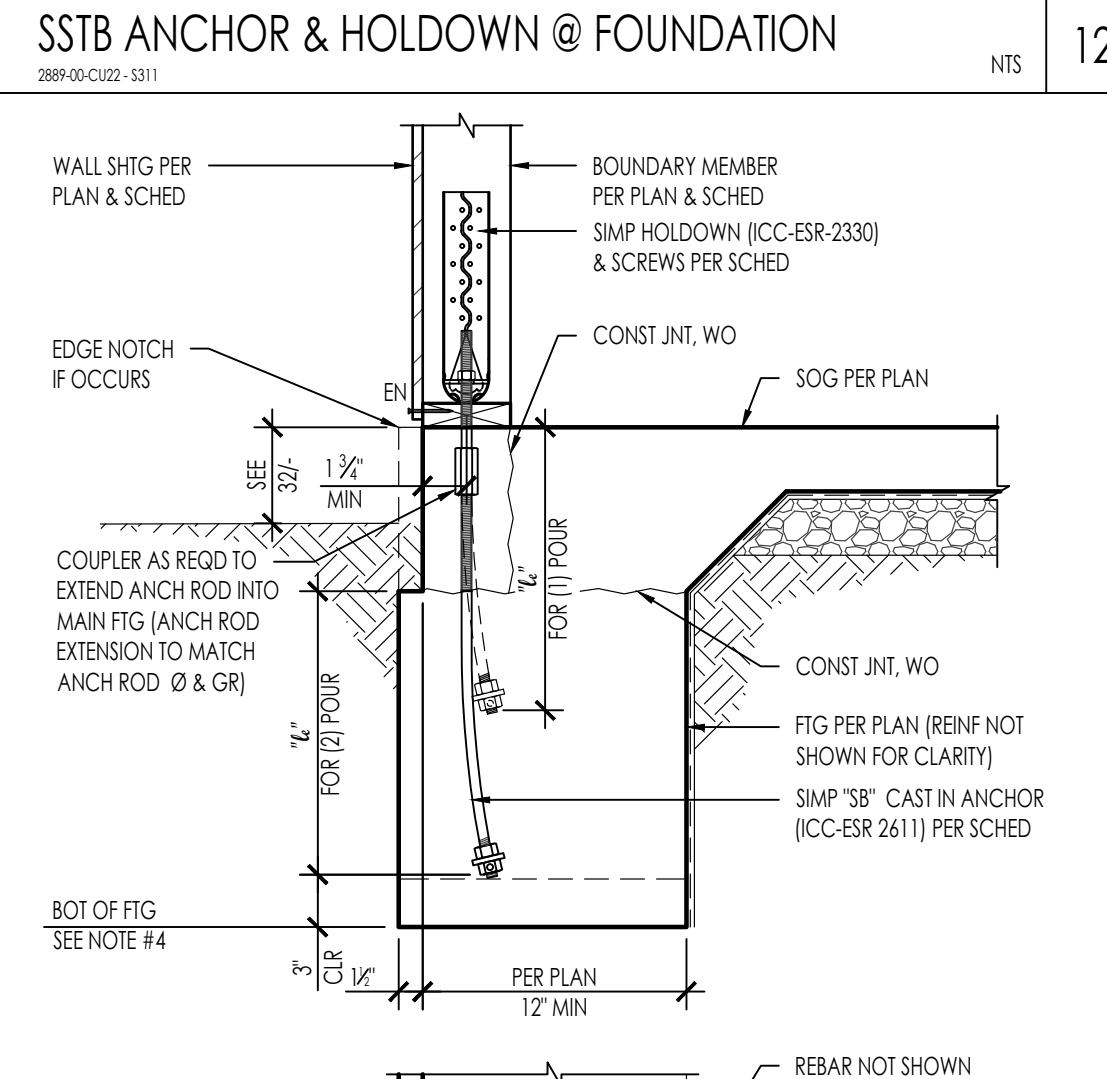
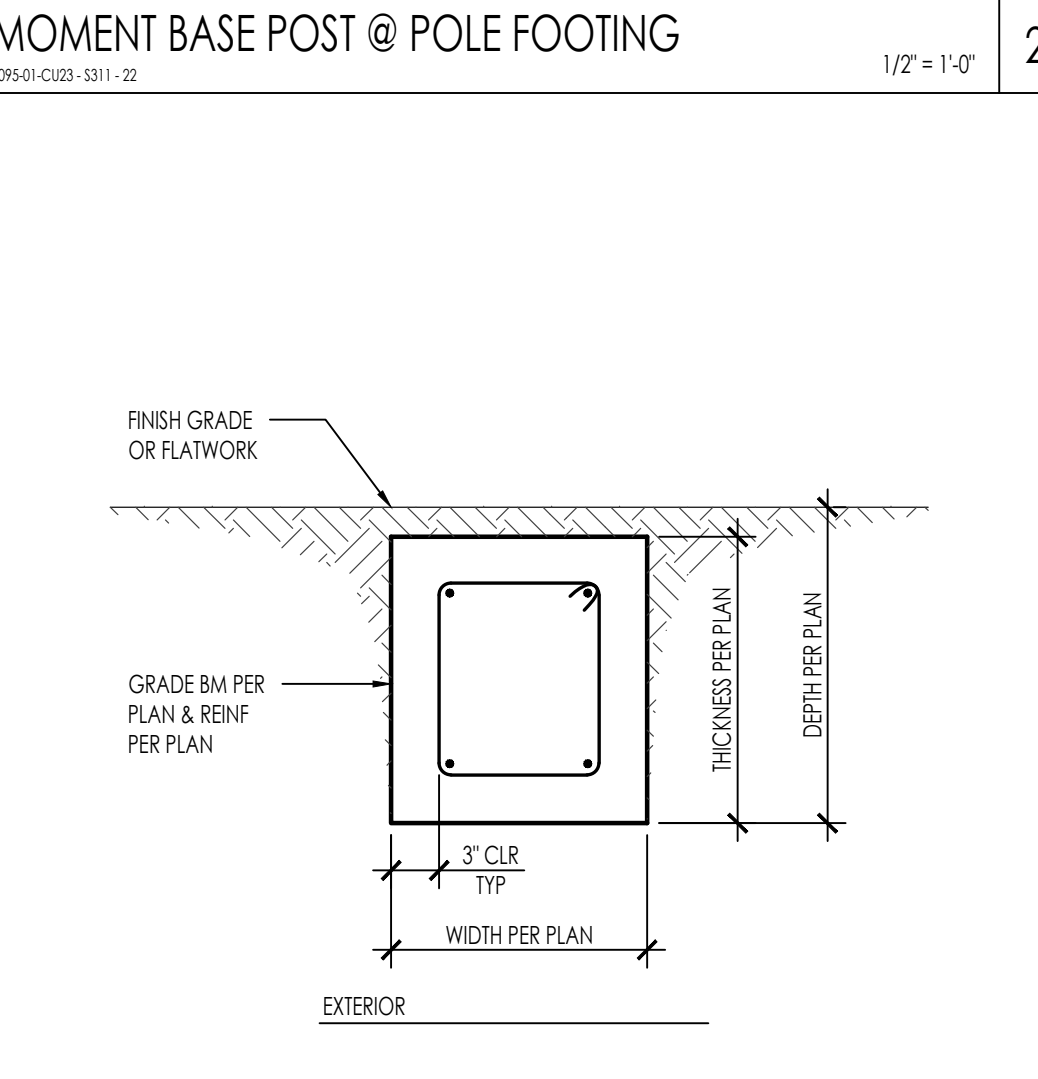
SPREAD FOOTING @ BEARING WALL POST

3/4" = 1'-0" 44



NON-BEARING WALL ANCHORAGE @ SOG

NTS 34



TYPE	HOLDOWN	ANCHOR	DIA (IN)	FASTENERS	MIN MEMBER THICKNESS (IN)	MIN EMBED (IN)	ALLOWABLE LOADS (KIP)	
							CORNER	MIDWALL
6A	HDU4-SDS2.5	SSB16		10-SDS 1/2" x 2 1/2"	3	12 3/4"	3,780	3,780
6B	HDU5-SDS2.5	SSB20	3/4"	14-SDS 1/2" x 2 1/2"	3	16 3/4"	4,785	4,785
6C	HDU5-SDS2.5	SSB24		14-SDS 1/2" x 2 1/2"	3	20 3/4"	5,645*	5,645*
6D	HDQ8-SD3	SSB28	1/2"	20-SDS 1/2" x 3"	4 1/2	24 3/4"	9,230*	9,230*

1. MINIMUM EDGE DISTANCE IS SHOWN ABOVE. ANCHOR LOCATIONS PER PLAN
2. MINIMUM ANCHOR TO ANCHOR SPACING IS 3'-4"
3. * = CAPACITY LIMITED BY HOLDOWN
4. DEEPEN FOOTING AT HOLDOWN ANCHOR AS REQ'D PER DETAIL 32/S-301



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LAGUNA NIGUEL
PRE - APPROVED ADU
CITY OF LAGUNA NIGUEL
CONCRETE DETAILS

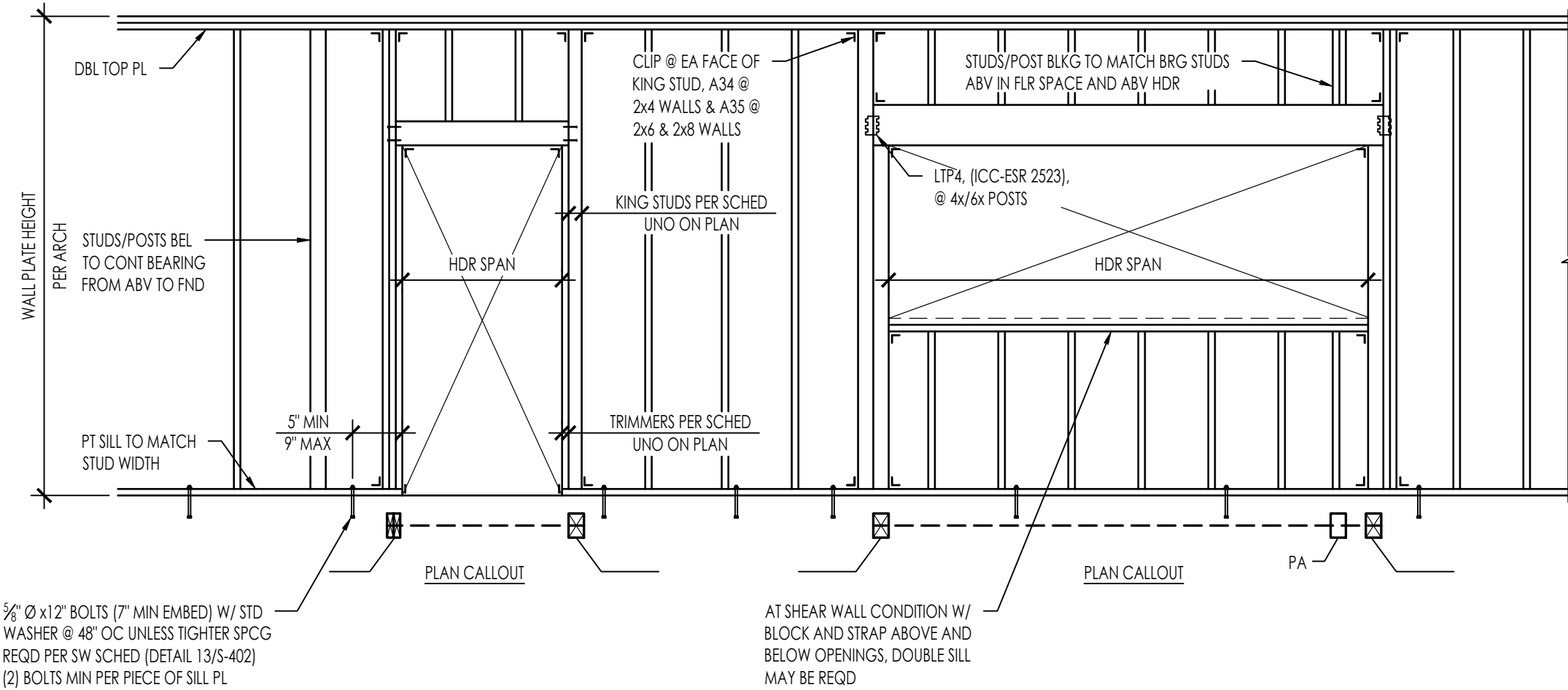
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S-311

PUBLIC SET

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BEARING/SHEAR WALL HEADER SCHEDULE					
1-STORY			6 INCH WALLS		
1-STORY	OPENING WIDTH	6x HEADER	SILL AT WINDOW	POST / TRIMMER	KING STUDS
	UP TO 3'-0"	6x4	2x	2x6	2x6
	3'-0" - 5'-0"	6x6	2x	2x6	2x6
	5'-0" - 7'-0"	6x8	(2) 2x	2x6	(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 13/S-402 FOR ADD'L REQUIREMENTS.
 - FOR INTERIOR NON-BEARING PARTITIONS SEE DETAIL 43/.
 - 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 2333)

FASTENING SCHEDULE PER 2022 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 2-16d COMMON	EACH END, TOENAIL END NAIL
3. FLAT BLOCKING TO TRUSS AND WEB FILLER	16d COMMON @ 6" OC	FACE NAIL
4. CEILING JOIST TO TOP PLATE	3-8d COMMON	EACH JOIST, TOENAIL
5. CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS	3-16d COMMON	FACE NAIL
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 ⁵
9. ROOF RAFTER TO RIDGE VALLEY OR HIP RAFTER; OR ROOF RAFTER TO 2-INCH RIDGE BEAM	2-16d COMMON 3-10d COMMON	END NAIL TOENAIL
10. STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS	16d COMMON	16" OC FACE NAIL
11. BUILT-UP HEADER (2" TO 2" HEADER)	16d COMMON	16" OC EACH EDGE, FACE NAIL
12. CONTINUOUS HEADER TO STUD	4-10d COMMON	TOENAIL
13. TOP PLATE TO TOP PLATE	16d COMMON	16" 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 SPLICE LENGTH EACH SIDE OF END JOINT)
15. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING	2-16d COMMON	16" 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. 1"x6" SUBFLOOR OR LESS TO EACH JOIST	6" OC, TOENAIL	FACE NAIL
22. 2" SUBFLOOR TO JOIST OR GIRDER	2-8d COMMON	FACE NAIL
23. BUILT-UP GIRDER AND BEAMS, 2" LUMBER LAYERS	2-16d COMMON	FACE NAIL
24. LEDGER STRIP SUPPORTING JOIST OR RAFTERS	20d COMMON (4" x 0.192")	32" OC FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDE
26. JOIST TO BAND JOIST OR RIM JOIST	3-16d COMMON	EACH JOIST OR RAFTER, FACE NAIL
27. BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS	3-16d COMMON	END NAIL
	2-8d COMMON	EACH END, TOENAIL

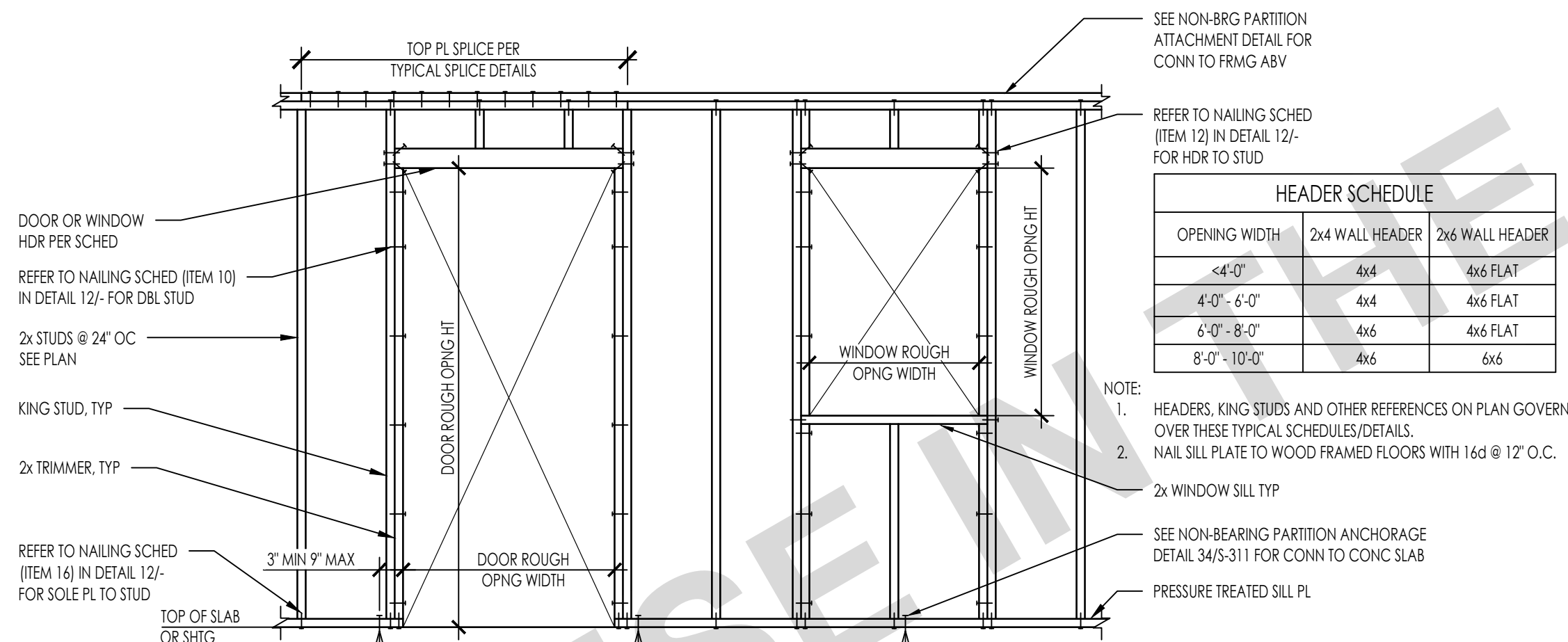
- NOTES:
- THIS NAILING SCHEDULE SHALL ONLY BE USED IF CONDITION IS NOT OTHERWISE DETAILED OR SPECIFIED ON THE CONSTRUCTION DOCUMENTS. COMMON NAILS SHALL BE USED EXCEPT WHERE OTHERWISE STATED
 - WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE AND THE 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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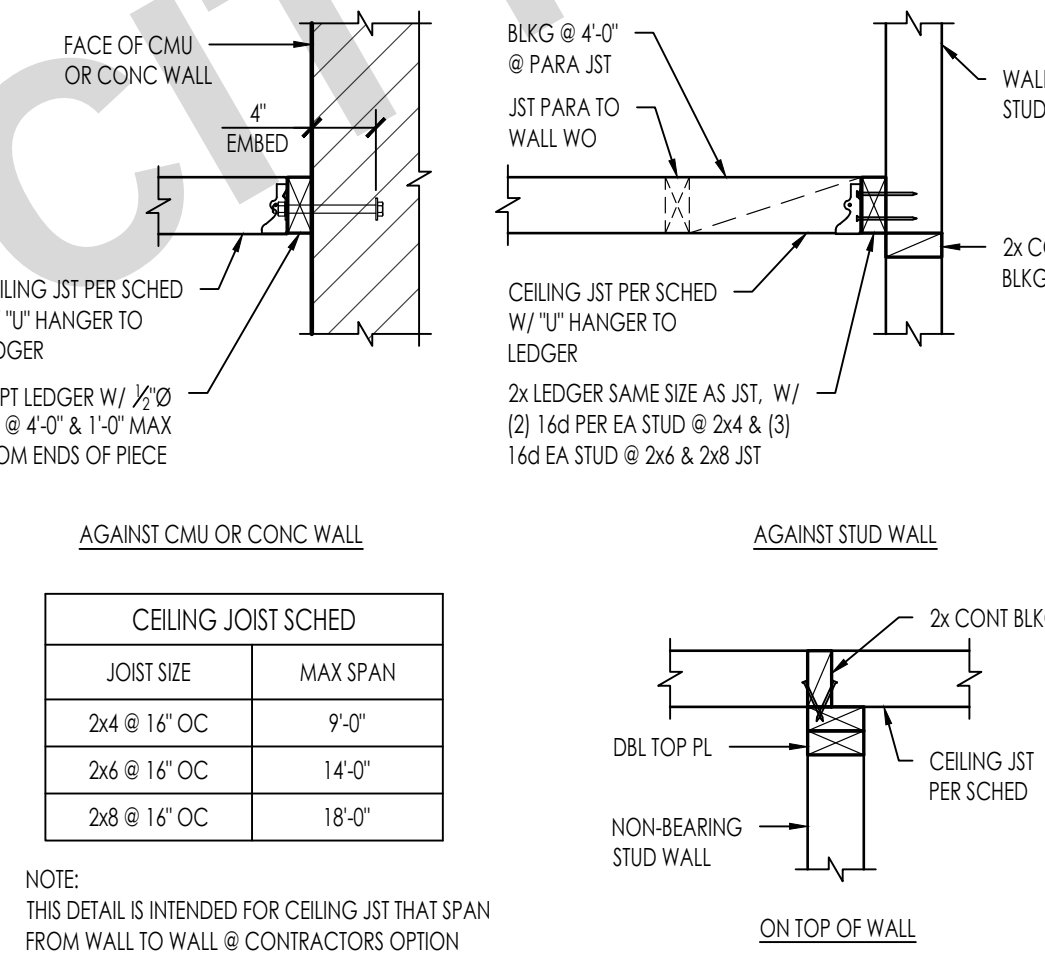
EXTERIOR WALL / INTERIOR WALL BEARING WALL FRAMING

