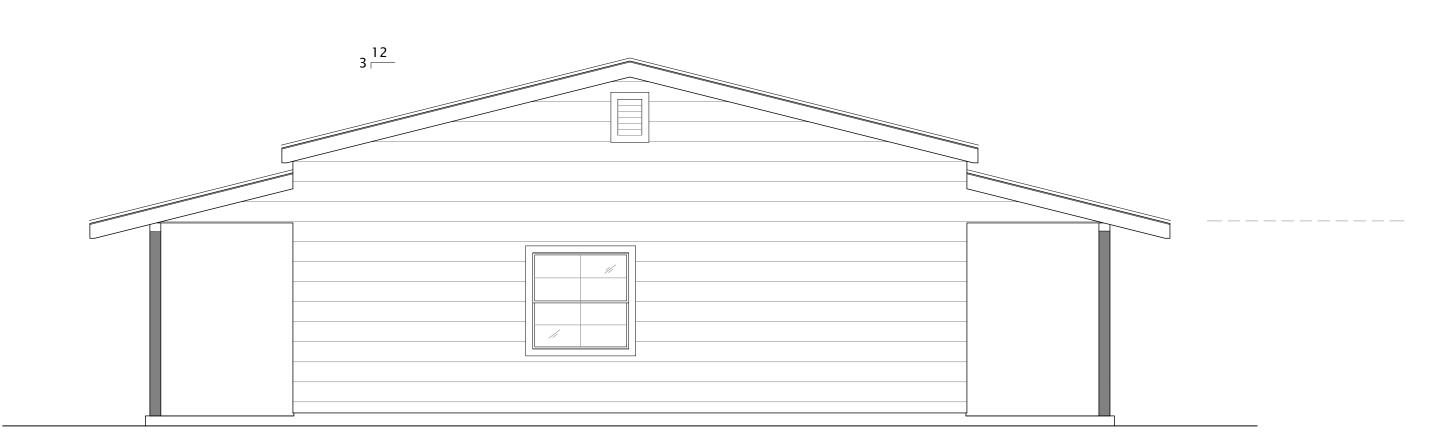


B LEFT SIDE ELEVATION - ELM
SCALE: 1/4" = 1'-0"

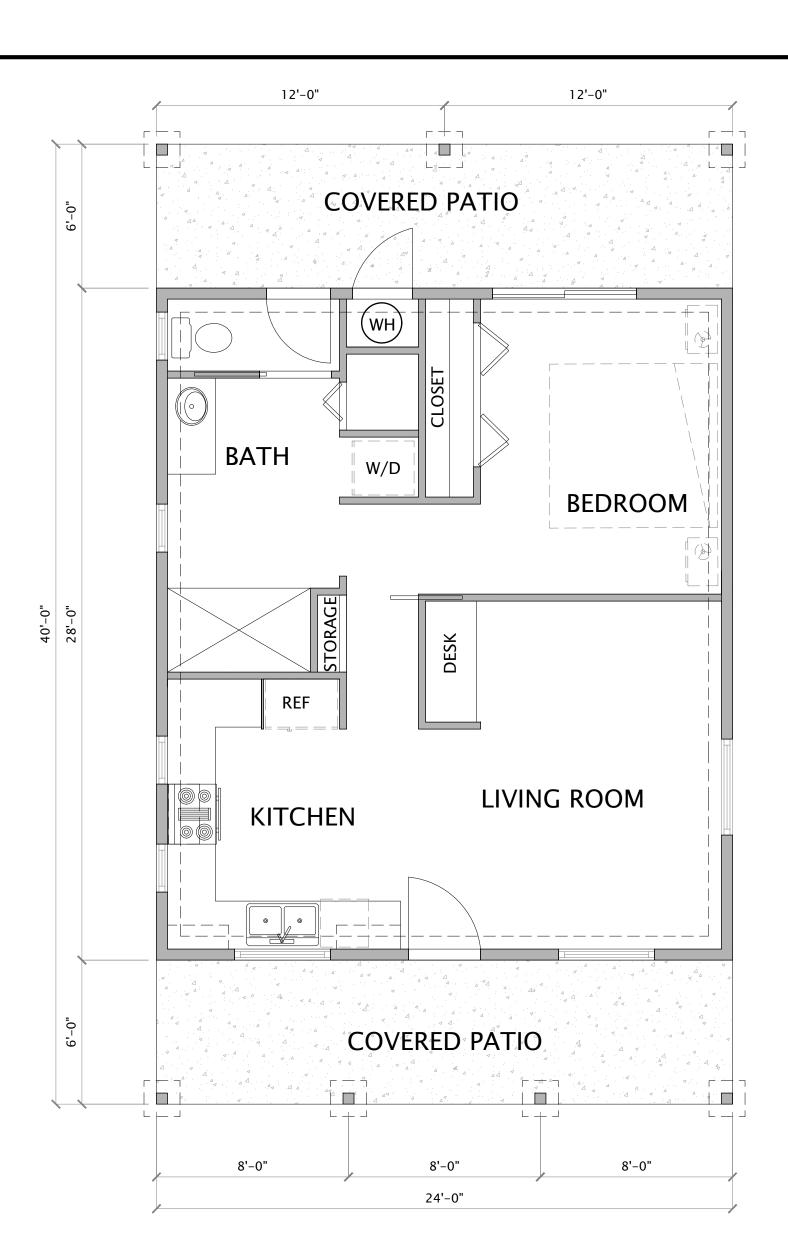


C RIGHT SIDE ELEVATION - ELM
SCALE: 1/4" = 1'-0"



D REAR ELEVATION - ELM

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

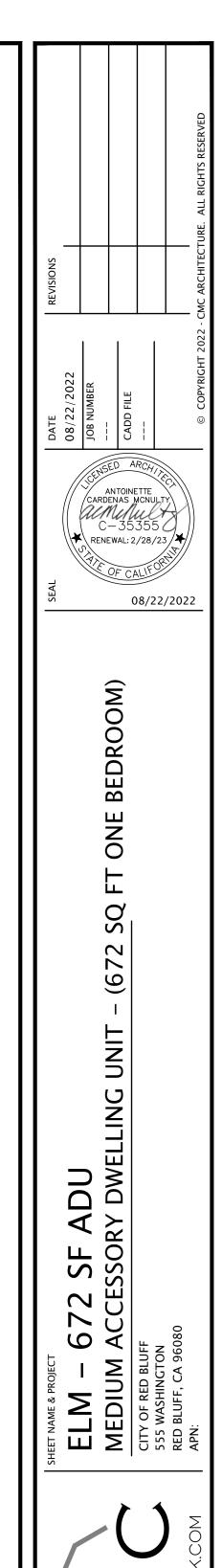


1 FLOOR PLAN- 672 SQ. FT.

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





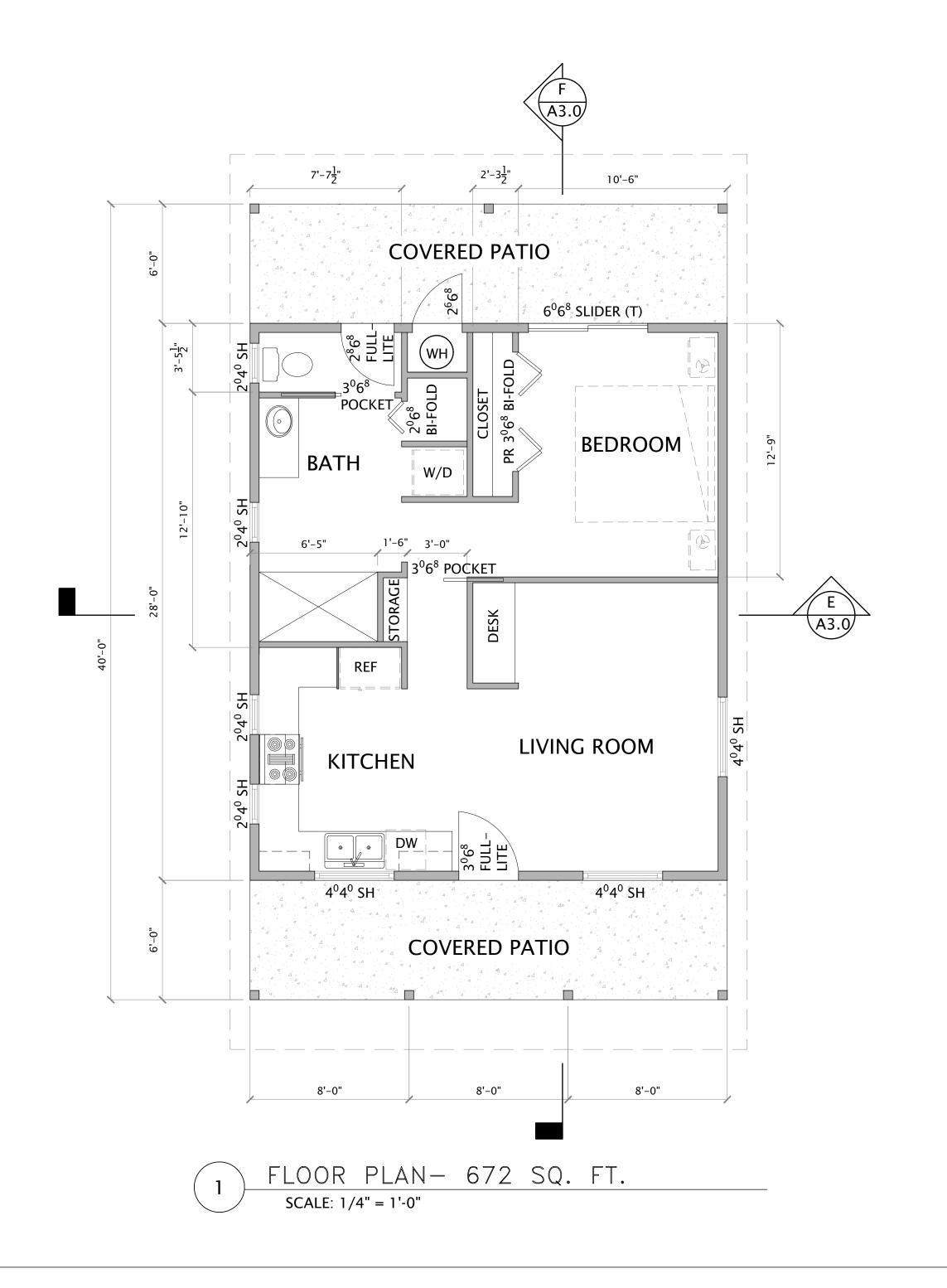


SHEET SHEET

CMC ARCHITECTURE 332 PINE STREET RED BLUFF, CA 96080 (530) 440-9256

SHEET

ADU5
PERMIT SET



## PROJECT DESCRIPTION:

NEW ACCESSORY DWELLING UNIT USING STANDARD FRAME CONSTRUCTION.

## SHEET INDEX:

COVER SHEET

A2.1 PROPOSED FLOOR PLAN A3.0 **EXTERIOR ELEVATIONS & SECTIONS** 

ELECTRICAL PLAN CALIFORNIA GREEN BUILDING STANDARDS

STRUCTURAL NOTES FOUNDATION/ROOF FRAMING PLAN STRUCTURAL DETAILS

S3.2 STRUCTURAL DETAILS

## WALL LEGEND:

S3.1

2X6 BEARING WALL / 2x4 INTERIOR BEARING WALL

2X4 NON BEARING WALL (2x6 @ PLUMBING)

### **GENERAL NOTES:**

- 1. EXTERIOR BEARING WALLS: 2x6 STUDS @16" O/C, U.O.N..
- 2. FIRE BLOCK: WITHIN CONCEALED SPACES OF EXTERIOR WALL FINISH AND OTHER ARCHITECTURAL ELEMENTS. AT 10 FOOT HORIZONTAL INTERVALS PER CRC SECTION 717.1. FIRE BLOCK PIPES, DUCTS AND CHIMNEYS AT FLOORS AND CEILINGS PER CRC SECTION 708.2.1.
- PENETRATIONS OF WALL OR FLOOR-CEILING ASSEMBLIES REQUIRED TO BE FIRE-RESISTANCE RATED IN ACCORDANCE WITH SECTION R302.2 O R302.3 SHALL BE PROTECTED IN ACCORDANCE WITH THIS SECTION.
- 4. DOORS SHALL BE PROVIDED WITH LANDINGS OR FLOORS NOT MORE THAN 7–3/4" BELOW THE TOP OF THRESHOLD. CRC SECTION R311.3.2.

## **BATHROOM NOTES:**

- TUB AND SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBANT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR.
- MATERIALS USED AS BACKERS FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL PANELS IN SHOWER AREAS SHALL BE GLASS MAT GYPSUM PANEL, FIBER-CEMENT BACKER BOARD, OR NON-ASBESTOS FIBER-CEMENT REINFORCED CEMENTITIOUS BACKER UNITS INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.

