

Plan 3

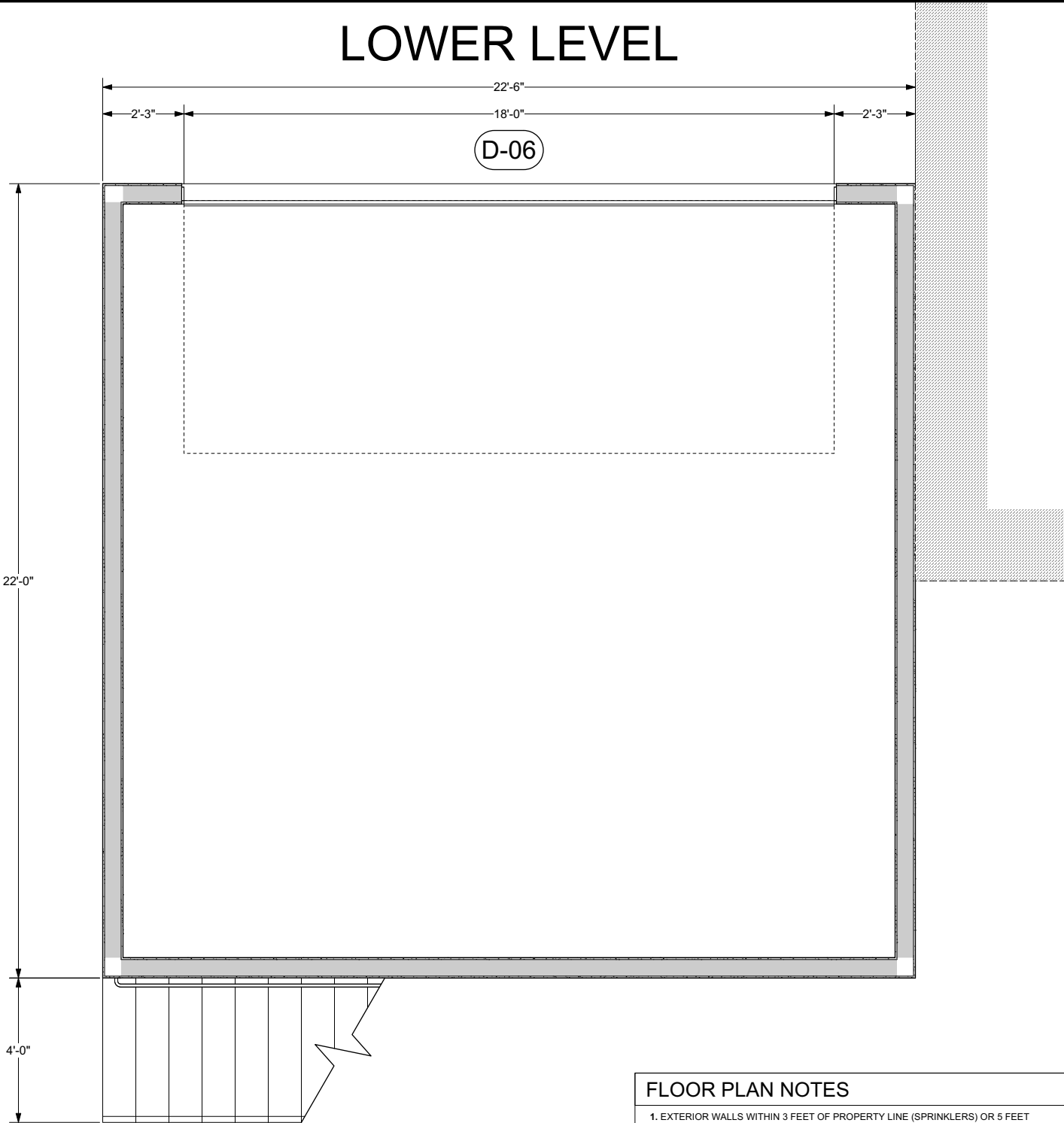
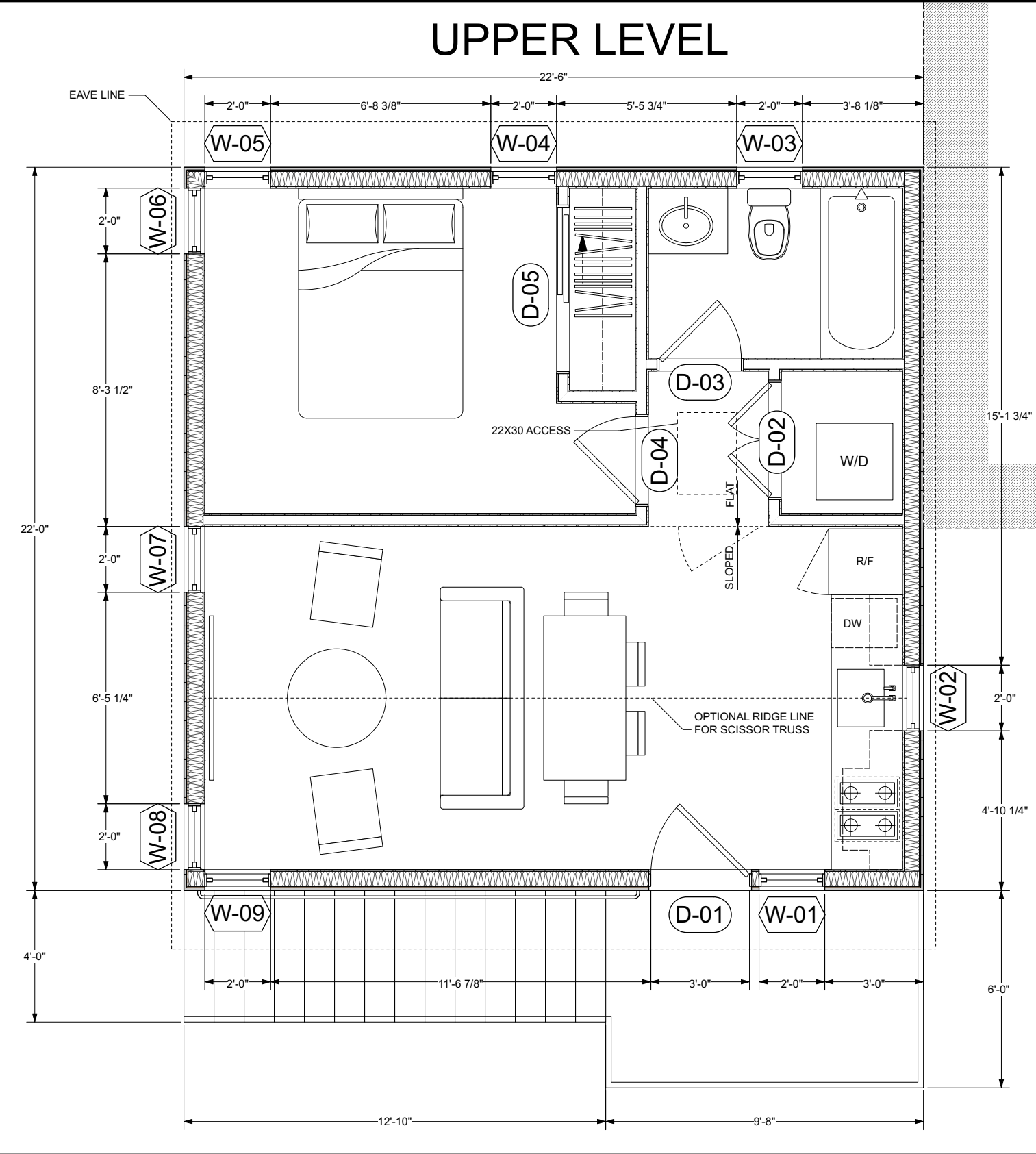
500 Square Feet

Accessory Dwelling Unit

Above 500 Square Feet Garage

Plans and Construction Documents

ELECTRICAL NOTES 1. Ground fault circuit interrupter (GFCI): GFCI protected receptacles or GFCI branch circuits shall be provided for all receptacles within 6 feet of any water source: at all bathrooms, in the garage, exterior spaces, equipment room, in the crawlspace, and at all non-dedicated outlets at kitchen and laundry room. (Per CEC 210-8 (A.). Provide GFCI receptacle outlets within 2 feet from edge of kitchen sink, appliances and edge of countertops as well as no more than 48 inches on center CEC 210.52. Receptacles in kitchens shall be placed no more than 20 inches above the counter top nor more than 12 inches below it. 2. All 120V, single phase, 15 and 20 amp branch circuits supplying outlets and devices installed in dwelling unit kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas or similar rooms shall be protected by a listed arc-fault circuit interrupter, combination type, or a listed outlet branch-circuit type AFCI located at the first receptacle outlet of the existing branch circuit installed to provide protection of the branch circuit. CEC 210.12 (B) 3. Metal water piping and other interior metal piping shall be bonded to service equipment. The points of attachment to the bonding jumper shall be accessible. 4. Provide at least one 20 amp circuit without other outlets on the circuit, for bathroom receptacles. CEC 210.11 (C)(3). 5. Outlet spacing shall not exceed 12'-0' OC per CEC. All outlet plates to be bright white UON. Receptacles shall be placed such that no point along the floor line in any wall space is more than 6 feet and at all 2 foot lengths of wall. (CEC 210-52(A). Install outlets horizontal in baseboards. Center outlets on wall UON for bathrooms/kitchen, see interior elevations. 6. Provide at least two separate 20 amp circuits for small appliances in kitchen, dining, and similar areas with no other outlets on the circuit per CEC 210.11(C) and 210.52(B). 7. Provide separate 120-volt circuit to laundry. CEC 210.11(C)(2) and provide 30 amp branch circuits to the laundry room per CEC 220.54. 8. A permanent GFI protected electrical outlet and a lighting fixture controlled by a switch located at the passageway opening shall be provided near the water heater per CMC909.5. 9. Install UFER ground in new foundation per CEC 250.52 (A)(3) 10. All exterior and garage outlets to have waterproof plate covers. 11. All 15 and 20 amp receptacles installed in a wet location shall have an enclosure that is weatherproof whether or not an attachment plug cap is inserted. 12. All 125-volt receptacles in any dwelling unit shall be tamper-resistant. CEC 406.11.	MECHANICAL NOTES 1. Verify all equipment sizes before beginning work. Install all equipment and materials per manufacturer's instructions and recommendations. 2. Mechanical equipment shall be fixed in position and securely fastened in place per CMC 304.4. 3"x3"x1/4" stl. angle welded to furnace frame and lagged down to framing with 5/8" diameter lag bolts on four sides, typical. 3. Verify gas, electrical, water stub-outs at all air handlers, furnaces, air conditioners and all appliances of similar equipment with manufacturer's recommendations and owner's requirements. 4. Install all thermostats at 64" AFF from centerline of plate to finish floor. All thermostats to be bright white finish, field verify locations with owner. 5. Any appliances in a garage or compartment accessed from garage which generate a spark, glow, or flame shall be elevated a minimum of 18" above the floor to point of ignition unless listed as Flammable vapor ignition resistant. (Per CMC 308.1 and CMC 508.14) 6. Provide clothes dryer vent to outside with a maximum length of 14 feet equipped with a backdraft damper including two 90 degree elbows and a minimum diameter of 4" (Per CMC 504.3.2.2) 7. Bathroom fans shall be connected directly to the outside. Fans and other exhaust systems exhausting air from conditioned space to the outside shall be provided with backdraft dampers to prevent air leakage. 8. Ventilation openings for enclosed attics, enclosed eave soffit spaces, enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters, and underfloor ventilation openings shall be fully covered with metal wire mesh, vents, other materials, or other devices that meet one of the following requirements: 1. Listed vents complying with ASTM E2886 with the following results: (a) The Ember Intrusion Test shall have no flaming ignition of the cotton material. (b) There shall be no flaming ignition during the Integrity Test portion of the Flame Intrusion Test. The maximum temperature of the unexposed side of the vent shall not exceed 662° F (350°C). 2. Vents complying with all of the following: (a) The dimensions of the openings therein shall be a minimum of 1/16" and shall not exceed 1/8". (b) The materials used shall be noncombustible. Exception: Vents located under the roof covering, along the ridge of roofs, with the exposed surface of the vent covered by noncombustible wire mesh, may be of combustible materials. (c) The materials used shall be corrosion resistant. CRC R337.6.2.		San Joaquin County, Planning & Development Services 500 SF ACCESSORY DWELLING UNIT ABOVE 500 SF GARAGE BUILDING DIVISION  Sheet Number A0.1 By using these standard plans, the user agrees to release San Joaquin County 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 use of these plans does not eliminate or reduce the user's responsibility to verify any and all information.
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WINDOW SCHEDULE				
MARK	DIMENSION	TYPE	TEMPERED	NOTES
W-01	2'-0" x 3'-6"	AWNING		
W-02	2'-0" x 3'-6"	CASEMENT		
W-03	2'-0" x 3'-6"	CASEMENT		
W-04	2'-0" x 3'-6"	CASEMENT		
W-05	2'-0" x 3'-6"	CASEMENT		
W-06	2'-0" x 3'-6"	AWNING		
W-07	2'-0" x 3'-6"	AWNING		
W-08	2'-0" x 6'-6"	AWN/FIXED		
W-09	2'-0" x 6'-6"	AWN/FIXED		

EXTERIOR WINDOWS, EXTERIOR GLAZED DOORS, GLAZED OPENINGS WITHIN EXTERIOR DOORS, GLAZED OPENINGS WITHIN EXTERIOR GARAGE DOORS, AND EXTERIOR STRUCTURAL GLASS VENEER SHALL COMPLY WITH ONE OF THE FOLLOWING: (SELECT ONE)

A. MULTI-PANE GLAZING WITH A MINIMUM OF ONE TEMPERED PANE MEETING THE REQUIREMENTS OF SECTION 2406 SAFETY GLAZING, AND WHERE ANY GLAZING FRAMES MADE OF VINYL MATERIALS SHALL HAVE WELDED CORNERS, METAL REINFORCEMENT IN INTERLOCK AREA, AND BE CERTIFIED TO AAMA/WDMA/CSA 101/I.S.2/A40

B. MINIMUM 20-MIN FIRE-RESISTANCE-RATED.

C. MEET PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-2

DOOR SCHEDULE				
MARK	DIMENSION	TYPE	TEMPERED	NOTES
D-01	3'-0" x 6'-8"	SWING		
D-02	3'-6" x 6'-8"	BI-SWING		
D-03	2'-6" x 6'-8"	SWING		
D-04	2'-8" x 6'-8"	SWING		
D-05	5'-0" x 6'-8"	SLIDER		
D-06	18'-0" x 7'-0"	GARAGE		

EXTERIOR DOORS SHALL COMPLY WITH ONE OF THE FOLLOWING: (SELECT ONE)

A. EXTERIOR SURFACE OR CLADDING OF NON-COMBUSTIBLE OR IGNITION-RESISTANT MATERIAL

B. SOLID CORE WOOD COMPLYING WITH THE FOLLOWING:

- STILES AND RAILS MINIMUM 1-3/8 INCHES THICK
- RAISED PANELS MINIMUM 1-1/4 INCHES THICK

EXCEPTION: EXTERIOR PERIMETER OF RAISED PANEL MAY TAPER TO A TONGUE MINIMUM 3/8 INCHES THICK

C. MINIMUM 20-MIN FIRE RATED WHEN TESTED PER NFPA 252

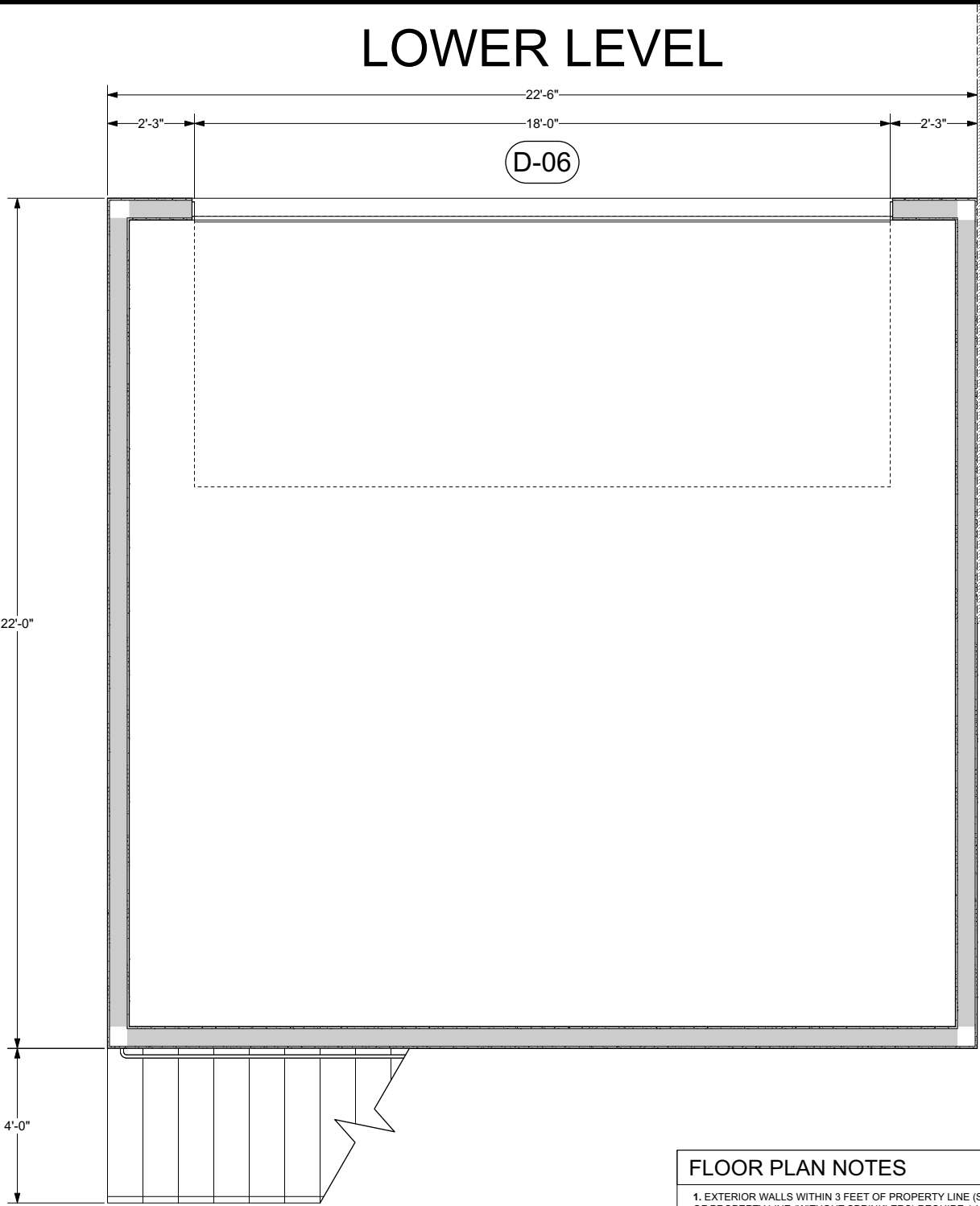
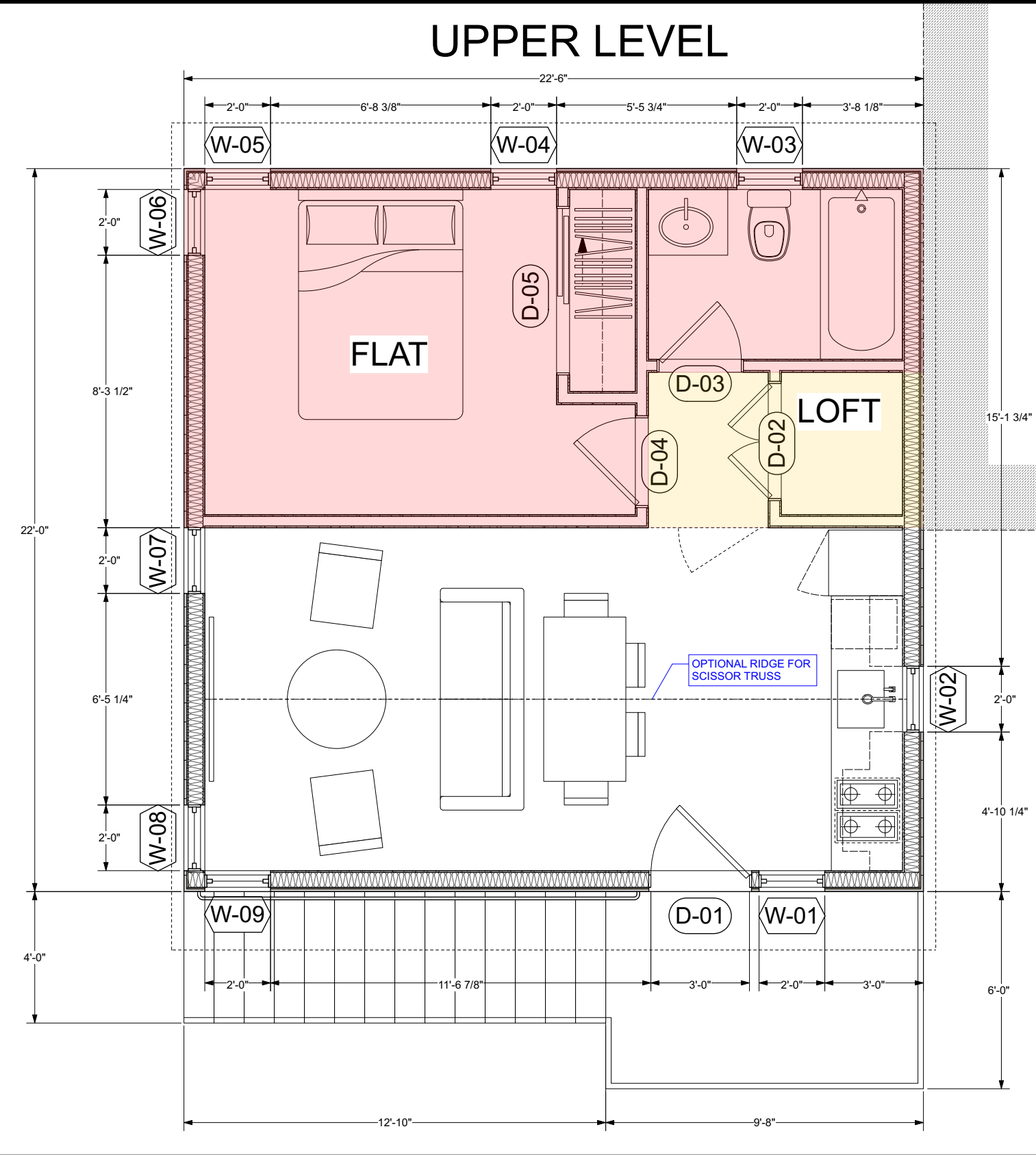
D. MEET PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-1