2889-00-CU22 - S401 - 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	6x6

- NOTE:
- HEADERS, KING STUDS AND OTHER REFERENCES ON PLAN GOVERN OVER THESE TYPICAL SCHEDULES/DETAILS.
 - NAIL SILL PLATE TO WOOD FRAMED FLOORS WITH 16d @ 12" O.C.
- 2x WINDOW SILL TYP
- SEE NON-BEARING PARTITION ATTACHMENT DETAIL 34/S-311 FOR CONN TO CONC SLAB



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

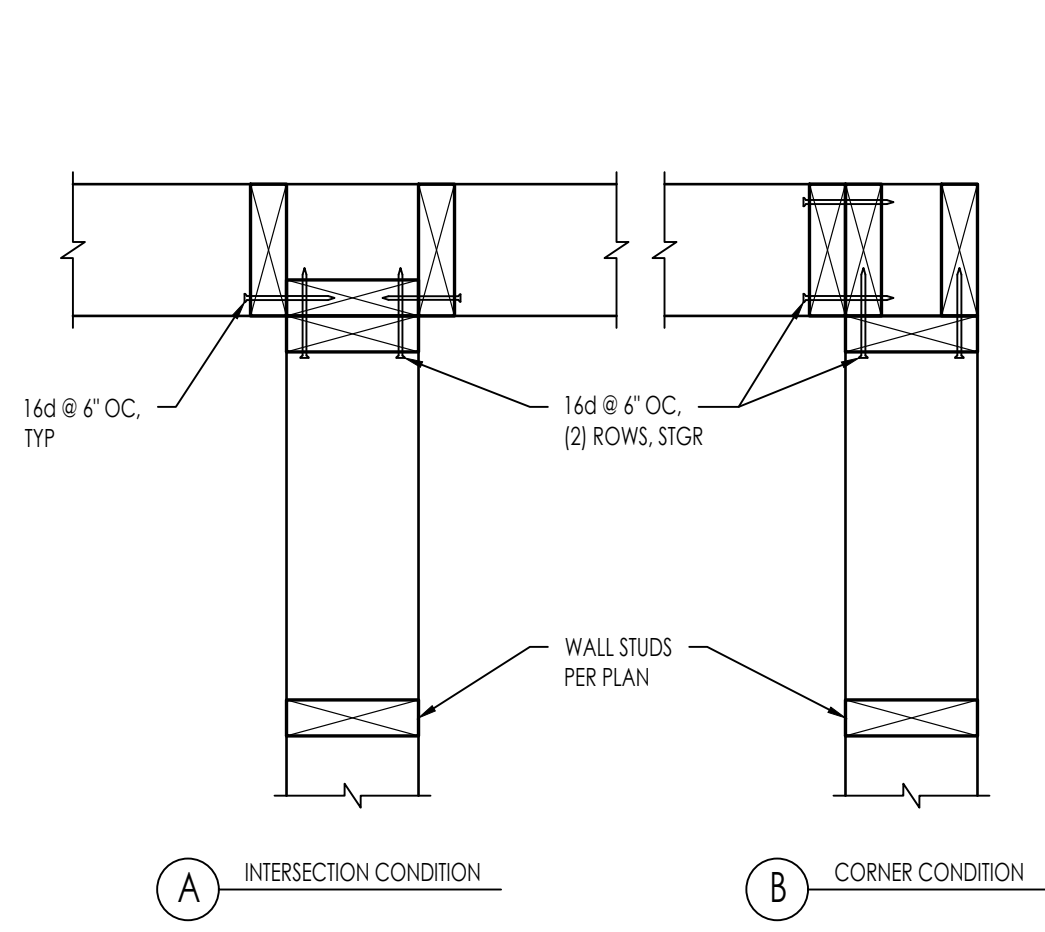
NOTE: THIS DETAIL IS INTENDED FOR CEILING JST THAT SPAN FROM WALL TO WALL @ CONTRACTORS OPTION

NTS

32

NAILING SCHEDULE

2889-00-CU22 - S401 - 12

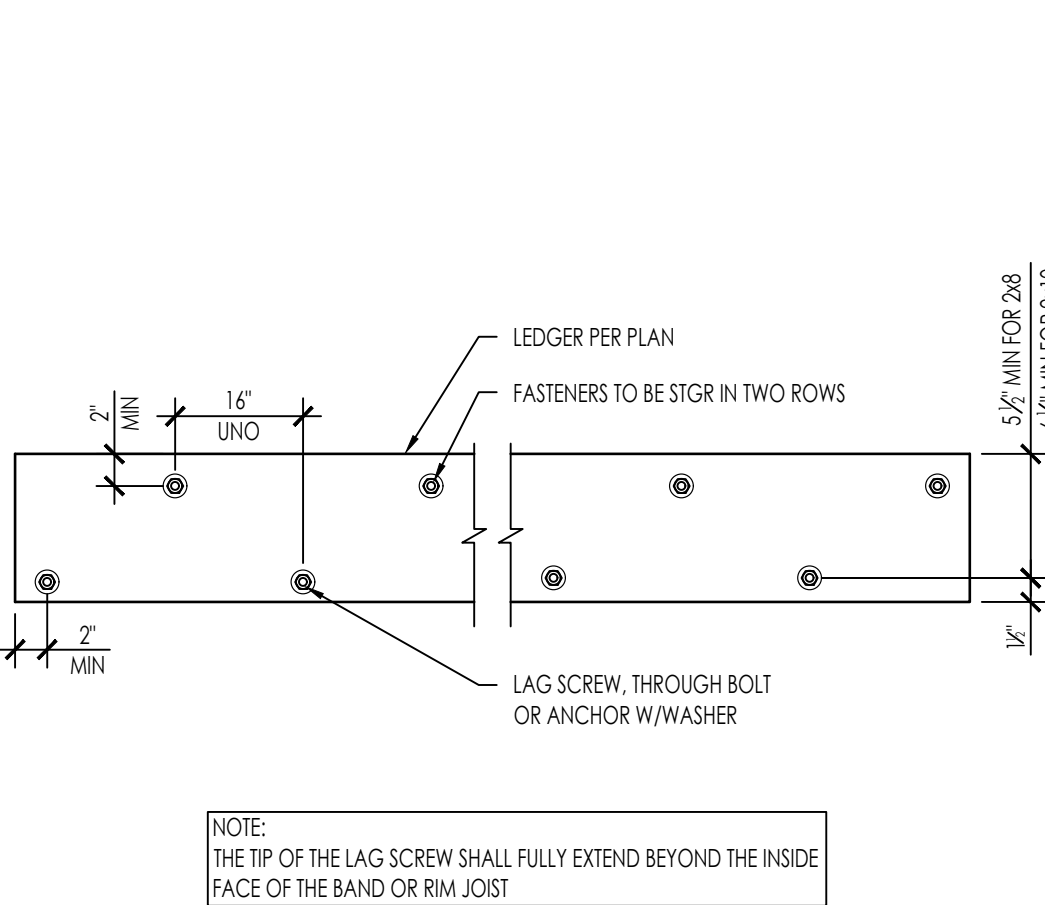


NTS

33

TYPICAL WOOD STUD INTERSECTIONS

2889-00-CU22 - S401 - 24



NTS

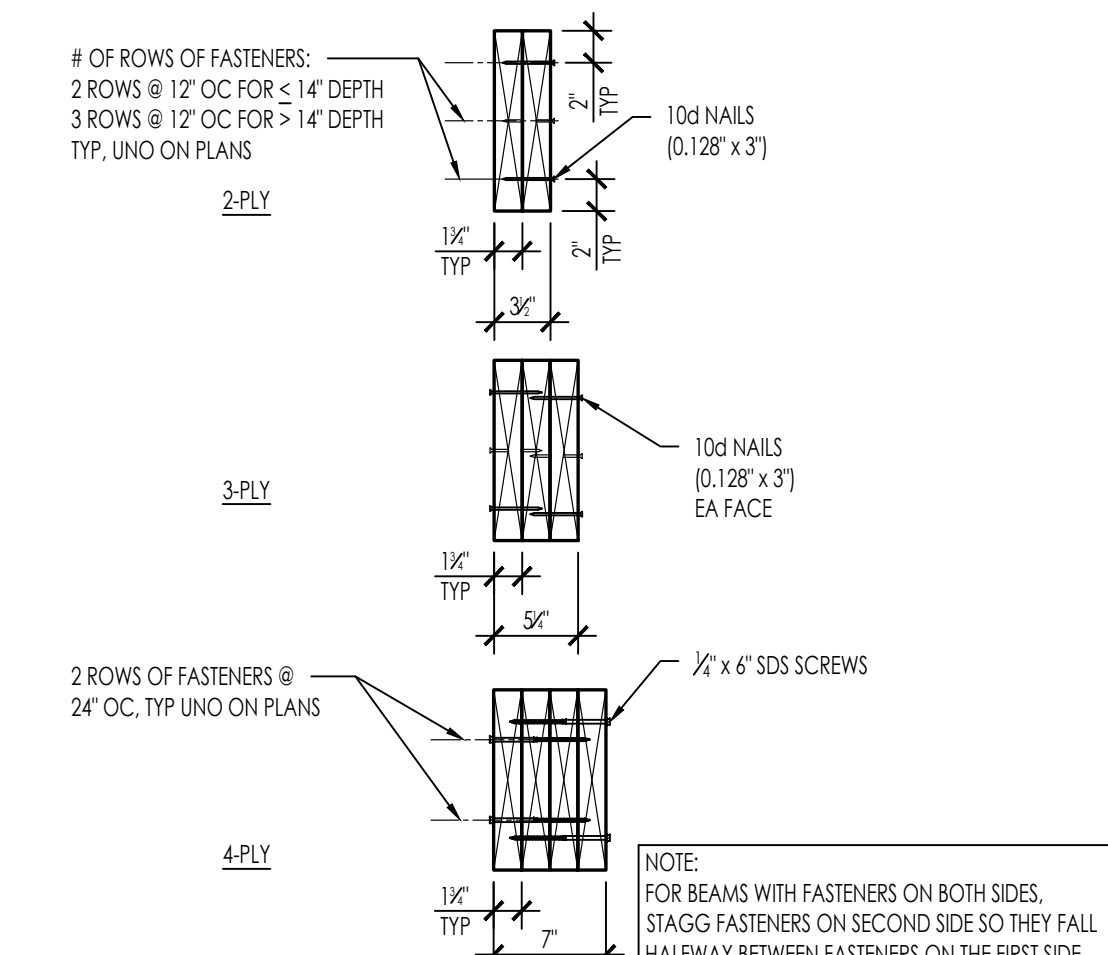
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LEDGER DETAIL

2889-00-CU22 - S401 - 44

NTS

12

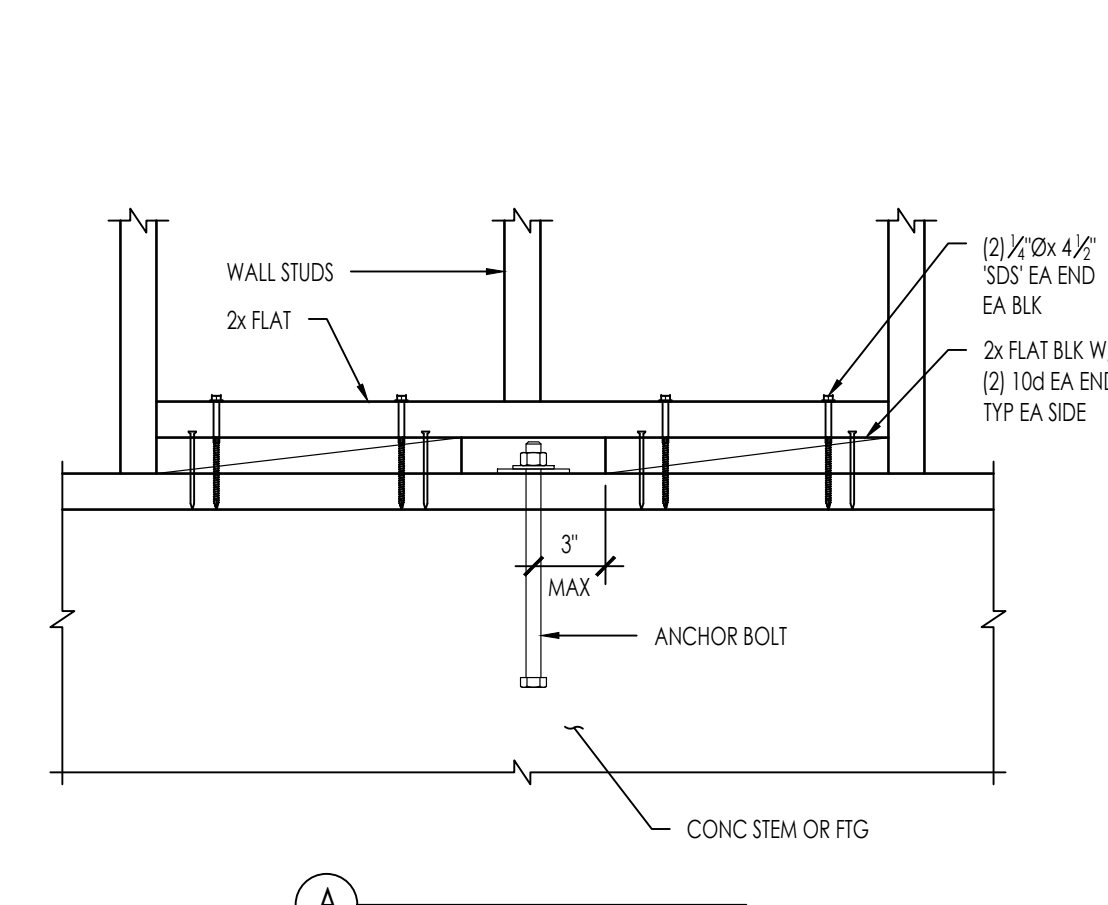


NTS

13

MULTI-PLY MEMBER CONNECTION

2889-00-CU22 - S401 - 14



NTS

14

ANCHOR BOLT AT WOOD STUD

2889-00-CU22 - S401 - 34

LAGUNA NIGUEL
PRE - APPROVED ADU
CITY OF LAGUNA NIGUEL
TYPICAL WOOD DETAILS

DATE
02/05/2025
SHEET

S-401

PUBLIC SET

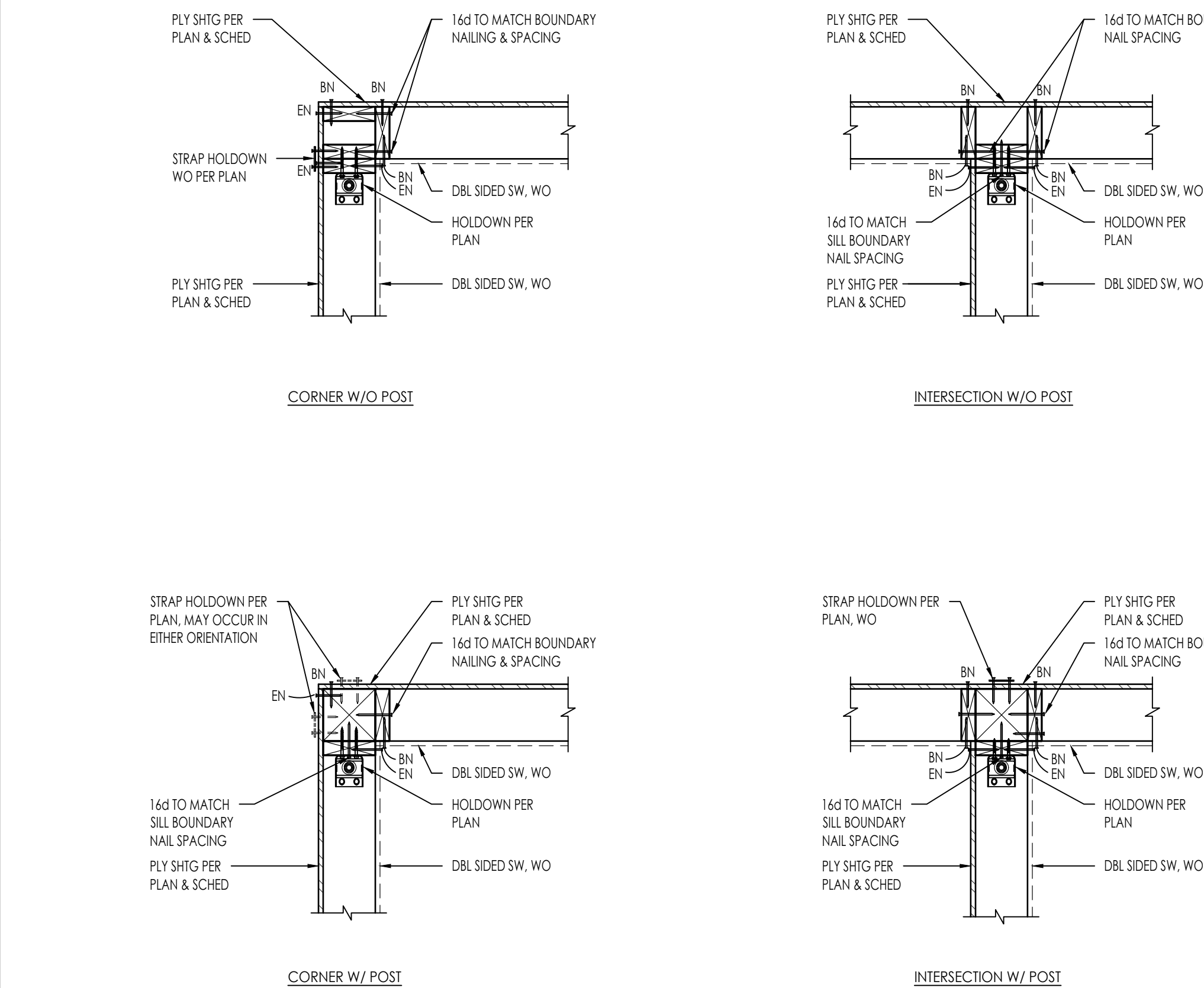
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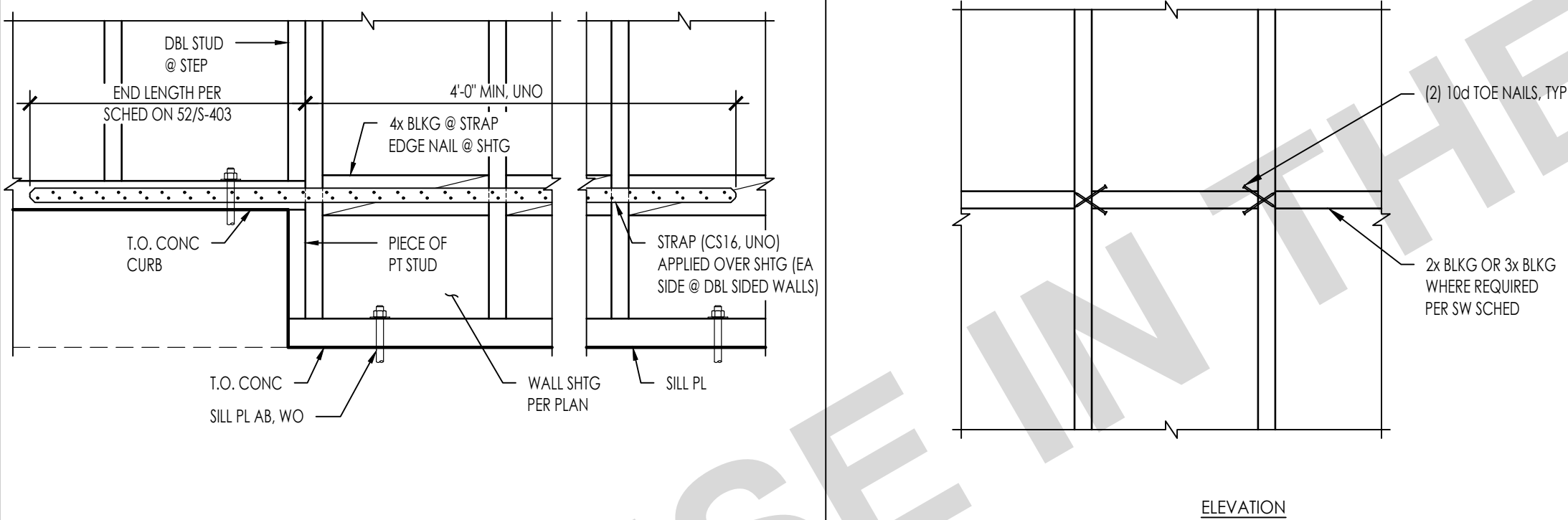
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LAGUNA NIGUEL
PRE - APPROVED ADU
CITY OF LAGUNA NIGUEL