## **GENERAL NOTES:**

- 1. ALL WORK SHALL CONFORM WITH THE CURRENT CALIFORNIA RESIDENTIAL BUILDING CODE, CALIFORNIA STATE ENERGY CODE AND ALL GOVERNING JURISDICTIONS' RULES, ORDINANCES, AND REGULATIONS.
- 2. SEPARATE PERMITS MAY BE REQUIRED FOR GRADING, RIGHT-OF-WAY, CLEARING, PLUMBING, MECHANICAL, ELECTRICAL AND SPRINKLER SYSTEM.
- 3. THE CONTRACTOR SHALL CONSULT PLANS OF ALL TRADES AND CONSULTANTS, INCLUDING DESIGN-BUILD DOCUMENTS TO VERIFY SIZE, LOCATION, WEIGHT, POWER AND OTHER REQUIREMENTS PRIOR TO BIDDING AND AGAIN PRIOR TO BEGINNING WORK.
- 4. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH CONSTRUCTION DOCUMENTS.
- 5. PROVIDE NEAT CUT WHERE UTILITIES PENETRATE RATED WALL AND FLOOR ASSEMBLIES, SEAL WITH FIRE-RATED, NON-COMBUSTIBLE MATERIAL. IMPERVIOUS TO THE PASSAGE OF SMOKE, CONFORMING TO CODE & BUILDING OFFICIAL REQUIREMENTS.

- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED BY THE GOVERNING JURISDICTIONS.
- 7. NO BUILDING OR PORTION OF BUILDING SHALL BE OCCUPIED OR USED FOR STORAGE PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR THAT BUILDING OR PORTION OF THE BUILDING.
- 8. PRIOR TO BEGINNING ANY WORK, THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES AND PROTECT THEM FROM DAMAGE.
- 9. ALL DEMOLISHED OR REMOVED MATERIALS SHALL BE DISPOSED OF OFF SITE BY THE CONTRACTOR IN A LEGAL MANNER.
- 10. SLOPE ALL WALKS, DRIVEWAYS AND PLAZAS AWAY FROM THE BUILDING.
- 11. PROVIDE APPROVED FIRE EXTINGUISHERS AS REQUIRED BY THE FIRE MARSHAL. VERIFY LOCATIONS INDICATED IN CONSTRUCTION DOCUMENTS WITH THE FIRE MARSHAL AND THE GENERAL CONTRACTOR PRIOR TO FRAMING.

- 12. ALL DIMENSION INDICATED ARE TO FACE OF STUD, FACE OF STOREFRONT MULLION, OR FACE OF CONCRETE UNLESS OTHERWISE NOTED.
- 13. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS.
- 14. VERIFY ALL DIMENSIONS, DATUMS AND LEVEL PRIOR TO CONSTRUCTION.
- 15. DO NOT MODIFY THE WORK SHOWN EXCEPT WITH WRITTEN INSTRUCTIONS FROM THE ARCHITECT OR ENGINEER.
- 17. THESE DRAWINGS ARE THE EXCLUSIVE PROPERTY OF THE ARCHITECT/ENGINEER AND MAY BE REPRODUCED ONLY WITH THE WRITTEN PERMISSION OF THE ARCHITECT/ENGINEER. AUTHORIZED REPRODUCTIONS MUST BEAR THE NAME OF THE ARCHITECT OR ENGINEER.

## CODES & DESIGN CRITERIA:

CALIFORNIA BUILDING CODE	2019 EDITION
CALIFORNIA RESIDENTIAL CODE	2019 EDITION
CALIFORNIA PLUMBING CODE	2019 EDITION
CALIFORNIA MECHANICAL CODE	2019 EDITION
CALIFORNIA ELECTRICAL CODE	2019 EDITION
CALIFORNIA FIRE CODE	2019 EDITION
CALIFORNIA ENERGY CODE	2019 EDITION
CALIFORNIA GREEN CODE	2019 EDITION
WIND LOAD EXP B (3 SEC. GUST)	110 MPH
ROOF LIVE LOAD	20 psf
FLOOR LIVE LOAD	NA
SEISMIC DESIGN CATEGORY	D
SOIL CLASS	D

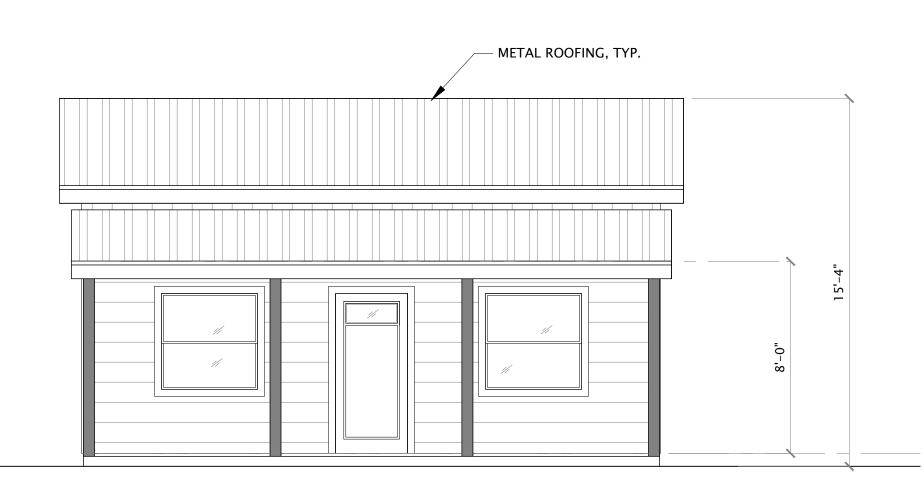
ANTOINETTE CARDENAS MCNULTY 📉 RENEWAL: 2/28/23 🕌



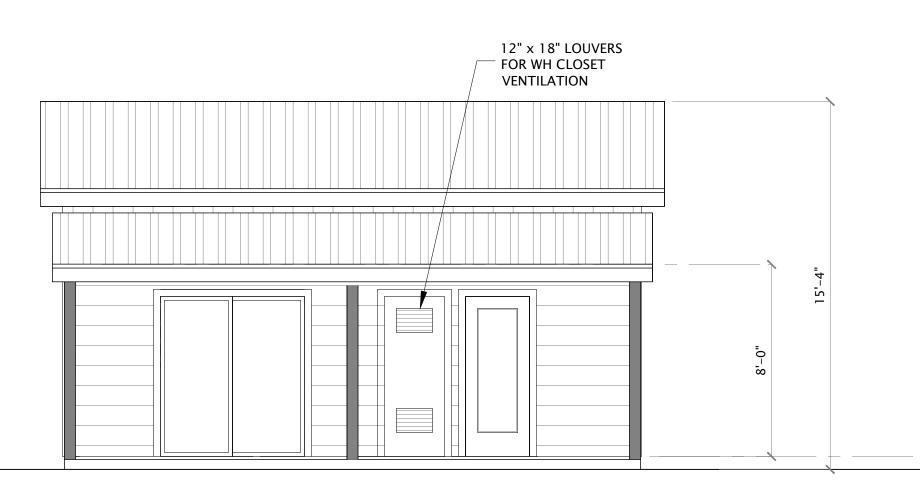
9)

FLOOR
MEDIUM A
CITY OF RED BLUFF
555 WASHINGTON
RED BLUFF, CA 960
APN:







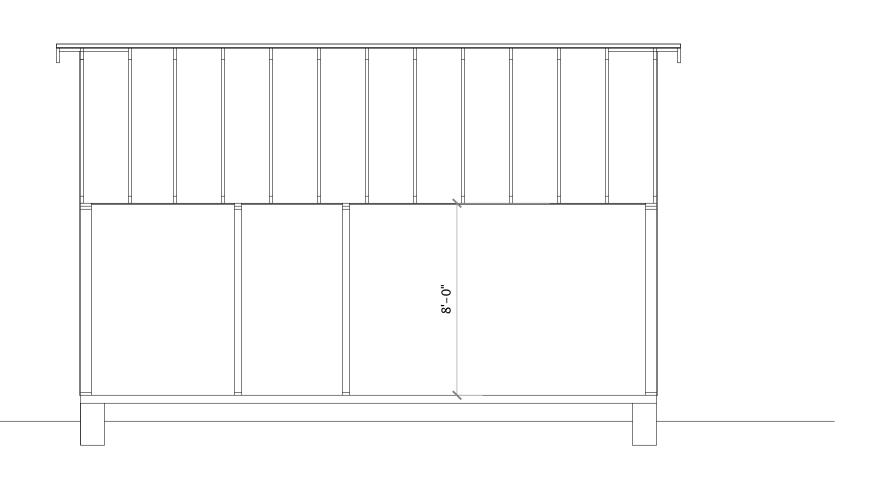


C REAR ELEVATION

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

**SECTION** 

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



## CALIFORNIA CHAPTER 7A REQUIREMENTS

ADU BUILT ON NORTH PART OF CITY OF RED BLUFF BEYOND HWY 32 IS SUBJECT TO WUI

REQUIREMENTS:

\* REFER TO WILDLAND-URBAN INTERFACE (WUI) FIRE AREA AND NEEDS TO MEET THE

REQUIREMENTS OF CRC SECTION R337.

LIST OF APPROVED MATERIALS FOR WILDLAND FIRE REQUIREMENTS IS LOCATED AT THE OSFM
WERSITE: http://osfm.fire.ca.gov/licensinglistings/licenselisting.html.searchcotest.php

WEBSITE: http://osfm.fire.ca.gov/licensinglistings/licenselisting\_bml\_searchcotest.php
\* EXTERIOR DOORS AND DOOR BETWEEN GARAGE & DWELLING SHALL BE NONCOMBUSTIBLE,
IGNITION RESISTANT, LISTED UNDER SFM 12-7A-1, A 20 MIN. LISTED ASSEMBLY OR SOLID
CORE 1 3/4" WITH INTERIOR FIELD PANEL THICKNESS NOT LESS THAN 1 1/4".

\* ROOFING: CLASS A ROOFING REQUIRED
\* GUTTERS: IF GUTTERS ARE INSTALLED, GUTTER COVERS SHALL ALSO BE INSTALLED PER CRC
R337.5.4.

\* EXTERIOR FINISH: STUCCO OR SIDING TO BE APPROVED NON-COMBUSTIBLE (HARDIE PANEL OR EQUAL). NON-APPROVED SIDING MAY BE USED WITH 5/8" EXTERIOR GYPSUM BOARD UNDERLAYMENT PER CRC 337.7.3.

\* EAVE SOFFIT: SIMILAR TO EXTERIOR SIDING \* EAVE & SOFFIT VENTS: ASTM LISTED VENTS, E2886; CAL-FIRE LISTING NO. 8165-2192:0100

MANUFACTURER - Vulcan Technologies OR EQUIVALENT PRODUCTS

\* Model VSC2120 OR VSC2120FF OR VAC2120SMC Continuous Soffit Vent (NFVA = 96 PER 10')

## **GLAZING NOTES:**

EXTERIOR WINDOWS AND EXTERIOR GLAZED DOOR ASSEMBLIES TO COMPLY WITH ONE
OF THE FOLLOWING REQUIREMENTS, PER CRC SECTION R337.8.2.1:

 a. BE CONSTRUCTED OF MULTI-PANE GLAZING WITH A MINIMUM OF ONE TEMPERED
PANE MEETING THE REQUIREMENTS OF SECTION R308 SAFETY GLAZING, OR
 b. BE CONSTRUCTED OF GLASS BLOCK UNITS, OR

c. Have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 257, or

d. BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-2.

2. GLAZING ADJACENT TO STAIRS AND RAMPS TO BE SAFETY GLAZED. CRC 2019 SECTION R308.4.6

3. IF GLAZING ADJACENT TO BOTTOM OF STAIR LANDING ARE EXPOSED, SAFETY GLAZING TO BE PROVIDED PER CRC 2019, SECTION R308.4.7.

4. GLAZING ADJACENT TO WET SURFACES TO BE SAFETY GLAZED PER CRC 2019, SECTION R308-4 5

5. WINDOW/DOOR WITH (T) INDICATES SAFETY GLAZING OR TEMPERED GLASS. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR SHALL BE CONSIDERED TO BE IN A HAZARDOUS LOCATION WHERE THE BOTTOM EXPOSED EDGES OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE FLOOR OR WALKING SERVICE AND MEETS EITHER OF THE FOLLOWING CONDITIONS:

a. WHERE THE GLAZING IS WITHIN 24 INCHES OF EITHER SIDE OF THE DOOR IN

THE PLAN OF THE DOOR IN A CLOSED POSITION.

b. WHERE THE GLAZING IS ON A WALL PERPENDICULAR TO THE PLANE OF THE DOOR IN A CLOSED POSITION AND WITHIN 24 INCHES OF THE HINGE SIDE OF THE AN IN-SWIING DOOR GLAZING MEETING EITHER OF THESE CONDITIONS MUST BE SAFETY GLAZED, PER CRC 2019, SECTION R308.4.2

c. GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BIFOLD DOORS SHALL BE CONSIDERED A HAZARDOUS LOCATION. CRC

6. EMERGENCY EGRESS WINDOWS: MINIMUM NET CLEAR OPENING FOR GRADE-FLOOR OPENINGS SHALL BE 5.7 SQ. FT. (5.0 SQ. FT. FOR GROUND FLOOR) PER CRC 1026.2 MINIMUM NET OPENING SHALL BE 24" CLEAR HEIGHT AND 20" CLEAR WIDTH, NET DIMENSIONS SHALL BE THE RESULT OF NORMAL OPERATION OF THE OPENING. BOTTOM OF THE CLEAR OPENING SHALL BE NO NO GREATER THAN 44" MEASURED FROM THE FLOOR PER CRC R310.2.