FLOOR PLAN NOTES

- EXTERIOR WALLS WITHIN 3 FEET OF PROPERTY LINE (SPRINKLERS) OR 5 FEET OF PROPERTY LINE (WITHOUT SPRINKLERS) REQUIRE 1-HOUR FIRE RATING FOR EXPOSURE TO BOTH SIDES
- PROJECTIONS:
 - PROHIBITED WITHIN 2 FEET OF PROPERTY LINE
 - 1-HOUR FIRE RATING ON THE UNDERSIDE WITHIN 3FT OF PROPERTY LINE (SPRINKLERS)
 - 1-HOUR FIRE RATING ON THE UNDERSIDE WITHIN 5FT OF PROPERTY LINE (WITHOUT SPRINKLERS)
- OPENINGS:
 - PROHIBITED WITHIN 3FT OF PROPERTY LINE
 - MAXIMUM 25% OF WALL AREA WITHIN 5 FEET OF PROPERTY LINE (WITHOUT SPRINKLERS)
- PENETRATIONS:
 - 1-HOUR FIRE-RATED PENETRATIONS OF WALLS WITHIN 3FT OF PROPERTY LINE (SPRINKLERS)
 - 1-HOUR FIRE-RATED PENETRATIONS OF WALLS WITHIN 5FT OF PROPERTY LINE (WITHOUT SPRINKLERS)
- CONCRETE LANDING WITH MIN 36" DEPTH AND A MAXIMUM OF 1-1/2" LOWER THAN TOP OF DOOR THRESHOLD

ADDITIONAL NOTES

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ADDITIONAL NOTES

FLOORPLAN
1/2" = 1'-0"

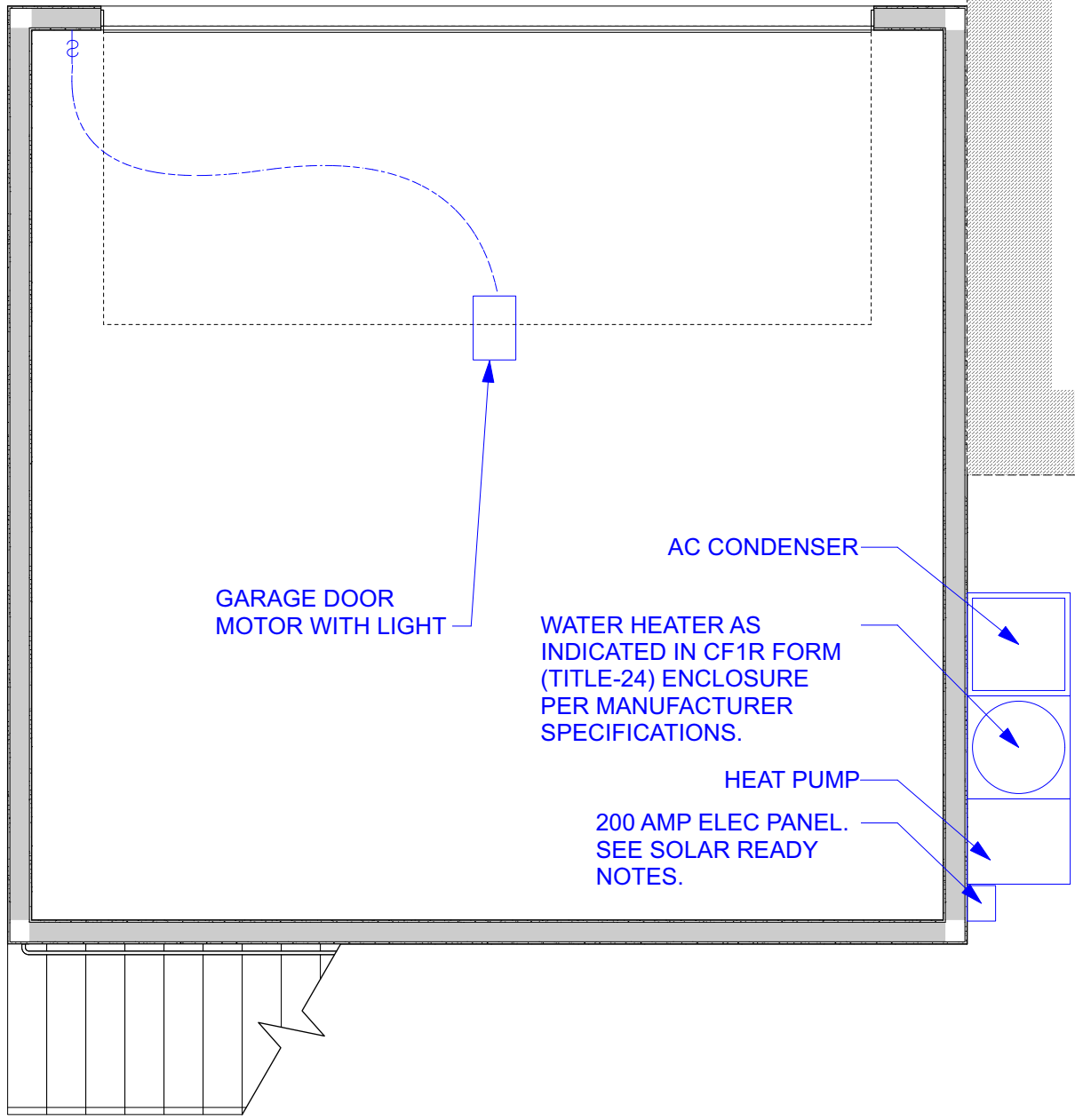
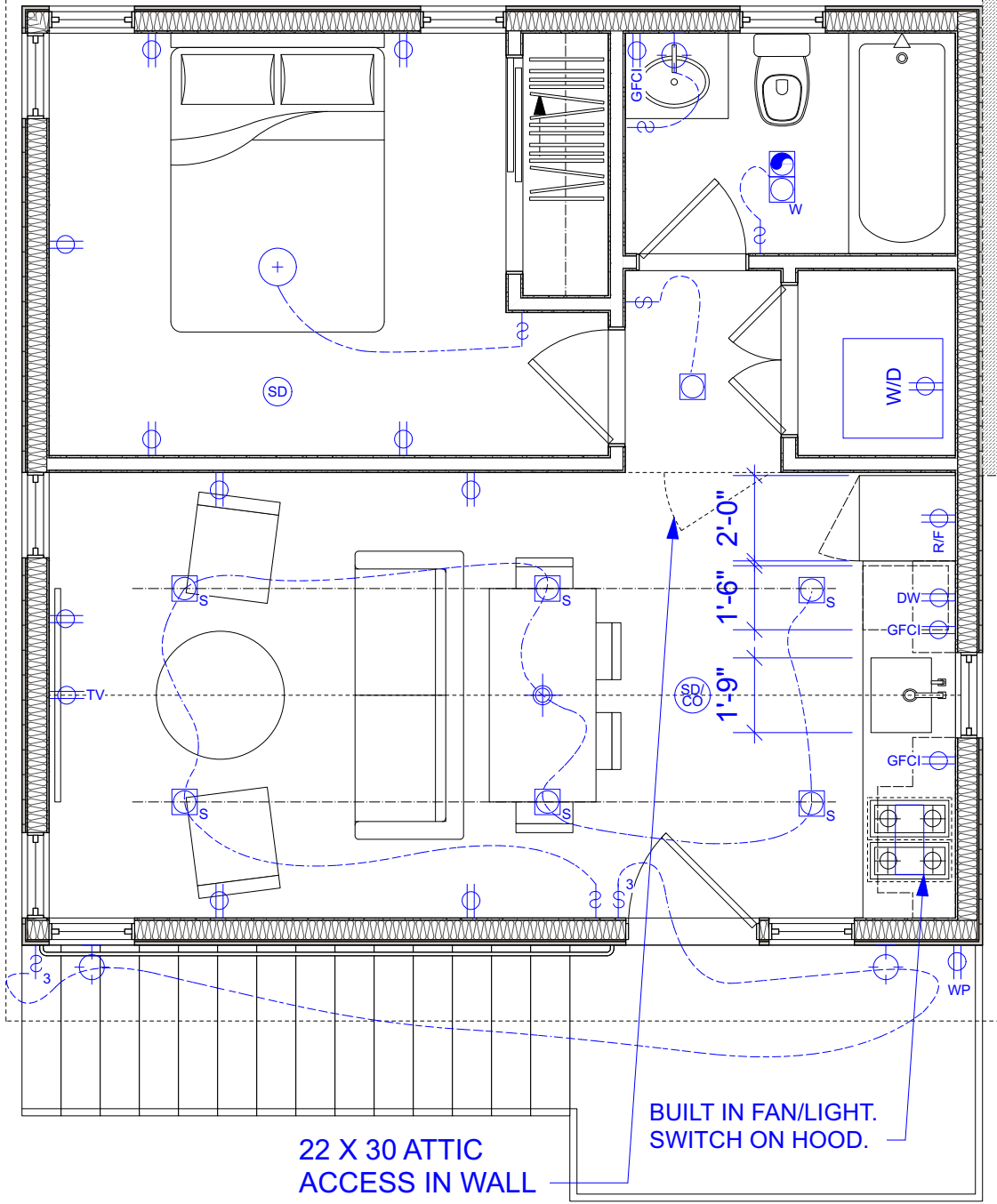
San Joaquin County, Planning & Development Services
500 SF ACCESSORY DWELLING UNIT
ABOVE 500 SF GARAGE
BUILDING DIVISION



Sheet Number

A1.1

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ELECTRICAL LEGEND

	DUPLEX OUTLET		HIGH EFFICACY RECESSED LIGHT
	DUPLEX GFCI OUTLET		OPTIONAL RECESSED LIGHT FOR SLOPED CIELING
	FLOOR MOUNTED OUTLET		PENDANT LIGHT FIXTURE
	WALL SWITCH		CIELING MOUNTED LIGHT FIXTURE
	THREE WAY WALL SWITCH		WALL MOUNTED LIGHT FIXTURE
	GARBAGE DISPOSAL SWITCH		LINEAR STRIPE LIGHT FIXTURE
	SUPPLY		FAN AND LIGHT COMBINATION
	COMBO SMOKE/ CARBON MONOXIDE DETECTOR		FAN
	SMOKE DETECTOR		
	CARBON MONOXIDE ALARM		

UTILITY PLAN NOTES

1. LOCAL EXHAUST FANS TO EXTERIOR TO PROVIDE MINIMUM 50 CFM INTERMITTENT OR 20 CFM CONTINUOUS VENTILATION.
2. SMOKE DETECTORS TO BE INTERCONNECTED PER CRC R314.4 AND HARD-WIRED WITH BATTERY BACK-UP PER CRC R314.6
3. CARBON MONOXIDE ALARMS TO BE INTERCONNECTED PER CRC R315.7 AND HARD-WIRED WITH BATTERY BACK-UP PER CRC R315.5
4. 4" Ø DRYER VENT WITH MAXIMUM 14 FOOT COMBINED HORIZONTAL AND VERTICAL LENGTH WITH TWO 90 DEGREE ELBOWS.
5. A MECHANICAL EXHAUST VENTILATION SYSTEM, SUPPLY VENTILATION SYSTEM, OR COMBINATION THEREOF SHALL BE INSTALLED FOR EACH DWELLING UNIT TO PROVIDE WHOLE-BUILDING VENTILATION WITH OUTDOOR AIR IN COMPLIANCE WITH ASHRAE STANDARD 62.2 AS ADOPTED BY THE CALIFORNIA ENERGY COMMISSION.
6. AN INTERMITTENTLY OR CONTINUOUSLY OPERATING LOCAL MECHANICAL EXHAUST VENTILATION SYSTEM SHALL BE INSTALLED IN EACH BATHROOM WITH A BATHTUB, SHOWER, OR SIMILAR MOISTURE SOURCE AND IN EACH KITCHEN IN COMPLIANCE WITH ASHRAE STANDARD 62.2 AS ADOPTED BY THE CALIFORNIA ENERGY COMMISSION. INTERMITTENT LOCAL EXHAUST VENTILATION AIRFLOW RATES SHALL BE 50 CFM IN BATHROOMS AND 100 CFM IN KITCHENS. CONTINUOUS LOCAL EXHAUST VENTILATION AIRFLOW RATES SHALL BE 20 CFM IN BATHROOMS AND 5 AIR CHANGES PER HOUR IN KITCHENS BASED ON KITCHEN VOLUME.
7. WATER HEATER OR FURNACE SHALL BE A DIRECT-VENT APPLIANCE

LIGHTING PLAN NOTES

1. ALL FIXTURES TO BE HIGH EFFICACY (NO EXCEPTIONS) PER CENC SECTION 150.0(K)(I).
2. CLOTHES CLOSET LIGHT FIXTURE CLEARANCES SHALL CONFROM TO CEC 410-8.
3. LIGHT FIXTURES IN TUB OR SHOWER ENCLOSURES OR OTHER WET/DAMP LOCATIONS SHALL BE LABELED "SUITABLE FOR DAMP LOCATIONS." PER CEC 410-4(A).
4. KITCHENS - SECTION 150 (K) 2: PERMANENTLY INSTALLED LUMINARIES IN KITCHEN SHALL BE HIGH-EFFICACY LUMINARIES.
5. PORCHES AND OUTDOOR LIGHTING - SECTION 150(K) 6: LUMINARIES PROVIDING OUTDOOR LIGHTING AND PERMANENTLY MOUNTED TO A RESIDENTIAL BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL BE HIGH-EFFICACY LUMINARIES.
6. AIRTIGHT - RECESSED FIXTURES INSTALLED IN AN INSULATED SPACE SHALL BE CERTIFIED AIRTIGHT IN ACCORDANCE WITH ASTM E283.

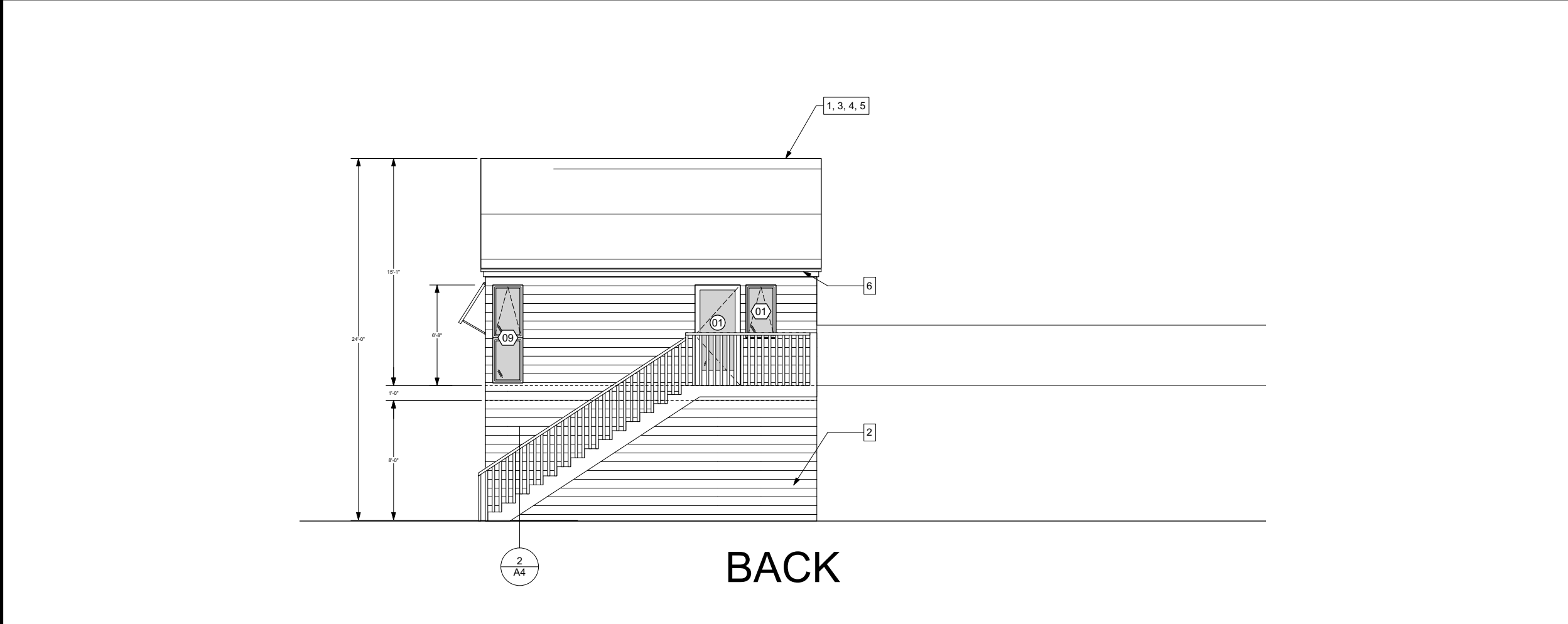
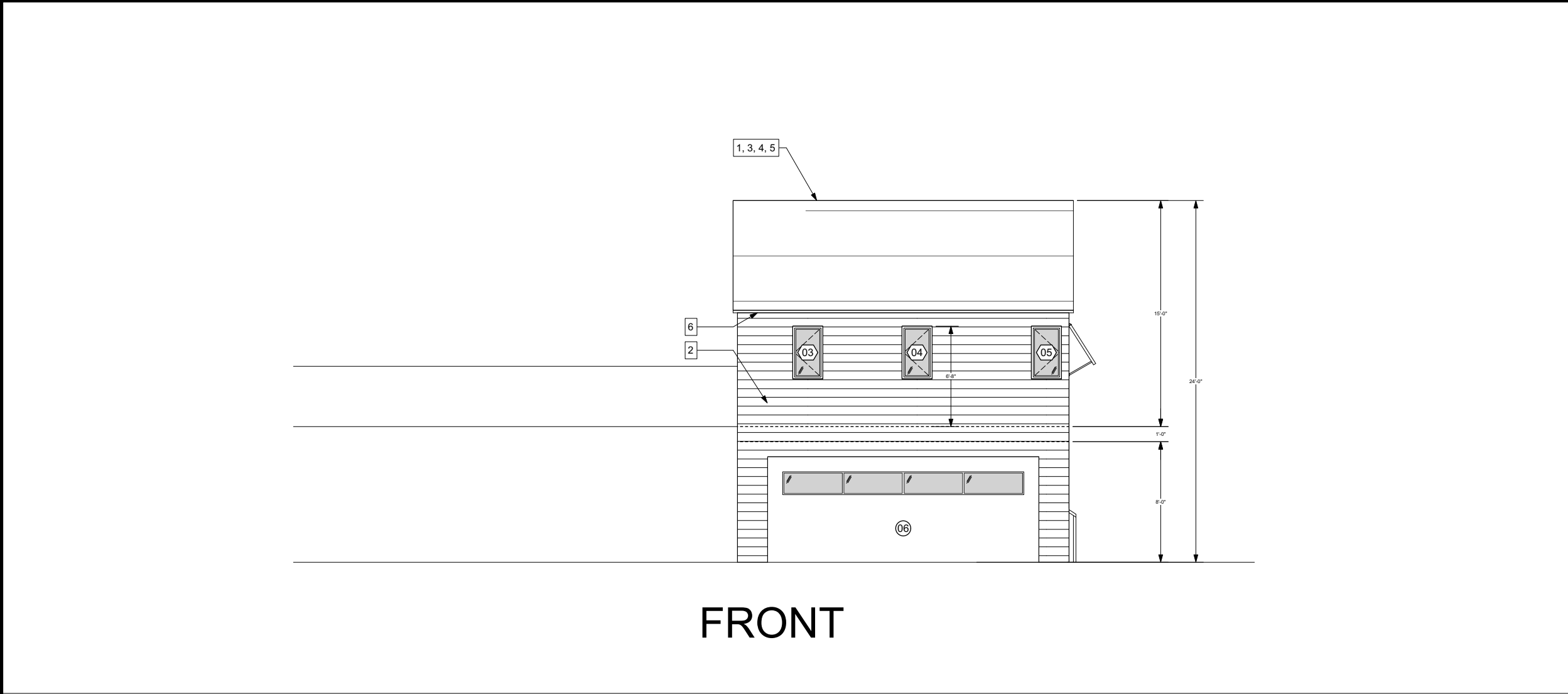
SOLAR READY KEY NOTES