TYPICAL WOOD DETAILS



SHEAR WALL INTERSECTION
2889-00-CU22- S402 - 42
NTS 42



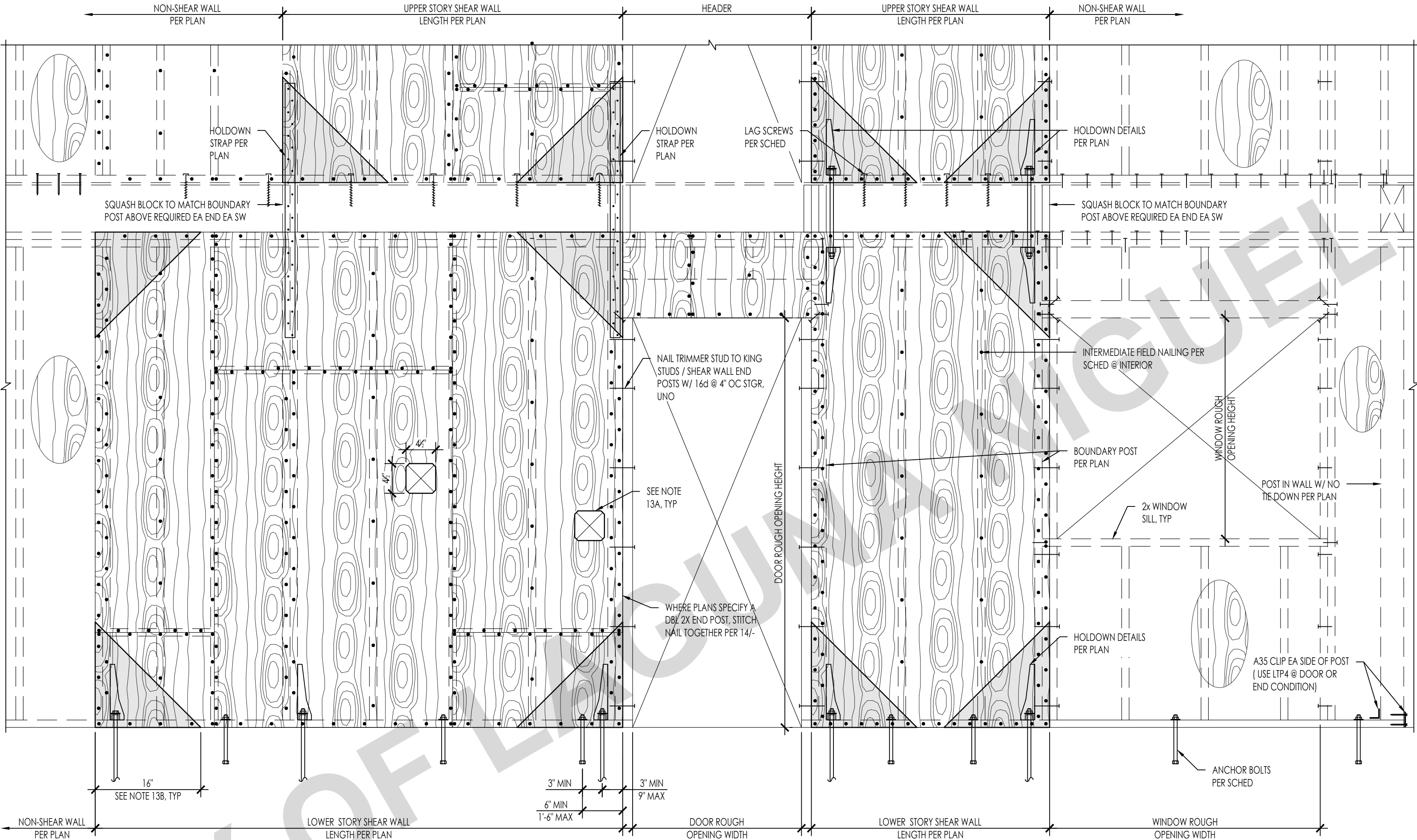
STRAP AT STEP IN SHEAR WALL SILL PLATE
2889-00-CU22- S402 - 53
NTS 53

TYPICAL BLOCKING DETAIL
2889-00-CU22- S402 - 43
NTS 43

MARK	# OF BLKG	STRAP	NAILS EA SIDE OF OPENING	STRAP LENGTH (IN)	ALLOWABLE TENSION LOADS (LBS)
▽1	1	CS20	(12) 10d x 2 1/2"	32'	1,030
▽1	1	CS16	(20) 10d x 2 1/2"		1,705
▽1	1	CS14	(26) 10d x 2 1/2"		2,490
▽1	2	CMSTC16	(50) 10d x 3 1/2"		4,690
▽2	2	CMST14	(66) 10d x 2 1/2"	39'	6,475
▽2	2	CMST12	(86) 10d x 2 1/2"		9,215

- NOTES:
- 2 BAYS OR 32" MIN STRAP LENGTH
 - EDGE NAILING FROM PLYWOOD TO STUDS / FRAMING SHALL OCCUR ALL AROUND OPENINGS AT THIS CONDITION
 - SEE TYPICAL SHEAR WALL ELEVATION FOR BALANCE OF INFO NOT SHOWN

FORCE TRANSFER AROUND OPENINGS
2889-00-CU22- S402 - 44
NTS 44



SHEAR WALL SHEATHING / NAILING SCHEDULE										
WALL SYMBOL	STRUCT SHEATHING	1,12 FRAMING SIZE	2,3,4 NAILING		7 SILL CONN TO RIM		10,11 LTP4 ALL 16		ANCHOR BOLTING	10,11
			(2) 2x STUD	EDGE	INTERMEDIATE SUPPORTS	NAILS / LAG SCREWS	SDWS SCREWS 14 OPTION	A35s		
△	15/32' STRUCT 1 PLYWOOD	2x	10d @ 9" OC	8d @ 6" OC	8d @ 12" OC	16d @ 6" OC	12" OC	24" OC	24" OC	16" OC
△	15/32' STRUCT 1 PLYWOOD	2x	10d @ 8" OC	10d @ 6" OC	10d @ 12" OC	5/8" Ø LAG SCREWS @ 15" OC	12" OC	16" OC	24" OC	16" OC
△	15/32' STRUCT 1 PLYWOOD	2x	10d @ 5" OC	10d @ 4" OC	10d @ 12" OC	5/8" Ø LAG SCREWS @ 15" OC	8" OC	12" OC	16" OC	8" OC
△	15/32' STRUCT 1 PLYWOOD	2x	10d @ 4" OC	10d @ 3" OC	10d @ 12" OC	5/8" Ø LAG SCREWS @ 15" OC	6" OC	8" OC	12" OC	8" OC
△	15/32' STRUCT 1 PLYWOOD	3x	10d @ 3" OC	10d @ 2" OC	10d @ 12" OC	5/8" Ø LAG SCREWS @ 8" OC	6" OC	8" OC	8" OC	6" OC
△	15/32' STRUCT 1 PLYWOOD (EACH FACE OF WALL)	3x	(2) 10d @ 5" OC	10d @ 4" OC	10d @ 12" OC	5/8" Ø LAG SCREWS 15 @ 8" OC	8" OC 15	12" OC 15	16" OC 15	8" OC 15
△	15/32' STRUCT 1 PLYWOOD (EACH FACE OF WALL)	3x	(2) 10d @ 4" OC	10d @ 3" OC	10d @ 8" OC	5/8" Ø LAG SCREWS 15 @ 8" OC	6" OC 15	8" OC 15	12" OC 15	8" OC 15
△	15/32' STRUCT 1 PLYWOOD (EACH FACE OF WALL)	3x	(2) 10d @ 3" OC	10d @ 2" OC	10d @ 6" OC	5/8" Ø LAG SCREWS 15 @ 6" OC	6" OC 15	8" OC 15	8" OC 15	6" OC 15

- 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.
 - 8d NAIL DEFINED AS 0.131" DIAMETER SHANK x 2 1/2" LONG x 0.281 DIAMETER HEAD. 10d NAIL DEFINED AS 0.148" DIAMETER SHANK x 3" LONG x 0.312 DIAMETER HEAD.
 - PROVIDE E.N. AT ALL END STUDS, STUDS/POSTS WITH HOLDOWNS OR TIE 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 REQUIRED PER SCHED. 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
 - LENGTHEN 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 LSL OR 2X RIM BOARD/BLOCKING. FASTENER EDGE DIST IS 5/8" MIN & 6" END DISTANCE MIN. 2" MIN PENETRATION INTO RIM BOARD/BLOCKING.
 - WALL W/ DOUBLE SIDED PLYWOOD REQUIRES (2) RIM BOARDS/BLOCKING. FASTENERS AND CLIPS WITH SPACING PER SCHED ARE REQUIRED ON EACH RIM BOARD OR BLOCKING LINE.
 - LTP4 CLIP SHALL BE INSTALLED IN A HORIZONTAL ORIENTATION UNDER SHEATHING. IF CLIP IS INSTALLED OVER THE SHEATHING, 0.131" x 2 1/2" NAILS SHALL BE USED.