## ROOF ATTIC SPACE VENT CALCULATION

### R806.1-3 REQUIREMENTS:

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 THE FOLLOWING REQUIREMENTS:

1. THE DIMENSIONS OF THE OPENINGS THEREIN SHALL BE A MINIMUM OF 1/16" AND SHALL NOT EXCEED 1/4".

2. THE MATERIALS USED SHALL BE CORROSION RESISTANT.

XR806.2 MINIMUM VENT AREA

THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE.

EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED ONE OR MORE OF THE FOLLOWING CONDITIONS ARE MET:

IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING.
 NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE.

UPPER VENTILATORS SHALL BE LOCATED NOT MORE THAN 3 FEET (914 mm) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY, WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION MORE THAN 3 FEET (914 mm) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.

1. \* ROOF ATTIC SPACE AREA 960 SQ. FT.  $\times$  1/150 = 6.4 SQ. FT. OF FREE VENT AREA REQUIRED.

\* ROOF ATTIC SPACE

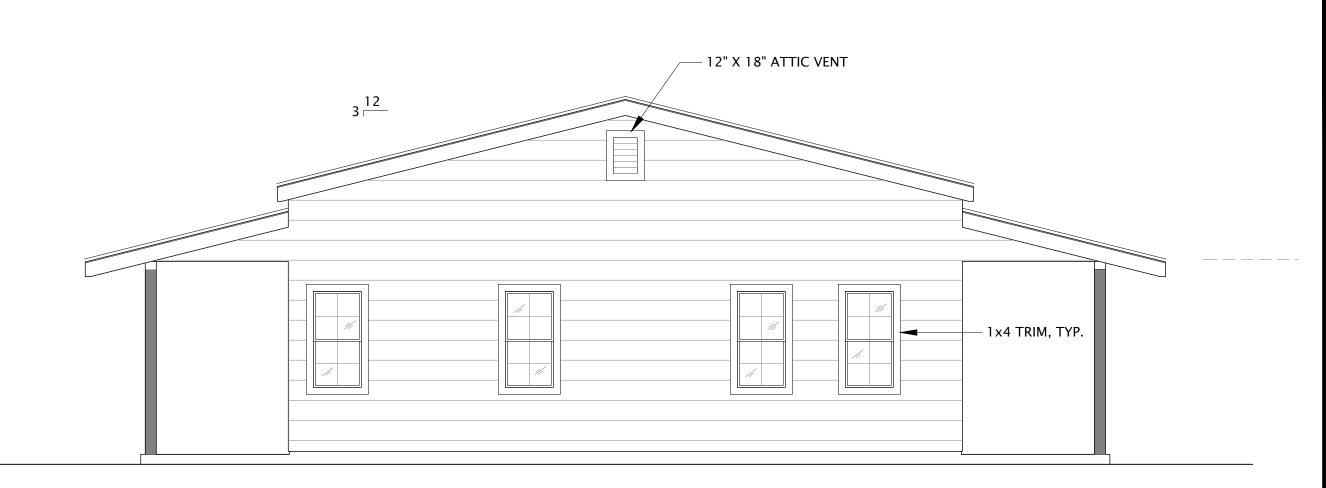
(SEE CALIFORNIA CHAPTER 7A REQUIREMENTS IF APPLICABLE)
RIDGE VENT: 10' LONG x 2" x 0.8 = 1.3 SQ. FT.

GABLE END ATTIC VENTS: (2) 12" x 18" x 0.8 = 2.4 SQ. FT.

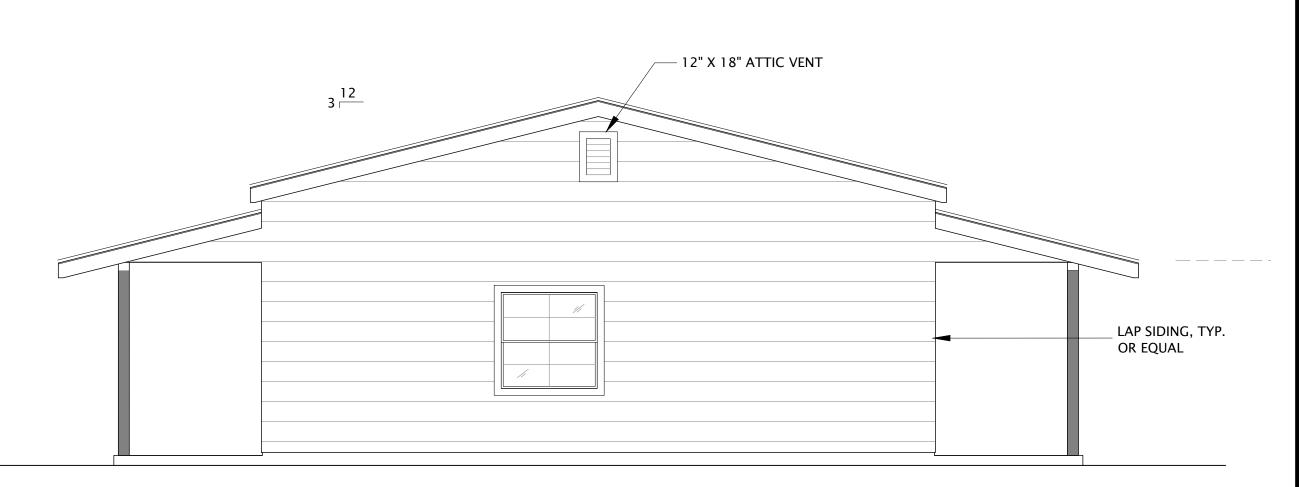
HIGH EAVE VENTS: (2) EA. SIDE (4) TOTAL x 3.5 x 22 x 0.8 = 1.7

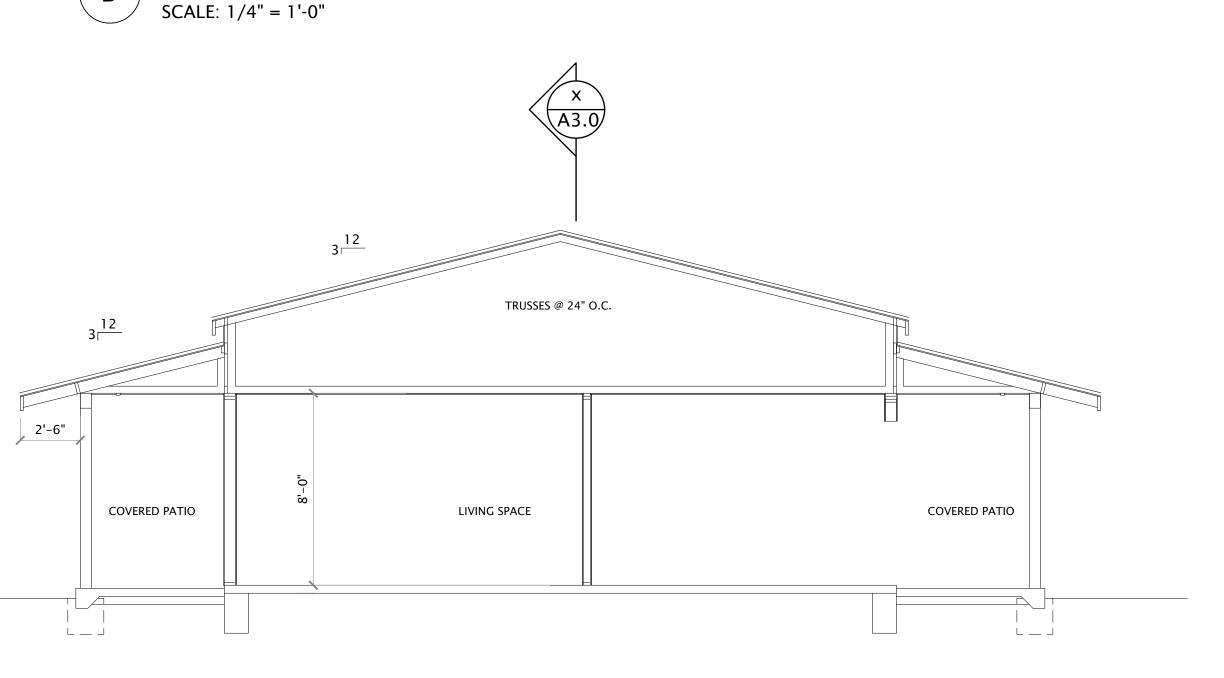
LOW EAVE VENTS: (2) EA. SIDE (4) TOTAL x 5.5 x 22 x 0.8 = 2.7

ADJUST NUMBER OF VENTS CONSIDERING SPECS OF VENT USED TO MEET THE MINIMUM REQUIRED VENTILATION.



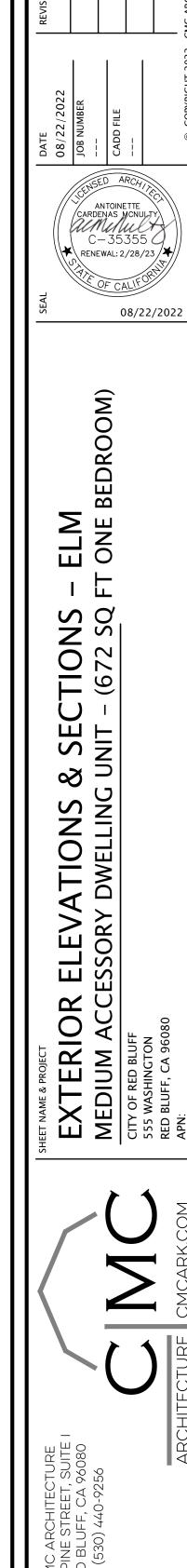








RIGHT SIDE ELEVATION



A3.0

100 AMP SUB-PANEL ADU:

LIGHTING: 3 VA/SQFT X 672 SQFT 2 x 1500 VA FOR SMALL APPLIANCE CIRCUITS => 3000 VA 1500 VA FOR DISHWASHER => 1500 VA 1000 VA FOR GARBAGE DISPOSAL => 1000 VA 5000 VA FOR DRYER OR W/D COMBO => 5000 VA 1500 VA FOR LAUNDRY => 1500 VA

SUB TOTAL: 14016 VA

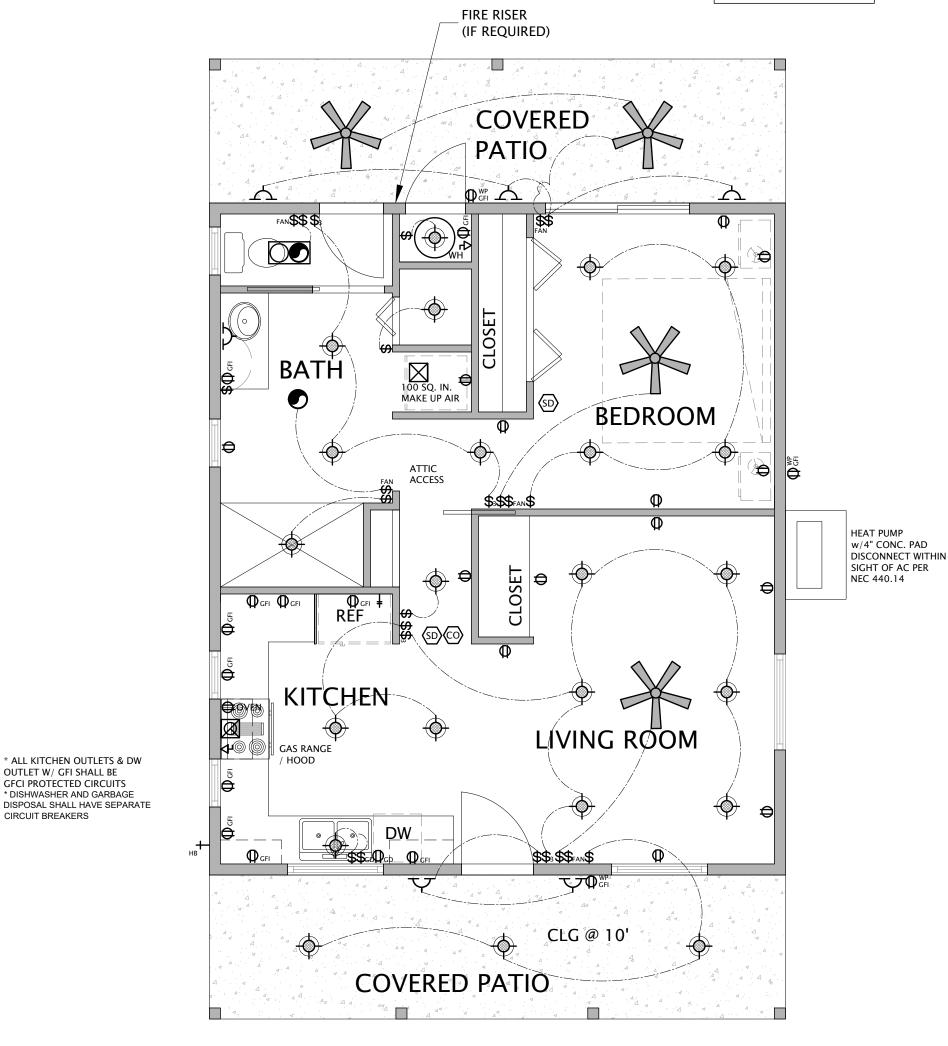
FIRST 10000 VA @ 100% = 10000 VA REMAINDER (CALCULATED AT 4016) @ 40% = 1606 VA