1. THE MAIN ELECTRICAL SERVICE PANEL SHALL NOT BE OF A TYPE WITH A CENTER-FED MAIN CIRCUIT BREAKER AND SHALL INCLUDE RESERVED SPACE ALLOWING FOR INSTALLATION OF DOUBLE-POLE CIRCUIT BREAKERS FOR A FUTURE SOLAR PHOTOVOLTAIC SYSTEM. SUCH RESERVED SPACE SHALL BE POSITIONED AT THE OPPOSITE (LOAD) END FROM THE INPUT FEEDER OR MAIN CIRCUIT BREAKER LOCATION. THE RESERVED SPACE SHALL BE PERMANENTLY AND VISIBLY MARKED AS "FOR FUTURE SOLAR PHOTOVOLTAIC"
2. APPROVED MINIMUM 4-INCH SQUARE ELECTRICAL JUNCTION BOX LOCATED WITHIN 72 INCHES HORIZONTALLY AND 12 INCHES VERTICAL OF MAIN ELECTRICAL SERVICE PANEL
3. MINIMUM 1 INCH DIAMETER LISTED ELECTRICAL METALLIC RACEWAY ORIGINATING AT THE REQUIRED ELECTRICAL JUNCTION BOX AND TERMINATING AT THE MAIN ELECTRICAL SERVICE PANEL
4. MINIMUM 1 INCH DIAMETER LISTED ELECTRICAL METALLIC RACEWAY ORIGINATING AT THE REQUIRED ELECTRICAL JUNCTION BOX AND TERMINATING AT THE MAIN ELECTRICAL SERVICE PANEL
5. ELECTRICAL JUNCTION BOX AND SEGMENT OF METALLIC RACEWAY IN THE ATTIC SHALL BE PERMANENTLY AND VISIBLY MARKED AS "FOR FUTURE SOLAR PHOTOVOLTAIC"

ELECTRICAL PLAN

1/2" = 1'-0"





ELEVATION KEY NOTES

1. ROOF: CLASS 'A' FIRE RATING
ROOF MATERIAL: _____
UNDERLAYMENT: _____
LISTING REPORT #: _____
2. EXTERIOR WALL FINISH: _____ (SEE NOTE 7 BELOW)
3. ROOF PITCH: 6.5:12
4. RADIANT BARRIER IS REQUIRED
5. RIDGE VENT (SEE NOTE 5 & 6 BELOW)
MANUFACTURER: _____
MODEL: _____
NFVA: _____ (MIN 97 in²)
6. EAVE VENT (SEE NOTE 5 & 6 BELOW)
MANUFACTURER: _____
MODEL: _____
NFVA: _____ (MIN 36 in²)

WILDFIRE ZONE PLAN NOTES

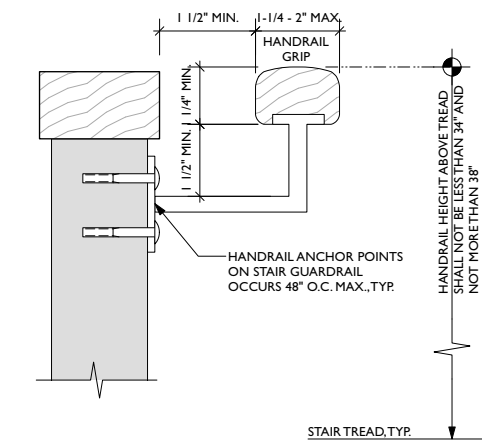
1. IN ROOF COVERINGS WHERE THE PROFILE CREATES SPACE BETWEEN THE ROOF COVERING AND COMBUSTIBLE ROOF DECKING, SPECIFY ONE OF THE FOLLOWING MEANS OF PROTECTING SPACES AT EAVES ENDS.
 - a. FIRE-STOPPING WITH APPROVED MATERIALS
 - b. ONE LAYER OF 72 POUND (32.4 KG) MINERAL-SURFACED NON-PERFORATED CAP SHEET COMPLYING WITH ASTM D 3909 INSTALLED OVER THE COMBUSTIBLE DECKING
 - c. OTHERWISE CONSTRUCTED TO PREVENT INTRUSION OF FLAMES AND EMBERS
2. EXPOSED VALLEY FLASHINGS SHALL BE CONSTRUCTED WITH NOT LESS THAN 0.019-INCH (NO. 26 GALVANIZED SHEET GAGE) CORROSION-RESISTANT METAL INSTALLED OVER A MINIMUM 36-INCH-WIDE UNDERLAYMENT CONSISTING OF ONE LAYER OF NO. 72 ASTM CAP SHEET RUNNING THE FULL LENGTH OF THE VALLEY.
3. ANY ROOF GUTTERS SHALL BE PROVIDED WITH MEANS TO PREVENT ACCUMULATION OF LEAVES AND DEBRIS.
4. SKYLIGHTS SHALL BE TEMPERED GLASS.
5. ALL VENTS (ROOF, FOUNDATION, COMBUSTION-AIR, ETC) SHALL RESIST THE INTRUSION OF FLAMES AND EMBERS
6. VENTILATION OPENINGS FOR ENCLOSED ATTICS, EAVE SOFFIT SPACES, ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS, UNDERFLOOR VENTILATION OPENINGS, AND VENT OPENINGS IN EXTERIOR WALLS AND EXTERIOR DOORS SHALL BE LISTED TO ASTM E 2886 AND COMPLY WITH ALL OF THE FOLLOWING:
 - a. THERE SHALL BE NO FLAMING IGNITION OF THE COTTON MATERIAL DURING THE EMBER INTRUSION TEST
 - b. THERE SHALL BE NO FLAMING IGNITION DURING THE INTEGRITY TEST PORTION OF THE FLAME INTRUSION TEST
 - c. THE MAXIMUM TEMPERATURE OF THE UNEXPOSED SIDE OF THE VENT SHALL NOT EXCEED 662 DEGREES FAHRENHEIT (350 DEGREES CELSIUS)
7. EXTERIOR WALL FINISH SHALL COMPLY WITH ONE OF THE FOLLOWING:
 - a. NON-COMBUSTIBLE MATERIAL (STUCCO, CEMENT FIBER BOARD, ETC)
- STUCCO AND CEMENT PLASTER USED AS AN EXTERIOR WALL COVERING SHALL BE 7/8-INCH THICK
- NONCOMBUSTIBLE OR FIRE-RETARDANT-TREATED WOOD SHAKE USED AS AN EXTERIOR WALL COVERING SHALL HAVE AN UNDERLAYMENT OF MINIMUM 1/2-INCH FIRE-RATED GYPSUM SHEATHING THAT IS TIGHTLY BUTTED, OR TAPED AND MUDDED, OR AN UNDERLAYMENT OF OTHER IGNITION-RESISTANT MATERIAL APPROVED BY THE BUILDING OFFICIAL.
 - b. IGNITION-RESISTANT MATERIAL
8. PATIO COVER, CARPORT AND TRELLIS CONSTRUCTION WITH ALL EXPOSED ELEMENTS SHALL COMPLY WITH ANY OF THE FOLLOWING:
 - NON-COMBUSTIBLE MATERIAL
 - 1-HOUR FIRE-RESISTANT-RATED MATERIAL
 - APPROVED EXTERIOR FIRE-RETARDANT TREATED WOOD
 - MODIFIED HEAVY TIMBER (MIN 2X TONGUE-AND-GROOVESHEATHING, 4X6 RAFTERS/BEAMS, 6X6 POSTS)
9. DECK, BALCONY, AND EXTERIOR STAIR CONSTRUCTION, WITH ALL EXPOSED ELEMENTS SHALL COMPLY WITH THE FOLLOWING:
 - a. FRAMING
- NON-COMBUSTIBLE MATERIAL
 - 1-HOUR FIRE-RESISTANT-RATED MATERIAL
 - APPROVED EXTERIOR FIRE-RETARDANT TREATED WOOD
 - MODIFIED HEAVY TIMBER (MIN 4X8 JOISTS, 4X10 OR 6X8 BEAMS, 6X6 POSTS)
- b. DECKING AND TREAD MATERIAL (ANY OF THE FOLLOWING):
 - NON-COMBUSTIBLE MATERIAL
 - 1-HOUR FIRE-RESISTANT-RATED MATERIAL
 - APPROVED EXTERIOR FIRE-RETARDANT TREATED WOOD
 - APPROVED ALTERNATIVE DECKING MATERIAL MEETING TESTS REQUIREMENTS OF COUNTY BUILDING CODE 92.1.709A.1.4)
10. EXTERIOR GARAGE DOORS SHALL RESIST THE INTRUSION OF EMBERS INTO THE GARAGE BY LIMITING THE SIZE OF ANY GAPS AT THE BOTTOM, SIDES, AND TOP OF THE DOOR TO 1/8 INCH OR LESS USING ONE OF THE FOLLOWING METHODS
 - a. WEATHER-STRIPPING PRODUCTS WITH TENSILE STRENGTH AND FLAMMABILITY RATING PER CBC 708A.4
 - b. DOOR OVERLAPS ONTO JAMBS AND HEADERS
 - c. GARAGE DOOR JAMBS AND HEADERS COVERED WITH METAL FLASHING
11. PAPER-FACED INSULATION PROHIBITED IN ATTICS OR OTHER VENTILATED SPACES.
12. FENCES OR ANY STRUCTURE WITHIN 5 FEET OF BUILDING SHALL BE CONSTRUCTED PER ONE OF THE FOLLOWING:
 - a. NON-COMBUSTIBLE MATERIAL
 - b. APPROVED EXTERIOR FIRE-RETARDANT TREATED WOOD
 - c. MATERIAL MEETING SAME FIRE-RESISTIVE STANDARDS AS EXTERIOR WALLS OF BUILDINGS





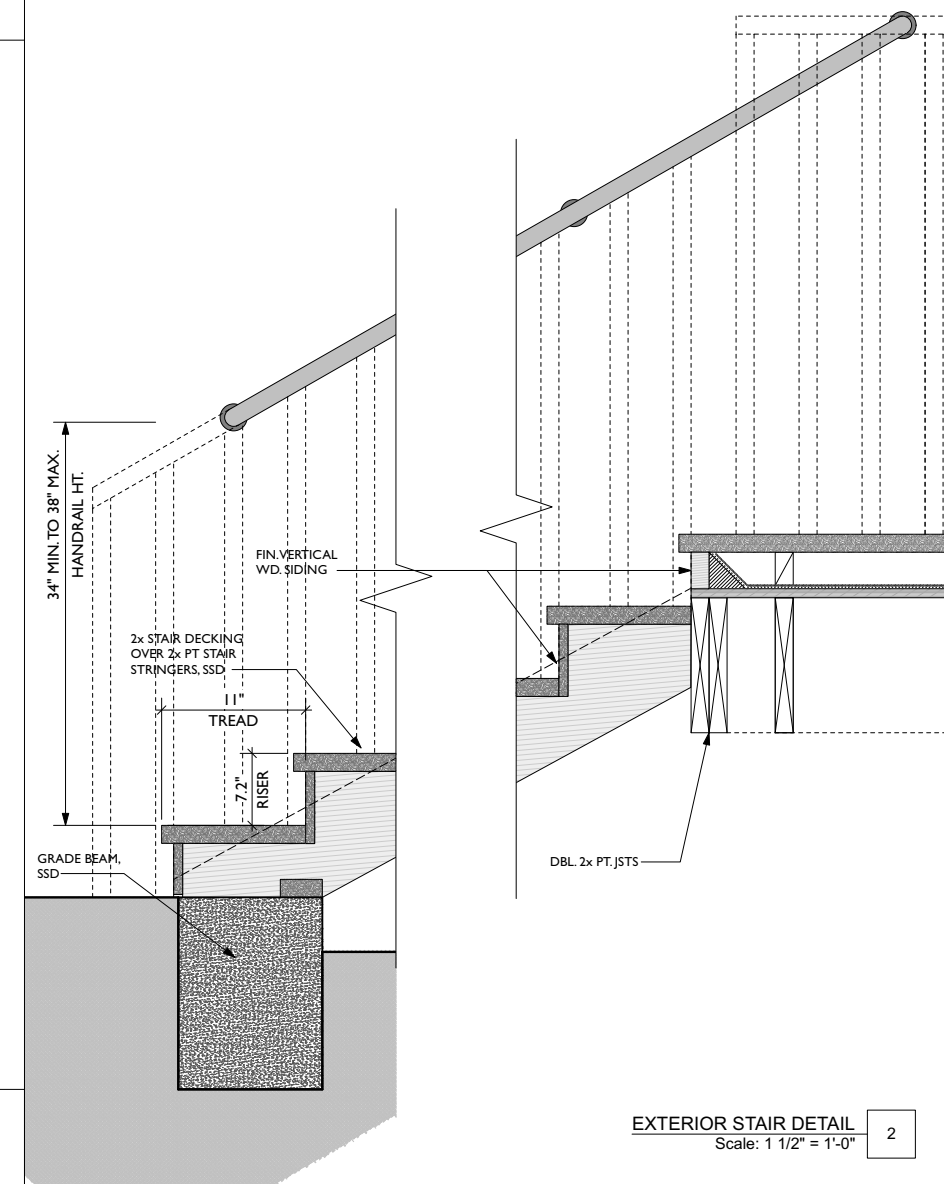
ELEVATION KEY NOTES

SEE SHEET A3 FOR KEY NOTES



EXTERIOR HANDRAIL DETAIL
Scale: Half Actual Size

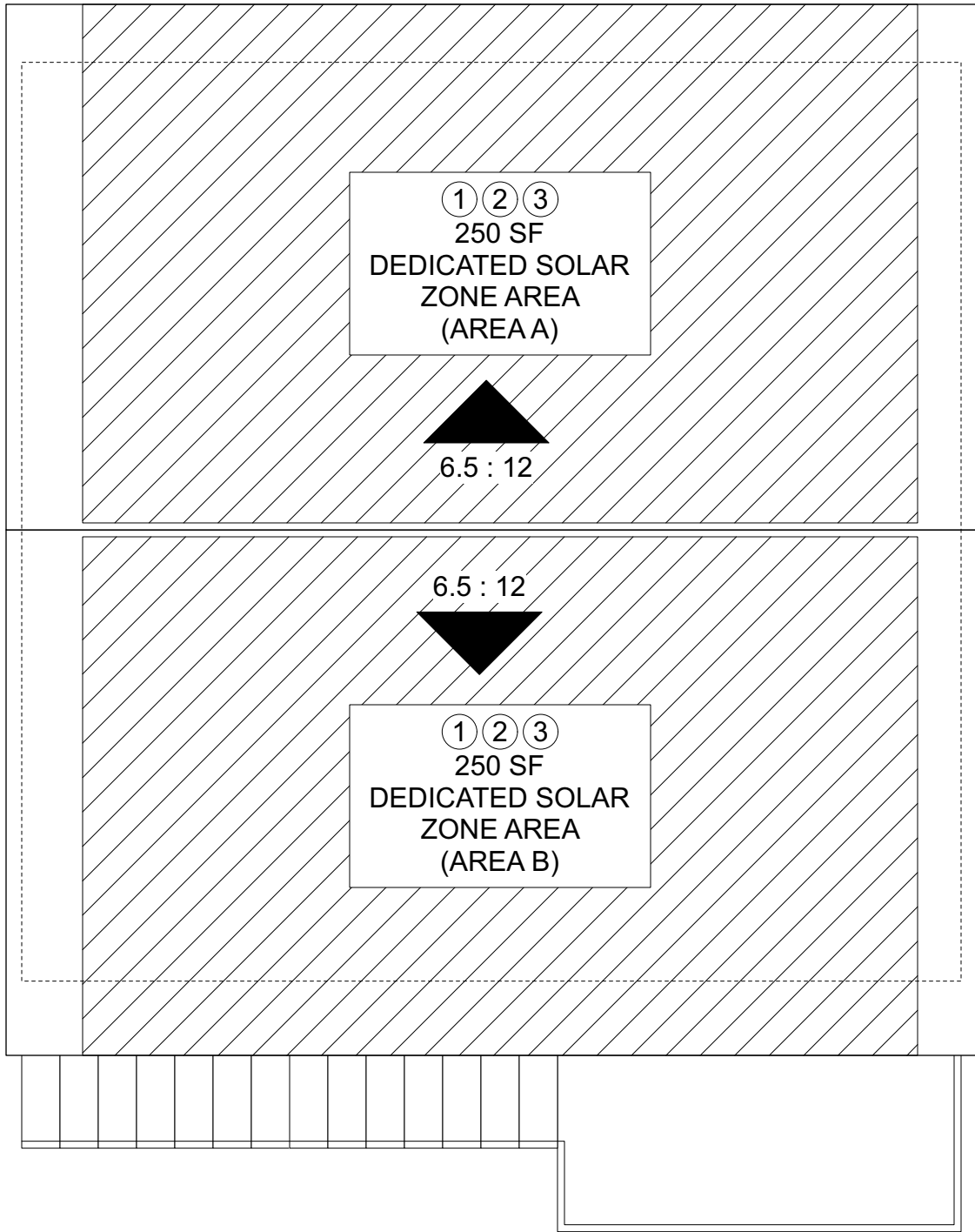
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EXTERIOR STAIR DETAIL
Scale: 1 1/2" = 1'-0"

2





ATTIC VENTILATION REQUIRED

NET FREE CROSS VENTILATION AREA = 1/300
VENT AREA REQ'D = 500 ft² / 300 = 1.66 ft² x 144 = 240 in²

RIDGE VENTS

NFVA = 10 in²
QTY = 12 VENTS
VENT AREA PROVIDED = 12 x 10 in² = 120 in²

EAVE VENTS

NFVA: 10 in²
QTY = 12 VENTS
VENT AREA PROVIDED = 12 x 10 in² = 120 in²

TOTAL VENT AREA PROVIDED

(120 in²) + (120 in²) = 240 in² = 240 in²

SOLAR READY KEY NOTES

- 1. MIN 250 S.F. SOLAR ZONE AREA
- 2. DEDICATED SOLAR ZONE AREA LOCATED BETWEEN 110 AND 270 DEGREES OF TRUE NORTH - USE AREA A OR B AS NEEDED.
- 3. NO OBSTRUCTIONS - INCLUDING VENTS, CHIMNEYS, SKYLIGHTS, ARCHITECTURAL FEATURES, ROOF-MOUNTED EQUIPMENT - LOCATED WITHIN SOLAR ZONE.
- 4. 3" MIN FIRE FIGHTER ACCESS
- 5. 1'-6" SMOKE VENTILATION SETBACK AT RIDGES

By using these standard plans, the user agrees to release San Joaquin County 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 use of these plans does not eliminate or reduce the user's responsibility to verify any and all information.

San Joaquin County, Planning & Development Services
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ABOVE 500 SF GARAGE
BUILDING DIVISION



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A5

NOTE REGARDING STRUCTURAL DRAWINGS

THE STRUCTURAL DRAWINGS SHOW ONLY THE BASIC STRUCTURAL FRAME. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR NONSTRUCTURAL ITEMS INCLUDING NONSTRUCTURAL WALLS, WHICH REQUIRE SPECIAL PROVISIONS DURING CONSTRUCTION. ONLY OPENINGS REQUIRING SPECIAL FRAMING ARE SHOWN ON STRUCTURAL PLANS. SEE TYPICAL DETAILS FOR REINFORCING AROUND NOMINAL OPENINGS NOT SHOWN.