TYPICAL SHEAR WALL ELEVATION AND SCHEDULE
2889-00-CU22- S402 - 13
NTS 13

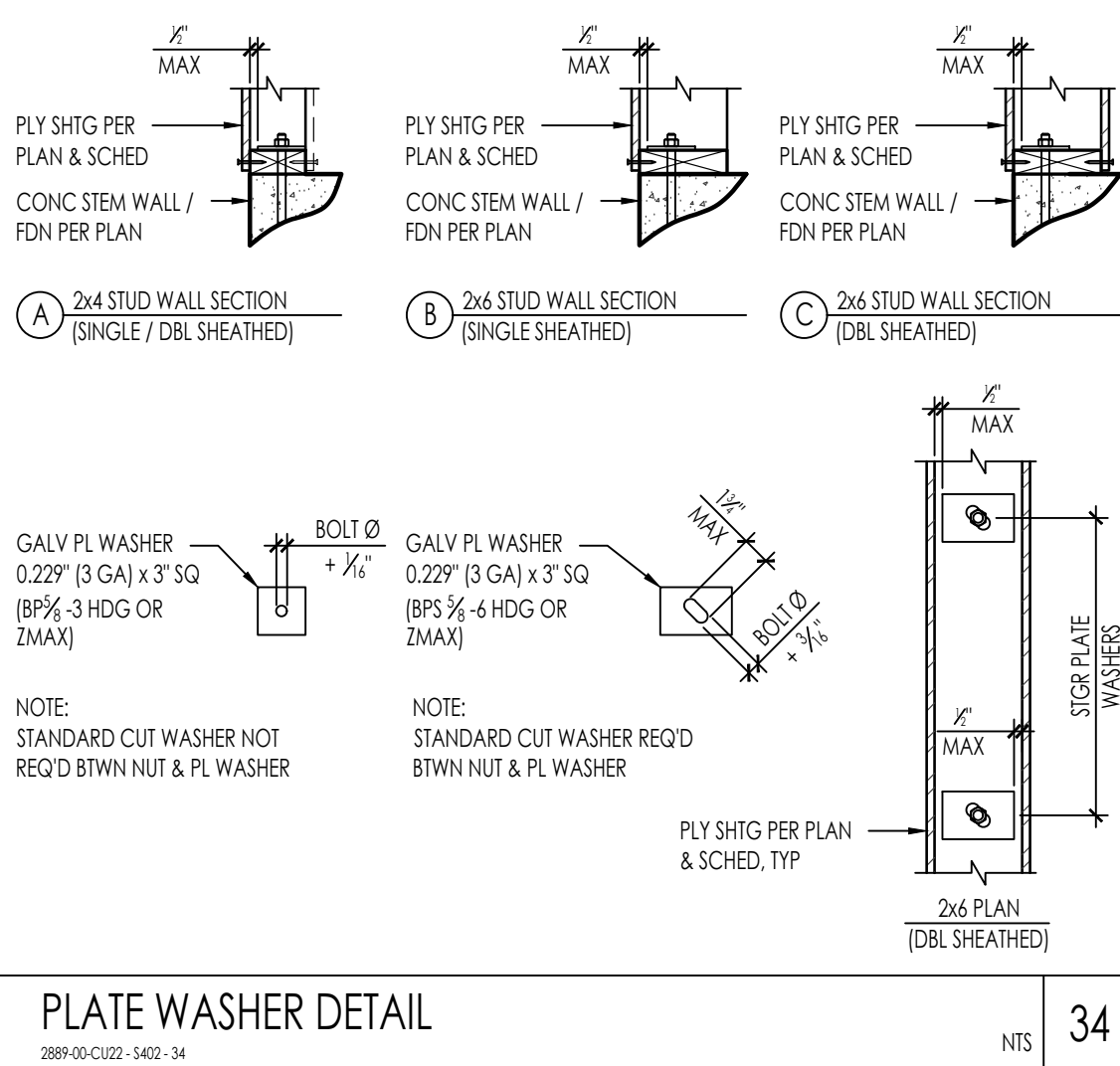
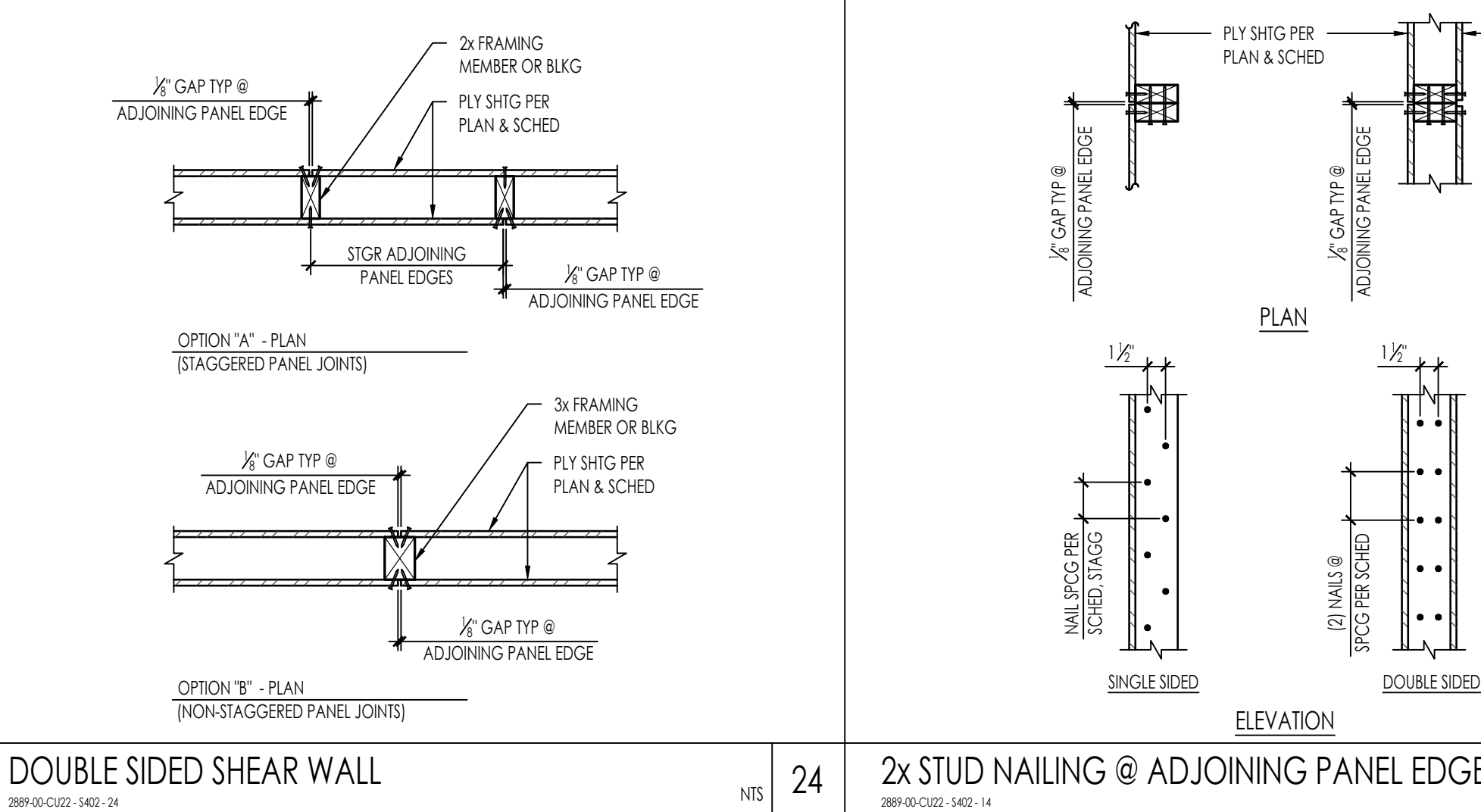
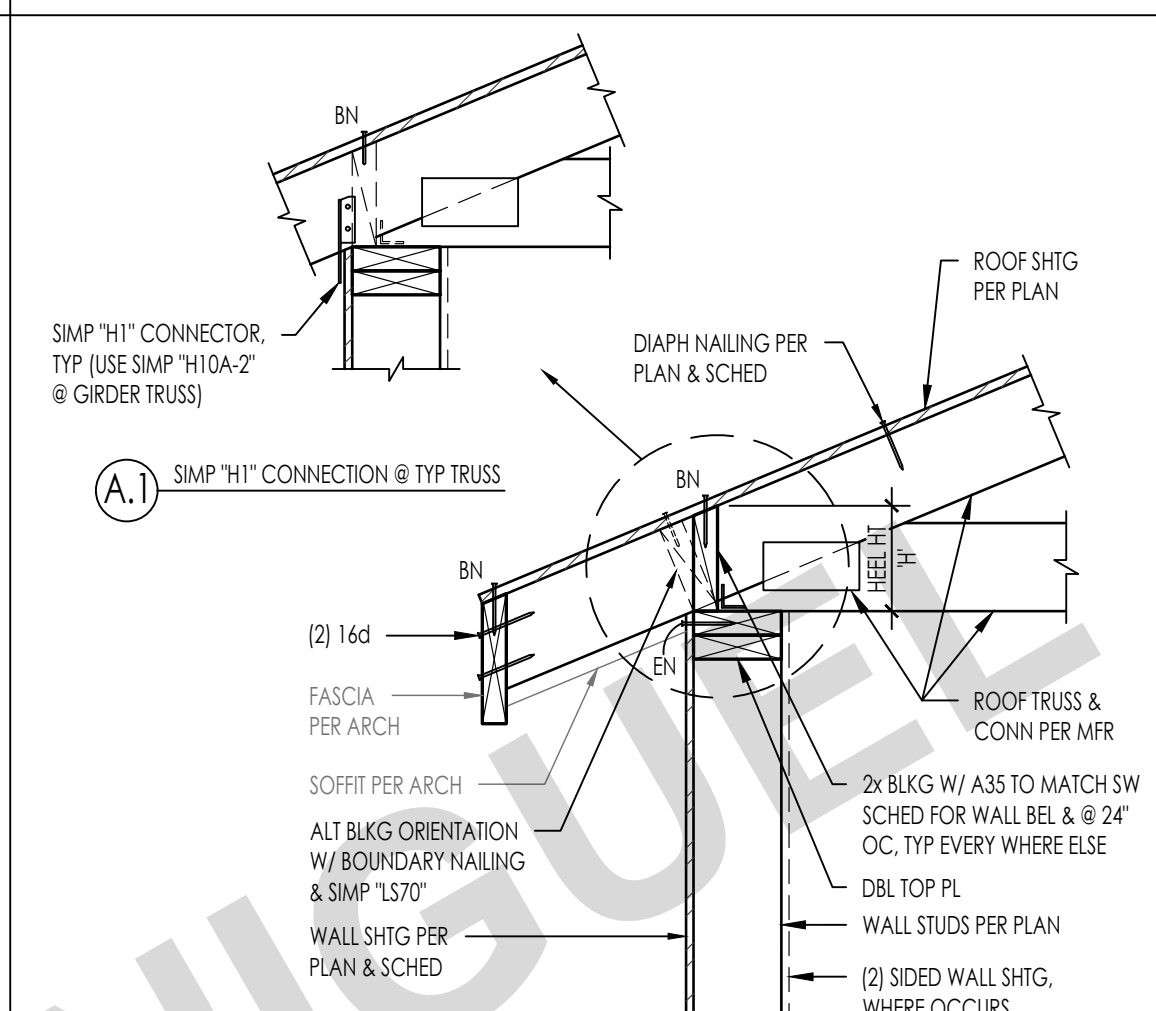
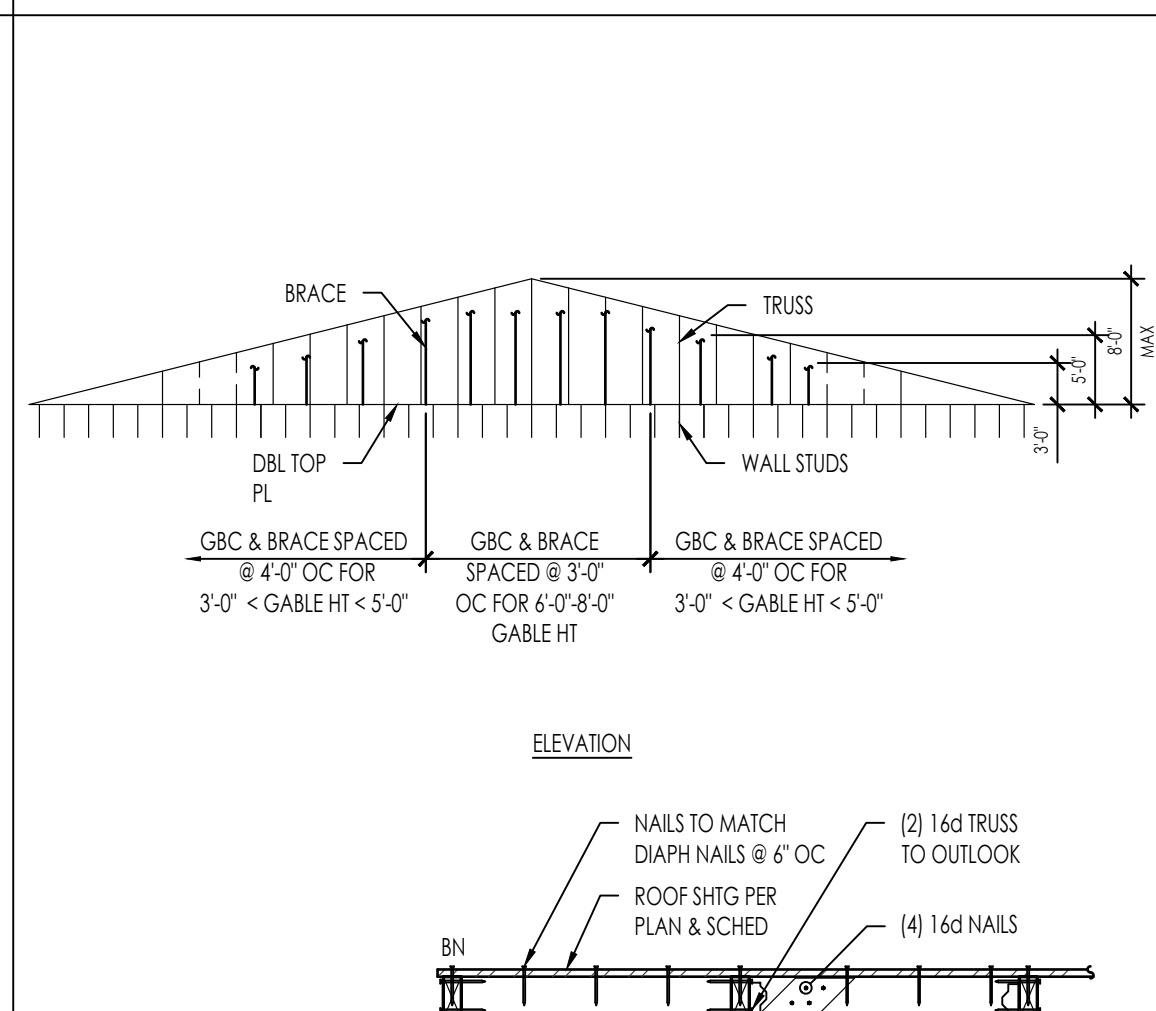
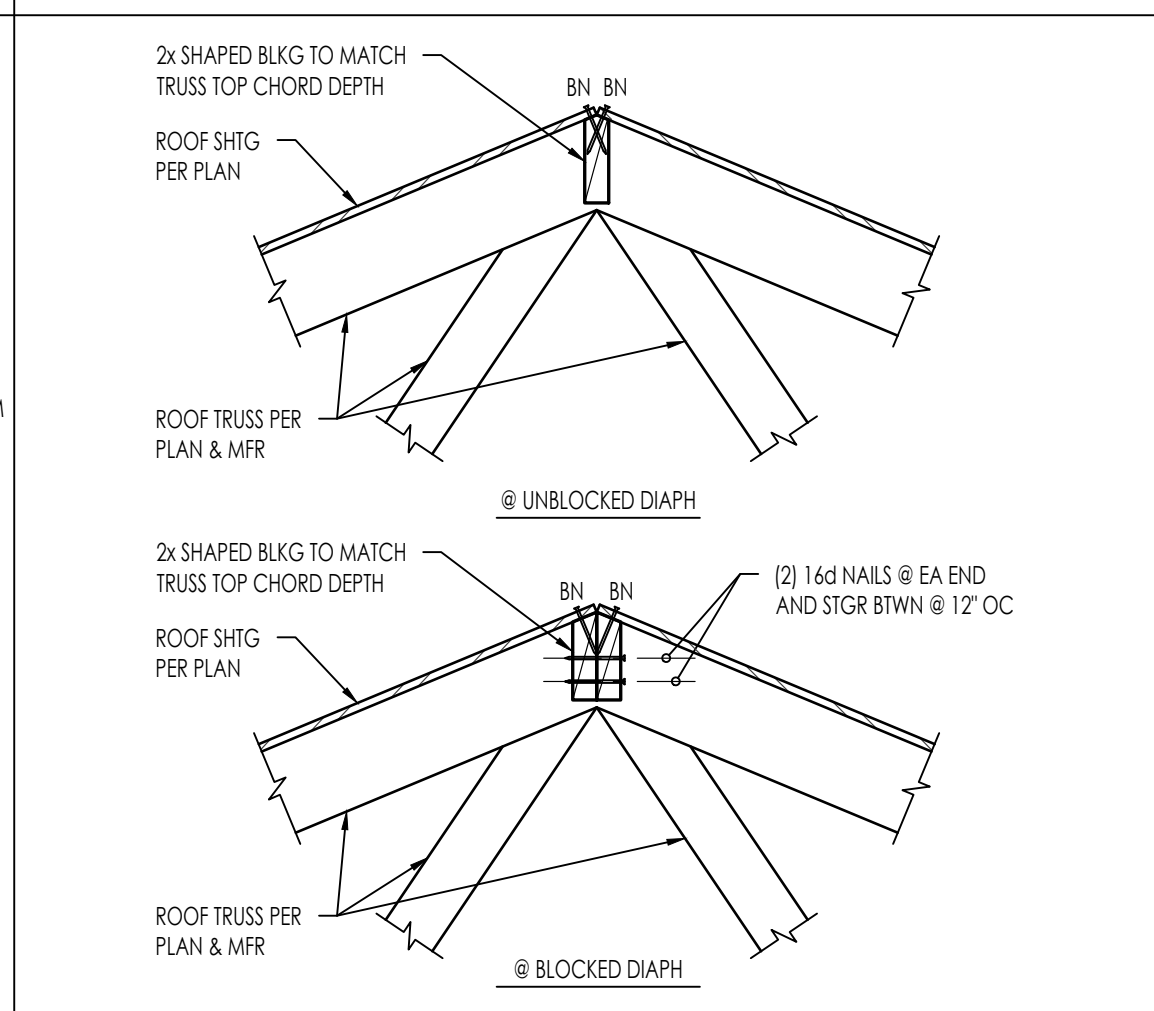
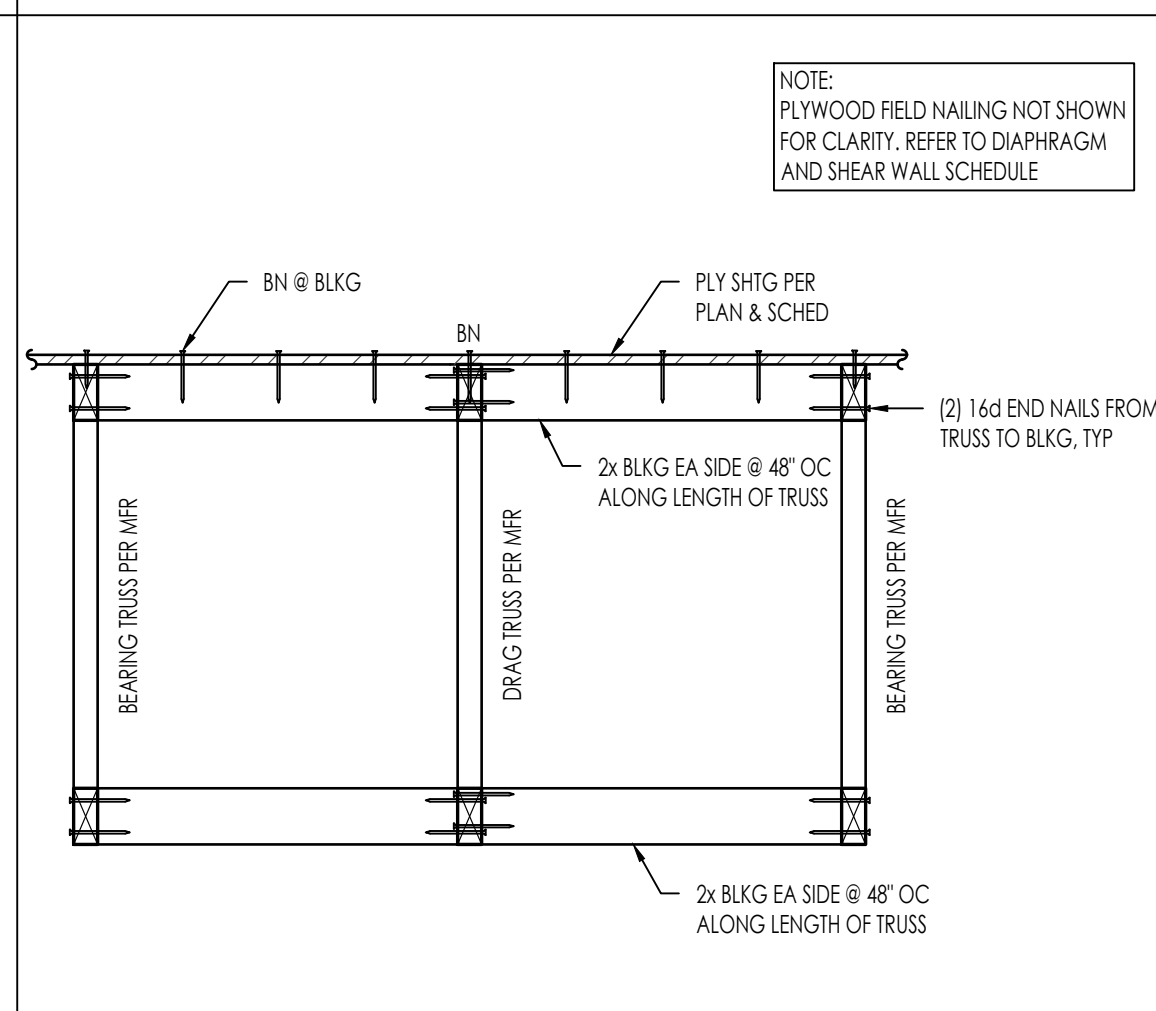
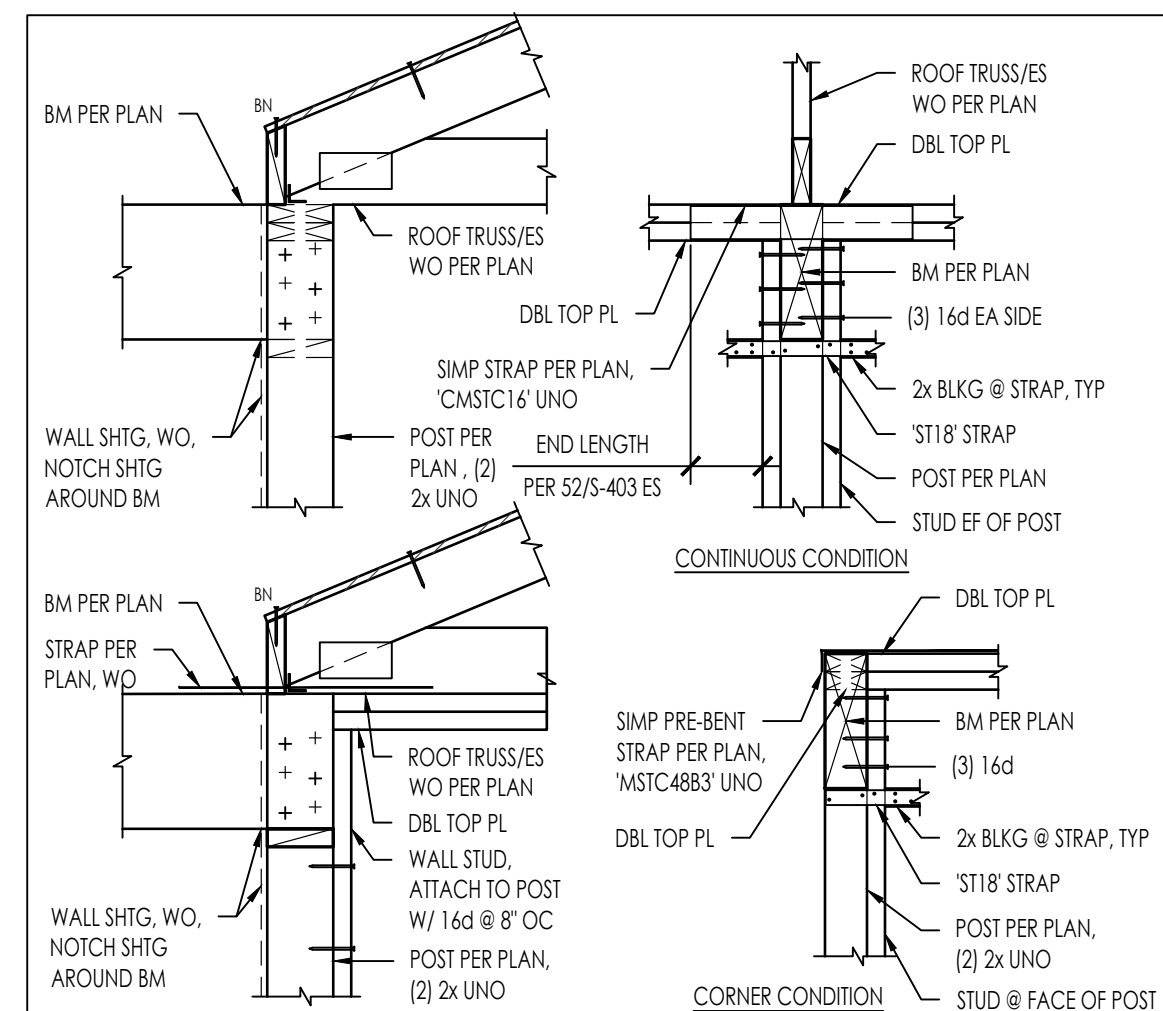