1.5 TON DUCTLESS HEAT PUMP + 2 FAN UNITS = 4600 VA

TOTAL DEMAND = 16206 VA

TOTAL AMPERAGE ON A 240 VOLT SYSTEM = 68 AMPS

100 AMP METER SERVICE / PANEL LOCATION TBD UPON PERMIT **PROCESS** 



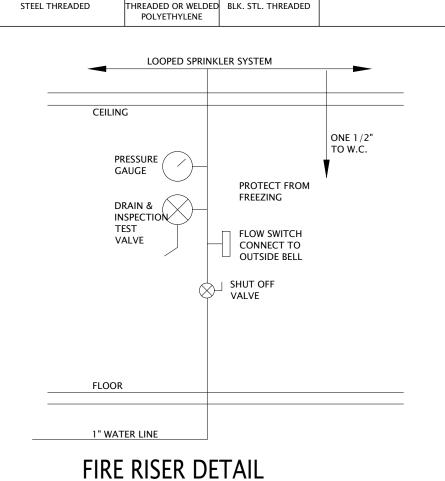
#### **HVAC SYSTEMS:**

1.5 TON HEAT PUMP DUCTLESS SYSTEM @ 2 LOCATIONS HSPF 8.5 /15 SEER - 12.5 EER

HEATING 17,800 BTU OUTPUT / COOLING 18,000 BTU OUTPUT

PIPE CONNECTION SIZE SCHEDULE VENT COLD WATER HOT WATER CLEANOUT YES  $1 - \frac{1}{2}$ " LAVATORY/SINK YES SHOWER/TUB  $1 - \frac{1}{2}$ " YES NA NA WATER HEATER

PIPING MATERIAL SCHEDULE					
TYPE	INTERIOR	EXTERIOR	INSULATION	NOTES	
COLD WATER	ABOVE FINISH FLOOR TYPE "M" COPPER OR EQUAL BELOW GRADE: TYPE"K" SOFT COPPER	SCHEDULE 40 PVC	IN ATTIC AND EXTERIOR WALLS	USE TYPE "L" COPPER FOR 1ST 18" FROM WATER HEATER IF PEX TUBING IS USED	
HOT WATER	SAME AS CW	NA	ALL HOT WATER LINES TO BE INSULATED	SAME AS CW	
WASTE AND VENT	NO-HUB CAST IRON PVC - DWV	SCR-35 PVC	NA	SCHEDULE 40 PVC-DWV MAY BE USED WITH BUILDING DEPARTMENT APPROVAL	
FIRE SPRINKLER	ABOVE FINISH FLOOR TYPE "L" COPPER OR CPVC	-	EXTERIOR WALLS, IN ATTIC & OUTSIDE	-	
GAS	SCHEDULE 40 BLACK	BELOW GRADE: PVC COATED BLK.STL.	ABOVE GRADE:	-	



#### GENERAL PLUMBING NOTES:

ALL HOSE BIBBS SHALL BE PROTECTED BY LISTED NON-REMOVABLE HOSE BIBB TYPE VACUUM BREAKER OR A LISTED ATMOSPHERIC VACUUM BREAKER INSTALLED AT LEAST SIX INCHES ABOVE THE HIGHEST POINT OF USAGE LOCATED ON THE DISCHARGE SIDE OF THE LAST VALVE. IN CLIMATES WHERE FREEZING TEMPERATURES OCCUR, A LISTED SELF-DRAINING FROST-PROOF HOSE BIBB WITH AN INTEGRAL BACKFLOW PREVENTER OR VACUUM BREAKER SHALL BE USED. CPC 603.4.

ALL WATER PIPES SHALL BE INSTALLED IN THE EXTERIOR WALL SHALL BE LOCATED ON THE CONDITIONED SIDE OF THE WALL ADJACENT TO THE INTERIOR FINISH.

SHOWER AND TUB / SHOWER COMBINATIONS SHALL BE PROVIDED WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE OR THERMOSTATIC MIXING VALVE TYPE. LIMIT WATER TEMPERATURE TO 120° AT

OPTION TO ADD ON DEMAND HOT WATER HEATER - 140,000 BTU/HR INPUT, 91 RECOVERY EFFICIENCY OR EQUAL, OR HEAT PUMP TANKED WH

PLUMBING FIXTURES SHALL BE WATER-CONSERVATIVE PLUMBING FIXTURES PER CALIFORNIA GREEN CODE SECTION 4.303 & PLUMBING CODE CPC 407.2, 408.2 & 411.2

\* WATER CLOSETS- 1.28 GAL. PER FLUSH \* LAVATORY FAUCET- MAX. 1.2 GPM @ 60 PSI & MIN. 0.8 GPM @ 20 PSI \* SHOWER HEAD- 1.8 GMP @ 80 PSI 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.

\* KITCHEN SINK FAUCET- 1.8 GAL. PER MIN. @ 60 PSI

7. TANKLESS WATER HEATER MUST HAVE ISOLATION VALVES W/ HOSE BIBS OR OTHER FITTINGS ON BOTH COLD AND HOT WATER LINES TO ALLOW FOR FLUSHING OF THE WATER HEATER WHEN THE VALVES ARE DOSED a. A 120-VOLT, 20-AMP RECEPTACLE OUTLET THAT IS WITHIN 3 FEET OF THE WATER HEATER AND IS ACCESSIBLE TO THE WATER HEATER WITH NO OBSTRUCTION. THE OUTLET SHALL BE CONNECTED TO A 120/240-VOLT 3 CONDUCTOR AND 10 AWG COPPER BRANCH CIRCUIT; b. THE ENDS OF THE UNUSED CONDUCTOR SHALL BE LABELED AS A "SPARE" AND BE ELECTRICALLY ISOLATED: c. THE CIRCUIT BREAKER FOR THE BRANCH CIRCUIT SHALL BE ADJACENT TO A RESERVED CIRCUIT BREAKER SPACE LABELED AS "FUTURE 240V USE."

\* ALL KITCHEN OUTLETS & DW

DISHWASHER AND GARBAGE

OUTLET W/ GFI SHALL BE GFCI PROTECTED CIRCUITS

CIRCUIT BREAKERS

#### **RESIDENTIAL LIGHTING REQUIREMENTS:**

ALL KITCHEN LIGHTING MUST BE HIGH EFFICACY. PERMANENTLY INSTALLED LIGHTING IN CABINETS MUST BE HIGH EFFICACY. UNDER CABINET LIGHTING MUST BE SWITCHED SEPARATELY FROM OTHER

BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS: ALL LIGHTING MUST BE HIGH EFFICACY. EACH ROOM MUST HAVE AT LEAST 1 LUMINAIRE IS CONTROLLED BY VACANCY SENSOR. EXHAUST FANS MUST BE SWITCHED SEPARATELY FROM LIGHTING SYSTEMS OR UTILIZE A DEVICE WHERE LIGHTING CAN BE TURN OFF WHILE THE FAN IS

CLOSETS AND HALLWAYS LIGHTING: LIGHTING FOR CLOSET LESS THAN 70 SQUARE FEET AND HALLWAYS MUST BE HIGH EFFICACY. LIGHTING FOR CLOSETS LARGER THAN 70 SQUARE FEET MUST BE HIGH EFFICACY AND CONTROLLED BY A VACANCY SENSOR OR DIMMER.

OTHER ROOMS OR AREAS LIGHTING: SHALL BE HIGH EFFICACY AND CONTROLLED BY EITHER BY A VACANCY SENSOR OR DIMMER.

CONTROL TYPES:

LIGHTING OFF DURING DAYLIGHT HOURS.

ALL PERMANENTLY INSTALLED OUTDOOR LIGHTING MUST BE HIGH EFFICACY AND MUST BE CONTROLLED BY A MANUAL ON AND OFF SWITCH AND USE ONE OF THESE AUTOMATIC

\* PHOTOCONTROL AND MOTION SENSOR, OR \* PHOTOCONTROL AND AUTOMATIC TIME SWITCH CONTROL, OR \* ASTRONOMICAL TIME CLOCK THAT AUTOMATICALLY TURN OUTDOOR LIGHTING OFF DURING ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) THAT PROVIDES THE FUNCTIONALITY OF AN ASTRONOMICAL TIME CLOCK. EMCS DOES NOT HAVE AN OVERRIDE OR BYPASS THAT ALLOWS THE LUMINARIES TO BE ALWAYS ON, AND IS PROGRAMMED TO AUTOMATICALLY TURN THE OUTDOOR

NIGHT LIGHTS: PERMANENTLY INSTALLED NIGHT LIGHTS AND NIGHT LIGHTS INTEGRAL TO A PERMANENTLY INSTALLED LUMINAIRES OR EXHAUST FANS MUST BE RATED TO CONSUME NO MORE THAN 5 WATTS OF POWER PER LUMINAIRE OR EXHAUST FAN. NIGHT LIGHTS DO NOT NEED TO BE CONTROLLED BY VACANCY SENSORS.

LIGHTING INTEGRAL TO EXHAUST FANS: LIGHTING INTEGRAL TO EXHAUST FANS (EXCEPT WHEN INSTALLED BY THE MANUFACTURER IN THE KITCHEN HOODS), MUST MEET THE APPLICABLE REQUIREMENTS OF SECTION 150.0(K).

RECESSED DOWNLIGHT LUMINAIRES IN CEILINGS: SHALL BE LISTED FOR ZERO CLEARANCE INSULATION CONTACT (IC), LABELED AS AIRTIGHT (AT) WITH AIR LEAKAGE LESS THAN 2.0 CFM. SEALED WITH A GASKET OR CAULK BETWEEN THE HOUSING AND CEILING, ALLOW BALLAST OR DRIVER MAINTENANCE AND REPLACEMENT TO BE READILY ACCESSIBLE TO BUILDING OCCUPANTS FROM BELOW THE CEILING WITHOUT REQUIRING THE CUTTING OF HOLES IN THE CEILING, SHALL NOT CONTAIN SCREW BASE SOCKETS, COMPLY WITH THE ELEVATED TEMPERATURE REQUIREMENTS AND INSTALL LAMPS MUST BE MARKED "JA8–2016–E". FOR INSTANCE, PIN-BASED CFLS MUST BE JA8 CERTIFIED TO BE INSTALLED IN CEILING RECESSED DOWNLIGHTS. ALL CEILING RECESSED DOWNLIGHTS AND ENCLOSED LUMINAIRES MUST BE CONTROLLED BY A DIMMER OR VACANCY SENSOR.

BLANK ELECTRICAL BOXES: THE NUMBER OF ELECTRICAL BOXES THAT ARE MORE THAN 5 FEET ABOVE THE FINISH FLOOR AND DO NOT CONTAIN A LUMINAIRE OR OTHER DEVICE SHALL BE NO GREATER THAN THE NUMBER OF BEDROOMS. THESE ELECTRICAL BOXES MUST BE SERVED BY A DIMMER, VACANCY SENSOR CONTROL, OR FAN SPEED CONTROL

SWITCHING DEVICES AND CONTROLS: \* ALL FORWARD PHASE CUT DIMMERS USED WITH LED LIGHT SOURCES SHALL COMPLY WITH NEMA \* EXHAUST FANS SHALL BE SWITCHED SEPARATELY FROM LIGHTING SYSTEM EXCEPT FOR AN EXHAUST FAN WITH INTEGRAL LIGHTING WHERE THE LIGHTING SYSTEM CAN BE MANUALLY TURNED OFF WHILF THE FAN IS RUNNING LUMINAIRES SHALL BE SWITCHED WITH READILY ACCESSIBLE CONTROLS THAT PERMIT MANUAL ON/OFF SWITCHING. NO CONTROLS SHALL BY PASS THE DIMMER OR VACANCY SENSOR FUNCTION. ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) MAY BE USED TO COMPLY WITH VACANCY

SENSOR OR DIMMER REQUIREMENTS. \* MULTISCENE PROGRAMMABLE CONTROLLER MAY BE USED TO COMPLY WITH DIMMER REQUIREMENTS.

## **ELECTRICAL SYMBOLS:**

115v DUPLEX +15" TO BOTTOM

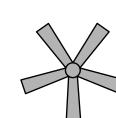
115v GROUND FAULT INDICATED DUPLEX OUTLET

220v OUTLET

SINGLE POLE SWITCH

SMOKE DETECTOR 115V CARBON MONOXIDE DETECTOR 115V \* SMOKE DETECTOR & CARBON MONOXIDE SHALL BE INTERCONNECTED FOR ALARM

ACTIVATION



3 SPEED FAN. ALL CLG. FIXTURE BOXES TO BE METAL & ADEQUATELY SUPPORTED FAN

WALL MOUNT LIGHT

CEILING MOUNT DECORATIVE LIGHT OR LIGHT DISK

LIGHT / EXHAUST FAN SWITCHED SEPARATELY AND BE ENERGY STAR RATED, 80 CFM - 70SF OR 110 CFM - 100SF, 1 SONES OR LESS NOISE, 4" DUCT TO OUTSIDE, NUTONE ULTRA SILENT INDOOR QUALITY FAN CONTINUOUS OPERATION W/ 24 CFM MIN.