TABLE 2304.10.1 FASTENING SCHEDULE

CONNECTION	(PARTIAL LIST)	NAILING
1.	JOIST TO SILL (GIRDER), TOENAIL	(4) 8d
2.	BRACING TO JOIST (RAFTER), TOENAIL EA. END	(2) 8d
6.	SOLE PLATE TO JOIST (BLKG)	16d @ 16" o.c.
7.	T/P AND SOLE PLATE TO STUD, END NAIL	(2) 16d
8.	STUD TO SOLE PLATE (ALTERNATE)	(4) 8d TOENAIL
9.	DOUBLE STUDS, FACE NAIL	16d @ 6" o.c.
10.	FLOOR & ROOF JOISTS OR BLOCKING TO TOP PLATE	(4) 10d TOENAIL
11.	BLKS. BTWN. JOISTS (RAFTERS) TO T/P, END NAIL	(3) 8d
12.	RIM JOIST TO T/P, TOENAIL	8d @ 6" o.c.
13.	TOP PLATES, LAPS & INTERSECTIONS, FACE NAIL	(2) 16d
15.	CEILING JOISTS TO PLATE, TOENAIL	(4) 8d
16.	CONTINUOUS HDR TO STUD, TOENAIL	(4) 20d
17.	CEILING JOISTS, LAPS O/ PARTITIONS, FACE NAIL	(3) 16d
18.	CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	(3) 16d
19.	RAFTER TO PLATE, TOENAIL	(3) 8d
23.	BUILT-UP CORNER STUDS	16d @ 24" o.c.
24.	POST TO SILL/SOLE PLATE	(4) 8d TOENAIL

STRUCTURAL DESIGN INFORMATION

BASIS OF STRUCTURAL DESIGN: CALIFORNIA BUILDING CODE

DESIGN CRITERIA FOR PROJECT SOILS: CALIFORNIA BUILDING CODE

CALIFORNIA BUILDING CODE PRESUMPTIVE LOAD BEARING VALUES
CLASS 4/5 MATERIALS:

DEAD + LIVE LOADS - 1,500 PSF
DEAD + LIVE LOADS + SEISMIC/WIND - 2,000 PSF
LATERAL PASSIVE RESISTANCE - 150 PCF
FRICTION COEFFICIENT - 0.250
COHESION - 130 PSF

TABLE 1610.1 2019 CALIFORNIA BUILDING CODE PRESUMPTIVE LATERAL SOIL LOADS
"SC"-TYPE SOILS/BACKFILL MATERIALS

ACTIVE EQUIVALENT FLUID PRESSURE - 60 PCF
AT REST PRESSURE - 100 PCF

GRAVITY LOAD SCHEDULE			LATERAL SYSTEM DESIGN DATA	
MATERIAL	DEAD LOAD	LIVE LOAD	3 SEC. GUST SPEED - WIND EXPOSURE RATING - END ZONE WALL PRESSURE - INT. ZONE WALL PRESSURE -	110 mph Exp. C 17 psf 12.5 psf
ROOF	14.0 psf	20 psf		
DECK	10.0 psf	40 psf		
FLOOR	15.0 psf	40 psf		
EXTERIOR WALL	11.0 psf		SOIL DESIGN CATAGORY - SEISMIC DESIGN CATAGORY -	D D
INTERIOR WALL	7.6 psf		Ss - S1 - Sds - Sd1 -	1.50 0.617 1.045 0.720
GENERAL DESIGN DATA			SEISMIC COEFFICIENT Cs - RESPONSE MOD. FACTOR R - SEISMIC BASE SHEAR -	0.154 6.5 8.42 kips
IMPORTANCE FACTOR -	1			
OCCUPANCY CATEGORY -	II			
ANALYSIS PROCEDURE -	ELFP			
LAT. FORCE R.S. -	WOOD SHEAR WALLS			

ABBREVIATIONS

A.B.	ANCHOR BOLT	INSUL.	INSULATION
ABV.	ABOVE	INT.	INTERIOR
ADH.	ADHESIVE	JNT.	JOINT
ALT.	ALTERNATE	JST.	JOIST
ARCH.	ARCHITECTURAL	LOC.	LOCATION
AWS.	AMERICAN WELDING SOCIETY	LSL	LAMINATED STRAND LUMBER
BLV.	BELOW	LVL	LAMINATED VENEER LUMBER
BLDG.	BUILDING	LWC	LIGHT WEIGHT CONCRETE
BLKG.	BLOCKING	MATL.	MATERIAL
BM	BEAM	MAX.	MAXIMUM
B.O.	BOTTOM OF	MECH.	MECHANICAL
BRG.	BEARING	MFS	MANUFACTURER
BOTT.	BOTTOM	MIN.	MINIMUM
BTWN.	BETWEEN	(N)	NEW
C.I.P.	CAST IN PLACE	N/A	NOT APPLICABLE
CL	CENTERLINE	N.I.C.	NOT IN CONTRACT
CLG.	CEILING	NO. #	NUMBER
CLR.	CLEAR	NS	NEAR SIDE
COL.	COLUMN	N.T.S.	NOT TO SCALE
CONC.	CONCRETE	N.W.C.	NORMAL WEIGHT CONCRETE
CONN	CONNECTION	O/	OVER
CONSTR	CONSTRUCTION	O.C.	ON CENTER
CONT.	CONTINUOUS	O.H.	OPPOSITE HAND
CTR.	CENTER	OPP	OPPOSITE
DBL	DOUBLE	OPNG.	OPENING
DET.	DETAIL	OSB	ORIENTED STRAND BOARD
DF	DOUGLAS FIR	OWSJ	OPEN WEB STEEL JOISTS
DIA.	DIAMETER	PDF	POWER DRIVEN FASTENER
DIAG.	DIAGONAL	PERP.	PERPENDICULAR
DIM	DIMENSION	PERIM.	PERIMETER
DWG	DRAWING	PL	PLATE
(E)	EXISTING	PLVD.	PLYWOOD
E.A.	EACH	PSL	PARALLEL STRAND LUMBER
E.F.	EACH FACE	P.T.	PRESSURE TREATED
EL	ELEVATION	REF	REFERENCE
EMBED.	EMBEDMENT	REINF.	REINFORCING
E.N.	EDGE NAIL	REQ'D.	REQUIRED
EQUIP.	EQUIPMENT	RET.	RETAINING
E.W.	EACH WAY	RO	ROUGH OPENING
EXP.	EXPANSION	RDWD.	REDWOOD
EXT.	EXTERIOR	S.A.D.	SEE ARCHITECTURAL DRAWINGS
FNDN.	FOUNDATION	SCHED.	SCHEDULE
F.F.	FINISHED FLOOR	SHTG.	SHEATHING
FLR	FLOOR	SIM.	SIMILAR
F.O.	FACE OF	S.O.G.	SLAB ON GRADE
FRMG.	FRAMING	SPEC.	SPECIFICATIONS
F.S.	FAR SIDE	SQ.	SQUARE
FT	FOOT	SS	STAINLESS STEEL
FTG.	FOOTING	STD	STANDARD
GA	GAGE	T&B	TOP AND BOTTOM
GALV.	GALVINIZED	T&G	TONGUE AND GROOVE
GR.	GRADE	T.N.	TOE NAIL
GL	GLULAM	T.O.	TOP OF
G.B.	GYPSUM BOARD	TYP.	TYPICAL
HDG	HOT DIPPED GALVANIZED	U.O.N.	UNLESS OTHERWISE NOTED
HDR	HEADER	VERT	VERTICAL
HGR	HANGER	W.P.	WATER PROOFING
HK	HOOK	WT	WEIGHT
HORIZ.	HORIZONTAL	WWF	WELDED WIRE FABRIC
HSB	HIGH STRENGTH BOLT	W/	WITH
HSS	HOLLOW STRUCTURAL STEEL	XS	EXTRA STRONG
INFO.	INFORMATION	XXS	DOUBLE-EXTRA STRONG

LEGEND

	CONCRETE SLAB	
	CONCRETE FOOTING, WIDTH AS INDICATED ON PLAN, DEPTH 1'-6" MIN BELOW GRADE	
	BAR BENDS AT FOOTINGS SHALL BE PER TYPICAL DETAIL	
	WOOD-FRAMED BEARING WALL ABOVE WITH 2x4 STUDS @ 16" O.C. U.O.N. WITH 1/2" CD-X PLYWOOD EXTERIOR SHEATHING	
	TYPICAL. CONSTRUCT BEARING WALLS PER TYPICAL DETAIL, SEE ARCHITECTURAL DRAWINGS FOR ALL OTHER WALL SHEATHING AND FINISHING	
	SHEAR/BEARING WALLS BELOW	
	WOOD PART. WALL-NON STRUCTURAL	
	WOOD-FRAMED WALL ABOVE TO BE CONSTRUCTED AS A SHEAR WALL WITH 1/2" CD-X PLYWOOD WITH FASTENING PER SHEAR WALL SCHEDULE AND TYPICAL DETAILS	
	SEISMIC COLLECTOR STRAP, PER PLAN & TYPICAL DETAIL	
	MAXIMUM STUD AND JOIST PENETRATIONS ALLOWED SHALL BE PER TYPICAL DETAIL	
	SIMPSON HOLDOWN WITH BOUNDARY CHORD SIZE, SIMPSON HDU2 OR EQUAL, U.O.N., REFER TO TYPICAL DETAILS.	
	WOOD BEAM, RAFTER OR JOIST, PER PLAN	
	HEADER OR DROPPED BEAN SIZE PER TYPICAL DETAIL	
	LEDGER, SEE PLAN FOR SIZE	
	FLUSH FRAMED BEAM-TO-BEAM CONNECTIONS WITH SIMPSON HARDWARE TYPE	
	REFER TO ARCHITECTURAL DRAWINGS FOR ALL PLAN DIMENSIONS. ANY DIMENSIONS GIVEN ON THESE DRAWINGS ARE FOR REFERENCE AND SHOULD BE VERIFIED ON THE ARCHITECTURAL DRAWINGS.	
	WHERE WALL SOLES OR PLATES ARE CUT FOR PLUMBING, HEATING OR OTHER ITEMS, A METAL TIE SHALL BE PROVIDED NOT LESS THAN 18 GA GALVANIZED AND 1.5" WIDE, FASTENED TO EACH PLATE ACROSS AND TO EACH SIDE OF THE OPENING WITH NOT LESS THAN SIX 16d NAILS.	
	POST BEARING ON FRAMING	
	POST BELOW FRAMING	
	CONTROL JOINTS PER TYPICAL DETAIL	

SHEET INDEX

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HANGER CONNECTION SCHEDULE

SUPPORTED MEMBER WIDTH	SUPPORTED MEMBER DEPTH	TOP FLANGE HANGER	ALLOWABLE LOAD	FACE MOUNTED HANGER	ALLOWABLE LOAD
3 1/2"	9 1/2"	HUI49.5TF	4,550 LB	HGUS410	9,100 LB
	9 3/4"	HUI49.5TF	4,550 LB	HGUS410	9,100 LB
	11 1/2"	GLTV3.56/11.25	7,400 LB	HGUS412	9,600 LB
	11 1/4"	GLTV3.511	7,400 LB	HGUS412	9,600 LB
5 1/2"-5 3/4"	14"	GLTV3.514	7,000 LB	HGUS414	10,100 LB
	9 1/2"	HB5.50/9.5	5,640 LB	HHUS5.50/10	5,660 LB
	9 3/4"	HB5.50/9.5	5,640 LB	HHUS5.50/10	5,660 LB
	11 1/2"	GLTV5.50/11.25	7,400 LB	HGUS5.50/12	9,600 LB
	11 1/4"	GLTV5.511	7,400 LB	HGUS5.50/12	9,600 LB
5 1/2"-5 3/4"	14"	GLTV5.514	7,400 LB	HGUS5.50/14	10,100 LB

NOTES:
1. USE FOR PARALAM, MICROLAM AND DOUGLAS FIR.
2. LOAD VALUES BASED ON SIMPSON WOOD CONSTRUCTION CONNECTORS CATALOG 2017-2018 EDITION.

San Joaquin County, Planning & Development Services
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BUILDING DIVISION



Sheet Number

S0

GENERAL NOTES

- 1 ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE APPLICABLE EDITION OF THE CALIFORNIA BUILDING CODE (CBC); THE MOST RECENT VERSIONS OF THE CMC, CPC AND CEC; ALL APPLICABLE LOCAL CODES AND ORDINANCES; AND LOCALLY ACCEPTED STANDARDS OF PRACTICE.
- 2 THE CONTRACTOR SHALL REVIEW ALL DRAWINGS IMMEDIATELY UPON THEIR RECEIPT AND SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
- 3 CONNECTIONS AND IMPLIED CONSTRUCTION ASSEMBLIES THAT ARE NOT SPECIFICALLY DESCRIBED OR DETAILED SHALL BE CONSTRUCTED USING STANDARD CONSTRUCTION PRACTICES IN COMPLIANCE WITH THE GOVERNING CODES AND ORDINANCES.
- 4 ALL DETAIL REFERENCES SHALL BE CONSIDERED "TYPICAL". THE INTENT OF TYPICAL DETAILS SHALL BE APPLIED TO SIMILAR CONDITIONS ELSEWHERE IN THE PROJECT. WHEN DETAILS LABELED "SIMILAR" ARE GIVEN ON DRAWINGS, THE CONTRACTOR SHALL APPLY THE GENERAL INTENT OF THE DETAIL TO THE REFERENCED CONDITION.
- 5 WRITTEN INFORMATION AND DIMENSIONS SHALL TAKE PRECEDENCE OVER GRAPHIC INFORMATION. DO NOT SCALE DRAWINGS.
- 6 STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR THIS WORK HAVE BEEN PREPARED IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING STANDARDS OF PRACTICE TO MEET THE MINIMUM REQUIREMENTS OF THE APPLICABLE EDITION OF THE CBC. ANY OMISSIONS OR DISCREPANCIES ON THE PLANS OR ANY DEVIATIONS FROM THE PLANS THAT ARE NECESSITATED BY FIELD CONDITIONS OR ANY CONDITION DIFFERENT FROM THOSE INDICATED ON THE PLANS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONTINUING CONSTRUCTION. ALL WORK SHALL BE COORDINATED SO COOPERATION BETWEEN THE TRADES IS ACCOMPLISHED.
- 7 THE STRUCTURAL DRAWINGS SHOW ONLY THE BASIC STRUCTURAL SYSTEMS. REFER TO THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR ITEMS WHICH REQUIRE SPECIAL PROVISIONS DURING THE CONSTRUCTION OF THE BUILDING.
- 8 CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY BRACING NECESSARY TO COMPLETE THE CONSTRUCTION.
- 9 THESE DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED EXCLUSIVELY FOR USE ON THIS PROJECT ONLY. THE DRAWINGS AND SPECIFICATIONS, OR PORTIONS THEREOF, SHALL NOT BE USED ON OTHER PROJECTS OR ADDITIONS TO THIS PROJECT EXCEPT BY AGREEMENT IN WRITING AND WITH APPROPRIATE COMPENSATION OF THE ENGINEER.
- 10 THE STRUCTURAL SYSTEMS HAVE BEEN DESIGNED TO CARRY THE SUPERIMPOSED LIVE LOADS AS PRESCRIBED BY THE CALIFORNIA BUILDING CODE AND IN ACCORDANCE WITH STANDARD ENGINEERING PRACTICES, WITH NO SPECIAL PROVISIONS TO CARRY CONCENTRATED LOADS FROM STORAGE AND HANDLING OF CONSTRUCTION MATERIALS OR FROM OPERATION OF CONSTRUCTION EQUIPMENT.
- 11 THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL SCAFFOLDING, BRACING, AND SHORING SYSTEMS AS REQUIRED FOR INSTALLATION, STABILITY AND SAFETY OF NEW WORK AND EXISTING STRUCTURES, PIPING, AND FOUNDATION SYSTEMS. CONTRACTOR SHALL ALSO PROVIDE FOR THE SAFETY OF PEDESTRIANS AND JOB SITE PERSONNEL. AT ALL TIMES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITION OF THE JOB SITE, INCLUDING SAFETY OF PERSONS AND PROPERTY. THE CONTRACTOR SHALL PROTECT NEW AND EXISTING CONSTRUCTION FROM INCLEMENT WEATHER AND FROM PHYSICAL DAMAGE.
- 12 CONTRACTOR SHALL COORDINATE WITH THE CITY TO ENSURE ALL INSPECTIONS (INCLUDING SPECIAL INSPECTIONS) ARE COMPLETED PER THE LOCAL BUILDING DEPARTMENT REQUIREMENTS. APPROVALS BY BUILDING INSPECTORS SHALL NOT CONSTITUTE AUTHORITY TO DEVIATE FROM THE PLANS AND SPECIFICATIONS.
- 13 IF PROVIDED, OBSERVATION OF THE CONSTRUCTION BY THE ENGINEER IS INTENDED TO IMPROVE THE PROBABILITY THAT THE WORK IS COMPLETED IN GENERAL CONFORMANCE WITH THE ENGINEERING DESIGN INTENT. OBSERVATION OF THE CONSTRUCTION BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR COMPLETING THE CONSTRUCTION IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND GENERALLY ACCEPTED STANDARDS OF PRACTICE.
- 14 ALL FRAMING HARDWARE SHALL BE MANUFACTURED BY SIMPSON STRONGTIE. ALTERNATE FRAMING HARDWARE MANUFACTURERS SHALL NOT BE PROVIDED UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER AND THE BUILDING OWNER. IF ALTERNATE HARDWARE SYSTEMS ARE AUTHORIZED, THE CONTRACTOR SHALL FORWARD COMPLETE SHOP DRAWINGS FOR REVIEW AND APPROVAL.

CONCRETE NOTES

- 1 ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE ACI BUILDING CODE (ACI-318) AND THE CALIFORNIA BUILDING CODE (CBC). DETAILING, FABRICATION, AND ERECTION OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF STANDARD PRACTICE (ACI-315).
- 2 CONCRETE SHALL CONFORM TO ASTM 94 AND REACH THE MINIMUM STRENGTH SPECIFIED ON THE FOUNDATION PLANS. CONCRETE QUALITY SHALL CONFORM TO PROVISIONS OF CBC SECTION 19. CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR II.
- 3 MIXING WATER SHALL BE CLEAN AND FREE FROM INJURIOUS AMOUNTS OF OIL, ACIDS, ALKALIES, ORGANIC MATERIALS OR OTHER DELETERIOUS SUBSTANCES. COURSE AGGREGATE SHALL BE HARD, DURABLE CRUSHED STONE OR GRAVEL GRADED PER ASTM C33. MAXIMUM SIZE AGGREGATE SHALL BE ¾" DIAMETER. SAND SHALL BE CLEAN, HARD, DURABLE, WASHED FREE FROM SILT, LOAM OR CLAY.
- 4 REINFORCEMENT SHALL NOT BE DISPLACED OR CUT TO PROVIDE FOR PENETRATIONS, INSERTS, OR EMBEDMENT.
- 5 LOOSE SOIL, SAWDUST, AND OTHER DEBRIS SHALL BE REMOVED FROM THE FORMS PRIOR TO PLACING CONCRETE. ALL CONCRETE SHALL BE THOROUGHLY CONSOLIDATED DURING THE PLACEMENT USING A MECHANICAL VIBRATOR.
- 6 CONCRETE SHALL BE REGULAR WEIGHT CONCRETE (145 PCF) U.O.N. AND SHALL ATTAIN THE FOLLOWING ULTIMATE COMPRESSIVE STRENGTHS AT 28 DAYS. (MINIMUM CEMENT CONTENT: FIVE SACKS/CU. YD.)
- | LOCATION | MIN. STRENGTH @ 28 DAYS - PSI* | MAX. AGG. SIZE- INCHES | MAX. SLUMP-INCHES |
|-----------------|--------------------------------|------------------------|-------------------|
| FOUNDATIONS* | 3000 | 3/4 | 4 |
| SLABS-ON-GRADE* | 3000 | 3/4 | 4 |
- * SPECIAL INSPECTION OF PLACEMENT IS NOT REQUIRED WHEN "MIN. STRENGTH AT 28 DAY" IS LESS THAN 2500 PSI OR MARKED WITH AN ASTERISK (*). WHEN MARKED WITH AN ASTERISK, CONCRETE IS SPECIFIED AS 3,000 PSI FOR QUALITY CONTROL AND TO SATISFY DURABILITY REQUIREMENTS OF 2019 CBC 1904/1904.1 - THE STRUCTURAL CALCULATIONS ASSUME A 2,500 PSI COMPRESSIVE STRENGTH THEREFORE SPECIAL INSPECTION IS NOT REQUIRED.
- 8 CONCRETE SHALL BE CONTINUOUSLY CURED FOR 10 DAYS AFTER PLACING IN ANY APPROVED MANNER, INCLUDING CURING COMPOUND, CURING PAPER, ETC. NOTE: FOOTINGS ARE EXCEPTED FROM THIS REQUIREMENT.
- 9 ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE USED.
- 10 FLY ASH OR POZZOLANS, IF USED, SHALL CONFORM WITH ASTM C618, COAL FLY ASH AND RAW OR CALCIFIED NATURAL POZZOLAN FOR USE AS A MINERAL ADMIXTURE IN CONCRETE. USAGE SHALL NOT EXCEED 25 PERCENT, BY WEIGHT OF THE TOTAL CEMENTITIOUS MATERIALS. WHEN POZZOLANS ARE USED TO MITIGATE THE EFFECT OF SULFATE CONTAINING SOILS THEY SHALL BE OF A TYPE THAT HAS DEMONSTRATED SUCH ABILITY BY TEST OR SERVICE RECORD.