PLATE WASHER DETAIL
2889-00-CU22- S402 - 34
NTS 34

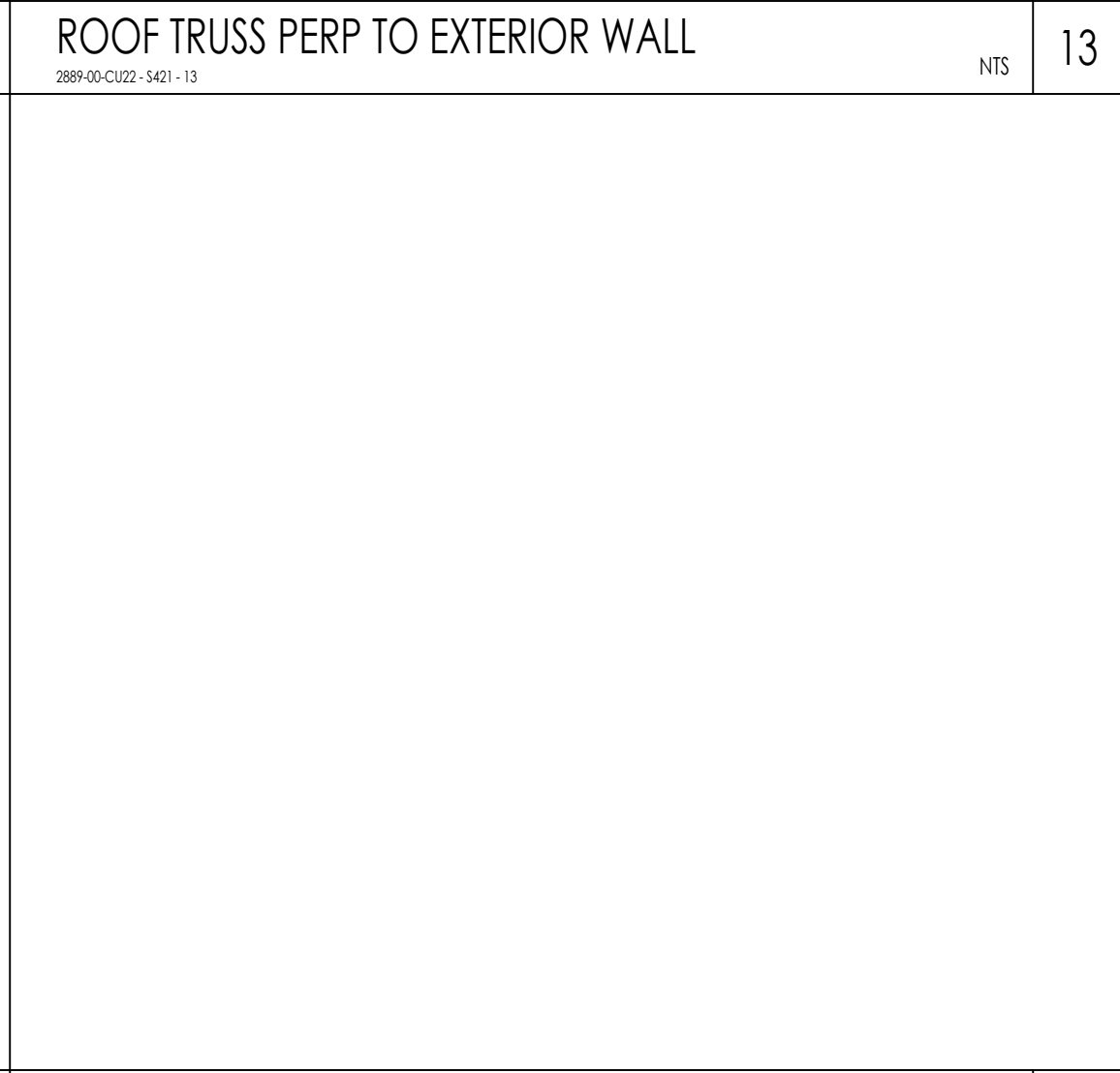
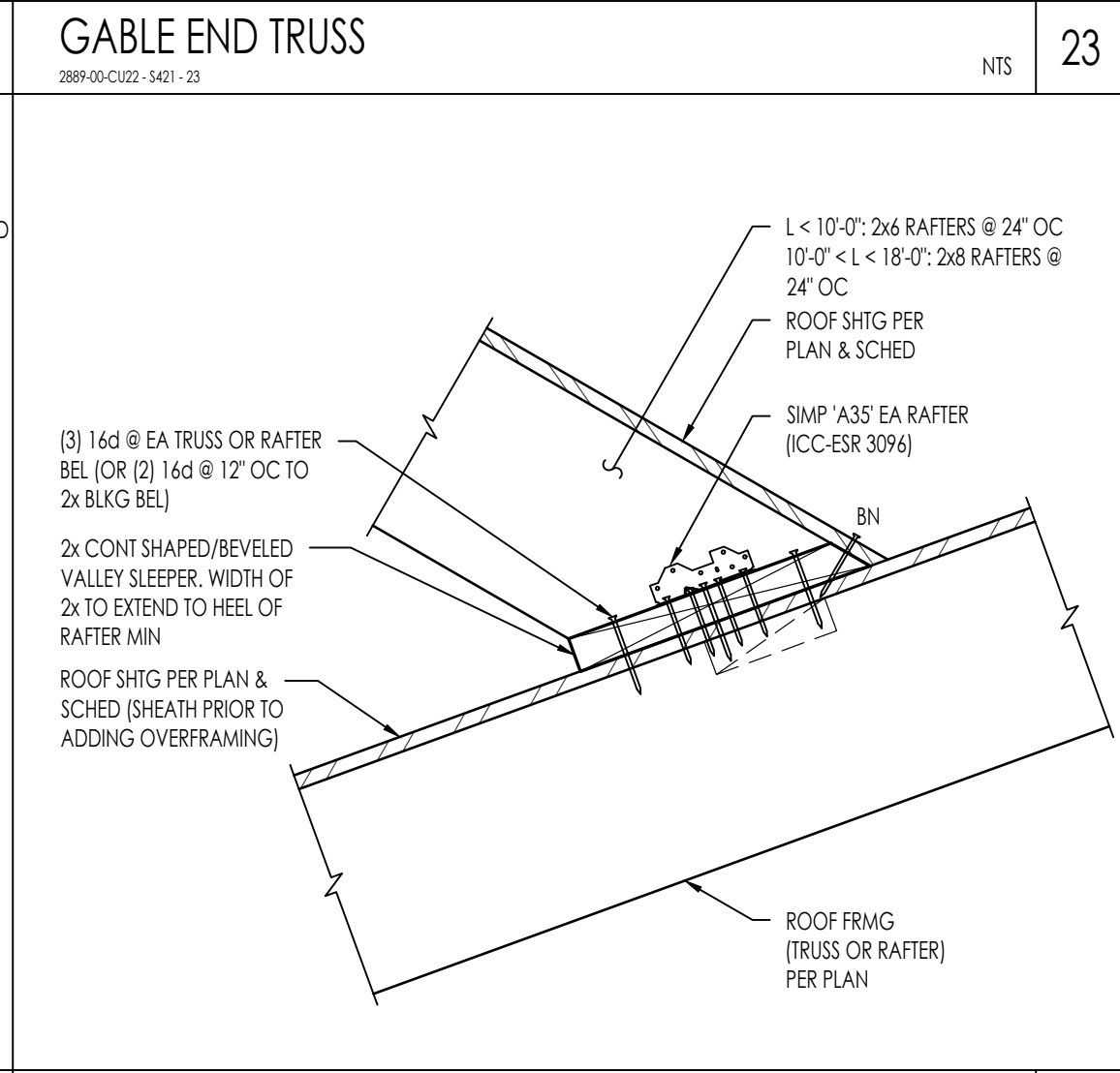
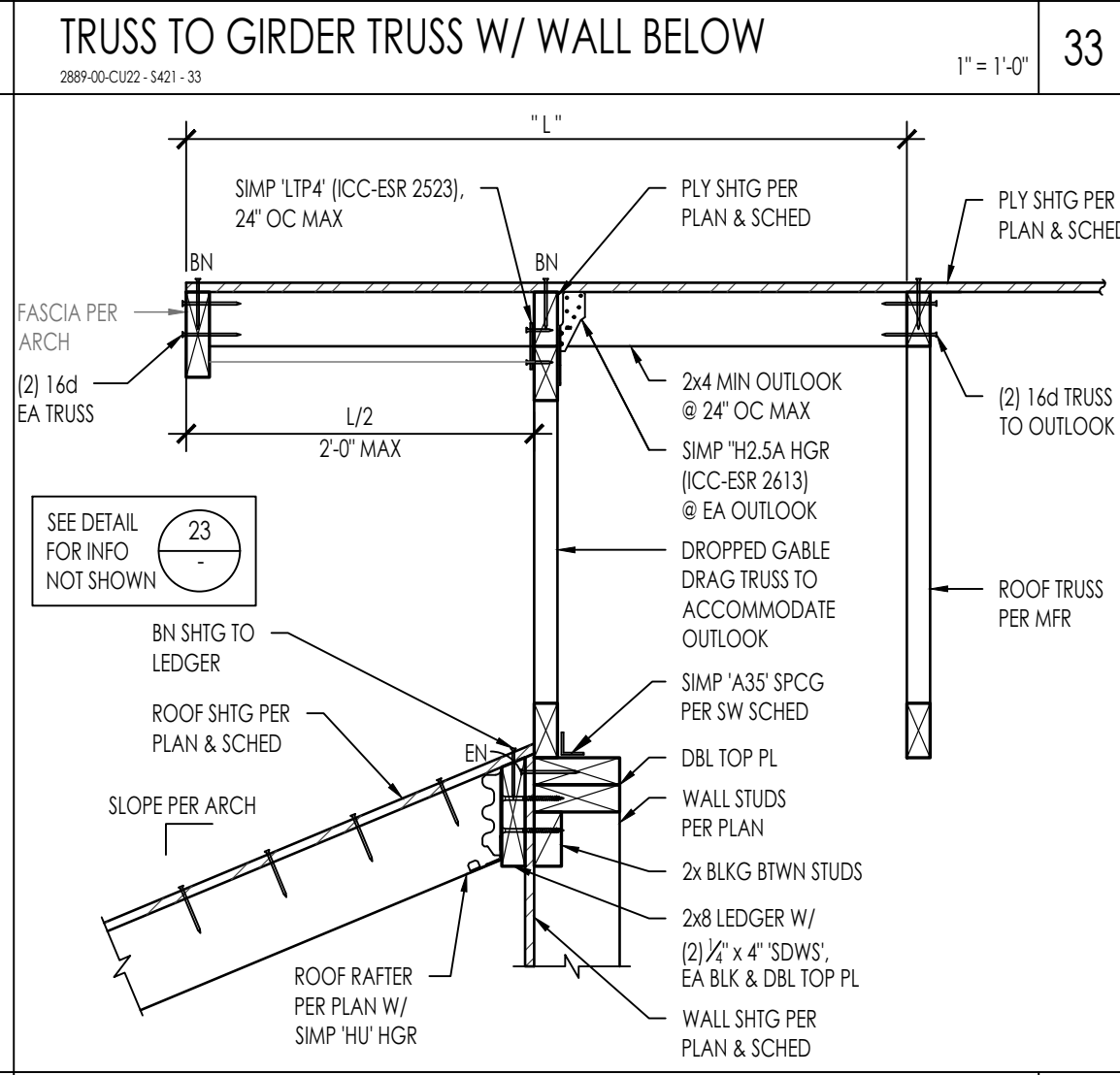
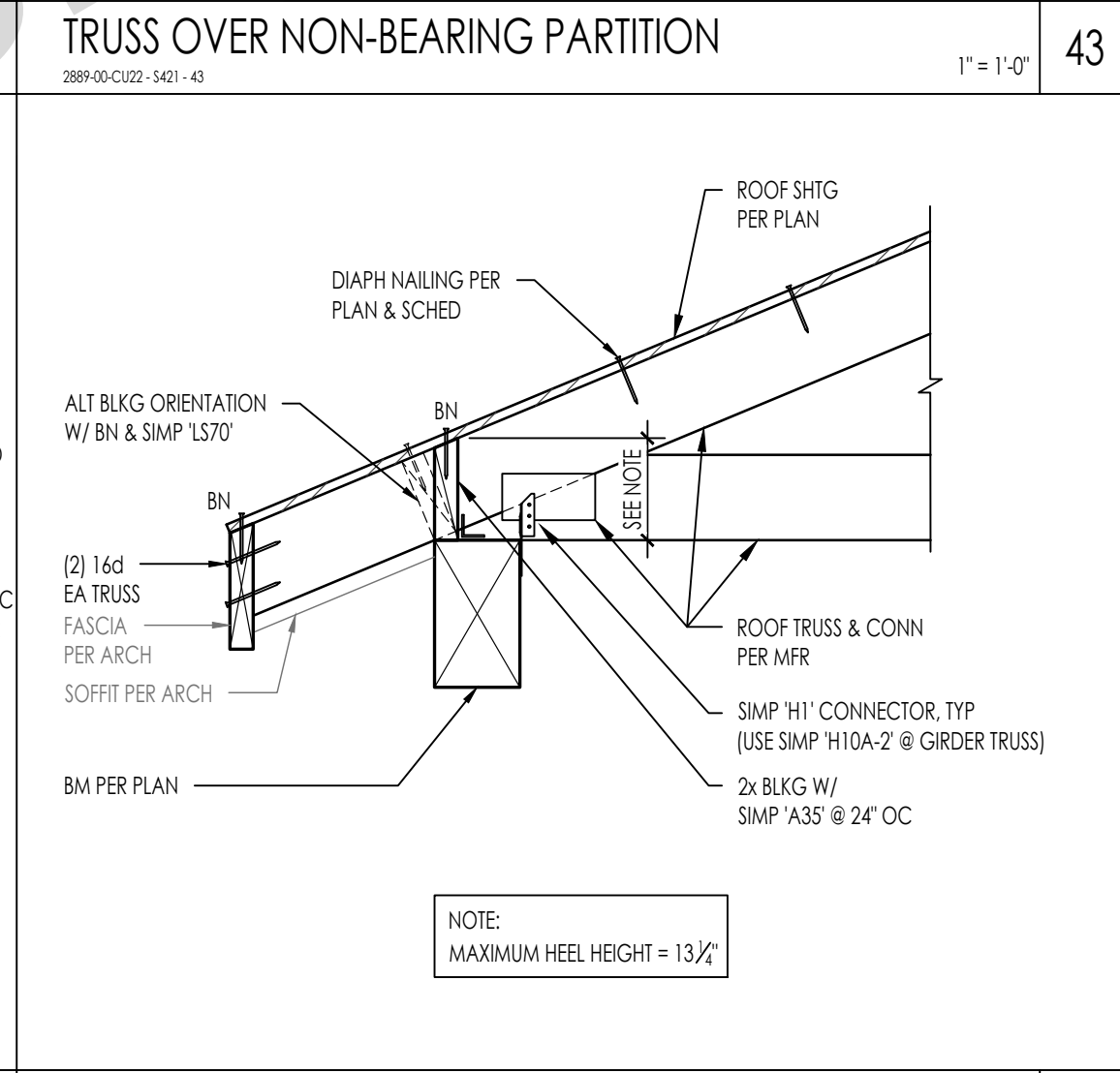
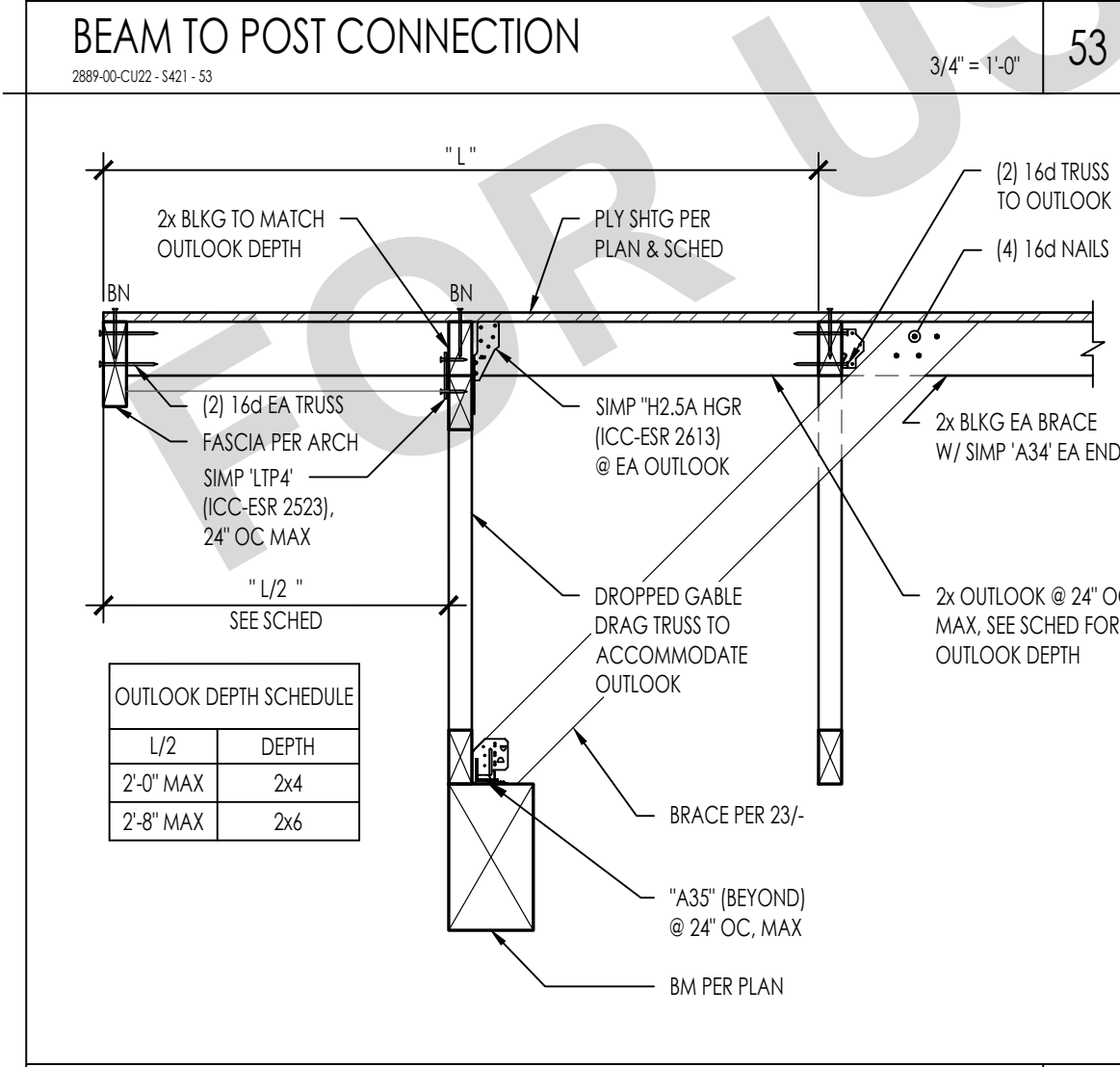
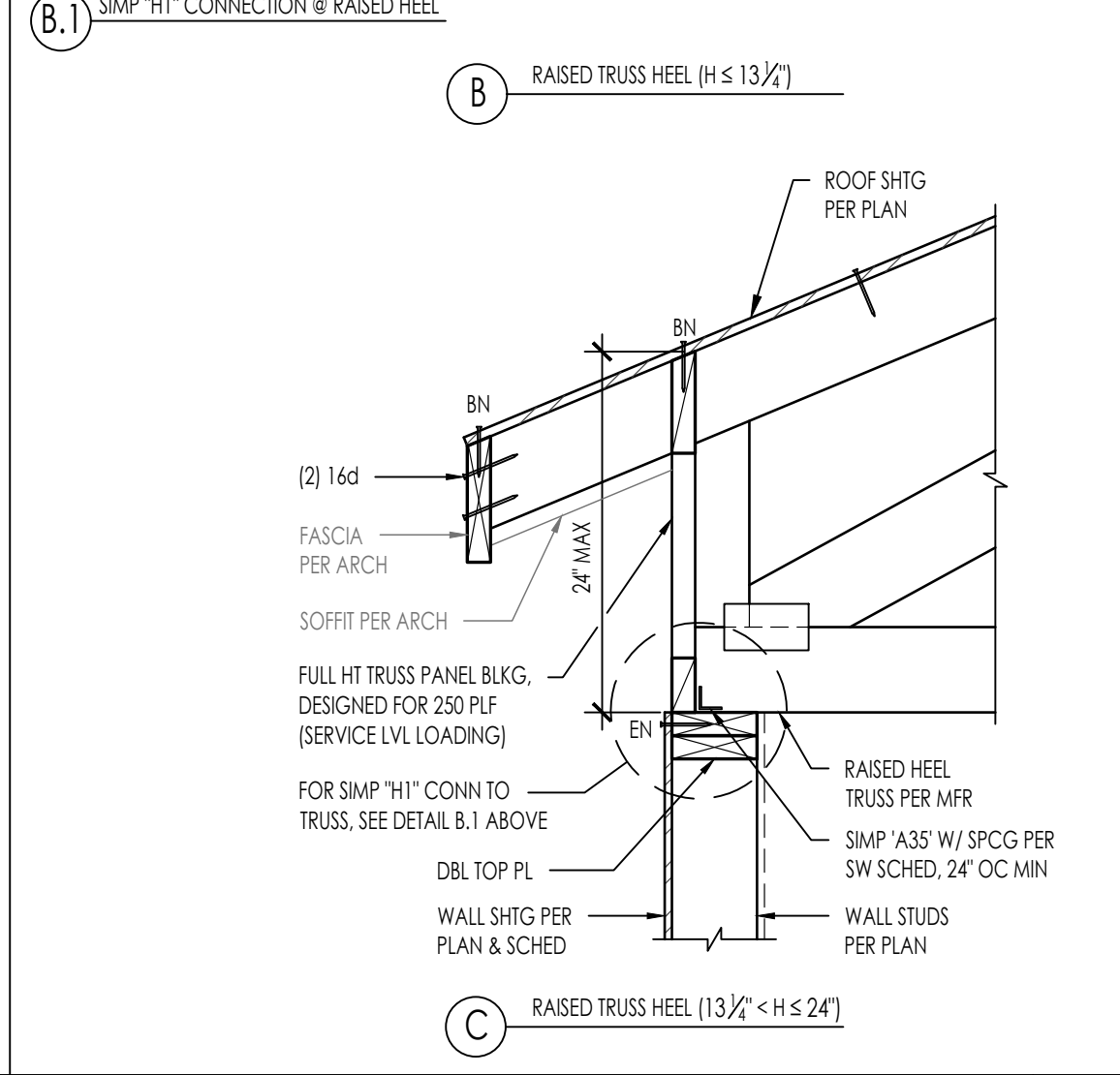
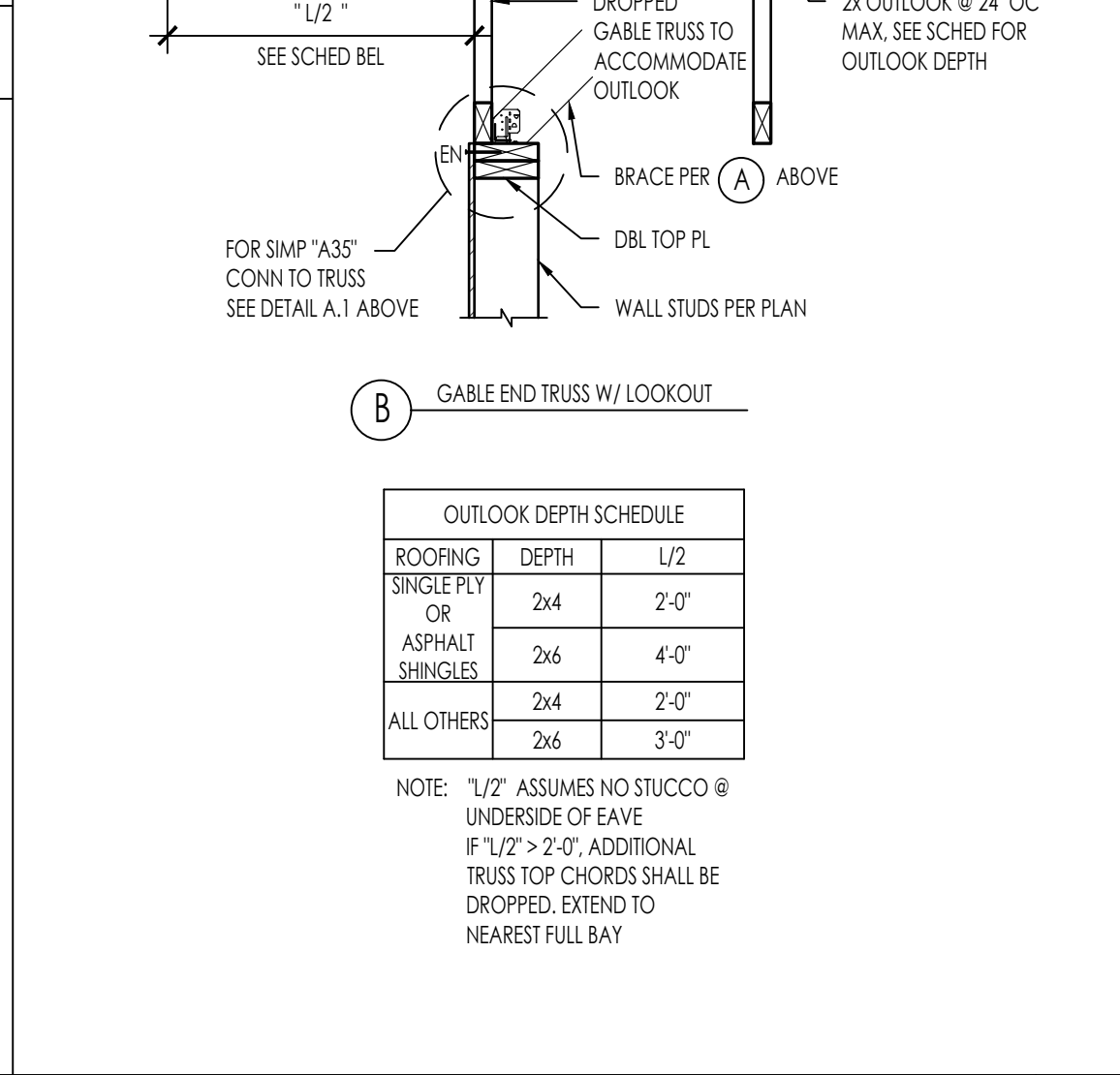