GAS SHUT OFF VALVE

KITCHEN HOOD - 100 CFM MIN. AIRFLOW, 3 SONES OR LESS NOISE W / 6" DUCT TO ROOF, NUTONE NS5830SS OR EQUAL KITCHEN EXHAUST FAN SHALL BE HVI-CERTIFIED

LIGHT / EXHAUST FAN W/ INDOOR AIR QUALITY CONT. FAN W/ 34 CFM. 1 SON OR LESS

EXHAUST FAN (CONTROLED BY A HUMIDISTAT AND BE ENERGY STAR RATED AT TUB & SHOWER LOCATION, 80 CFM - 70SF OR 110 CFM - 100SF, 3 SONES OR LESS NOISE, 4" DUCT TO OUTSIDE, NUTONE ULTRA SILENT 110 OR EQUAL) W/ BROAN DEHUMIDISTAT WALL CONTROL

HOSE BIB

OPTIONAL ICE WATER STUB OUT

#### **GENERAL ELECTRICAL NOTES:**

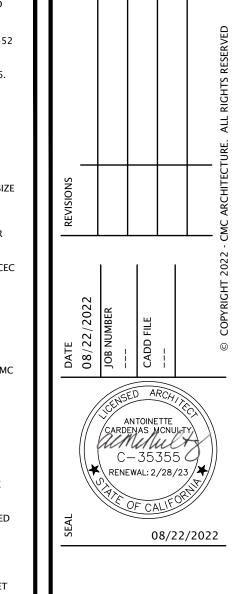
- 1. ALL RECEPTACLES SHALL BE CONNECTED TO THE CIRCUIT INDICATED USING  $\frac{1}{2}$  MC CABLE C-2 #12, 1# 12G INSULATED U.N.O. CIRCUITS TO BE CONCEALED IN WALLS OR RAN OVERHEAD. LOCATION AND SPACING OF RECEPTACLE OUTLETS SHALL BE PER CEC SECTION 210-52
- MAINTAIN MIN. 30" WIDE x 36" DEEP x 78" HIGH CLEAR SPACE IN FRONT OF ALL ELECTRICAL DISCONNECTS AND PANELS PER CEC 2016.
- PANEL SHALL BE RATED AS SHOWN AND PROVIDED W/ TIN-PLATED ALUMINUM BUS, THERMAL MAGNETIC CIRCUIT BREAKERS AS SHOWN, AND NEMA 1 ENCLOSURE U.N.O.
- 4. KITCHEN HOOD TO HAVE 100 CEM MIN. AIRELOW KITCHEN VENTILATION HOOD REQUIRES MANUFACTURE'S DOCUMENTATION ON INSTALLED SYSTEM PERFORMANCE. IF MANUFACTURE DOES NOT PROVIDE PERFORMANCE INFO FOR DUCT SIZE AND LENGTH, PROVIDE FIELD AIRFLOW TESTING MEASURING CFM OF
- 6. ALL APPLIANCES, FIXTURES AND EQUIPMENT TO BE INSTALLED AS PER CODE AND MANUFACTURE'S SPECIFICATIONS.
- 7. REQUIRED GROUND FAULT INTERRUPTER RECEPTACLE CIRCUITS PER CEC A. ATTACHED GARAGES - ONE MINIMUM B. EXTERIOR OF DWELLING - ONE FRONT, ONE BACK - MINIMUM C. ALL BATHROOM RECEPTACLES D. ALL RECEPTACLES AT KITCHEN COUNTER TOPS. E. CRAWL SPACES
- 8. DRYER TO VENT TO OUTSIDE AIR 14' MAX. W/ 2 BENDS MAX. PER CMC

INSTALLED FAN AND DUCT.

- 9. USE CEILING FAN BOXES LISTED PER CEC 422-18.
- 10. FIXTURES ABOVE HYDRO MASSAGE TUBS AND SPAS, AND OTHER WET/DAMP LOCATIONS SHALL BE G.F.I. PROTECTED. SUITABLE FOR DAMP LOCATIONS, AND ELECTRICALLY ISOLATED PER CEC 680.4.1.
- 11. SEE MANDATORY MEASURES SUMMARY ON TITLE 24 ENERGY CALCULATIONS FOR ADDITIONAL LIGHTING REQUIREMENTS AND ARE PART OF THESE PLANS.
- 12. COMBUSTION APPLIANCES MUST BE PROPERLY VENTED AND INSTALLED TO PREVENT BACK DRAFT
- AUTOMATIC GARAGE DOOR OPENERS MUST BE UL LISTED R309.4. GARAGE DOOR SPRINGS - PER SECTION 1211 CBC
- . REOUIRED HEATING 68 DEGREES F, 3 FEET ABOVE FLOOR AND 2 FEET FROM EXTERIOR WALLS IN ALL HABITABLE ROOMS - R303.8
- 15. DUCT SHALL HAVE R-8 INSULATION & TESTED FOR LOW LEAKAGE
- 16. RECESSED CANS PER SECTION 6.10.1 MUST BE IC RATED & LABELED FOR AIRTIGHT CONSTRUCTION, SEALED WITH A GASKET OR CAULKING BETWEEN THE LUMINARIES HOUSING AND THE
- 18. NOT USED
- EFFICACY CA ENERGY CODE SECTION 150.0(k)1A.
- IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
- CONTROLLED BY MORE THAN ONE SWITCH WHERE A DIMMER OR VACANCY SENSOR HAS BEEN INSTALLED SHALL MEET THE FOLLOWING CONDITIONS: NO CONTROLS SHALL BYPASS THE DIMMER OR VACANCY SENSOR FUNCTION AND THE DIMMER OR VACANCY SENSOR SHALL BE CERTIFIED TO MEET THE APPLICABLE REQUIREMENTS IN CEC SECTION 6.3.2.
- 23. LUMINAIRES IN CLOTHES CLOSETS SHALL BE PER CEC 410-16
- BACK OF RESIDENCE PER CEC 210-52 AND 410-57.
- 27. PROVIDE AN OUTDOOR WEATHER PROOF GFI RECEPTACLE WITH-IN 25' OF EXTERIOR MECHANICAL EQUIPMENT PER CEC
- 28. ALL BRANCH CIRCUITS THAT SUPPLY 120 VOLTS, SINGLE PHASE 15 AND 20 AMP OUTLETS INSTALLED IN DWELLINGS THROUGHOUT SHALL BE PROTECTED BY ARC FAULT CIRCUIT INTERRUPTER PER
- EQUIPMENT PER CEC 440-14.
- 30. PROVIDE 30" WIDE X 36" DEEP WORKING CLEARANCE AT AC DISCONNECT PER CEC 210-12.(b)
- BATTERY BACKUP, AND AUDIBLE IN ALL BEDROOMS PER CEC
- 33. SWITCHED LIGHT AND RECEPTACLE IN ATTIC AND UNDER FLOOR
- 34. PROVIDE A LIGHT WITH SWITCH AT ALL EXITS PER CEC 210-70
- 36. EXHAUST FAN DUCTS TO BE INSTALLED PROPERLY WITHOUT DIPS WHERE MOISTURE CAN COLLECT.
- CONTROL" AND THE HOME OWNER SHALL BE PROVIDED WITH INSTRUCTIONS ON HOW TO OPERATE THE SYSTEM.
- SHALL HAVE A MERV 6 FILTER OR BETTER.
- 39. AIR INLETS (NOT EXHAUST) SHALL BE LOCATED AWAY FROM KNOW CONTAMINANTS.
- 40. ALL LIGHTING INSTALLATION TO COMPLY WITH CF-6R-LTG-01 INSTALLATION CERTIFICATE REQUIREMENTS, IT IS RECOMMENDED
- 41. WHOLE BUILDING VENTILATION FANS AND LOCAL BUILDING VENTILATION FANS ARE TO COMPLY WITH CF-6R-MECH-05 INSTALLATION CERTIFICATE REQUIREMENTS. IT IS RECOMMENDED THIS FORM BE FILLED OUT PRIOR TO SUBMITTAL AND PROVIDED TO THE BUILDING INSPECTOR AT THE FRAME INSPECTION. CF-6R-MECH-05 REQUIRED AT FINAL AND PROVIDED TO OWNER
- 42. NO GAS OR SOLID FUEL (OTHER THAN DIRECT VENT) ALLOWED IN CONDITIONED SPACE UNLESS SUPPLY AIR IS PROVIDED.
- 43. IN ALL AREAS SPECIFIED IN CEC 210.52 ALL 125V 15 TO 20 AMP RECEPTACLES SHALL BE LISTED TAMPER RESISTANT RECEPTACLE. 44. TERMINATION ALL ENVIRONMENTAL AIR DUCTS SHALL BE A MIN.
- 45. CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM BUILDING WIRING FROM A COMMERCIAL SOURCE

AND SHALL BE EQUIPPED WITH A BATTERY BACK-UP. CRC R315.1.1

46. ALL 125 VOLT. 15 AND 20 AMP RECEPTACLES INSTALLED IN A RESIDENCE OR ACCESSORY STRUCTURE SHALL BE LISTED TAMPER RESISTANT RECEPTACLES. NO EXCEPTIONS FOR RECEPTACLES ON CEILINGS, ABOVE COUNTERS OR BEHIND APPLIANCES. CEC 406.11



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17. NOT USED.

19. ALL PERMANENTLY INSTALLED LUMINARIES SHALL BE HIGH

20. ALL LIGHTING MUST BE SWITCHED SEPARATELY FROM EXHAUST

21. ALL LIGHTING CONTROLS AND EQUIPMENT SHALL BE INSTALLED

22. 3-WAY AND 4-WAY SWITCHES AND OTHER LIGHTING

24. ELECTRICAL RECEPTACLES FOR DISHWASHER AND GARBAGE DISPOSAL TO BE LOCATED UNDER SINK, NOT MORE THAN 36"

25 RECEPTACIE IN RATHROOMS LAUNDRY CARACE AND HALLS 10 LONG AND WITHIN 24" ALONG KITCHEN COUNTER SPACES 12' AND WIDER, AND EVERY 12' ALONG ISLANDS PER CEC 210-57

26. OUTDOOR WEATHER PROOF GFI RECEPTACLES IN FRONT AND

29. PROVIDE DISCONNECT WITHIN SIGHT OF AIR CONDITIONING

CEC 210-12.(b)

31. SMOKE DETECTORS SHALL BE HARD WIRED, INTERCONNECTED, W/

32. DEDICATED 20-AMP CIRCUIT FOR ALL BATHROOM RECEPTACLES PER CEC 210-11.(c) (2) 20 AMP SMALL APPLIANCE BRANCH CIRCUITS IN KITCHEN.

SPACES WITH MECHANICAL EQUIPMENT PER CEC 210-70.(3Xc)

35. DIRECT VENT IS REQUIRED FOR WARM AIR FURNACES IN SLEEPING ROOMS PER CEC 504.5

37. VENTILATION SYSTEM CONTROLS SHALL BE LABLED "VENTILATION

38. MECHANICAL SYSTEMS INCLUDING HEATING AND AIR CONDITIONING SYSTEMS THAT SUPPLY AIR TO HABITABLE SPACES

TO BE FILLED OUT AND PROVIDED TO BUILDING INSPECTOR AT FRAME INSPECTION.

AND UTILITY FANS ETC) MUST BE 3' AWAY FROM DOORS, WINDOWS, OPENING SKYLIGHTS, OR ATTIC VENTS PER CMC 504.5.

OF 3' FROM ANY OPENINGS INTO THE BUILDING (DRYERS, BATH

47. ATTIC FURNACE NEEDS A 30"X30" PLATFORM AND 24" WALKWAY, A MAXIMUM OF 20' FROM THE ACCESS UNLESS 6' OF HEADROOM IS PROVIDED. CMC 904.11



EC

## CALIFORNIA GREEN BUILDING STANDARDS RESIDENTIAL MANDATORY MEASURES

STORM WATER MANAGEMENT: CGBSC SEC. 4.106.2

UTILIZE 'BMP' - PROJECTS THAT DISTURB LESS THAN ONE ACRE OF SOIL SHALL MANAGE STORM WATER IN ONE OF THE FOLLOWING MEASURES TO PREVENT FLOODING OF ADJACENT PROPERTY, PREVENT EROSION AND RETAIN SOIL RUN-OFF ON THE SITE:

1. RETENTION BASINS OF SUFFICIENT SIZE SHALL BE UTILIZED TO RETAIN STORM WATER ON SITE

- WHERE STORM WATER IS CONVEYED TO A PUBLIC DRAINAGE SYSTEM, COLLECTION POINT, GUTTER, OR SIMILAR DISPOSAL METHOD, THE 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 PLAN.

ELECTRIC VEHICAL (EV) CHARGING NEW ONE AND TWO FAMILY DWELLINGS AND TOWNHOUSES WITH ATTACHED PRIVATE GARAGES CGBSC 4.106.4.1

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 BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE.