REINFORCING STEEL NOTES

- 1 REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, INTERMEDIATE GRADE. FOUNDATION STEEL SHALL BE NEW ASTM GRADE 40 (#4 AND SMALLER) OR GRADE 60 (#5 AND LARGER). DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL CONFORM TO OR EQUAL THAT SET FORTH IN THE MANUAL OF STANDARD PRACTICE (ACI-315) FOR DETAILING REINFORCED CONCRETE STRUCTURES, AND BETTER WHERE REQUIRED BY THE DRAWINGS. STANDARD HOOKS SHALL COMPLY WITH THOSE NOTED IN DETAILS.
- 2 REINFORCING SHALL BE INSTALLED CONTINUOUS FOR THE MAXIMUM LENGTH POSSIBLE. STAGGER ALL LAP SPLICES A MINIMUM OF 12 INCHES IN CONCRETE AND CONCRETE BLOCK UNLESS OTHERWISE LENGTHS NOTED IN DETAILS. LAP SPLICE ALL BARS A MINIMUM OF 48 BAR DIAMETERS, UNLESS OTHERWISE NOTED IN DETAILS.
- 3 ALL DOWELS, ANCHOR BOLTS AND OTHER INSERTS SHALL BE WELL SECURED IN PLACE PRIOR TO POURING CONCRETE. SUITABLE DEVICES SHALL BE USED TO HOLD THE REINFORCING IN ITS TRUE HORIZONTAL AND VERTICAL POSITIONS. THESE DEVICES SHALL BE SUFFICIENTLY RIGID AND NUMEROUS TO PREVENT DISPLACEMENT OF THE REINFORCING DURING THE PLACING OF THE CONCRETE. ALL PIPES AND DUCTS THROUGH CONCRETE SHALL BE SLEEVED. VERIFY OPENINGS WITH PLUMBER AND ELECTRICIAN.
- 4 IF SPECIFIED, WELDED WIRE FABRIC SHALL BE 6x6, #10x#10. WIRE FABRIC SHALL BE ELECTRICALLY WELDED STEEL PER ASTM A185. LAP 6" MINIMUM AT ALL EDGES AND TIE AT THREE PLACES TO REINFORCING DOWELS (WHERE OCCUR) EXCEPT LOCATIONS WHERE SLAB IS INDEPENDENT OF FOUNDATION. CONTRACTOR SHALL PROVIDE SUPPORT CHAIRS TO ENSURE FABRIC IS LOCATED IN THE CENTER OF THE SLAB.
- 5 CLEAR DISTANCE OF REINFORCEMENT SHALL BE AS FOLLOWS:
- | | 1½" CLEAR |
|---|-----------|
| EXPOSED WALL SURFACES | 1½" CLEAR |
| FORMED SURFACES IN CONTACT WITH EARTH | 2" CLEAR |
| UNFORMED SURFACES IN CONTACT WITH EARTH | 3" CLEAR |
| MINIMUM DISTANCE BETWEEN ADJACENT BARS | 2" CLEAR |
- 6 WELDING OF REINFORCING BARS SHALL CONFORM TO AWS D1.4 USING ASTM A706 REINFORCING BAR SPECIFICATIONS.

VERTICAL POSITIONS. THESE DEVICES SHALL BE SUFFICIENTLY RIGID AND NUMEROUS TO PREVENT DISPLACEMENT OF THE REINFORCING DURING PLACING OF CONCRETE.

- 8 IN LIEU OF LAP SPLICES, REBAR COUPLERS MAY BE USED. ERICO'S LENTON AND/OR ERICO'S CADWELD OR FOX-HOWLETT MAY BE USED. ALTERNATIVES WILL BE CONSIDERED UPON SUBMITTAL OF MANUFACTURER'S DOCUMENTATION AND ICBO REPORTS. STAGGER ALL COUPLERS A MINIMUM OF 24 INCHES.

GENERAL FRAMING NOTES

- NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED UNLESS SPECIFICALLY SHOWN, NOTED, OR APPROVED BY THE ENGINEER. NOTCH DETAILS, IF PROVIDED, ARE FOR GENERAL GUIDANCE ONLY. THE ENGINEER SHALL BE CONTACTED TO APPROVE LOCATIONS OF PROPOSED NOTCHES. STUDS IN EXTERIOR WALLS AND BEARING PARTITIONS MAY BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25% OF STUD WIDTH. CUTTING OR NOTCHING OF STUDS IN NON-BEARING PARTITIONS SHALL NOT EXCEED 40% OF THE WIDTH.
- 2 ALL STUD WALLS SHOWN ON STRUCTURAL DRAWINGS SHALL BE FRAMED AS FOLLOWS (U.O.N.):
- | INTERIOR WALLS, MAXIMUM HEIGHT: | EXTERIOR WALLS, MAXIMUM HEIGHT: |
|---------------------------------|---|
| UP TO 14 FT. 2x4 @ 16" O.C. | UP TO 10 FT. 2x4 @ 16" O.C. |
| UP TO 20 FT. 2x6 @ 16" O.C. | UP TO 18 FT. 2x6 OR DBL. 2x4 @ 16" O.C. |
| | UP TO 21 FT. DBL. 2x6 @ 16" O.C. |
- 3 TOP PLATES SHALL BE DOUBLED ON ALL STUD WALLS. LAP 4'-0" MINIMUM AT TOP PLATE SPLICES, WITH (28) 16D NAILS EACH SIDE OF SPLICE, U.O.N. SPLICES IN UPPER AND LOWER PLATES SHALL BE STAGGERED AT LEAST 4 FEET.
- 4 POSTS IN WALLS MAY BE MADE WITH MULTIPLE STUDS OF EQUIVALENT WIDTH AND DEPTH, U.O.N. SECURE MULTIPLE STUDS WITH 16D NAILS AT 8" O.C. STAGGERED.
- 5 PROVIDE KING STUDS AT THE ENDS OF ALL HEADERS OR OTHER BEAMS INSTALLED IN WALLS. PROVIDE DBL. KING STUDS AT ALL OPENINGS GREATER THAN 5 FT WIDE. ADJACENT, STACKING WINDOWS SHALL BE SEPARATED BY KING STUDS THAT ARE CONTINUOUS FROM SILL TO TOP PLATE (TO PREVENT ROTATION). END NAIL KING STUDS TO HEADERS. CRIPPLE STUDS UNDER HEADERS SHALL BE CONTINUOUS TO SOLE PLATE.
- 6 ALL MEMBERS IN BEARING SHALL BE ACCURATELY CUT AND ALIGNED SO THAT FULL BEARING IS PROVIDED WITHOUT THE USE OF SHIMS.
- 7 BLOCK ALL STUD WALLS AS REQUIRED FOR SHEATHING AND FINISHES. BALLOON FRAME ALL WALLS WITH SLOPING CEILING OR WITH RAISED CEILINGS.
- 8 INSTALL HORIZONTAL MEMBERS WITH CROWN UP. WHERE KNOTS EXIST NEAR THE TOP OR BOTTOM OF HORIZONTAL MEMBERS, INSTALL MEMBER WITH KNOTS UP. CANTILEVERED DECK JOISTS SHALL BE CAREFULLY NOTCHED AND TRIMMED (IF NECESSARY) TO PROVIDE SLOPE WITHOUT OVER-CUTTING.
- 9 PROVIDE FULL DEPTH BLOCKING OR CONTINUOUS RIM JOIST AT ALL FLOOR AND ROOF FRAMING SUPPORTS. FRAMING MEMBERS SHALL HAVE A MINIMUM OF 2" BEARING AT SUPPORTS. LAPPING JOISTS SHALL HAVE 6" MINIMUM OVERLAP CENTERED OVER INTERIOR SUPPORTS.
- 10 ALL FRAMING LUMBER SHALL BE DOUGLAS FIR, AND SHALL BE STAMPED WITH A GRADE MARK WITH THE FOLLOWING GRADES. FRAMING LUMBER SHALL CONFORM TO GRADING RULES OF WWPA. MAXIMUM MOISTURE CONTENT SHALL NOT EXCEED 19% AT TIME OF INSTALLATION.
- | | E, KSI | FB, PSI | FV, PSI | WIDTH, IN. |
|----------------------------|--------|---------|---------|------------|
| TIMBERSTRAND LSL RIM JOIST | 1300 | 1700 | 400 | 1.25 |
| TIMBERSTRAND LSL BEAMS | 1550 | 2325 | 310 | 1.75-3.5 |
| MICROLLAM LVL BEAMS | 2000 | 2600 | 285 | 1.75-3.5 |
| PARALLAM PSL BEAMS | 2200 | 2900 | 290 | 3.5-7 |
- 13 ALL BOLTED WOOD CONNECTIONS SHALL HAVE A WASHER UNLESS A STEEL PLATE IS SPECIFIED. HOLES SHALL BE PROPERLY ALIGNED. OVERSIZED HOLES ARE NOT ALLOWED. NUTS SHALL BE SNUG TIGHTENED. BOLT HOLES SHALL BE NOMINAL DIAMETER OF BOLT PLUS ⅛". BOLTS SHALL BE ⅝" DIAMETER, MINIMUM, GRADE A307 OR BETTER.
- 14 NAILED WOOD CONNECTIONS SHALL USE COMMON WIRE NAILS, U.O.N. MINIMUM NAILING REQUIREMENTS FOR STANDARD CONNECTIONS SHALL BE IN ACCORDANCE WITH CBC FASTENING SCHEDULE (TABLE 2304.10.1).
- 15 ALL MANUFACTURED CONNECTION HARDWARE SHALL BE AS DESIGNATED ON DRAWINGS AND INSTALLED (WITH ALL NAIL HOLES FILLED) IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPLICABLE ICBO APPROVALS.
- 16 INSTALL LAG SCREWS IN DRILLED LEAD HOLES WITH A DIAMETER EQUAL TO ¾ OF THE SHANK DIAMETER. LAG SCREWS SHALL NOT BE HAMMERED IN. PROVIDE WASHERS UNDER HEADS BEARING ON WOOD. HOLES SHALL BE PROPERLY ALIGNED.
- 17 ALL TJI JOIST ARE TO BE PREFABRICATED WOOD I-JOISTS HAVING WOOD OR WOOD-BASED FLANGES AND OSB WEBS. EITHER THE TOP AND BOTTOM FLANGES ARE PARALLEL, FORMING A CONSTANT-DEPTH JOIST; OR THE TOP FLANGE HAS A SINGLE TAPER, FORMING A VARIABLE-DEPTH JOIST. THE WEB PANELS HAVE THE FACE GRAIN ORIENTED VERTICALLY, AND THE WEB-TO-WEB CONNECTION IS EITHER BUTT JOINTED OR SERRATED AND GLUED TO FORM A CONTINUOUS WEB. THE WEB-TO-FLANGE CONNECTION IS A PROPRIETARY TONGUE-AND-GROOVE GLUED JOINT. ALL THE FRAMING MEMBERS ARE TO CONFORM TO ESR-1153.
- 18 FASTENERS FOR PRESSURE TREATED WOOD SHALL BE HOT-DIPPED ZINC COATED GALVANIZED, STAINLESS, STEEL.
- 19 .229x3"x3" PLATE WASHERS SHALL BE PROVIDED AT ALL SILL BOLTS.
- 20 ALL GABLE & RAKE WALLS ARE TO BE BALLOON FRAMED U.N.O. ON STRUCTURAL PLANS.

PLYWOOD

- 1 EACH PANEL SHALL BE IDENTIFIED WITH THE APPROPRIATE GRADE, TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION, AND SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE U.S. PRODUCTS STANDARD PS-1. PLYWOOD SHALL BE DOUGLAS FIR AND AS FOLLOWS:
- ROOF: APA RATED SHTG. 24/0, EXPOSURE 1*
FLOOR: APA RATED SHTG. 48/24, T&G EXPOSURE 1**
GARAGE: APA STURD-I-FLOOR 48 OC, T&G EXPOSURE 1**
WALL: APA RATED SHTG. 32/16, EXPOSURE 1
- *PROVIDE PLYWOOD CLIPS BETWEEN JOISTS WHERE EDGES ARE NOT BLOCKED.
**CONTRACTOR MAY OMIT T&G WHERE EDGES ARE BLOCKED.
2. PLYWOOD SHEETS SHALL BE THICKNESS NOTED ON STRUCTURAL DRAWINGS.
3. PLYWOOD SHEETS AT FLOORS AND ROOFS SHALL BE LAID WITH FACE GRAIN PERPENDICULAR TO JOISTS AND RAFTERS.
4. PLYWOOD SHEETS ON WALLS SHALL BE LAID WITH LONG DIMENSION VERTICAL. BLOCK ALL EDGES WITH A MINIMUM OF 3X BLOCKS.
5. DRIVE NAILS FLUSH WITH PLYWOOD SURFACE. DO NOT FRACTURE SURFACE BY OVERDRIVING NAILS. REPLACE OVERDRIVEN NAILS WITH NEW HOLE.
- SHEARWALL NOTES
- 1 WHERE A STRUCTURAL SHEARWALL IS INDICATED ON PLANS THE ASSEMBLY SHALL RUN HORIZONTALLY AND CONTINUOUSLY TO THE NEAREST WALL OPENING OR END OF THE WALL. THE ASSEMBLY SHALL RUN VERTICALLY CONTINUOUSLY FROM THE BOTTOM OF THE NEAREST SOLE OR BOTTOM PLATE UP TO THE TOP OF THE NEAREST DOUBLE TOP PLATE (OR BEAM). ALL PLYWOOD PANEL EDGES SHALL BE BLOCKED AND EDGE NAILED.
- 2 WHERE HOLDOWN POSTS OR STUDS ARE INDICATED AT THE END OF A SHEARWALL, THE SHEAR PLYWOOD SHALL BE EDGE NAILED AND THE POST SHALL RUN CONTINUOUSLY FROM THE SOLE PLATE TO THE DOUBLE TOP PLATE. HOLDOWNS SHALL BE ATTACHED TO POSTS AT THE ENDS OF SHEARWALLS AND SHALL EXTEND TO EITHER FRAMING BELOW OR TO FOUNDATION AS SHOWN ON PLANS.
- 3 SEE SHEARWALL SCHEDULE ON PLANS FOR REQUIRED SHEARWALL NAILING, ANCHOR BOLTS, SILL NAILS, AND OTHER SHEAR TRANSFER HARDWARE.
- 4 SHEARWALL PLYWOOD SHALL NOT BE CUT FOR PIPE, DUCTS, SLEEVES, ETC., U.O.N. OR DETAILED.
- 5 UNLESS OTHERWISE DETAILED, ALL INTERIOR SHEARWALLS SHALL BE CONTINUOUS TO THE ROOF OR FLOOR PLYWOOD IN ACCORDANCE WITH THE TYPICAL SHEAR TRANSFER DETAILS.

STRUCTURAL STEEL NOTES

- 1 ALL STEEL COMMON BOLTS SHALL CONFORM WITH ASTM A307 GRADE A UNLESS OTHERWISE NOTED. NUTS SHALL BE ASTM A563 AND WASHERS SHALL BE ASTM F436. ALL BOLT HEADS AND NUTS THAT BEAR ON WOOD SHALL HAVE MALLEABLE IRON WASHERS IF EXPOSED, OR CUT WASHERS IF CONCEALED.
- 2 ALL STEEL THREADED RODS SHALL BE A36 U.O.N.
- 3 ALL STEEL ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 36 TYPE 3 GALVANIZED.

ROOF TRUSS DESIGN REQUIREMENTS

- 1 ROOF TRUSS MANUFACTURER SHALL SUPPLY TO THE CONTRACTOR ROOF TRUSS SHOP DRAWINGS FOR REVIEW AND APPROVAL. ROOF TRUSS SHOP DRAWINGS SHALL BE SIGNED BY A CALIFORNIA REGISTERED PROFESSIONAL ENGINEER AND SHALL INCLUDE TRUSS LAYOUTS, CALCULATIONS, SPECIFICATIONS, AND DETAILS. TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST LOCAL BUILDING CODE FOR ALL LOADS IMPOSED, INCLUDING LATERAL LOADS AND MECHANICAL EQUIPMENT LOADS. SEE THE LOAD SCHEDULE FOR TYPICAL DEAD AND LIVE LOADS USED IN THE STRUCTURAL DESIGN. TRUSS DESIGNER SHALL SIZE AND SPECIFY ALL HANGERS NECESSARY TO SUPPORT TRUSSES.
- 2 TRUSS DESIGNER SHALL REINFORCE ALL GABLE AND SHEAR TRUSSES TO TRANSFER LATERAL LOADS INDICATED ON THE PLANS FROM THE TOP CHORD TO THE BOTTOM CHORD. SEE ARCHITECTURAL PLANS FOR SPECIAL TRUSS REQUIREMENTS INCLUDING CEILING CONFIGURATIONS, OVERHANGS, ATTIC MOUNTED FAU UNITS, AND OPENINGS FOR SKYLIGHTS, VENTS, CHIMNEYS, ACCESS DOORS, ETC. STRONG-BACKS, CROSS BRIDGING, AND/OR BRACING SHALL BE PROVIDED AND DETAILED AS REQUIRED TO ADEQUATELY BRACE ALL TRUSSES. ALL CONNECTORS SHALL BE ICBO APPROVED.
- 3 TRUSS LAYOUT SHOWN ON THE PLANS IS FOR TRUSS MANUFACTURER'S AID IN DESIGNING THE TRUSSES. ACTUAL TRUSS LAYOUT SHALL UTILIZE BEARING WALLS SHOWN ON THE PLANS AND SHALL MAINTAIN ARCHITECTURAL ROOF AND CEILING PROFILES. INTERIOR WALLS SHALL NOT BE USED FOR BEARING UNLESS SPECIFICALLY NOTED IN THE STRUCTURAL PLANS.
- 4 TOTAL LOAD AND LIVE LOAD DEFLECTIONS SHALL BE LIMITED TO L/240 AND L/360 RESPECTIVELY. DEFLECTIONS SHALL BE FURTHER REDUCED TO ELIMINATE UNDESIRABLE APPEARANCE, FINISH CRACKING, OR SHIFTING
- 5 TRUSS SHOP DRAWINGS SHALL BE REVIEWED AND APPROVED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS (APPROVED BY THE ENGINEER) SHALL BE FORWARDED TO THE BUILDING DEPARTMENT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN BUILDING DEPARTMENT APPROVAL OF CALCULATIONS AND SHOP DRAWINGS PRIOR TO FABRICATION. APPROVED FINAL TRUSS DRAWINGS SHALL BECOME PART OF CONSTRUCTION DOCUMENTS.
- 6 TRUSS CALCULATIONS, DRAWINGS AND LAYOUT PLANS OF ALL ENGINEERED ROOF TRUSSES MUST BE APPROVED BY THE ENGINEER OF RECORD AND APPROVED BY THE BUILDING OFFICIAL PRIOR TO REQUESTING A ROOF NAILING OR FRAMING INSPECTION.
- A. WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH CBC 2016, AND ACCEPTED ENGINEERING PRACTICE.
- B. WOOD TRUSSES SHALL BE PREFABRICATED BY A MANUFACTURER WITH A MINIMUM OF FIVE YEARS EXPERIENCE PERFORMING SUCH WORK. DESIGN, FABRICATION AND TESTING SHALL COMPLY WITH ASTM STANDARDS.
- C. THE TRUSS MANUFACTURER SHALL RETAIN A CIVIL ENGINEER LICENSED IN THE STATE OF CALIFORNIA TO DESIGN AND DIRECT THE FABRICATION AND ERECTION OF THE TRUSSES.
- D. PRIOR TO FABRICATION OF THE TRUSSES, THE FOLLOWING MATERIAL BEARING THE APPROVAL OF THE MANUFACTURER'S ENGINEER MUST BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR REVIEW:
7. SHOP DRAWINGS CLEARLY DELINEATING LAYOUT, BRIDGING REQUIREMENTS, JOIST MEMBER SIZES, GRADE AND SPECIES OF LUMBER, ELEVATION OF PITCHED MEMBERS, CONNECTION DETAILS, BEARING DETAILS PER CBC 2016.
8. STRUCTURAL CALCULATIONS STAMPED BY THE MANUFACTURER'S ENGINEER SHOWING MEMBER STRESSES, ANALYSIS AND DESIGN OF SUPPORT AND JOINT CONNECTIONS.
- A. WOOD TRUSSES SHALL BE DESIGNED TO WITHSTAND THE FOLLOWING LOADS (IN ADDITION TO ANY LOAD SHOWN ON THE PLANS OR DETAILS):
- | | | |
|-----------------|----------|--|
| UNIFORM LOADS - | ROOF: | DEAD LOAD = 13 PSF
LIVE LOAD = 20 PSF |
| | CEILING: | DEAD LOAD = 6 PSF
LIVE LOAD = 10 PSF |
- B. VERTICAL DEFLECTIONS SHALL BE LIMITED AS FOLLOWS:
- | | |
|----------------------|-------|
| DEAD + LIVE LOADING: | L/360 |
| LIVE LOADING: | L/480 |
- C. THE CONTRACTOR SHALL INSTALL ERECTION BRACING PER THE TRUSS MANUFACTURER'S REQUIREMENTS.
- D. ALL BLOCKING, STIFFENERS, LATERAL AND DIAGONAL BRACING, CLIPS AND ANCHORS AS DETAILED IN THESE DRAWINGS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. THE TRUSSES SHALL NOT BE MODIFIED, CUT, NOTCHED OR DRILLED EXCEPT AS DETAILED IN THE STRUCTURAL DRAWINGS.
- E. THE CONTRACTOR SHALL COORDINATE ALL PLUMBING, ELECTRICAL, MECHANICAL, FIRE PROTECTION, AND REQUIREMENTS BY OTHER TRADES AND ANY CONFLICTS WITH THE TRUSS REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO INSTALLATION.
- F. PROVIDE MINIMUM BEARINGS OF 1.5" AT TRUSSES ENDS AND 3.5" AT INTERMEDIATE BEARING SUPPORTS. FASTEN TRUSSES AT ALL BEARING SUPPORTS WITH 2-10d NAILS, ONE EACH SIDE, SPACED A MINIMUM OF 1.5" FROM EDGE.
- G. WOOD TRUSSES CONNECTED WITH METAL PLATE PER ANSI.TPI 1, SECTION 2.2)