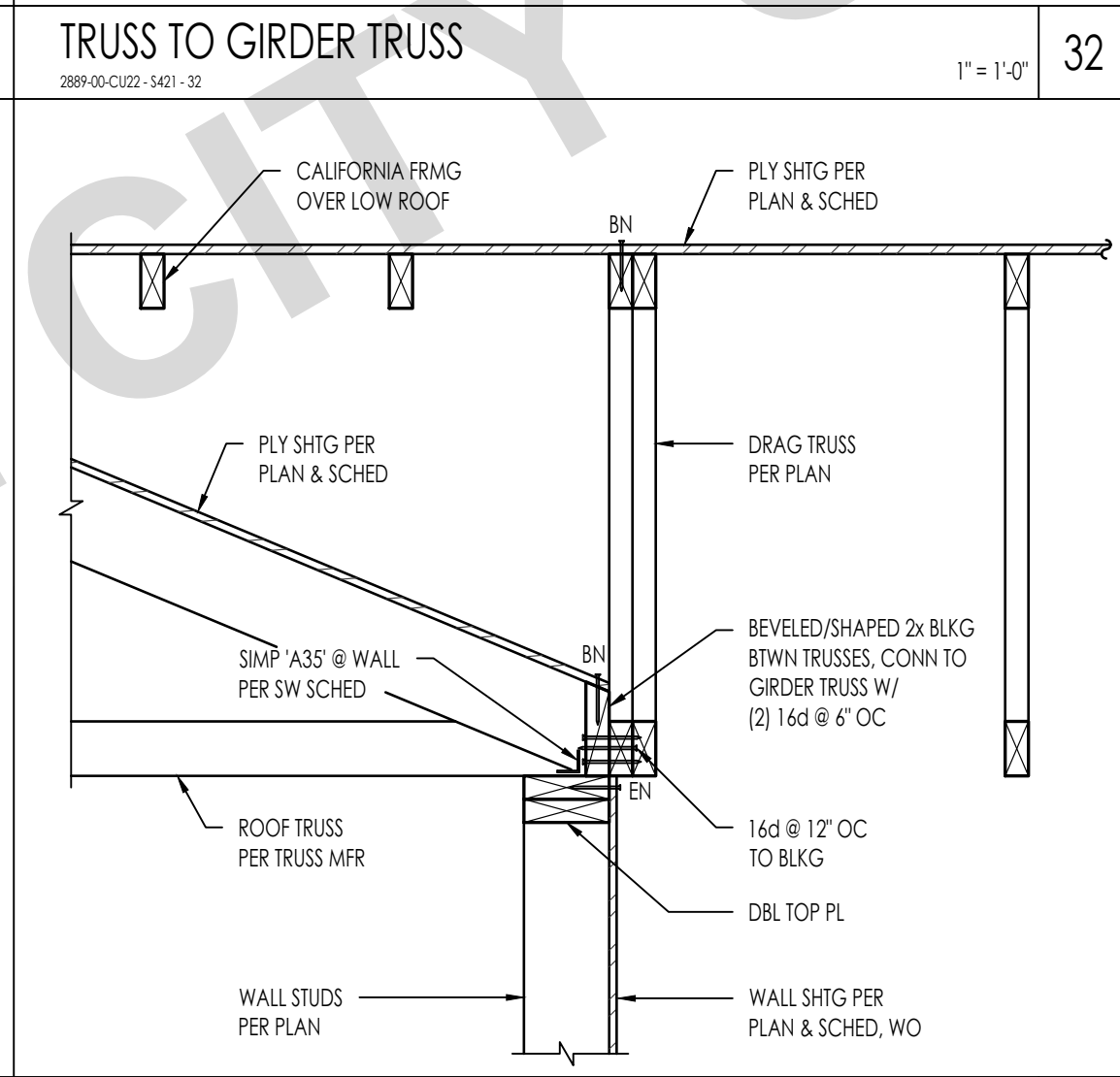
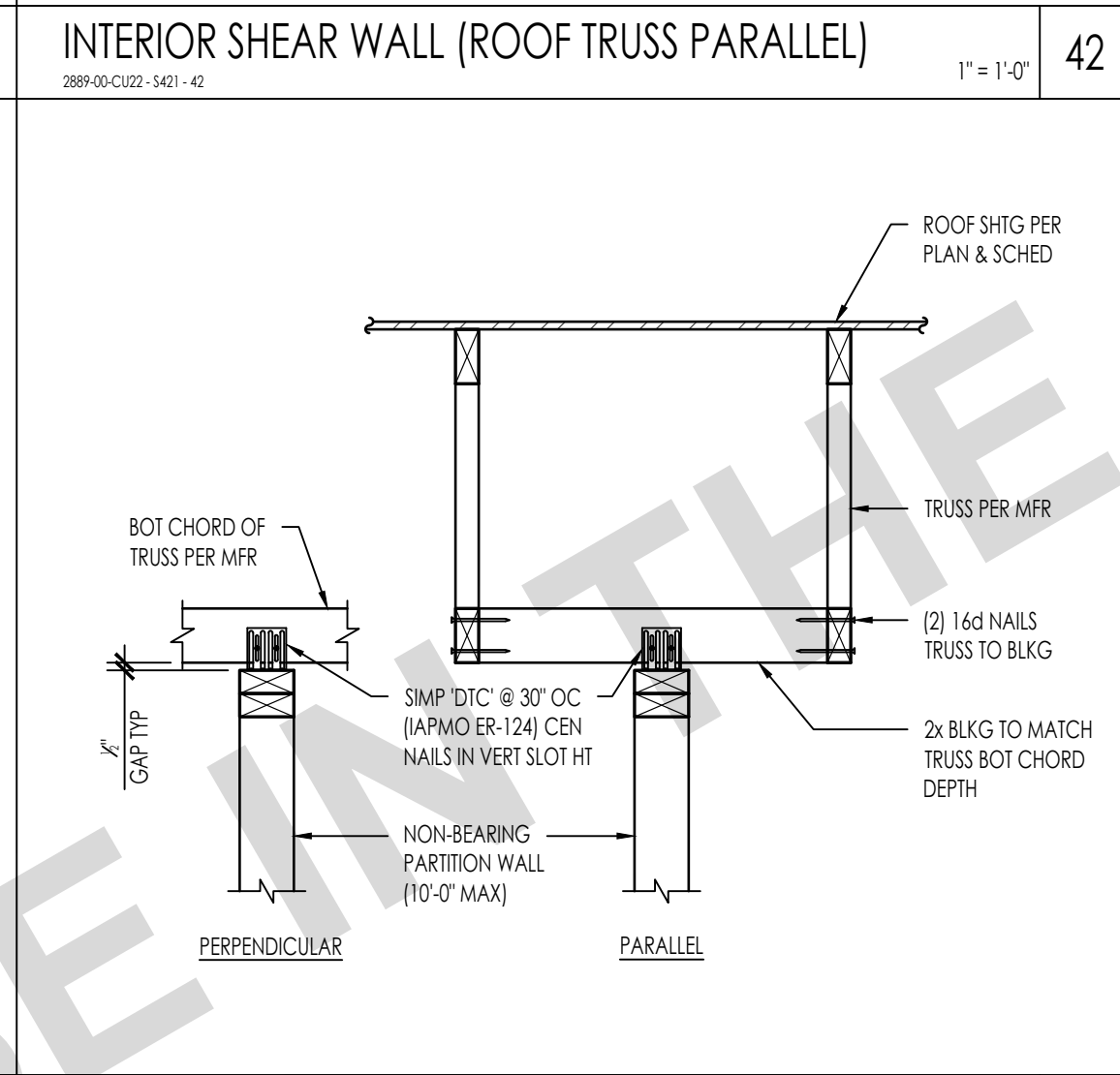
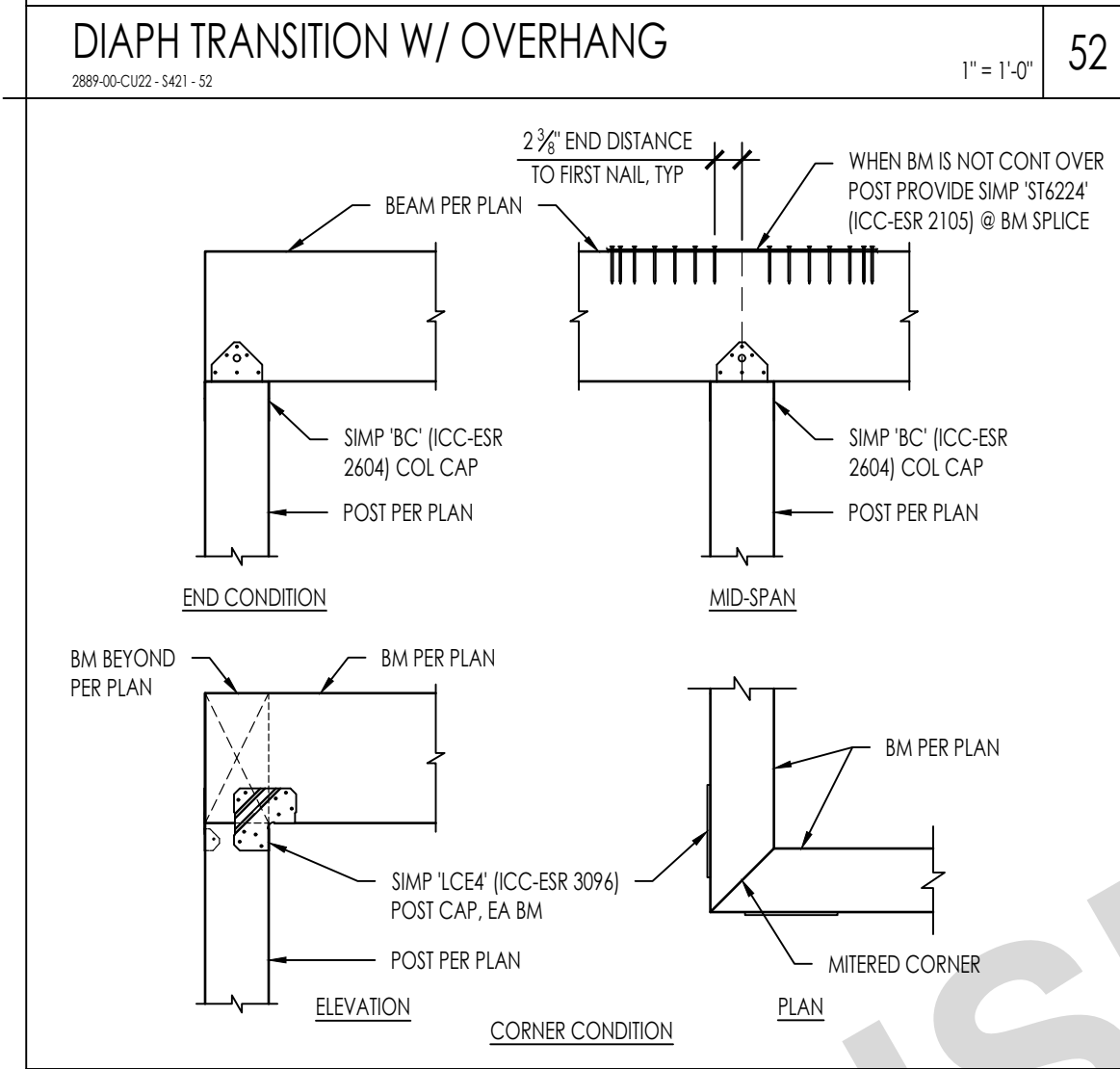
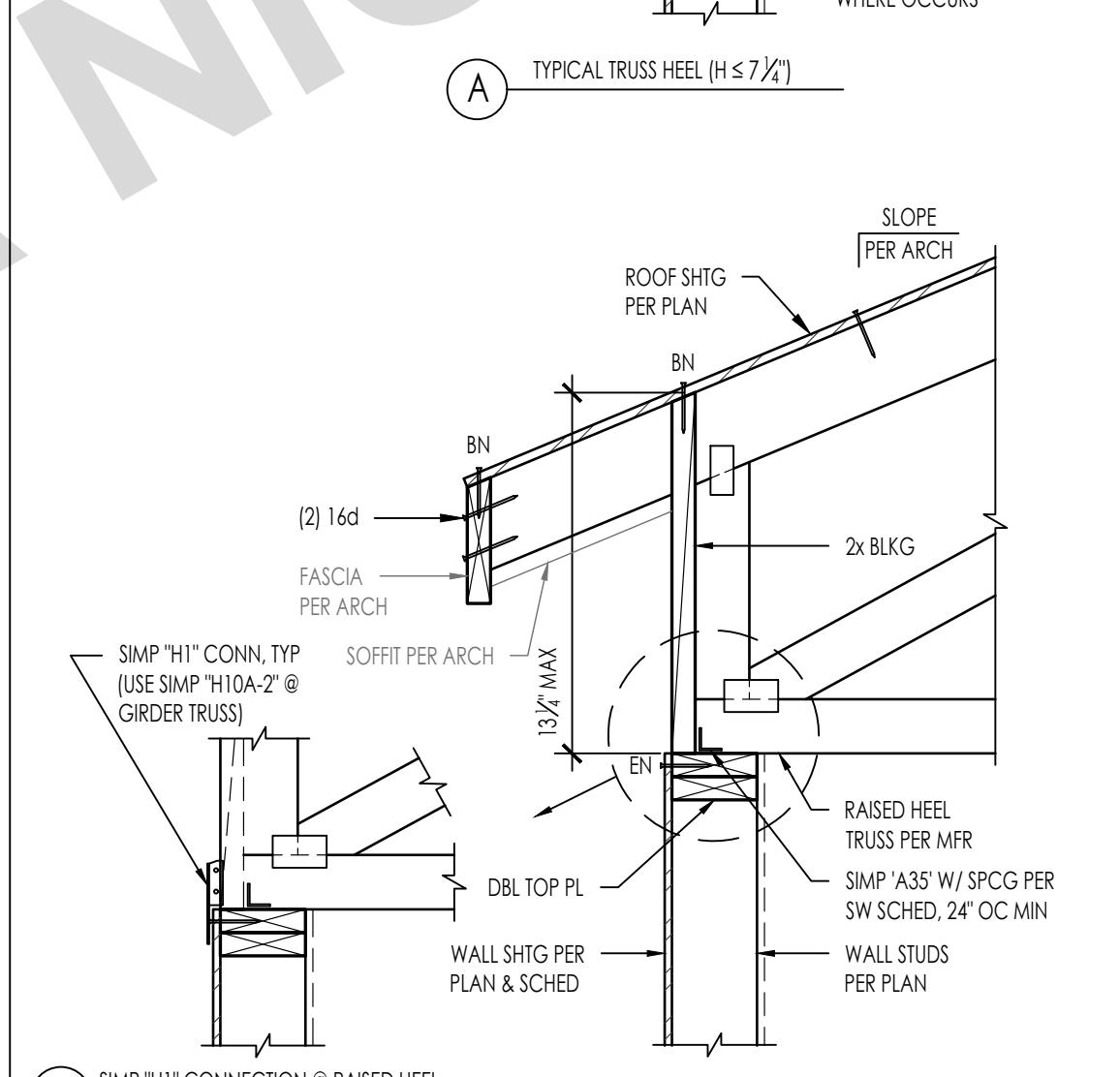
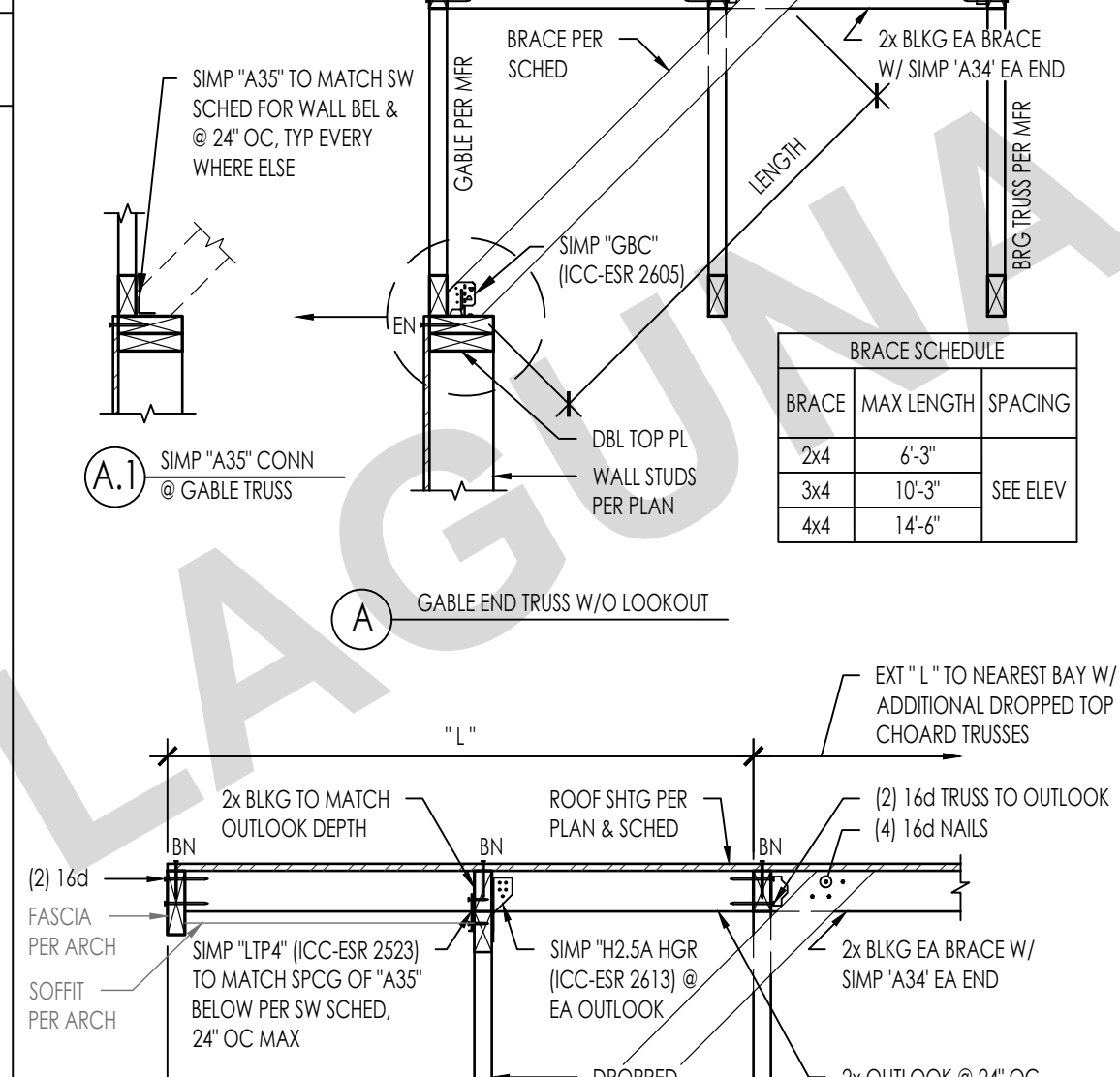
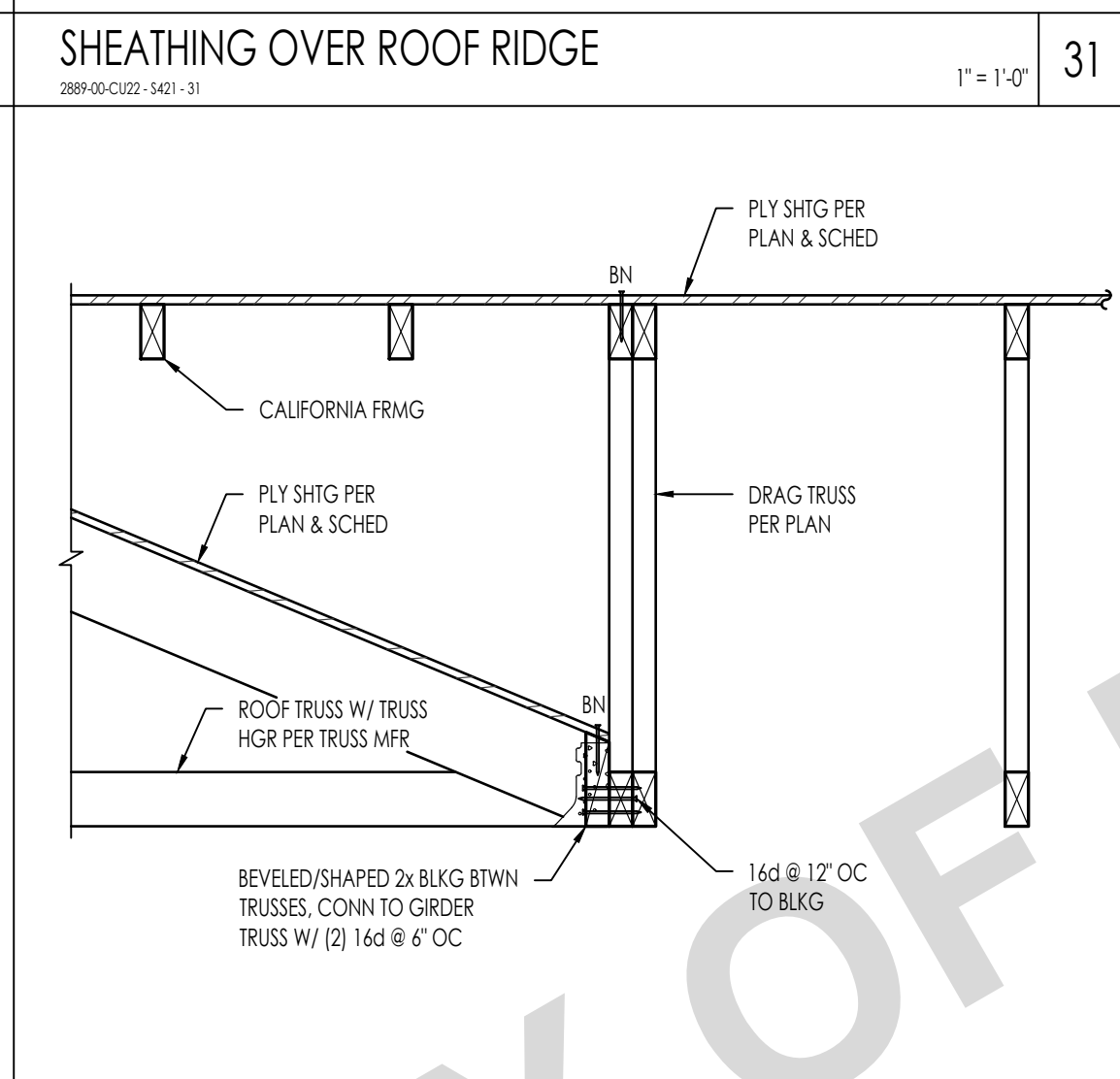
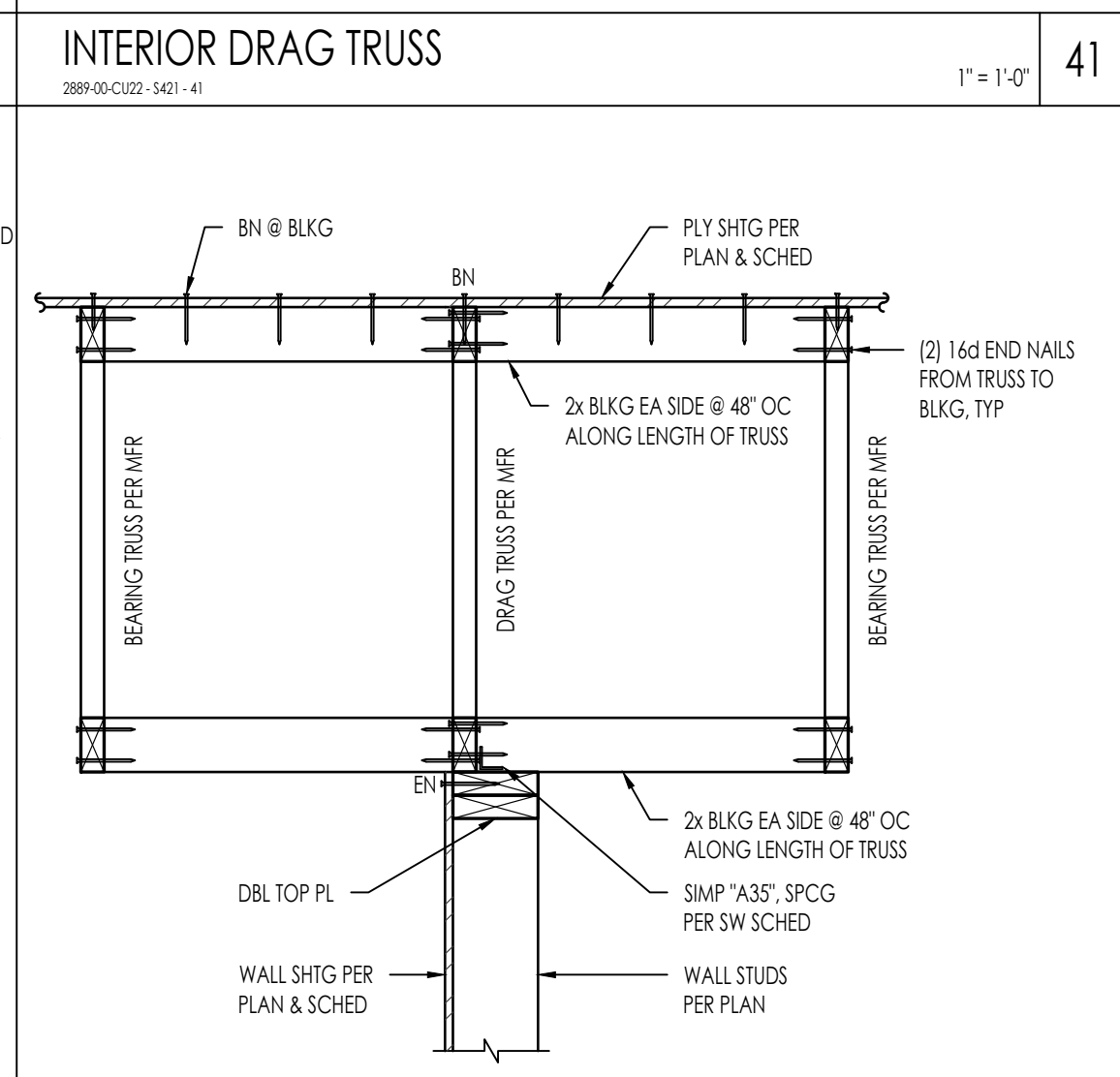
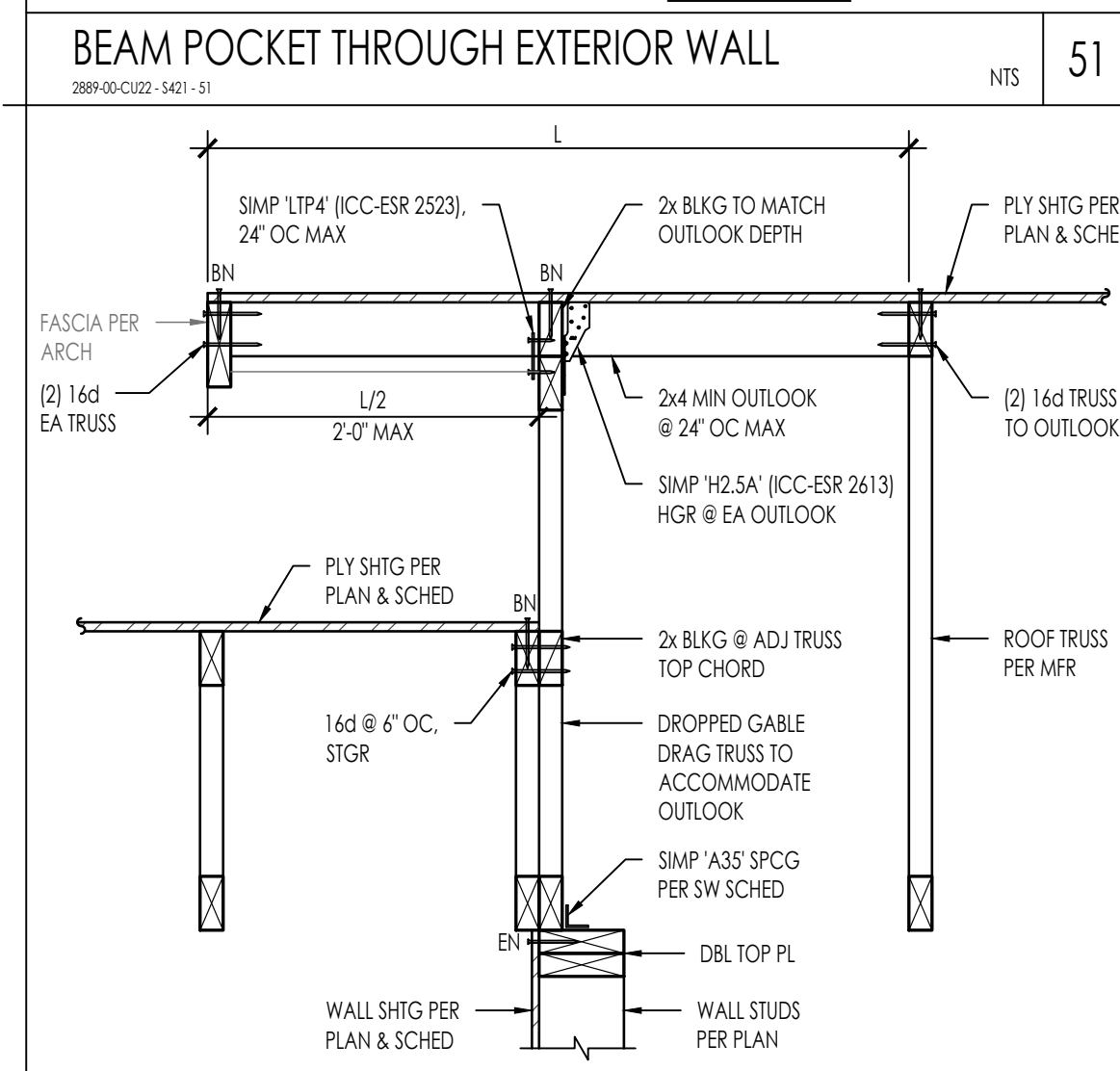