#### **INDETIFICATION CGBSC 4.106.1.1**

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'

INDOOR WATER CONSERVING PLUMBING FIXTURES AND FITTINGS CGBSC 4.303.1

- WATER CLOSETS THE EFFECTIVE FLUSH VOLUME OF ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH 4.303.1.1
- URINALS THE EFFECTIVE FLUSH VOLUME OF WALL MOUNTED URINALS SHALL NOT EXCEED 0.125 GALLONS PER FLUSH 4.303.1.2 SINGLE SHOWER HEAD - SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GALLONS PER MINUTE AT 80 PSI. - 4.303.1.3
- THE COMBINED FLOW RATE OF MULTIPLE SHOWER HEADS IN ONE SHOWER SHALL NOT EXCEED 1.8 GPM @ 80 PSI OR THE SHOWER SHALL BE DESIGNED TO ALLOW OPERATION OF ONLY ONE SHOWER HEAD AT A TIME. - 4.303.1.3.2
- FAUCETS THE MAX. 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.
- 6. KITCHEN FAUCETS THE MAX. FLOW RATE OF KITCHEN FAUCETS SHALL NOT EXCEED 1.8 GALLONS PER MINUTE AT 60 PSI.

#### OUTDOOR WATER USE CGBSC 4.305

AFTER DECEMBER 1st. 2015, NEW RESIDENTIAL DEVELOPMENTS WITH AN AGGREGATE LANDSCAPE AREA EQUAL TO OR GREATER THAN 500 SQUARE FEET SHALL COMPLY WITH ONE OF

- 1. A LOCAL WATER EFFICIENT LANDSCAPE ORDINANCE OR THE CURRENT CALIFORNIA DEPARTMENT OF WATER RESOURCES MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO) WHICHEVER IS MORE STRINGENT;
- PROJECTS WITH AGGREGATE LANDSCAPE AREAS LESS THAN 2,500 SQUARE FEET MAY COMPLY WITH MWELO'S APPENDIX D PRESCRIPTIVE 5. A MIN. OF 50% OF THE CONSTRUCTION WASTE GENERATED AT THE SITE SHALL BE DIVERTED TO RECYCLE OR SALVAGE GBC 4.408.1

ENHANCED DURABILITY AND REDUCED MAINTENANCE - RODENT PROOFING CGBSC 4.406.1

ANNULAR SPACES AROUND PIPES, ELECT. CABLES, CONDUITS OR OTHER OPENINGS IN PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONC. MASONRY OR SIM. METHOD ACCEPTABLE TO THE ENFORCING AGENCY.

#### CONSTRUCTION WASTE MANAGEMENT CGBSC 4.408.

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, 4.408.4, OR MEET A MORE STRINGENT LOCAL CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT ORDINANCE.

#### CONSTRUCTION WASTE MANAGEMENT PLAN CGBSC 4.408.2

SUBMIT A CONSTRUCTION WASTE MANAGEMENT PLAN IN CONFORMANCE WITH ITEMS 1 THRU 5. THE CONSTRUCTION WASTE MANAGEMENT PLAN SHALL BE UPDATED AS NECESSARY AND SHALL BE AVAILABLE DURING CONSTRUCTION FOR EXAMINATION BY THE ENFORCING AGENCY:

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

#### WASTE MANAGEMENT COMPANY CGBSC 4.408.3

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

#### BUILDING MAINTENANCE AND OPERATION - OPERATION AND MAINTENANCE MANUAL CGBSC 4.10.1

AT THE TIME OF FINAL INSPECTION, A MANUAL, COMPACT DISK, 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 WILL 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 CHARGINGS. 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
- 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 MAINTENANCE MEASURES, INCLUDING BUT NOT LIMITED TO, CAULKING, PAINTING, GRADING AROUND THE BUILDINGS, ETC.
- INFORMATION ABOUT SOLAR ENERGY AND INCENTIVE PROGRAMS AVAILABLE.
- 10. A COPY OF ALL SPECIAL INSPECTION VERIFICATIONS REQUIRED BY THE ENFORCING AGENCY OR THIS CODE.

## FIREPLACES - GENERAL CGBSC 4.503

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

POLLUTANT CONTROL:

COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION CGBSC 4.504.1

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

FINISH MATERIAL POLLUTANT CONTROL CGBSC 4.504.1

ADHESIVES, SEALANTS AND CAULKS CGBSC 4.405.2.1

ADHESIVES, SEALANTS AND CAULKS USED 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, SEALANTS, SEALANT PRIMERS AND CAULKS SHALL COMPLY WITH LOCAL OR REGIONAL AIR POLLUTION CONTROL OR AIR QUALITY MANAGEMENT DISTRICT RULES WHERE APPLICABLE OR SCAQMD RULE 1168 VOC LIMITS, AS SHOWN IN TABLE 4.504.1 OR 4.504.2, AS APPLICABLE. SUCH PRODUCTS ALSO SHALL COMPLY WITH RULE 1168 PROHIBITION ON THE USE OF CERTAIN TOXIC COMPOUNDS (CHLOROFORM, ETHYLENE, DICHLORIDE, METHYLEN, 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 PACKING, 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, OR CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94507.

#### PAINTS AND COATINGS CGBSC 4.504.2.2

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 CATEGORY LISTED IN TABLE 4.504.3 SHALL BE DETERMINED BY CLASSIFYING THE COATING AS FLAT, NONFLAT OR NONFLAT-HIGH GLOSS COATING, BASED ON IT'S GLOSS, AS DEFINED IN SUB-SECTIONS 4.21, 4.36, AND 4.37 OF THE 2007 CALIFORNIA AIR RESOURCES BOARD, SUGGESTED CONTROL MEASURES, AND CORRESPONDING FLAT, NONFLAT OR NONFLAT-HIGH GLOSS VOC LIMIT IN TABLE 4.504.3 SHALL

#### AEROSOL PAINTS AND COATINGS CGBSC 4.504.2.3

AEROSOL PAINTS AND COATINGS SHALL MEET THE PRODUCT-WEIGHED 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(a)(1) OF THE 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.

#### VERIFICATION CGBSC 4.504.2.4

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

## MANUFACTURES PRODUCT SPECIFICATION.

2. FIELD VERIFICATION OF ON-SITE PRODUCT CONTAINERS.

#### CARPET SYSTEMS CGBSC 4.504.3

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

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

#### CARPET CUSHIONS CGBSC 4.505.3.1

ALL CARPET CUSION INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF THE CARPET AND RUG INSTITUTE'S GREEN LABEL PROGRAM.

#### CARPET ADHESIVE CGBSC 4.504.3.2

ALL CARPET ADHESIVE SHALL MEET THE REQUIREMENTS OF TABLE 4.504.1.

#### RESILIENT FLOORING SYSTEMS CGBSC 4.504.4

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

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

#### COMPOSITE WOOD PRODUCTS CGBSC 4.504.5

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 TOXIC CONTROL MEASURE FOR COMPOSITE WOOD (17 CCR 93120 ET SEQ) BY OR BEFORE THE DATES SPECIFIED IN THOSE SECTIONS IN TABLE 4.504.5.

#### **DOCUMENTATION CGBSC 4.504.5.1**

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.)
- 4. 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.
- 5. OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY.

## TABLE 4.504.5

FORMALDEHYDE LIMITS

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	0.13

#### INTERIOR MOISTURE CONTROL CGBSC 4.505

## CONCRETE SLAB FOUNDATION CGBSC 4.505.2

CAPILLARY BREAK CGBSC 4.505.2.1

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

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

#### MOISTURE CONTENT OF BUILDING MATERIALS CGBSC 4.505.3

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 CONTENT-TYPE MOISTURE METER. EQUIVALENT MOISTURE VERIFICATION METHODS MAY BE APPROVED BY

MOISTURE READINGS SHALL BE TAKEN AT A POINT 2 FEET TO 4 FEET FROM GRADE STAMPED END OF EACH PIECE TO BE VERIFIED.

AT LEAST 3 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 THAT ARE VISIBLY WET OR HAVE 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.

#### INDOOR AIR QUALITY AND EXHAUST CGBSC 4.506

BATHROOM EXHAUST FANS CGBSC 4.506.1

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.

THE ENFORCING AGENCY AND SHALL SATISFY REQUIREMENTS FOUND IN SECTION 101.8 OF THIS CODE (CGBSC)

- 2. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL a.) HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF <50 PERCENT TO A MAXIMUM OF 80 PERCENT. A HUMIDITY CONTROL
- MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT.

#### b.) A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO THE EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL (BUILT-IN).

1. FOR THE PURPOSE OF THIS SECTION, A BATHROOM IS A ROOM WHICH CONTAINS BATHTUB, SHOWER, OR TUB/SHOWER COMBINATION.

2. LIGHTING INTEGRAL TO BATHROOM EXHAUST FANS SHALL COMPLY WITH THE CALIFORNIA ENERGY CODE.

#### ENVIRONMENTAL COMFORT CGBSC 4.507

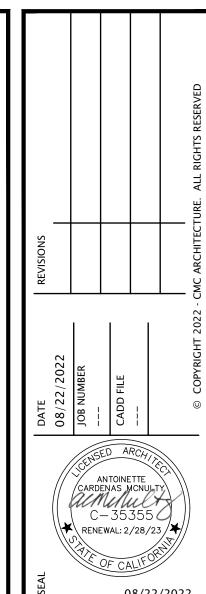
HEATING AND AIR CONDITION SYSTEM DESIGN CGBSC 4.507.2

HEATING AND AIR CONDITIONING SYSTEMS SHALL BE SIZED, DESIGNED AND HAVE THEIR EQUIPMENT SELECTED USING THE FOLLOWING METHODS: 1. THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANSI/ACCA 2 MANUAL J - 2011 (RESIDENTIAL LOAD CALCULATION), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

2. DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI/ACCA 1 MANUAL D - 2014 (RESIDENTIAL DUCT SYSTEMS) ASHRAE\_HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

3. SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ACCA 3 MANUAL S - 2014 (RESIDENTIAL EQUIPMENT SELECTION) OR OTHER EQUIVALENT DESIGN SOFTWARE OR

EXCEPTION: USE OF ALTERNATE DESIGN TEMPERATURES NECESSARY TO ENSURE THE SYSTEM'S FUNCTIONS ARE ACCEPTABLE.



08/22/2022

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#### CONSTRUCTION NOTES

UNLESS OTHERWISE SPECIFICALLY SHOWN ON THE DRAWINGS, THE FOLLOWING NOTES SHALL APPLY THROUGHOUT THIS CONSTRUCTION. ALL WORK SHALL BE IN COMPLIANCE WITH THE CURRENT EDITIONS OF THE CALIFORNIA BUILDING CODES AND ANY STATE LAW OR LOCAL ORDINANCES PERTAINING TO THE WORK BEING PERFORMED. THE CONTRACTOR SHALL VERIFY THESE REQUIREMENTS PRIOR TO BEGINNING ANY WORK.

#### INTERPRETATION OF DRAWINGS

- 1. REFER TO ARCHITECTURAL DRAWINGS TO COORDINATE WITH STRUCTURAL DRAWINGS.
- 2. COMPARISON OF ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL BE MADE BY THE GENERAL CONTRACTOR PRIOR TO THE BEGINNING OF CONSTRUCTION, AND ALL DIMENSIONS SHALL BE CHECKED BY THE SAME BEFORE STARTING WORK.
- 3. ANY DISCREPANCY BETWEEN ABOVE MENTIONED DRAWINGS SHALL BE REFERRED TO THE ENGINEER FOR FURTHER CLARIFICATION BEFORE STARTING CONSTRUCTION.
- 4. IN THE EVENT THAT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS OR CALLED FOR IN THE GENERAL NOTES OR SPECIFICATION, THEN THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN OR CALLED FOR.

#### **FOUNDATIONS**

- 1. ALLOWABLE SOIL PRESSURE IS 1500 psf FOR DEAD PLUS LIVE LOADS W/ ALLOWABLE INCREASES FOR SEISMIC OR WIND AND AS PER CHAPTER 18 C.R.C.
- 2. BOTTOM OF ALL FOOTINGS, EXCEPT THICKENED SLABS, SHALL EXTEND TO ELEVATIONS MARKED ON FOUNDATION PLAN OR DETAILS, BUT IN NO CASE LESS THAN 12" BELOW EXISTING OR FINISHED GRADE, WHICHEVER IS LOWER.

#### CONCRETE

- 1. PERFORMANCE STANDARD SHALL CONFORM TO APPLICABLE CODES AND REGULATIONS PER LOCAL, STATE, OR FHA, WHICHEVER IS MORE RESTRICTIVE.
- 2. VERIFY LOCATION AND REQUIREMENTS FOR UNDERGROUND WORK AND WORK EMBEDDED IN SLABS, INCLUDING UTILITY SERVICE, SANITARY SEWER, DRAINAGE, AND IRRIGATION PRIOR TO START OF WORK. SPECIAL COORDINATION WITH UTILITY COMPANIES WILL BE REQUIRED TO COORDINATE GAS, ELECTRIC, CABLE, AND WATER SERVICE LINES.
- 3. ALL FOOTINGS SHALL REST ON FIRM UNDISTURBED OR COMPACTED SOIL.
- 4. ALL CONCRETE REINFORCEMENT IS TO BE INTERMEDIATE GRADE, DEFORMED BARS, TO COMPLY WITH ASTM DESIGNATION A-615 AND SHALL BE 40KSI MINIMUM, U.N.O.
- 5. AT HORIZONTAL AND VERTICAL SPLICES, THE REINFORCING BARS SHALL LAP 36 DIAMETERS MINIMUM FOR #5 OR LARGER BARS, AND 1'-6" FOR #3 AND #4 BARS.
- 6. ALL REINFORCING SHALL HAVE A MINIMUM CLEAR COVERAGE AS FOLLOWS:

3" IN FOOTINGS WHERE POURED AGAINST EXCAVATION.
2" IN FOOTINGS WHERE FORMED BOTH SIDES AND WALLS BELOW GRADE.
1" IN WALLS ABOVE GRADE.