PRESSURE TREATMENT OF WOOD

- 1 ALL LUMBER IN THE FOLLOWING LOCATIONS SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWPA C-2 WITH A PRESERVATIVE AND RETENTION SUITABLE FOR THE APPLICATION ABOVE THE GROUND.
- 1.1. IN CONTACT WITH ROOFING, FLASHING, WATERPROOFING.
- 1.2. IN CONTACT WITH MASONRY OR CONCRETE.
- 1.3. WITHIN 18 INCHES OF GRADE.
- 1.4. WOOD OR PLYWOOD EXPOSED TO WEATHER
- 1.5. WHERE CALLED FOR ON THE DRAWINGS
- 2 ALL LUMBER TO RECEIVE PRESSURE TREATMENT SHALL HAVE A MINIMUM MOISTURE CONTENT OF 19% AFTER PRESSURE TREATMENT. AS AN ALTERNATE, CONTRACTOR MAY USE REDWOOD OF EQUIVALENT STRENGTH PROPERTIES AS WOOD SPECIFIED IN THESE NOTES, AND AN APPROVED PRIMER.
- 3 AMMONIACAL COPPER QUATERNARY COMPOUND (ACQ) THAT DOES NOT USE ARSENIC OR CHROMIUM MAY BE USED. AMINE & CHLORINE PRESERVATIVES, CHROMATED COPPER ARSENATE (CCA) AND AMMONIACAL COPPER ARSENATE (ACA) SHALL NOT BE USED.
- 4 BORING AND CUT-OFFS: TREAT PER AWPA STANDARD M-4. FIELD TREAT CUT ENDS AND DRILL HOLES WITH SOLUTION OF COPPER NAPHTHANATE (MINIMUM 2% COPPER AS METAL)
- 5 FASTENERS: FOR PRESSURE-PRESERVATIVE TREATED WOOD, PROVIDE STEEL FASTENERS WITH HOT-DIPPED ZINC-COATED GALVANIZED TREATMENT PER ASTM A153/A153M, STAINLESS STEEL, SILICON BRONZE, COPPER OR SIMPSON'S "Z-MAX" COATING.
- 6 ALL EXTERIOR GLUED LAMINATED BEAMS EXPOSED TO WEATHER SHALL BE PRESSURE TREATED WITH A PRESERVATIVE. ALL CUT ENDS SHALL ALSO BE TREATED WITH A PRESERVATIVE. AS AN ALTERNATE, GLU-LAM BEAMS MAY BE FABRICATED OF ALASKAN, OR PORT ORFORD CEDAR, AND FIELD PAINTED WITH AN APPROVED PRIMER.

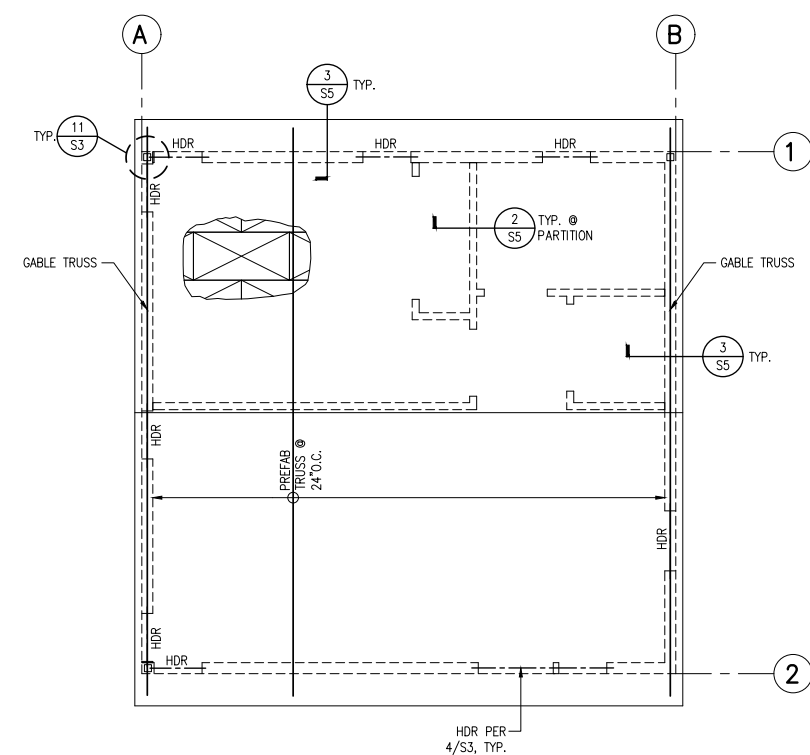
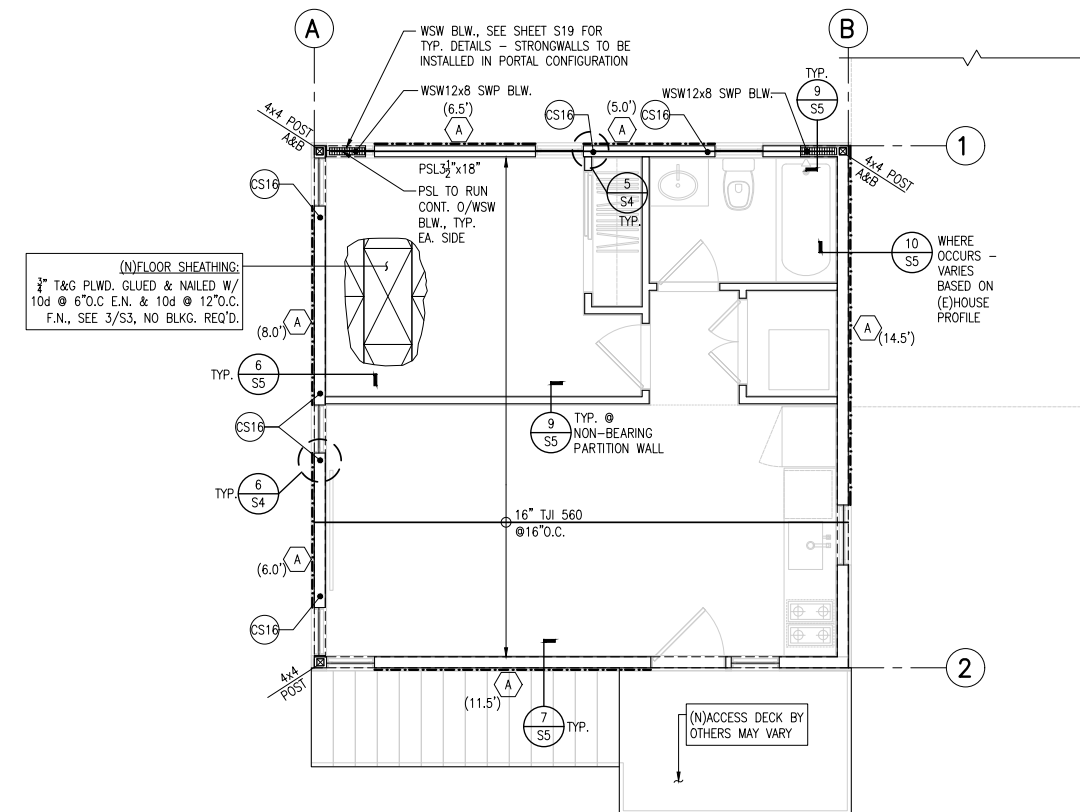
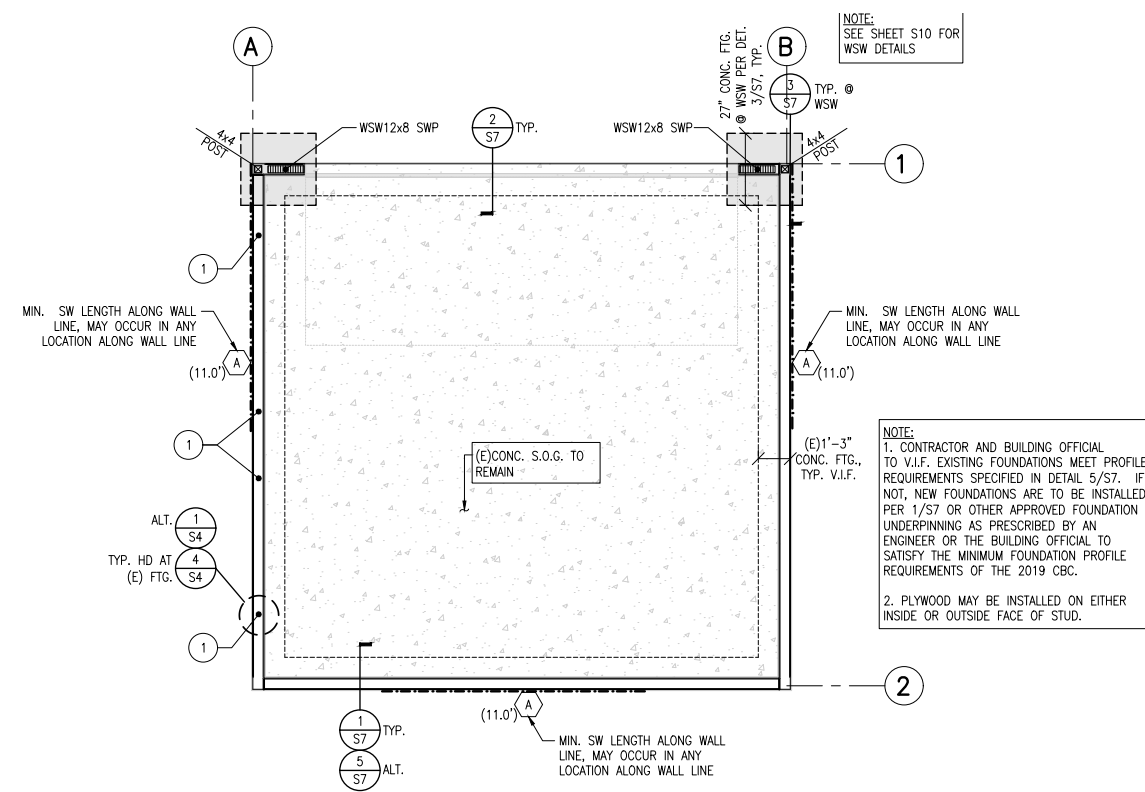
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500 SF ACCESSORY DWELLING UNIT
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Sheet Number

S1

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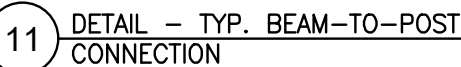
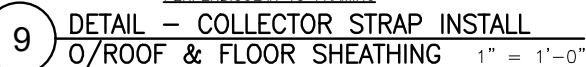
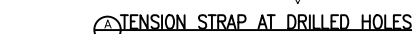
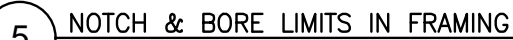
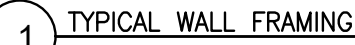
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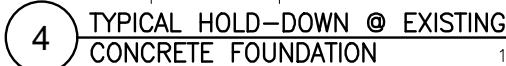
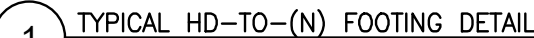


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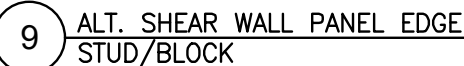
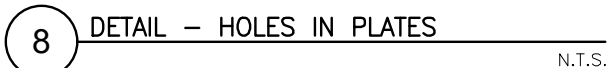
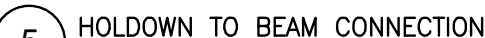
S2



S3



6 TYPICAL STRAP TIE - DOWN DETAIL
& SCHEDULE 1" = 1'-0"



NOTES:

1. SEE STRUCTURAL NOTES FOR MATERIALS SPECIFICATIONS.
2. PROVIDE SOFT BLOCKING IN THE FLOOR SPACE UNDER FULL CROSS SECTION OF POST.
3. INCREASE DEPTH OF FOUNDATION WHERE REQUIRED TO ACCOMMODATE ANCHOR EMBEDMENT.
4. PROVIDE FOUNDATION FOR ALL POSTS.
5. MINIMUM SIZED POSTS ARE REQUIRED AT ALL SHEAR WALL ENDS WHERE HOLD-DOWNS ARE SPECIFIED. END POST SIZE IS INDICATED IN THE HOLD-DOWN SCHEDULE.
6. ALL HOLD-DOWN POSTS AND VERTICAL ANCHORAGE RODS ARE TO BE LOCATED AS CLOSE TO THE END OF THE SHEAR WALL AS POSSIBLE. POSTS WHICH ARE PROVIDED PRIMARILY FOR HOLDING PURPOSES MAY NOT BE SPECIFICALLY INDICATED ON THE FRAMING PLANS.
7. WHERE THE HOLDING OR ANCHORAGE HOLD-DOWN POST IS NOT ALLOWED, PROVIDE ADDITIONAL 2x4 NAILER IF REQUIRED TO COVER BOLT HEADS.
8. WHERE POSSIBLE, USE VERTICAL LOAD CARRYING POSTS SHOWN ON PLANS AS HOLD-DOWNS.
9. **HOLD-DOWN POSTS FROM MULTIPLE STUDS (SEE SCHEDULE); FACE NAIL MULTIPLE STUDS WITH 2 ROWS OF 16D @ 6" O.C., FULL HEIGHT.
10. **LIGHTEN ALL HOLD-DOWN POSTS TO 2x4 NAILER IF ALLOWED. SEE LOSS-IN

NOTES:

1. ALL NAILS SHALL BE COMMON OR GALVANIZED BOX. GALV. BOX NAILS SHALL BE HOT DIPPED OR TUMBLER.
2. PLYWOOD AND OSB SHALL BE TYPE CD-X GRADE OR BETTER (EXCEPT WHERE STRUCTURAL 1 GRADE IS NOTED).
3. SHEARWALLS THAT REQUIRE 3X4 FRAMING SHALL USE 3x (MIN.) AT PANEL EDGES AND NAILING SHALL BE STAGGERED.
4. ALL ANCHOR BOLTS MUST BE INSTALLED WITH 3/8"x29" GALVANIZED PLATE WASHERS PER 2016 CCB.
5. PREDRILL SILL CONNECTIONS. USE DRILL BIT SIZE = 0.75 x NAIL (OR SCREW) DIAMETER.
6. ALL OUTSIDE SIDED WALLS REQUIRE 3x SILL MIN.
7. ALL FASTENERS THAT ARE INSTALLED INTO P.T. LUMBER ARE TO BE HOT DIPPED GALVANIZED.
8. STEEL = STRUCTURAL 1 GRADE PLYWOOD OR STRUCTURAL 1 GRADE OSB.
9. SDS = SIMPSON SDS x 6" DIAMETER x 6" LONG SCREWS
10. WHERE SHEAR MATERIAL IS APPLIED ON BOTH FACES OF A SHEARWALL, AND NAIL SPACING IS LESS THAN 6" O.C. THE FOLLOWING REQUIREMENTS SHALL BE:
 - A. USE 1x SILL AND NO TOP PLATES.
 - B. THE VERTICAL SHEAR PANEL JOINTS ON OPPOSITE FACES SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS, UNLESS SUCH FRAMING MEMBERS ARE 4x OR THICKER

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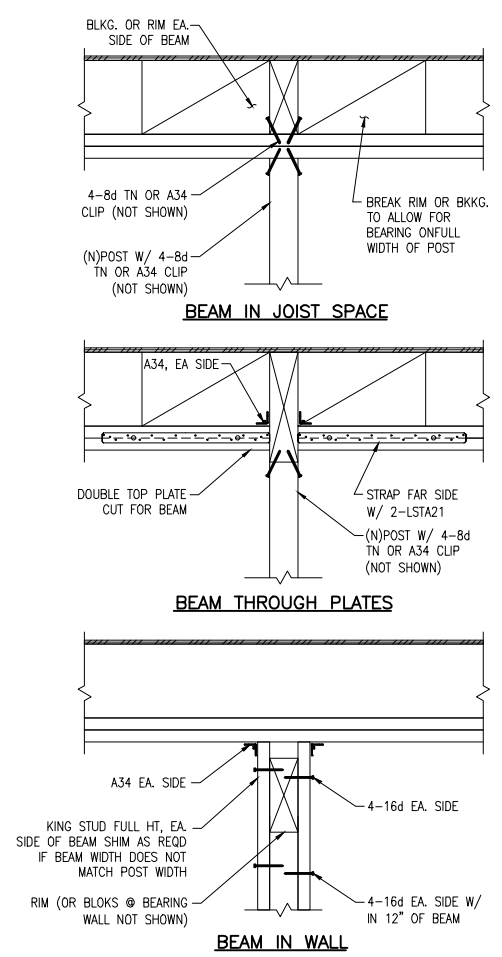
S4

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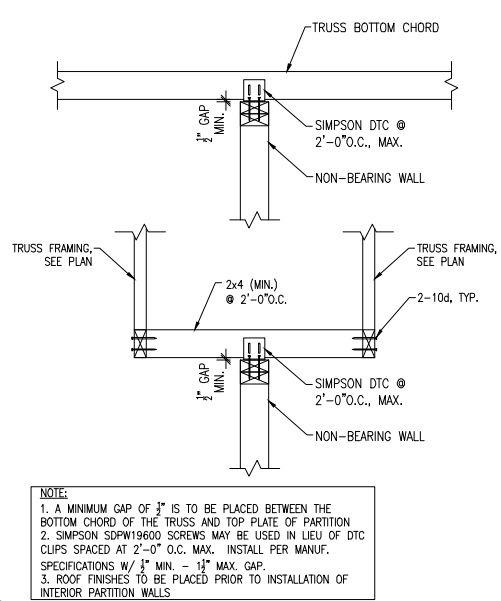


S5

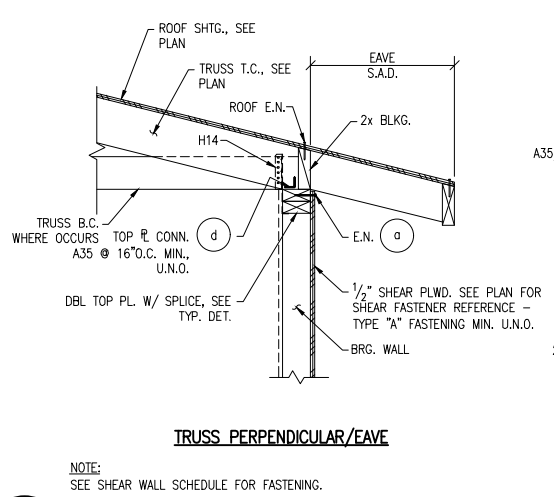


NOTES:
1. AT BEAM SUPPORTED BY ISOLATED POSTS, PROVIDE EPC OR PC CONNECTIONS FROM POST TO BEAM.
2. AT CONDITIONS WHERE BOTTOM OF BEAM IS > 24" FROM PLATES. BLOCK FROM KING STUD TO ADJACENT STUDS W/ FULL DEPTH BLKG. OR 2x4 T&B OF BEAM.