DOUBLE SIDED SHEAR WALL
2889-00-CU22- S402 - 24
NTS 24

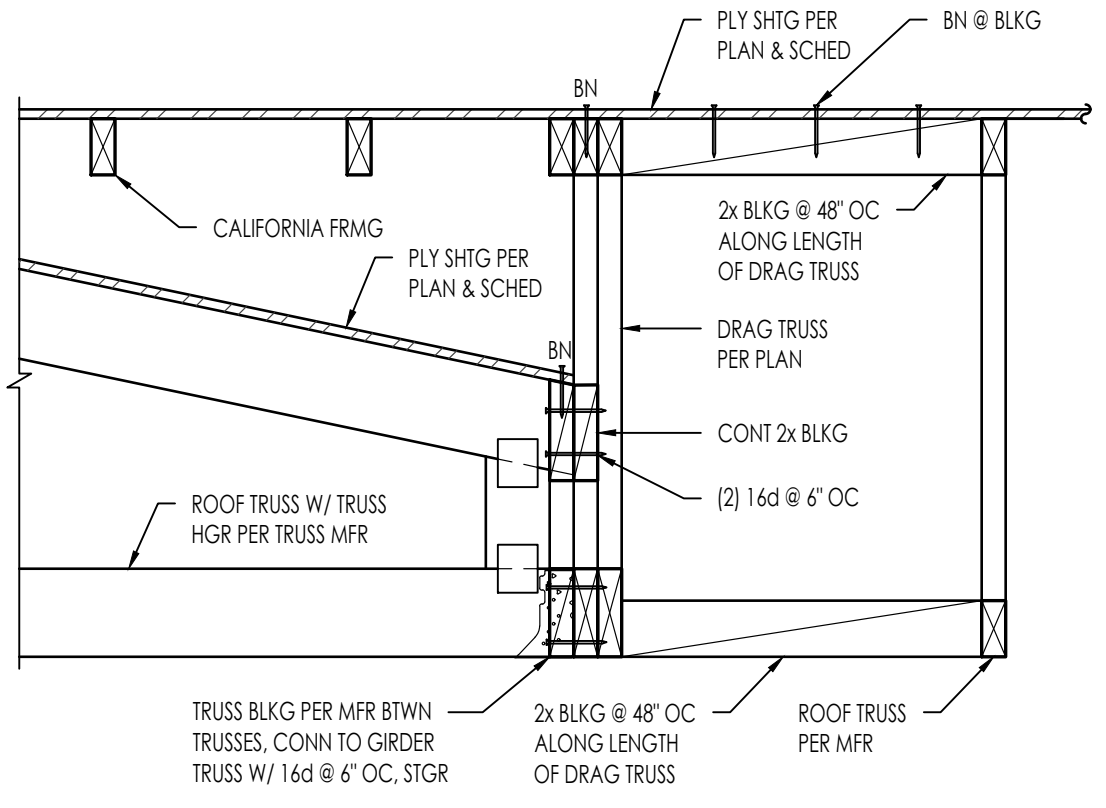
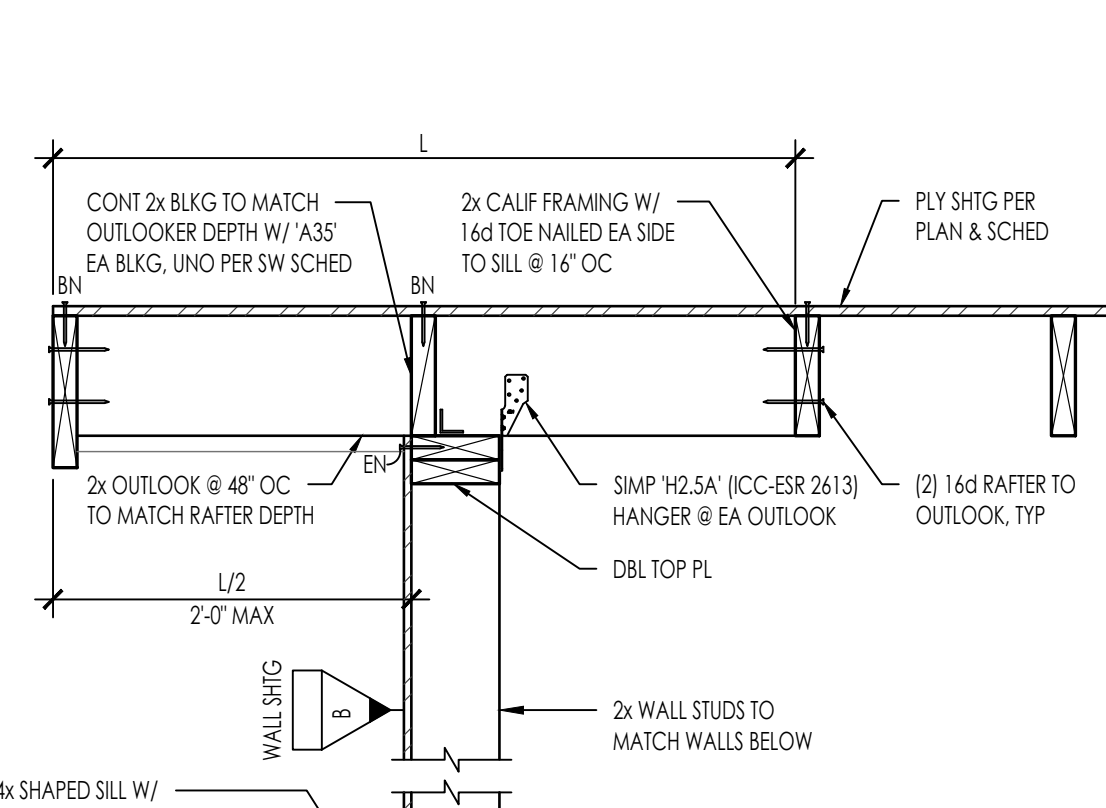
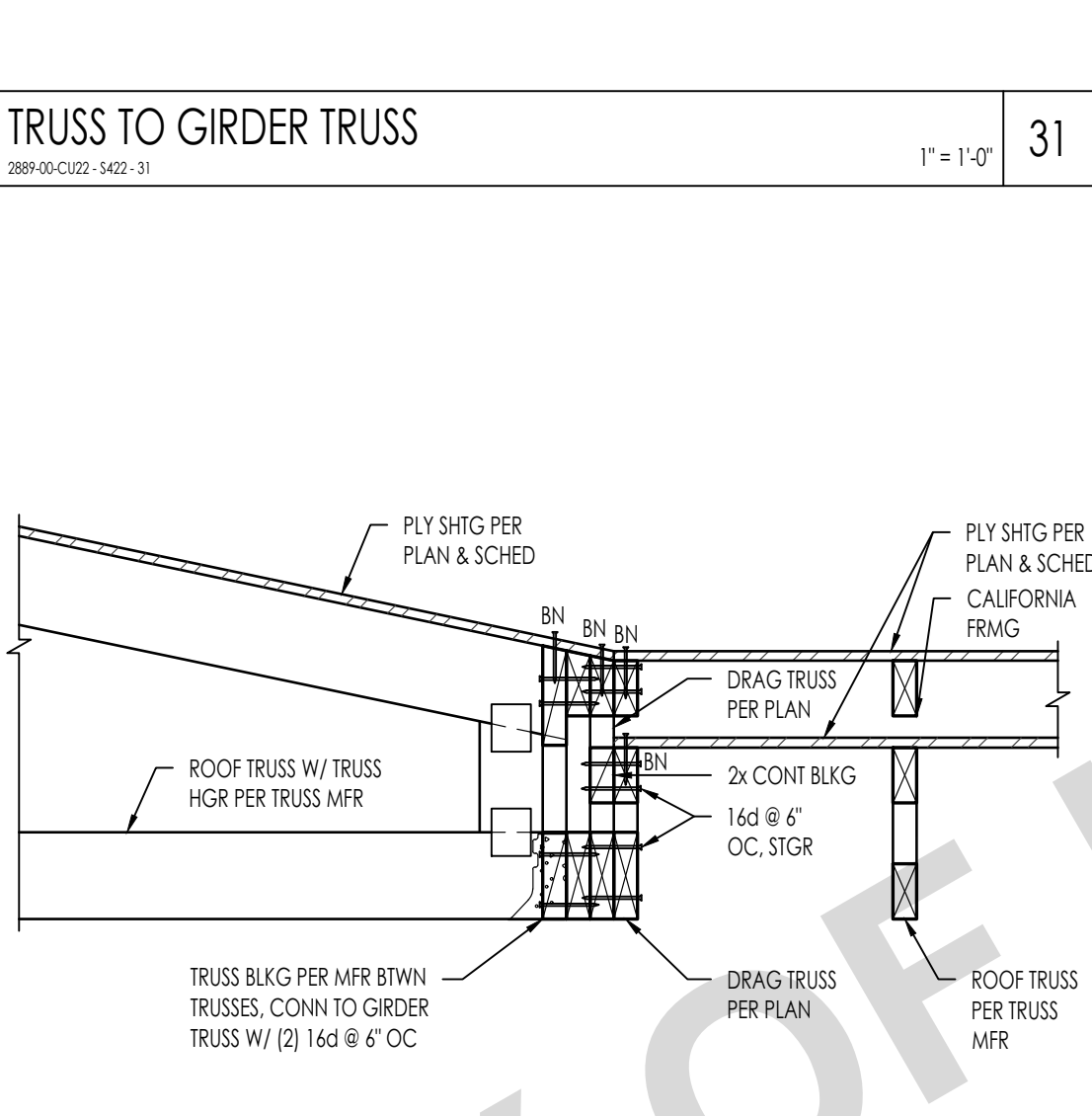
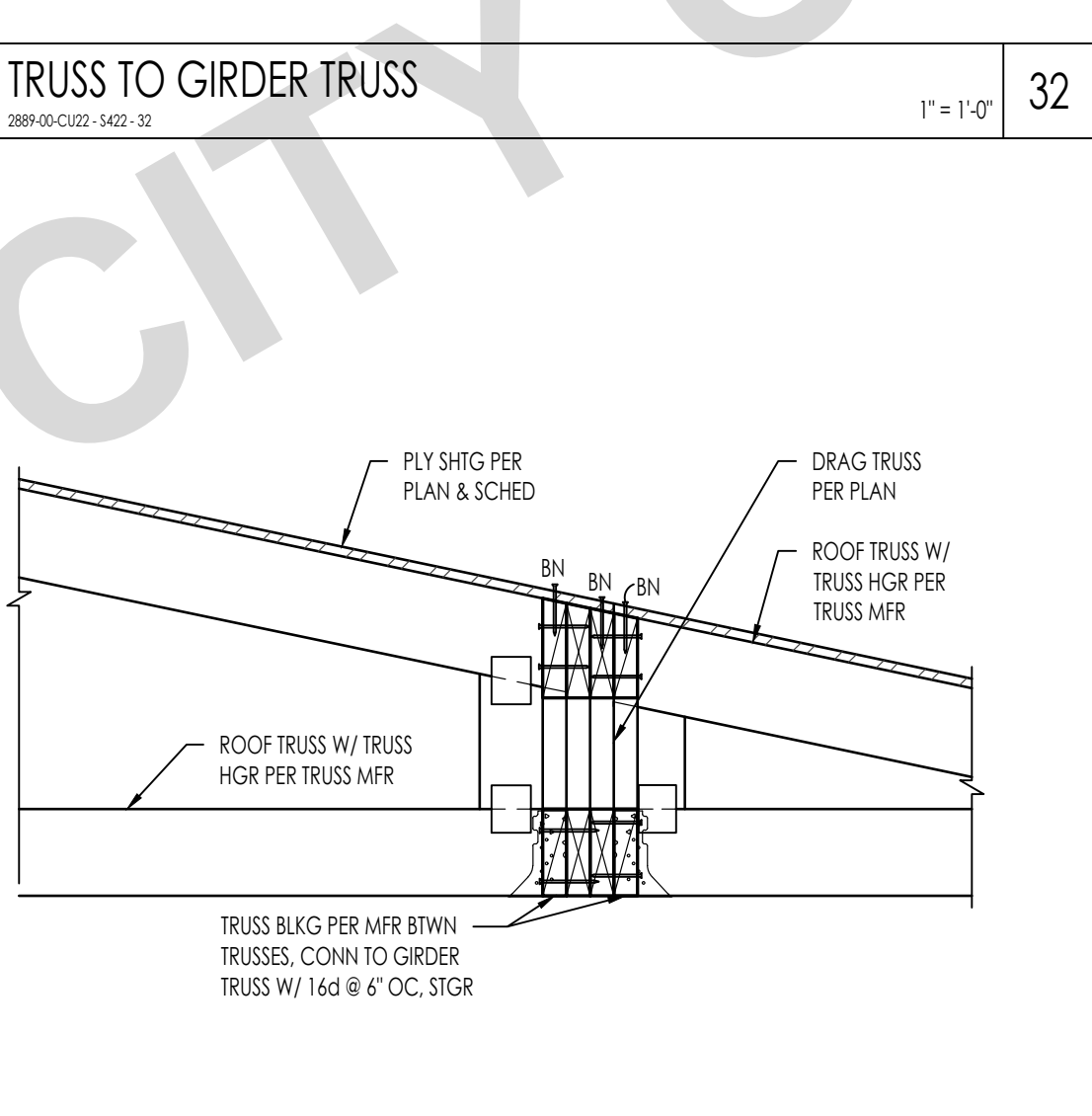
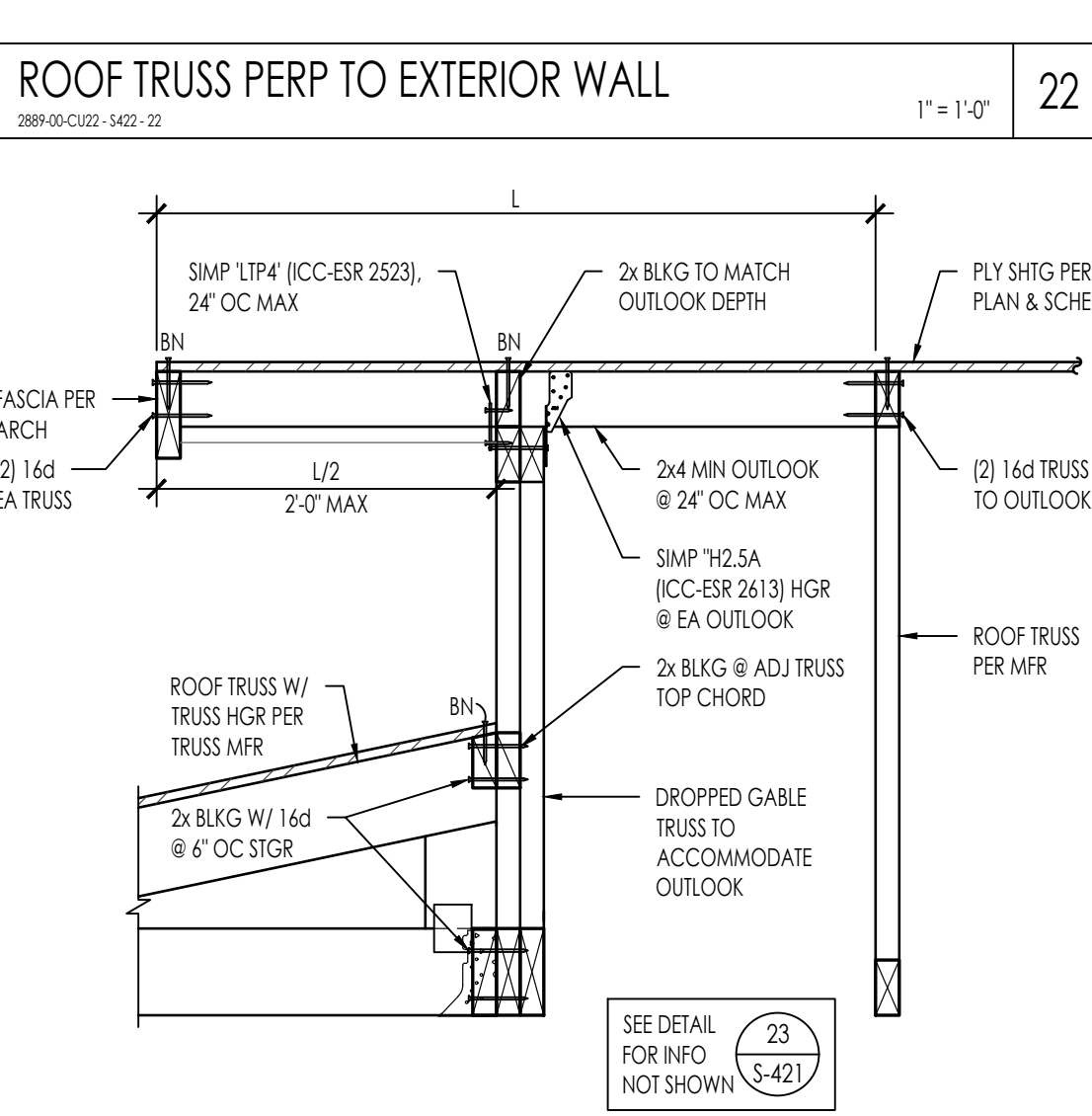
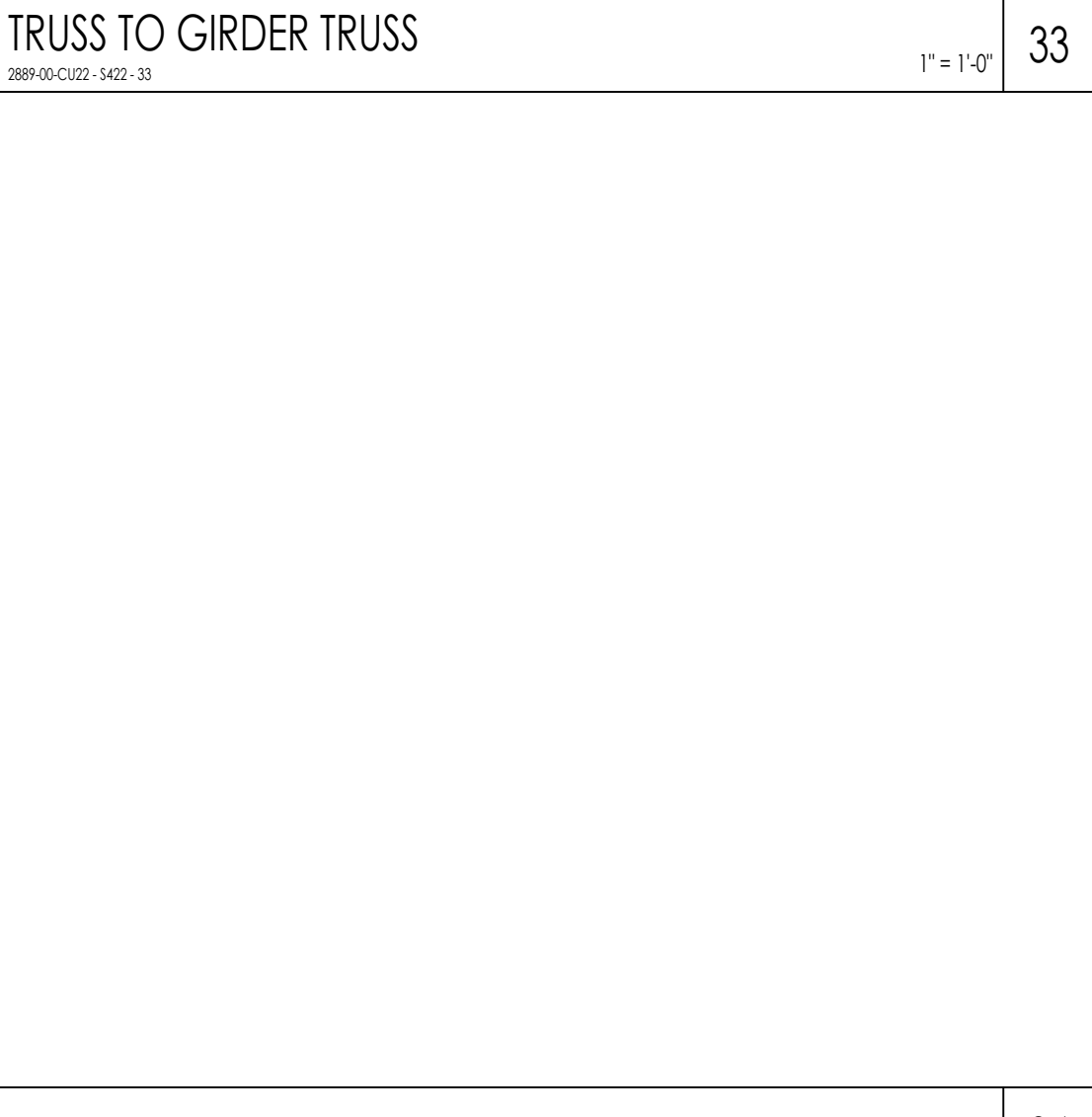
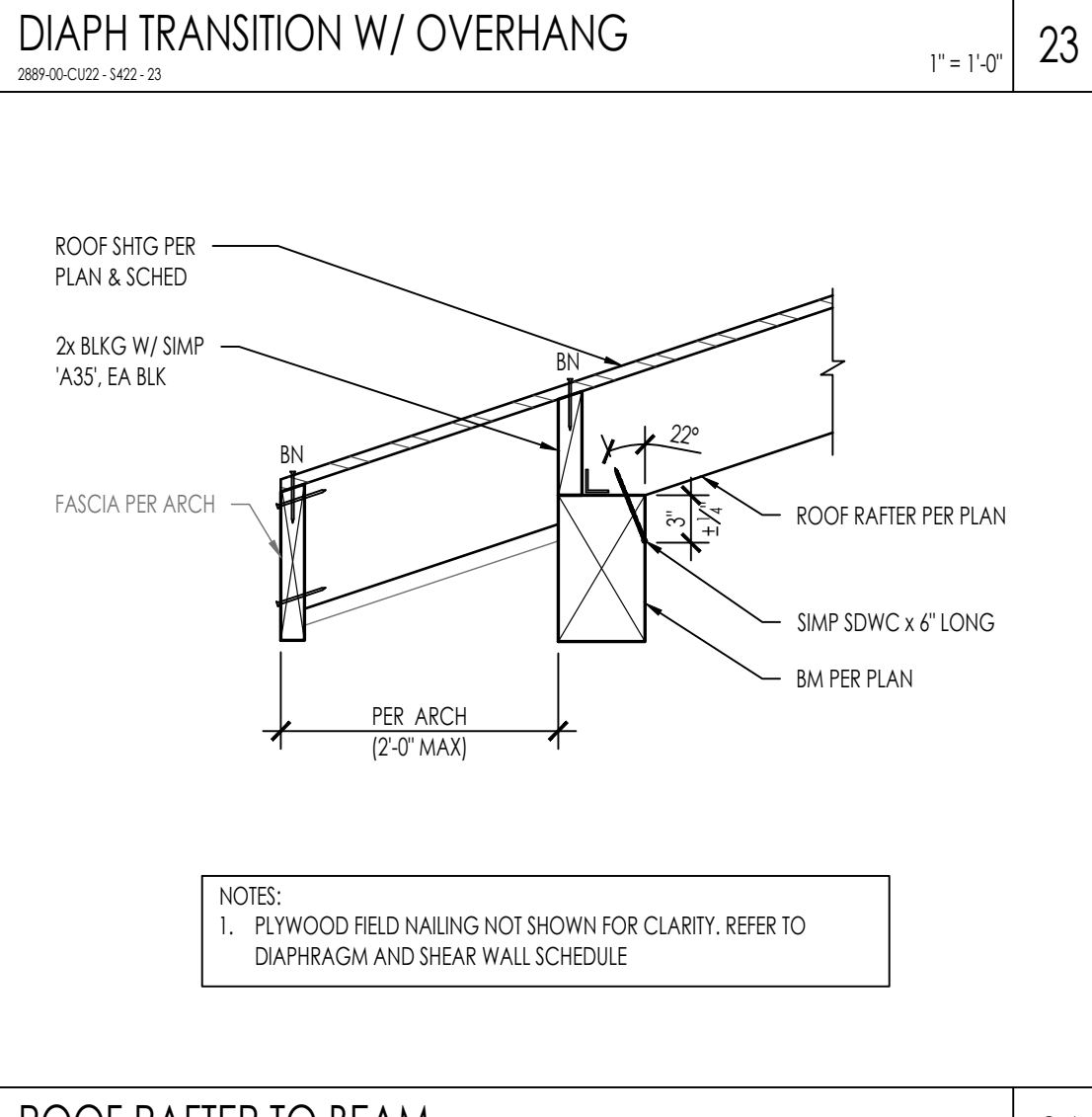