- 1" IN SLABS.
- 1- 1/2" IN BEAMS.
- 7. SLABS ON GRADE SHALL BE 4" THICK AND SHALL BE REINFORCED WITH 6X6 W1.4 X W1.4 WIRE MESH AT CENTER OF SLAB. U.N.O.
- 8. AT THE END OF 28 DAYS, CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2500 psi FOR SLABS ON GROUND, AND 2500 psi FOR FOOTINGS AND GRADE BEAMS AND STRUCTURAL WALLS.
- 9. SLABS SHALL BE PLACED ON 2" SAND BED AND A WATERPROOF MEMBRANE SHALL BE PLACED DIRECTLY UNDER THE SAND BED, U.N.O.
- 10. PROVIDE 4 MIL POLYETHYLENE SHEET MOISTURE BARRIER MINIMUM BELOW SLAB AT LIVING AREAS. LAP POINTS 12" MINIMUM. (IF APPLICABLE)
- 11. NOT USED
- 12. CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED AND HEAVILY ROUGHENED SO AS TO EXPOSE COARSE AGGREGATE.
- 13. ALL ANCHOR BOLTS TO BE 1/2" DIAMETER X 10" LONG UNLESS NOTED AND SHALL HAVE 3 x 3 x .229" SQUARE WASHERS WHERE HEAD OR BOLT BEARS ON WOOD.
- 14. ALL FRAMING HARDWARE SHALL BE "SIMPSON" OR EQUAL.
- 15. MAXIMUM SLUMP FOR ALL CONCRETE SHALL BE 4".
- 16. APPLY APPROVED CURING COMPOUND ON FINISHED CONCRETE SURFACES, OR MAINTAIN MOISTENED CONDITION FOR (5) FIVE DAYS AFTER PLACEMENT.
- 17. VERIFY LOCATIONS FOR ANCHOR BOLTS AT ENDS OF EACH SECTION OF WOOD SILLS OR PLATES BEFORE PLACING CONCRETE. PROVIDE ANCHOR BOLTS OR SIMPSON MAS WITH 12" OF THE END OF EXTERIOR AND BEARING WALLS.

## CONCRETE BLOCKS

- 1. ALL CELLS IN PIERS, THREE CELLS AT CORNERS OF WALLS, AND CELLS AT EACH SIDE OF OPENINGS SHALL BE FILLED WITH GROUT AND REINFORCED. ALL CELLS SHALL BE GROUTED SOLID WHEN CALLED OUT ON PLANS.
- 2. VERTICAL CELLS CONTAINING REINFORCING BARS, ANCHORS, BOLTS, DOWELS OR STRAPS SHALL BE FILLED WITH GROUT.
- 3. 8" WALLS SHALL BE REINFORCED WITH #4 VERTICAL BARS @ 24" O.C. MAXIMUM. U.N.O. PROVIDE THREE REINFORCED VERTICAL CELLS AT CORNERS WITH #4 VERTICAL. U.N.O.
- 4. BOND BEAMS WITH 2- #4 HORIZONTAL BARS SHALL OCCUR AT 4'0" O.C. MAXIMUM, AND AT TOP OF WALLS, U.N.O.
- 5. WINDOW AND DOOR OPENINGS SHALL BE REINFORCED WITH 2- #4 REBAR. 4- #4 TOTAL IMMEDIATELY OVER OPENINGS, BARS TO EXTEND 2'-0" MINIMUM EACH SIDE OF OPENING, U.N.O.
- 6. ALL HORIZONTAL WALL STEEL SHALL BE SPLICED WITH 40 BAR DIAMETER MINIMUM LAP AT CORNERS AND INTERSECTIONS. ALL DOWELS EXTENDING OUT OF FOOTINGS SHALL HAVE A 40 BAR DIAMETER LAP.
- 7. VERTICAL LIFTS FOR EACH POUR SHALL NOT EXCEED 4'-6" WITHOUT CLEAN-OUT OPENINGS.
- 8. ALL CELLS IN RETAINING WALLS OR UNDER GRADE SHALL BE FILLED SOLID WITH GROUT.
- 9. MINIMUM MASONRY DESIGN STRENGTH:
  A. MINIMUM MASONRY UNIT STRENGTH, f'm =1500 psi MIN.
  B. MORTAR TYPE & STRENGTH, f'c =1800 psi MIN.

C. GROUT STRENGTH, f'c = 2000 psi MIN.

- STRUCTURAL STEEL
- 1. THE STEEL CONTRACTOR SHALL PROVIDE, WHERE NECESSARY, TEMPORARY BRACING DURING ERECTION OF STRUCTURAL STEEL.
- 2. SEE CARPENTRY SECTION FOR BOLTS, PLATES, ANGLES ETC., TO PROVIDE FOR WOOD TO STEEL CONNECTIONS.
- 3. CONNECTIONS NOT SHOWN SHALL CONFORM TO AISC STANDARDS.
- 4. STEEL CONTRACTOR IS TO CHECK IN THE FIELD THE ELEVATIONS OF LEVELING PLATES, ANCHOR BOLTS, ETC., PRIOR TO COMPLETION OF FABRICATION AND MAKE ANY NECESSARY ADJUSTMENTS OF BASE PLATES IN THE SHOP.
- 5. FIELD BURNING TO ENLARGE BOLT HOLES AND WELDING OF BOLTS TO BASE PLATES SHALL NOT BE ALLOWED.
- 6. TUBE STEEL MEMBERS SHALL BE 46 KSI GRADE B, A500 MINIMUM, ALL OTHER STEEL PLATES, SADDLES GUSSETS, ETC. SHALL BE 36 KSI STEEL.
- 7. ALL WELDING SHALL BE PERFORMED W/ E70XX ELECTRODES.
- 8. ALL STRUCTURAL BOLTS SHALL BE ASTM A307, U.N.O.

#### **CARPENTRY**

- 1. ALL WOOD FRAMING AND NAILING SHALL CONFORM TO "CONVENTIONAL CONSTRUCTION PROVISION", SEC. 2308, CALIFORNIA BUILDING CODE, CURRENT EDITION AND ANY AMENDMENTS APPROVED BY THE GOVERNING AGENCY.
- 2. VERIFY ALL PLAN DIMENSIONS AND ROUGH OPENING REQUIREMENTS PRIOR TO START OF FRAMING.
- 3. VERIFY SPACE REQUIRED FOR PLENUMS AND DUCTS WITH HEATING CONTRACTOR BEFORE START OF WORK.
- 4. VERIFY SPACE REQUIRED AND COMPLIANCE WITH CODE REQUIREMENTS FOR PIPING AND DRILLING THROUGH STRUCTURAL WOOD MEMBERS BEFORE START OF WORK.
- 5. BEAMS, GIRDERS, POSTS, AND MULLIONS SHALL BE #1 DOUGLAS FIR OR BETTER, U.N.O.
- 6. STUDS, PLATES AND CRIPPLES (STRUCTURAL), #2 DOUGLAS FIR OR BETTER. JACKS AND BLOCKING, UTILITY OR BETTER.
- 7. STUDS IN WALLS SHALL BE SPACED NOT MORE THAN 16" O.C. ALL TRUSSES SHALL BEAR DIRECTLY ON TOP OF STUDS, OR ON DBL. TOP PLATE W/ SOLID 2X BLOCKING BELOW AND BETWEEN STUDS. CORNERS AND INTERSECTIONS OF STUD WALLS SHALL BE FRAMED AS SHOWN OR SOLID.
- 8. AT THE CORNERS AND/OR INTERSECTIONS OF STUD WALLS WHICH HAVE PLYWOOD SHEATHING, THE SHEATHING FROM BOTH WALLS SHALL BE NAILED TO THE SAME STUDS OR POST WITH PERIMETER NAILING. WHERE SUCH CONNECTION IS NOT POSSIBLE, STUDS RECEIVING PLYWOOD SHEATHING FROM EACH WALL SHALL BE NAILED TOGETHER WITH 16d @ 6" O.C.
- 9. WHERE STUD WALLS ABUT MASONRY OR CONCRETE WALLS, END STUD SHALL BE A 2X PRESSURE TREATED MEMBER BOLTED TO MASONRY OR CONCRETE WITH 1/2" X 8" BOLTS @ 2'-8" O.C. AND 6" FROM TOP AND BOTTOM, U.N.O.
- 10. PROVIDE SOLID BLOCKING OR CROSSBRIDGING @ 8'-0" O.C. MAXIMUM BETWEEN JOISTS OR RAFTERS.
- 11. WOOD GIRDERS, BEAMS, JOISTS, AND RAFTERS SHALL BE LIMITED TO CUTS AND BORED HOLES NOT DEEPER THAN ONE FIFTH OF THE BEAM DEPTH FROM THE TOP, LOCATED NOT FARTHER FROM THE BEAM END THAN 3 TIMES THE BEAM DEPTH.
- 12. NAILERS REQUIRED FOR FINISH MATERIAL OR FIREPROOFING OF STEEL SHALL BE BOLTED TO STEEL AS SPECIFIED. COUNTERSINK BOLTS WHERE THEY INTERFERE WITH FINISH, U.N.O.
- 13. BOLTS BEARING ON WOOD SHALL HAVE STANDARD CAST IRON OR MALLEABLE IRON WASHERS. BOLTS HOLES SHALL BE DRILLED TO THE NET DIAMETER OF BOLTS.
- 14. WHERE PLYWOOD SHEATHING IS USED ON ROOF OR ON FLOOR, SHEETS SHALL BE LAID PERPENDICULAR TO DIRECTION OF JOISTS OR RAFTERS. PLYWOOD SHEETS SHALL BE STAGGERED.
- 15. EDGES OF PLYWOOD SHEETS NOT NAILED TO STUDS, JOISTS OR SOLID BLOCKING SHALL BE BLOCKED AND NAILED TO 2X4 FLAT BLOCKING WITH PERIMETER NAILING. (EXCEPTION FOR ROOF AND FLOOR DIAPHRAGMS, U.N.O.)
- 16. BRACING ALL EXTERIOR WALL AND MAIN CROSS STUD PARTITIONS SHALL BE EFFECTIVELY AND THOROUGHLY BRACED AT EACH END, OR AS NEAR THERETO AS POSSIBLE AND AT LEAST EVERY 25 FT. OF LENGTH BY ACCEPTABLE ALTERNATE METHODS. SECTION 2308, CRC CURRENT EDITION.
- 17. STUD HEIGHT: UNLESS SUPPORTED LATERALLY THE MAXIMUM HEIGHT OF STUDS SHALL BE AS FOLLOWS FOR NON-BEARING WALLS ONLY:

  SIZE HEIGHT (MAX.)

_	SIZE	HEIGHT (	M
	2X3	10'-0"	
	2X4	14'-0"	
	2X6	20'-0"	
	3X4	14'-0"	
	ED 4 4 4 1 4 1 G	EV/TEDIOD	

18. WALL FRAMING: EXTERIOR AND INTERIOR BEARING WALLS OF BUILDING NOT OVER TWO STORIES IN HEIGHT SHALL BE 2X4 STUDS. FOR THREE STORY BUILDINGS, THE FIRST FLOOR SHALL BE 3X4 OR 2X6 STUDS. UNDERPINNING UNDER TWO STORY BUILDINGS OVER 6'-0" IN LENGTH SHALL BE 3X4 OR 2X6. U.N.O.