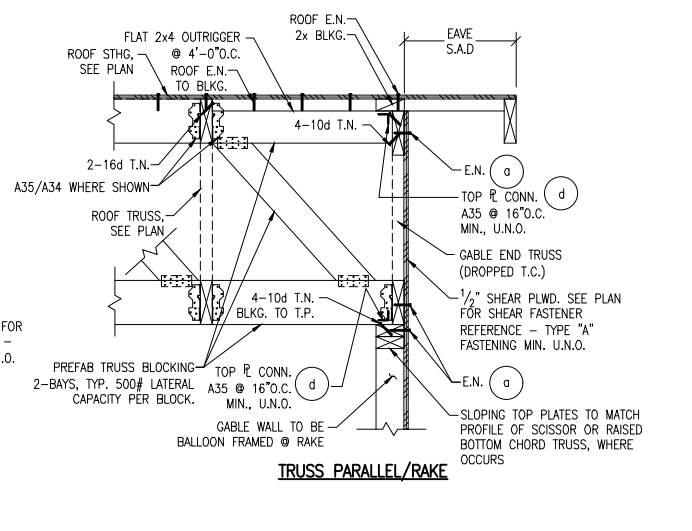
5. TYPICAL BEAM OR GIRDER TRUSS SUPPORT AT WALL
1" = 1'-0"
TDW44.dwg



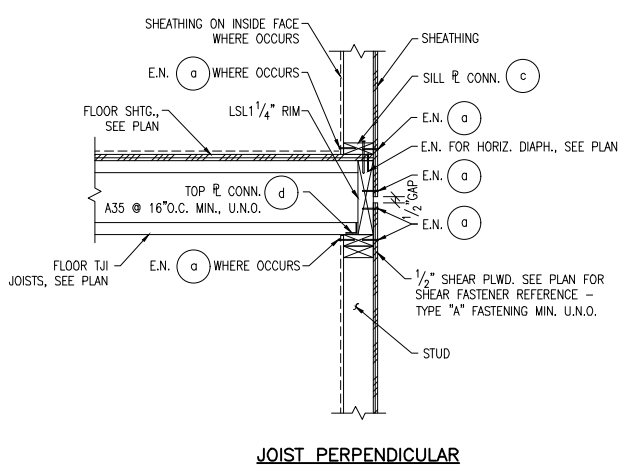
2. DETAIL NON-BEARING PARTITION CONN. @ ROOF TRUSS
1" = 1'-0"
TDW22



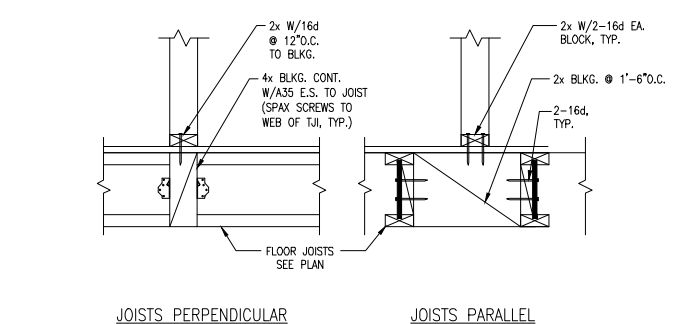
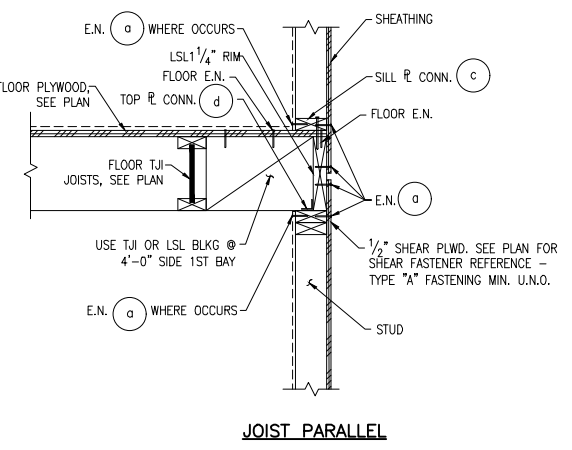
3. TYPICAL SECTION AT ROOF TRUSS - EXTERIOR
1" = 1'-0"
TDW191



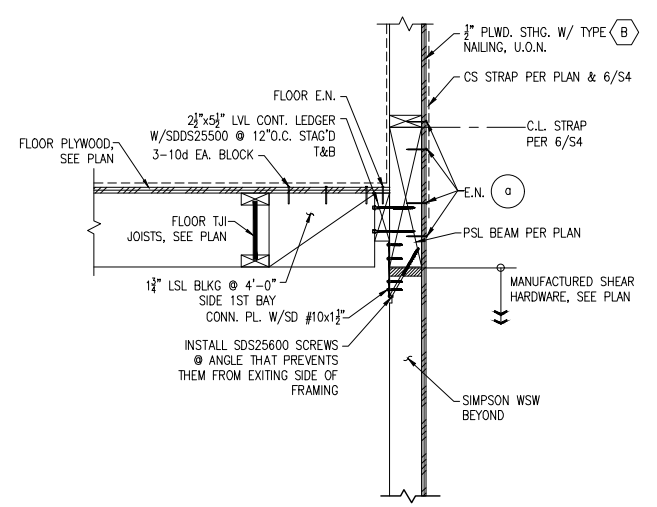
N.T.S.
TDW191



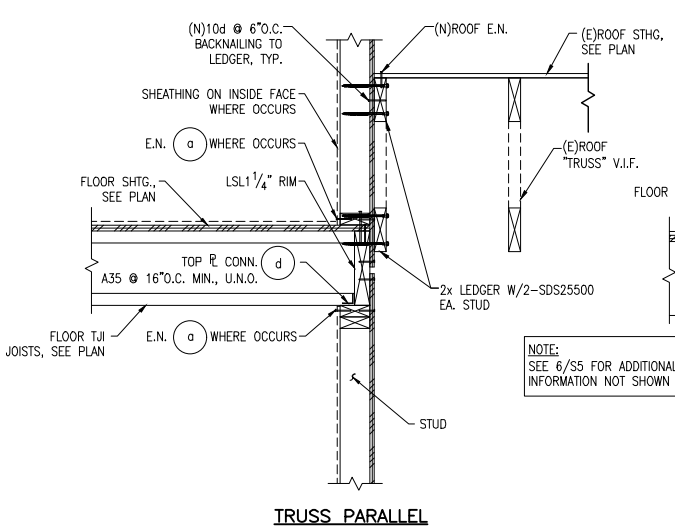
6. TYPICAL SECTION AT FLOORS - EXTERIOR (TJI JOISTS)
1" = 1'-0"
TDW20



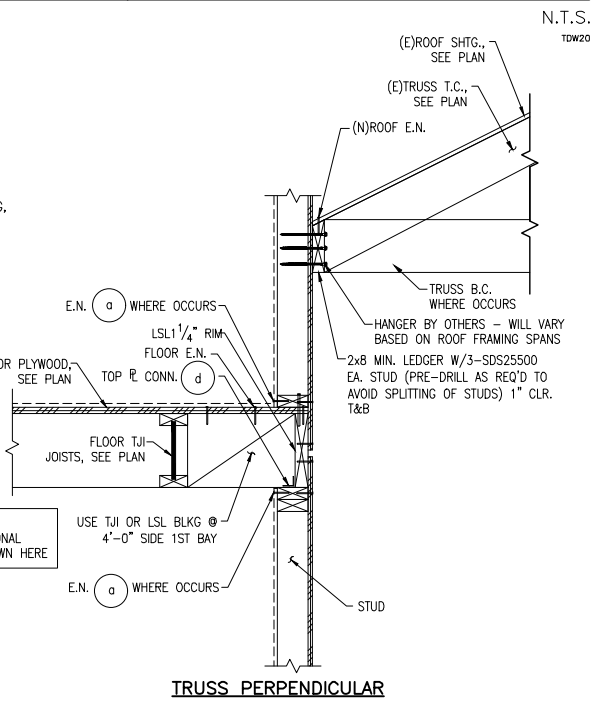
8. DETAIL - NON-BEARING PARTITION CONN.
1" = 1'-0"
TDW228.dwg



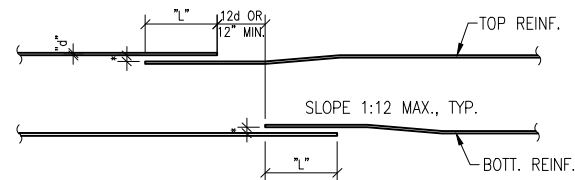
9. SECTION - FLOOR DIAPHRAGM CONN. @ WOOD STRONGWALL
N.T.S.
2018DW03.dwg



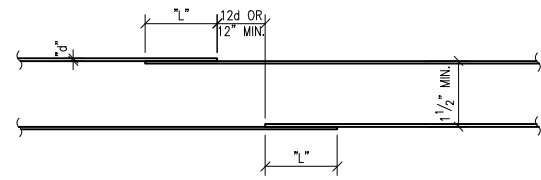
10. DETAIL - LOW ROOF TRUSS CONN. @ FLOORS
N.T.S.
TDWNP14F.dwg



N.T.S.
TDWNP14F.dwg



BOUNDARY, COLUMN & BEAM



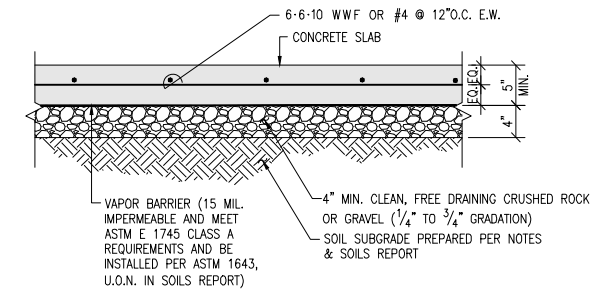
MAXIMUM OFFSET BEND
PRINCIPAL REINFORCING

135° HOOK
TIE OR STIRRUP

- NOTES:
1. ALL BENDS SHALL BE MADE COLD.
 2. FOR D ETC. SEE ACI-318 LATEST EDITION.

2 TYPICAL BAR BEND DETAILS

N.T.S.
TDC08



4 TYPICAL CONCRETE SLAB-ON-GRADE

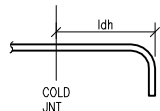
N.T.S.
TDC01

5

$F'_c = 2500\text{psi}$			
#3	9"	6"	6"
#4	12"	9"	7"
#5	15"	11"	9"

BAR SIZE	BASIC LENGTH l_{dh}	12.5.3 (a) MODIF $0.7 l_{dh}$	12.5.3 (b)(c) MODIF $0.7(0.8) l_{dh}$
$F'_c = 3000\text{psi}$			
#3	8"	6"	6"
#4	11"	8"	6"
#5	14"	10"	8"
#6	17"	12"	10"
#7	20"	14"	11"
#8	22"	16"	13"
#9	25"	18"	14"

- NOTE:
1. EMBEDMENT LENGTHS ARE BASED ON ACI 318-14 12.5, OR 60 STEEL AND NORMAL WEIGHT AGGREGATE.
 2. FOR MODIF 12.5.3 (a) SIDE COVER NOT LESS THAN $2\frac{1}{2}"$. COVER ON EXTENSION OF 90° HOOK NOT LESS THAN 2".
 3. FOR MODIF 12.5.3 (b)(c) BARS ENCLOSED IN TIES OR STIRRUPS PERP TO THE BAR SPACED NOT GREATER THAN $3d_b$ ALONG l_{dh} .



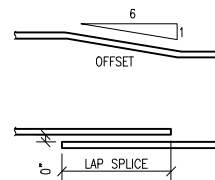
9 TENSION DEVELOPMENT FOR STANDARD HOOKS

N.T.S.
TDC45

6

BAR SIZE	CLASS B SPLICE (in)		CLASS A SPLICE (in)	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
$F'_c = 2500\text{psi}$				
#3	31	24	24	18
#4	41	32	32	24
#5	51	39	39	30
$F'_c = 3000\text{psi}$				
#3	28	22	22	17
#4	37	29	29	22
#5	47	36	36	28
#6	56	43	43	33
#7	81	63	63	48
#8	93	72	72	55
#9	105	81	81	62

- NOTE:
1. LAP SPLICE LENGTHS ARE BASED ON ACI 318-14 12.2.2, GR. 60 STEEL AND NORMAL WEIGHT AGGREGATE. CLEAR SPACING OF BARS BEING DEVELOPED OR SPLICED NOT LESS THAN $2d_b$ AND CLEAR COVER NOT LESS THAN d_b .
 2. CLASS A SPLICES ARE LIMITED TO CASES WHERE ONE-HALF OR LESS OF THE TOTAL REINFORCEMENT IS SPLICED WITHIN THE REQUIRED LAP LENGTH (STAGGERED SPLICE). FOR WALLS THE SPLICES SHALL ALSO BE STAGGERED WITH RESPECT TO THE OPPOSITE CURTAIN.
 3. TOP BARS ARE BARS WITH MORE THAN 12" OF CONCRETE POURED BELOW THE BARS.



10 TENSION LAP SPLICES FOR DEFORMED BARS

N.T.S.
TDC44

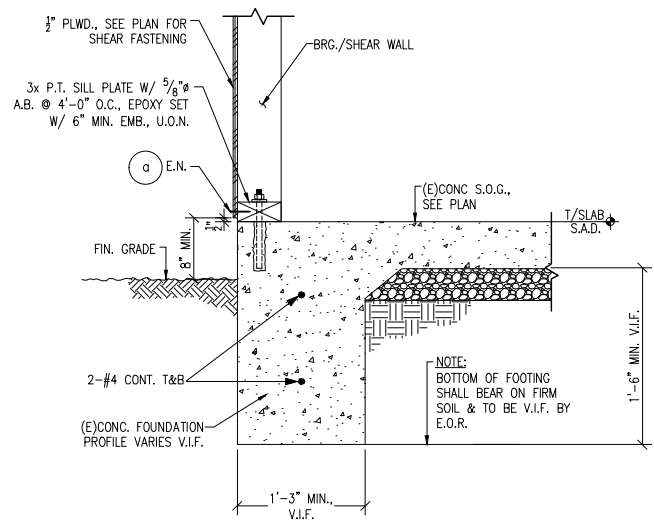
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11

8

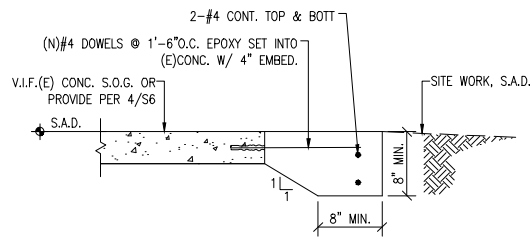
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1

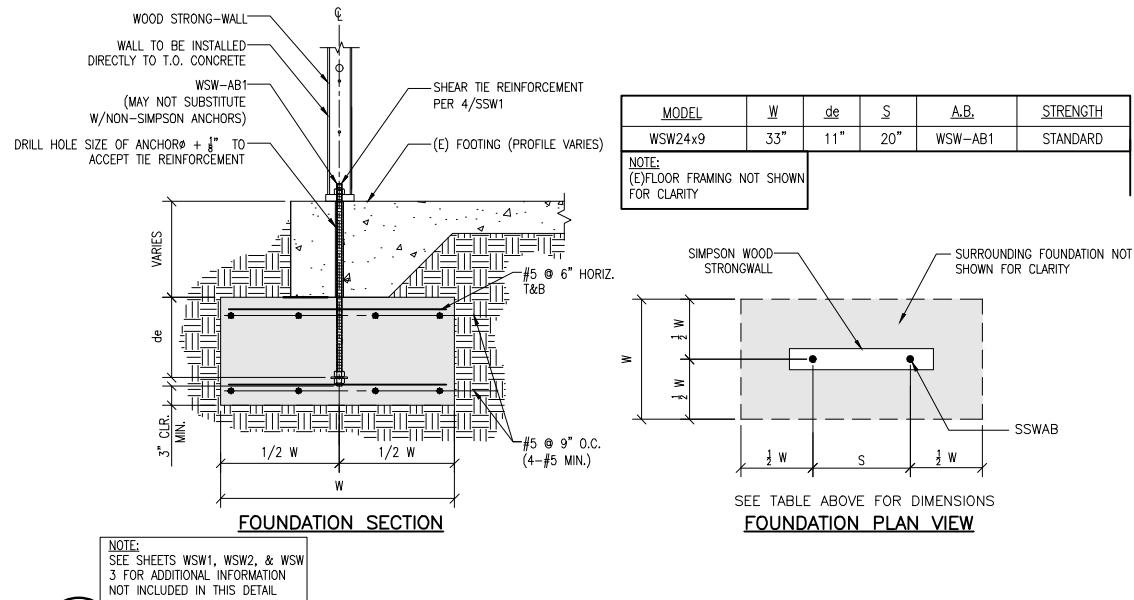


5 DETAIL – SHEAR/BRG. WALL ON PERIMETER FOUNDATION N.T.S. TDADWP13B.dwg

2 DETAIL – (N) TURNDOWN EDGE TO (E) S.O.G. AT GARAGE DOOR N.T.S. 2018ADC02.dwg



3 DETAIL – SIMPSON WSW WOOD STRONGWALL @ EXISTING CONCRETE FOUNDATION N.T.S. WSW ANCHORAGE (E)CONC.dwg



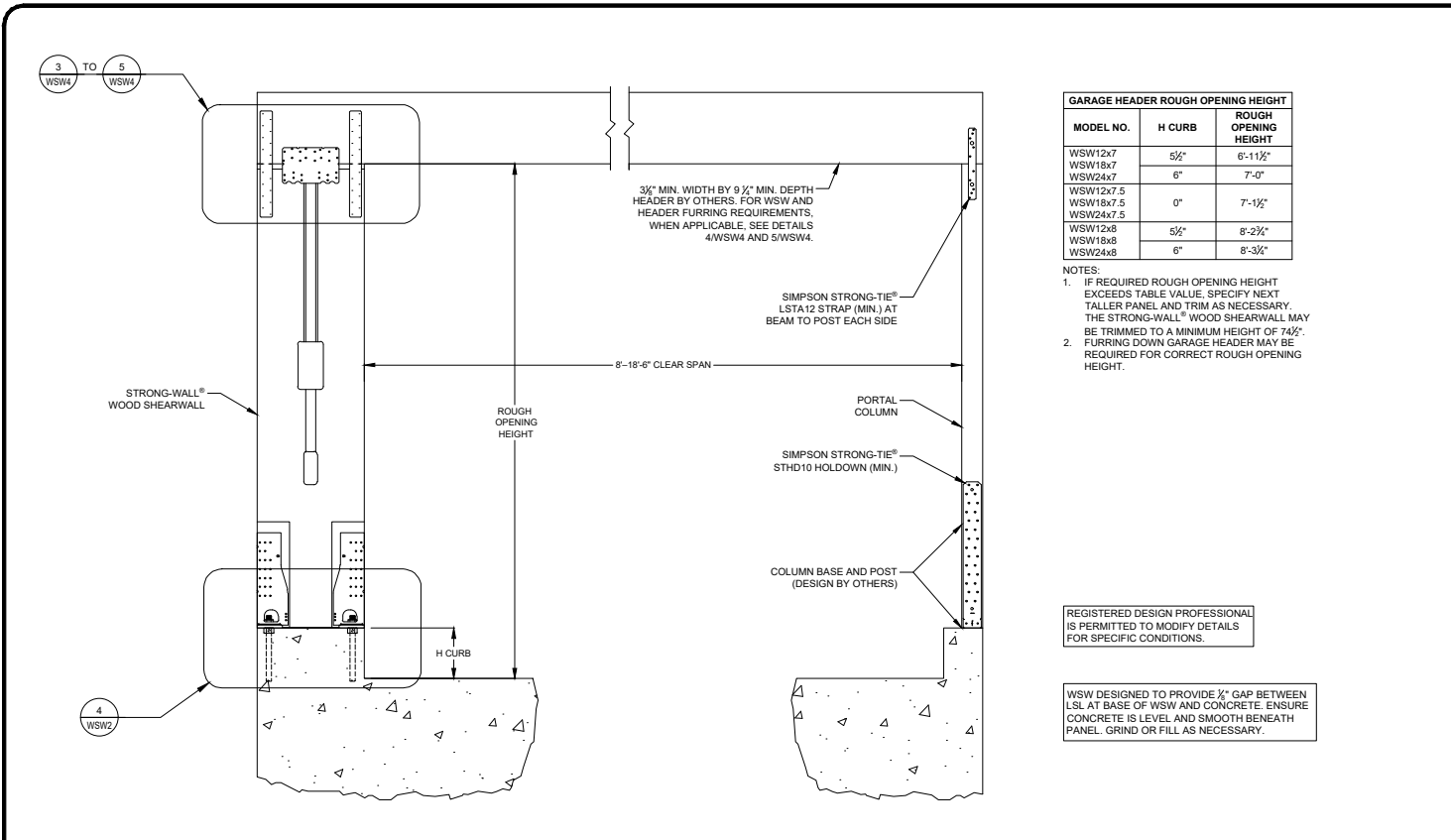
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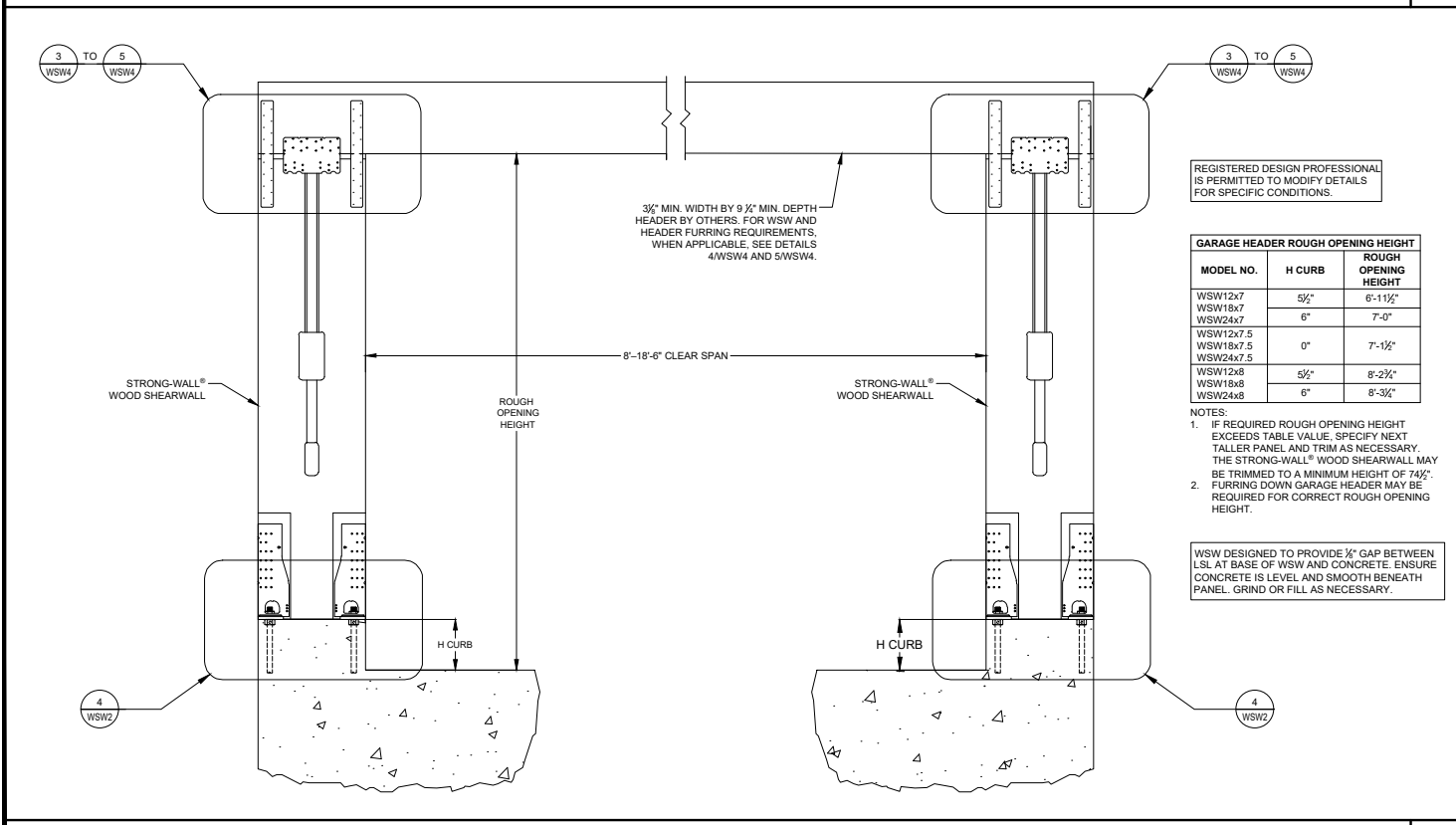
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12