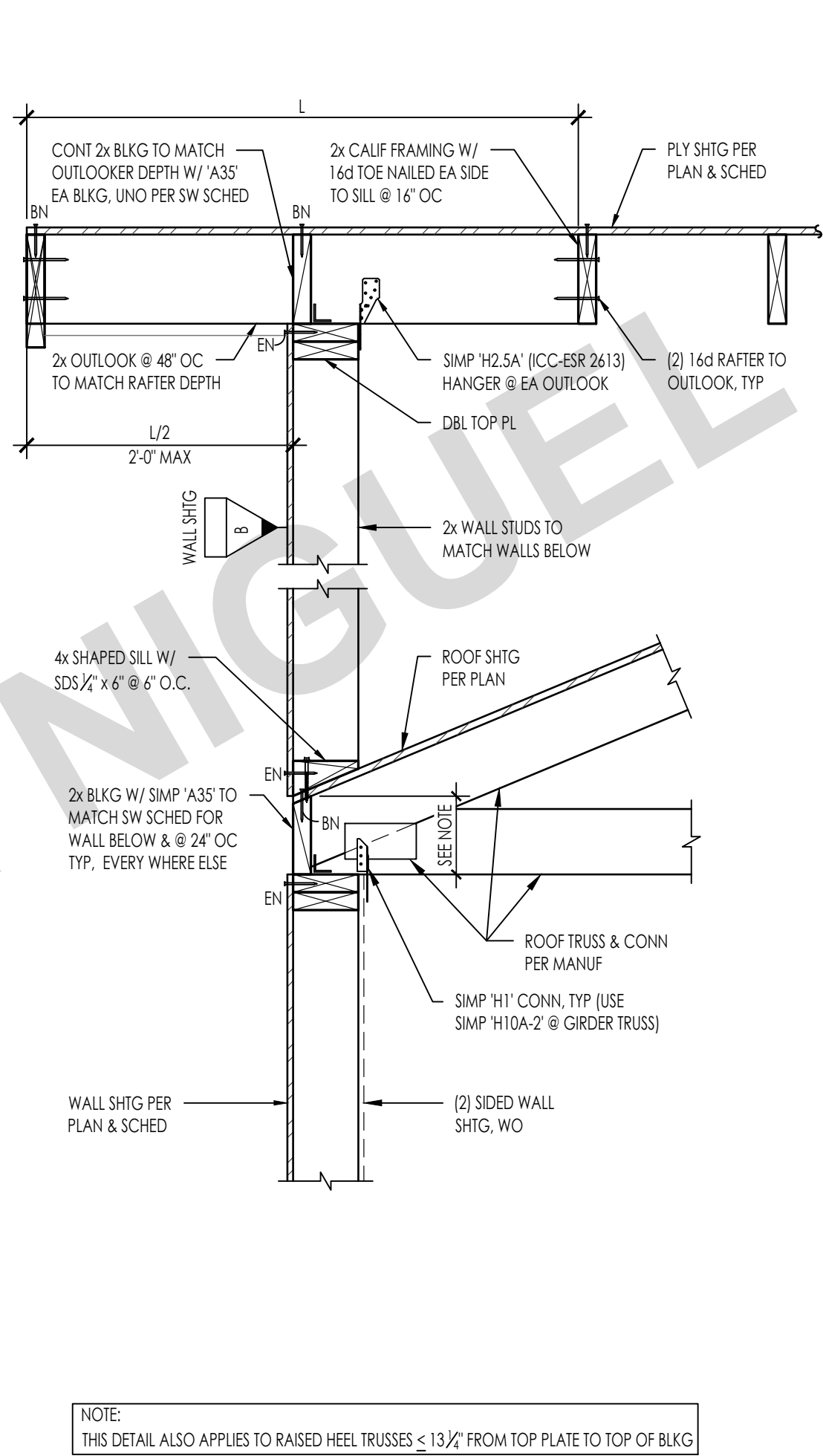
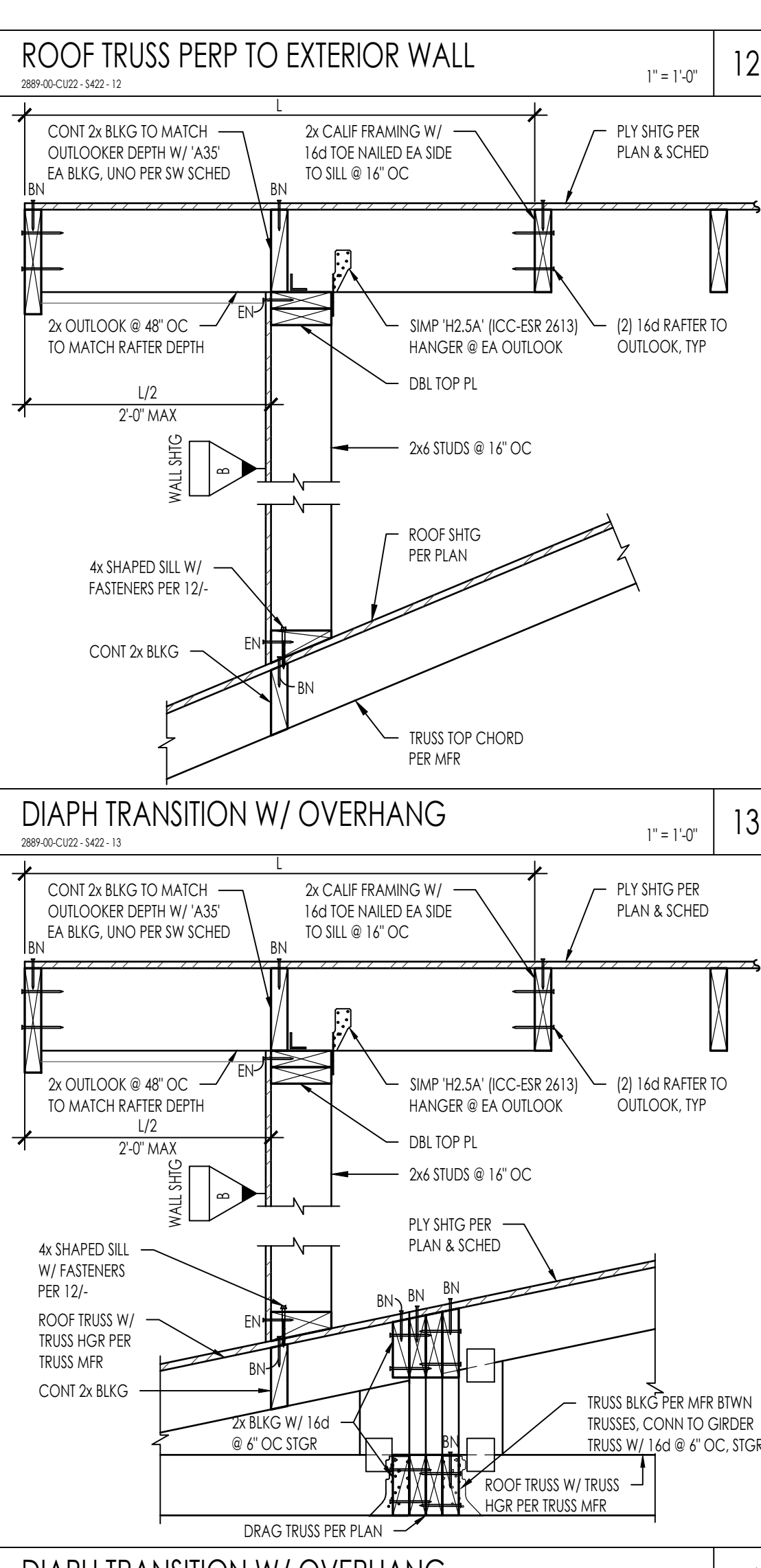
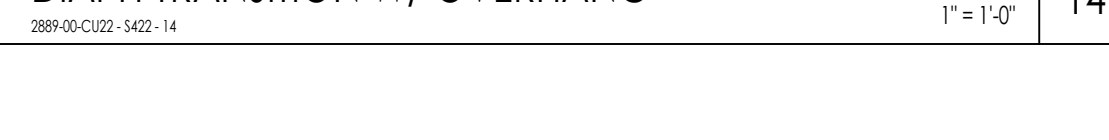
2x STUD NAILING @ ADJOINING PANEL EDGES
2889-00-CU22- S402 - 14
NTS 14



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	51	41	TRUSS TO GIRDER TRUSS 2889-00-CU22 - S-422 - 31	31	
					
	52	42	TRUSS TO GIRDER TRUSS 2889-00-CU22 - S-422 - 32	32	ROOF TRUSS PERP TO EXTERIOR WALL 2889-00-CU22 - S-422 - 32
					
	53	43	TRUSS TO GIRDER TRUSS 2889-00-CU22 - S-422 - 33	33	DIAPH TRANSITION W/ OVERHANG 2889-00-CU22 - S-422 - 33
					
	54	44		34	ROOF RAFTER TO BEAM 2889-00-CU22 - S-422 - 34
					
				22	ROOF TRUSS PERP TO EXTERIOR WALL 2889-00-CU22 - S-422 - 12
					
				13	DIAPH TRANSITION W/ OVERHANG 2889-00-CU22 - S-422 - 13
					
				14	DIAPH TRANSITION W/ OVERHANG 2889-00-CU22 - S-422 - 14
					



THESE PLANS ARE PROVIDED BY THE CITY OF LAGUNA NIGUEL AS PART OF THE PRE-APPROVED ADU PROGRAM AND ARE PUBLIC DOMAIN. THERE CANNOT BE A CHARGE TO PROVIDE THESE PLANS. NO ALTERATIONS TO THESE PLANS ARE ALLOWED. ALL ALTERATIONS MUST BE DONE UNDER A SEPARATE PERMIT ONCE THE BUILDING PERMIT FOR THE ADU HAS BEEN ISSUED AND FINAL INSPECTION COMPLETED. IF YOU DO NOT HAVE THE CONSTRUCTION KNOWLEDGE AND EXPERIENCE TO CONTRUCT THESE PLANS WITHOUT FURTHER DETAILS, IT IS RECOMMENDED YOU HIRE A CONTRACTOR TO DO THE CONSTRUCTION. THE CITY WILL NOT PROVIDE FURTHER INFORMATION OR DETAILS AND BUILDING INSPECTORS WILL NOT PROVIDE STEP BY STEP INSTRUCTIONS IN THE FIELD.

LAGUNA NIGUEL
PRE - APPROVED ADU
CITY OF LAGUNA NIGUEL

ROOF FRAMING DETAILS

DATE
02/05/2025

SHEET

S-422

PUBLIC SET