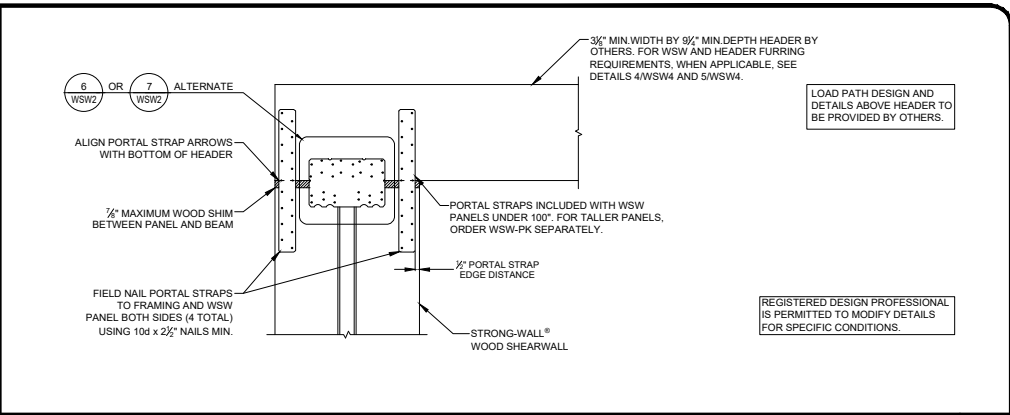


STRONG-WALL WOOD SHEARWALL SINGLE PORTAL ASSEMBLY



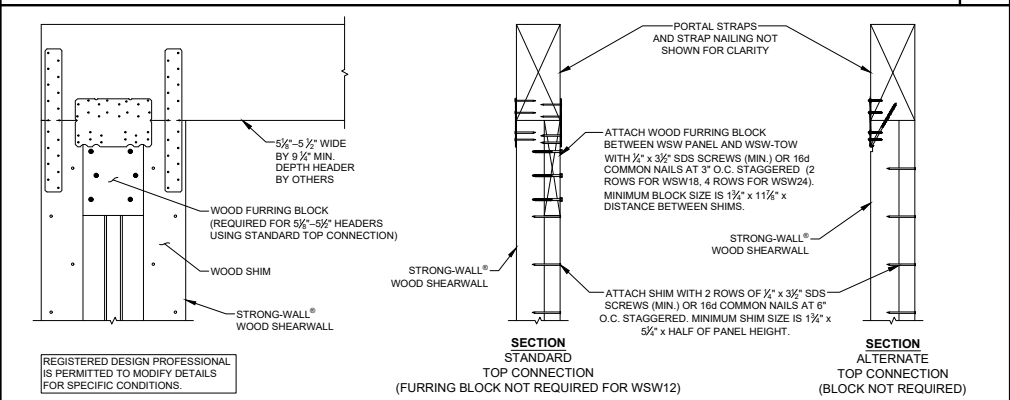
STRONG-WALL WOOD SHEARWALL DOUBLE PORTAL ASSEMBLY

2 NOTES



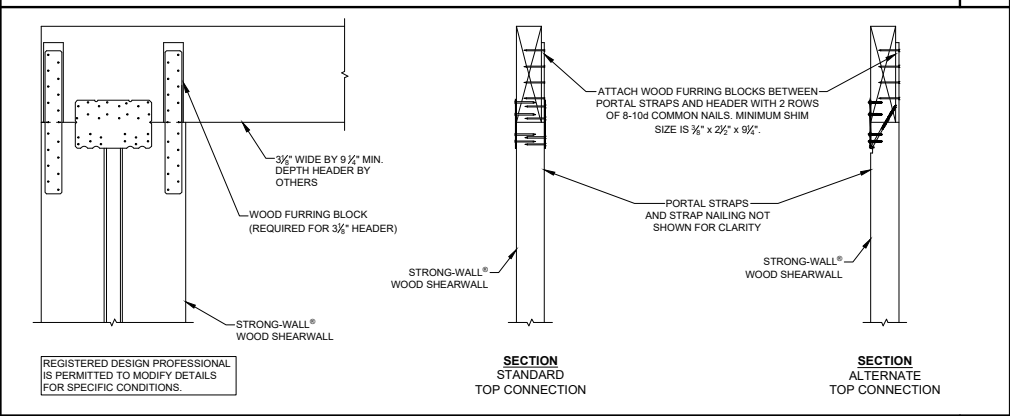
PORTAL TOP CONNECTION

3



FURRING FOR 5 1/8" TO 5 1/2" HEADER

4



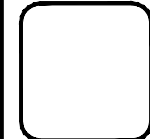
FURRING FOR 3 1/8" HEADER

5

1. STRONG-WALL WOOD SHEARWALL IS MANUFACTURED AND TRADEMARKED BY "SIMPSON STRONG-TIE COMPANY INC." HOME OFFICE: 5556 W. LAS POSITAS BLVD., PLEASANTON, CA 94588 TEL: (800) 999-5089, FAX: (925) 847-1597. "SIMPSON STRONG-TIE COMPANY INC." IS AN ISO 9001-2008 REGISTERED COMPANY.
2. USE OF THIS PRODUCT IS SUBJECT TO THE APPROVAL OF THE LOCAL BUILDING DEPARTMENT.
3. THIS PRODUCT IS PART OF THE OVERALL LATERAL FORCE RESISTING SYSTEM OF THE STRUCTURE. DESIGN OF THE BUILDING'S LATERAL FORCE RESISTING SYSTEM, INCLUDING THE LOAD PATH TO TRANSFER LATERAL FORCES FROM THE STRUCTURE TO THE GROUND, IS THE RESPONSIBILITY OF THE DESIGNER.
4. ENGINEER OF RECORD IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, ELEVATIONS, ETC. PRIOR TO INSTALLATION OF ANY COMPONENTS FOR THE STRONG-WALL SB SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
6. INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE TO THESE DRAWINGS. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE DESIGNER.
7. SIMPSON STRONG-TIE COMPANY INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
8. ALL HARDWARE CALLED OUT IS SIMPSON STRONG-TIE.
9. SEE ICC-ES ESR-2652 OR CITY OF LOS ANGELES RR25730 AS APPLICABLE FOR ADDITIONAL INFORMATION.

6

NO.	DATE	REVISIONS
0	07/01/2016	FIRST RELEASE - 2016 BC



SIMPSON STRONG-TIE COMPANY, INC.
HOME OFFICE: 5556 W. LAS POSITAS BLVD., PLEASANTON, CA 94588
TEL: (800) 999-5089

STRONG-WALL® WSW
PORTAL SYSTEM
FRAMING DETAILS
ENGINEERED DESIGNS

NAME	DATE
SCALE	07-01-2016
CHECKED	N.T.S.
DESIGN	WSW4
JOB NO.	OF SHEETS

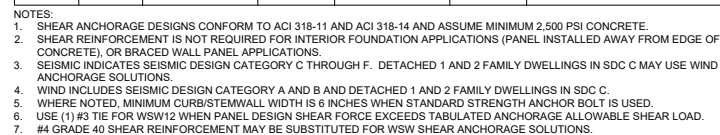
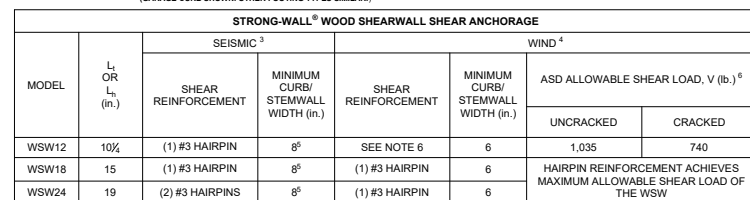
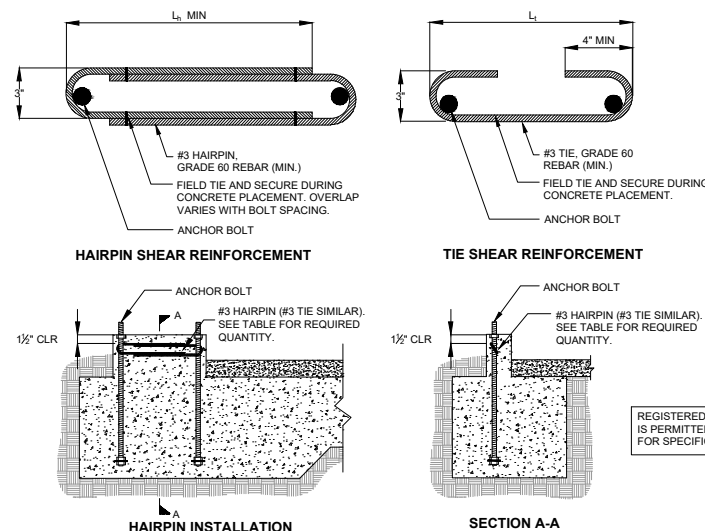
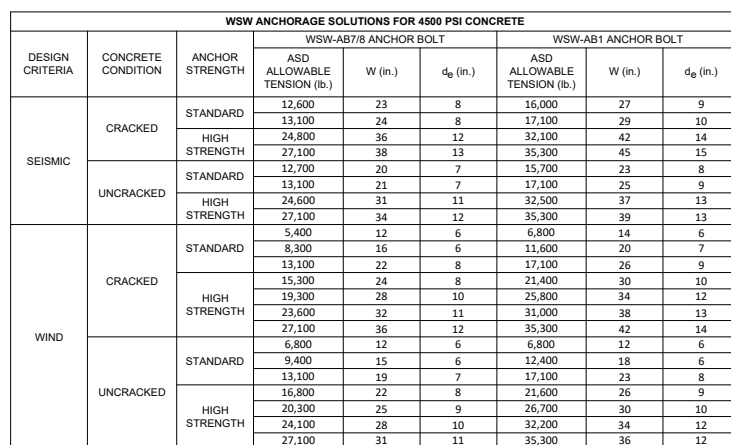
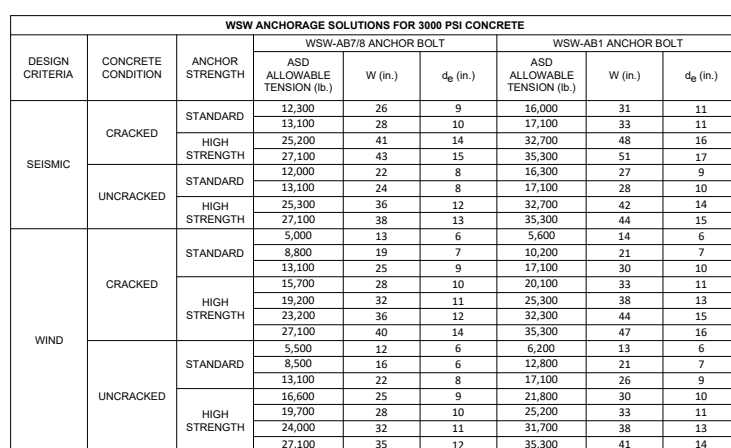
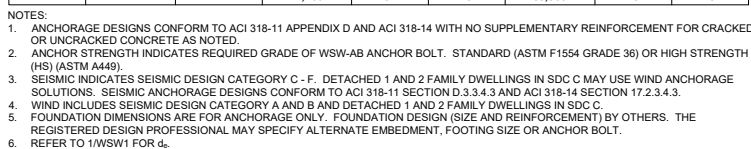
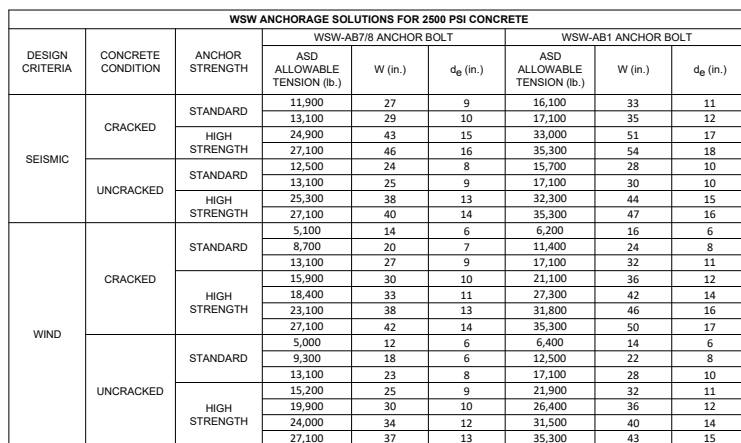
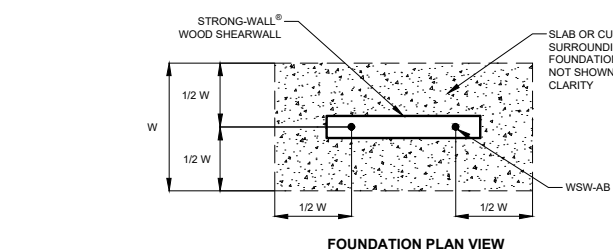
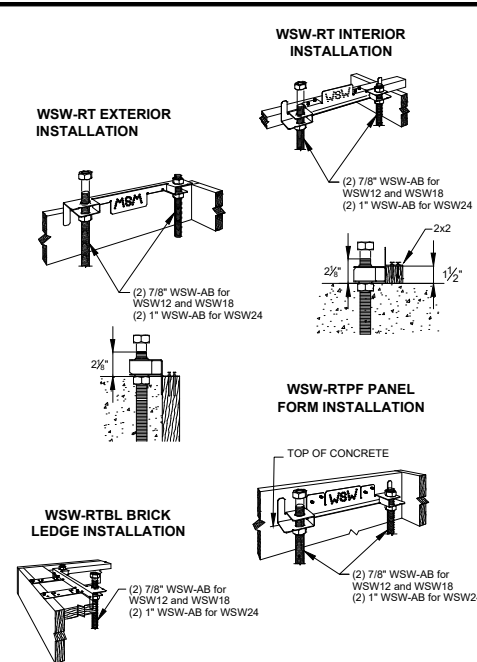
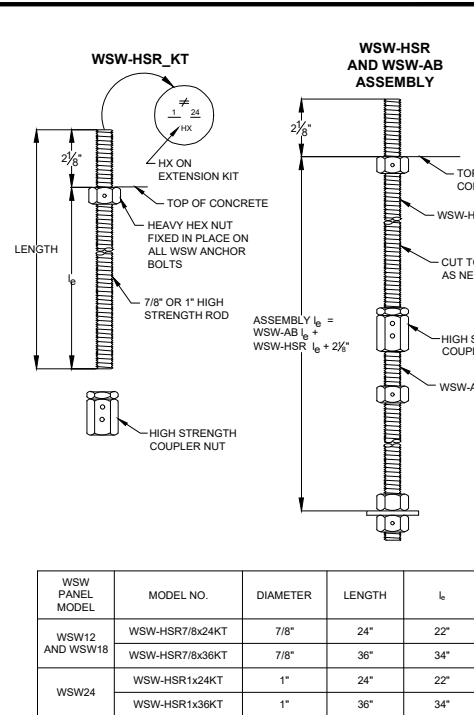
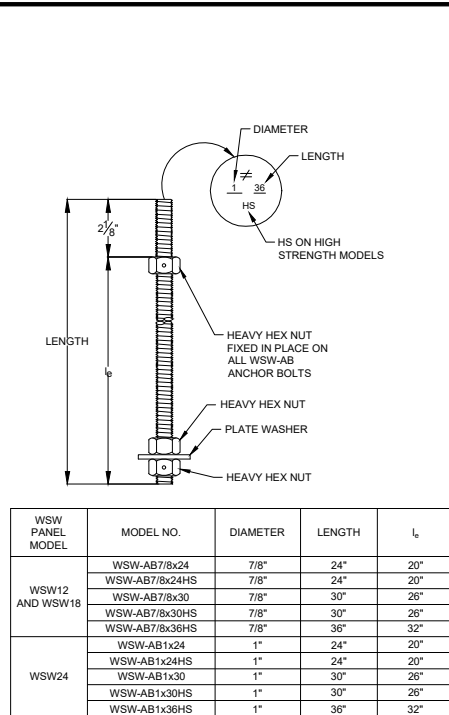
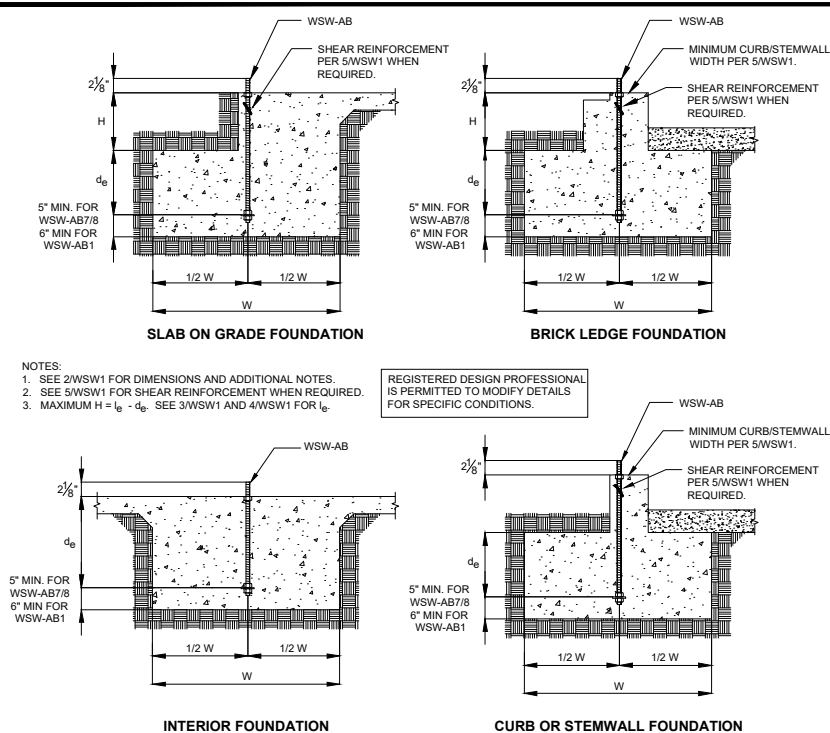
San Joaquin County, Planning & Development Services
500 SF ACCESSORY DWELLING UNIT
ABOVE 500 SF GARAGE
BUILDING DIVISION



Sheet Number

S9

By using these standard plans, the user agrees to release San Joaquin County 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 use of these plans does not eliminate or reduce the user's responsibility to verify any and all information.



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500 SF ACCESSORY DWELLING UNIT
ABOVE 500 SF GARAGE
BUILDING DIVISION**



Sheet Number

S10