## DESIGN STRESSES & PROPERTIES FOR GLUE LAMINATED LUMBER

ALL GLUELAM BEAMS SHALL MEET THE FOLLOWING CRITERIA:

 $F_{h}$ = 2400 PSI  $F_{v}$  = 165 PSI  $E = 1.8 \times 10^{6} \text{ PSI}$ 

## DESIGN STRESSES & PROPERTIES FOR MANUFACTURED LUMBER

		G				FcL		Fcll	Fv	SG
			SHEAR MODULUS OF ELASTICITY	E MODULUS OF ELASTICITY	Fb FLEXURAL STRESS	Ft TENSION STRESS	COMPRESSION PERPENDICULAR TO GRAIN	COMPRESSION PARALLEL TO GRAIN	COMPRESSION SHEAR PARALLEL TO GRAIN	EQUIVALENT SPECIFIC GRAVITY
TYPE	GRADE	ORIENTATION	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)	(psi)
TIMBERSTRAND LSL	1.7E	BEAM	106,250	1.7 x 10 <sup>6</sup>	2,600	1,825	880	2,380	400	.50
MICROLAM LVL	1.9E	BEAM	118,750	1.9 x 10 <sup>6</sup>	2,600	1,555	750	2,510	285	.50
PARALLAM PSL	2.0E	BEAM	125,000	2.0 x 10 <sup>6</sup>	2,900	2,025	750	2,900	290	.50

## NAILING SCHEDULE, TO COMPLY WITH 2019 CBC/CRC DESIGN CRITERIA:

. 16d @ 12"

- 1. NAILING FOR FRAMING SHALL BE WITH BOX NAILS, NUMBER AND SIZE AS FOLLOWS, EXCEPT AS NOTED OTHERWISE ON PLANS. NAILING TO PRESSURE TREATED LUMBER SHALL BE WITH HOT-DIPPED GALVANIZED OR STAINLESS STEEL NAILS.
- 2. NAILS SHALL NOT BE DRIVEN CLOSER TOGETHER THAN 1/2 THEIR LENGTH, NOR CLOSER TO THE EDGE OF MEMBER THAN 1/4 THEIR LENGTH, EXCEPT FOR SHEATHING. PENETRATION SHALL BE 1/2 THE LENGTH OF NAIL MINIMUM.
- 3. NAILING NOT NOTED BELOW OR ON PLANS AND DETAILS SHALL BE A MINIMUM OF TWO NAILS AT EACH CONTACT, 8d FOR 1" MATERIAL AND 16d FOR 2" MATERIAL.
- 4. WHERE POSSIBLE, NAILS DRIVEN PERPENDICULAR TO THE GRAIN SHALL BE USED INSTEAD OF TOE NAILING.
- 5. HOLES SHALL BE PRE-DRILLED FOR NAILS WHICH TEND TO SPLIT WOOD.
- 6. REQUIRED NAILING AS FOLLOWS:

TOE NAILS EACH SIDE..

BLOCKING BETWEEN STUDS

MULTIPLE STUDS.....

JOISTS OR RAFTERS TO SIDES OF STUDS	
8" JOISTS OR LESS	3-16d
FOR EACH ADDITIONAL 4" IN DEPTH	1-16d
JOISTS OR RAFTERS AT ALL BEARINGS	
TOE NAILS EACH SIDE	2-16d
STUDS TO BEARING	

BLOCKING BETWEEN JOISTS OR RAFTERS

TO JOIST OR RAFTER – TOE NAILS EACH END.......2–8d

TO JOIST OR RAFTER BEARINGS – TOE NAILS EACH SIDE ..... 2–8d

THICKNESS EDGE NAIL FIELD NAIL

NAILING OF PLYWOOD (UNLESS OTHERWISE SPECIFIED)

* ROOF	1/2"	8d @ 6" O.C.	8d @ 12" O.C.
* FLOORS	5/8"	10d @ 6" O.C.	10d OR 8d RING SHANK @ 10" O.C.
* WALLS	3/8" 1/2"	8d @ 6" O.C. 8d @ 6" O.C.	8d @ 12" O.C. 8d @ 12" O.C.

\* NAILING FOR ALL SHEAR WALLS, ROOFS AND FLOORS SHALL BE COMMON NAILS PER C.B.C. TABLES

PLYWOOD GRADES

FLOORS CDX - T&G APA SPAN RATED 32/16.

FACE GRAIN PERPENDICULAR TO JOIST.

3/8" MINIMUM EDGE DISTANCE

ROOF CDX – APA APPROVED PLYCLIPS AT UNSUPPORTED EDGES OVER 24"

APA SPAN RATED 24/0.

SHEAR PANELS CDX APA, FACE GRAIN UP FULL HEIGHT. NO HORIZONTAL JOINTS.

#### NAILING OF GYPSUM WALLBOARD LOCATION THICKNESS EDGE NAIL FIELD NAIL 1/2" 5d COOLER @ 7" O.C. 5d COOLER @ 7" O.C. WALLS 5/8" 6d COOLER @ 7" O.C. 6d COOLER @ 7" O.C. 1/2" **CEILINGS** 5d COOLER @ 6" O.C. 5d COOLER @ 6" O.C. 5/8" 6d COOLER @ 6" O.C. 6d COOLER @ 6" O.C.

GYPSUM WALLBOARD WALLS, SPECIFIED FOR USE AS SHEAR WALLS, SHEETS SHALL BE INSTALLED VERTICALLY WITH ALL EDGES BLOCKED.

GYPSUM WALLBOARD FOR THE RATED ASSEMBLIES SHALL BE INSTALLED AS PER THE ASSEMBLY REQUIREMENTS.

## REQUIRED NAIL SIZES

### NAILING FOR FRAMING

NAIL TYPE	DIAMETER (~)	<u>LENGTH</u>
8d COMMON	.131"	2 1/2"
10d COMMON	.148"	3"
16d COMMON	.162"	3 1/2"
8d BOX	.113"	2 1/2"
10d BOX	.128"	3"
16d BOX	.135"	3 1/2"

### NAILING FOR SHEARWALLS, FLOOR & ROOF DIAPHRAGM

NAIL TYPE	DIAMETER (~)	MIN. LENGTH
8d COMMON	.131"	1 1/2" + SHEATHING THICKNES
10d COMMON	.148"	1 5/8" + SHEATHING THICKNES

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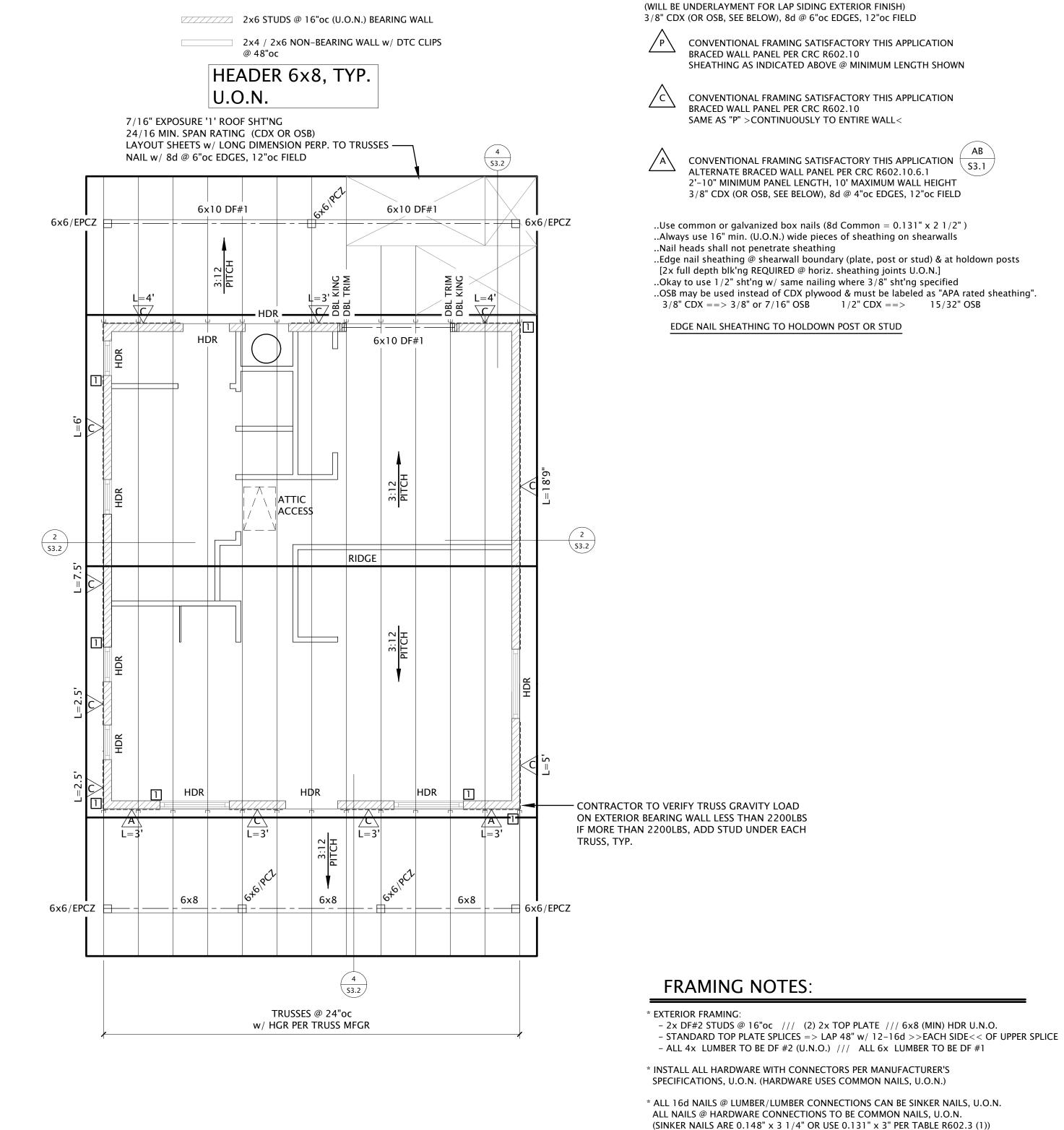
..... 110 MPH

WIND LOAD EXP B (3 SEC. GUST)...

SEISMIC DESIGN CATEGORY...

SOIL CLASS..

FLOOR LIVE LOAD / ROOF LIVE LOAD... NA / 20 psf



WALL LEGEND:

\* BEARING WALL @ FOOTING

BRACE WALL SCHEDULE:

OPTIONAL APPLICATION (REQUIRED WHERE INDICATED)

APPLY STRUCTURAL SHEATHING TO ENTIRE EXTERIOR SURFACE OF BUILDING

DBL STUD (KING @ OPENING) w/ HTT4 (14–16d @ 0.163" x 2 1/2")

NAIL DBL STUD TOGETHER W/ 16-16d (WELL SPACE)

# \_\_\_ 18"SQ x18" DP FTG, TYP. \_\_\_\_3 12'-0" 12'-0" $\vdash$ $\sqcup \sqcup \sqcup$ PORCH SLAB $\sqrt{c}$ 12" FTG SEE SLAB NOTES A L=3'L=3' L=32-1/2" A.B. 2-1/2" A.B. PORCH SLAB $\vdash$ $\vdash$ $\dashv$ $\vdash + \dashv$ $\vdash + \dashv$ $\perp \perp \perp \rfloor$

## **FOUNDATION NOTES:**

\* ASSUMED SOIL ALLOWABLE BEARING USE 1500 PSF CONTRACTOR AND/OR OWNER IS SOLELY RESPONSIBLE FOR VERIFYING THAT THE SOIL CONDITIONS @ THE BUILDING SITE ARE OF ADEQUATE INTEGRITY TO SUPPORT THE STRUCTURE. AT MINIMUM, VERIFY BEARING ON NATIVE SOIL OR ENGINEERED FILL.

IF NECESSARY, CONSULT A GEOTECHNICAL ENGINEER. \* CONTRACTOR AND/OR OWNER IS SOLELY RESPONSIBLE FOR PROVIDING PROPER DRAINAGE AROUND THE STRUCTURE (2% AWAY, MIN., OR AS REQ'D).

THIS INCLUDES PROPERLY GRADING THE SITE AND IMPLEMENTING ANY DRAINAGE SYSTEMS OR EROSION CONTROL MEASURES AT OR NEAR THE STRUCTURE TO PREVENT ANY KIND OF WATER DAMAGE TO THE STRUCTURE.

\* IF THE STRUCTURE IS BUILT >>> ON OR NEAR <<< GROUND SLOPING MORE THAN 1:4, THEN ALERT THE DESIGNER FOR POSSIBLE COMPLIANCE ISSUES w/ CRC R403.1.7. STRUCTURE MUST BE SET BACK @ LEAST 15' FROM THE TOP OR BOTTOM CREST OF ANY SLOPES ON THE SITE (CONTACT DESIGNER FOR ACCEPTABLE ALTERNATIVES).

\* ALL CONCRETE FOR FOOTINGS TO HAVE A 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI (5 SACK CEMENT PER CUBIC YARD ==>> SUGGESTED MINIMUM) 3000 PSI @ PATIO >>SUGGEST (NOT REQ'D)<< CONCRETE SHOULD BE VIBRATED TO ELIMINATE VOIDS AND PROMOTE BONDING w/ STEEL

\* ALL FOOTING STEEL TO BE GRADE 40 MIN. \* CONNECTORS @ P.T. SILL TO BE IN COMPLIANCE w/ CRC R402.1.1/ CBC 2304.9.5

HOT-DIP GALV. OR STAINLESS STEEL NAILS /// HOT-DIP GALV. OR ZINC COATED ANCHOR

**BOLTS** \* ANCHOR BOLTS TO BE 1/2" BOLTS @ 72"oc (MAX.) w/ 7" MIN. EMBED. (CRC R403.1.6/ CBC 2308.6)

- ALL CAST IN PLACE BOLTS TO HAVE EMBEDDED HEAD OR 'J' BEND INTO CONCRETE - ALL BOLTS REQUIRE 3" x 3" x 1/4" PLATE WASHERS (CRC R403.1.6.1/ CBC 2308.12.) SLOT IN PLATE WASHER (1 3/4" MAX. LENGTH) OKAY IF STANDARD CUT WASHER ALSO USED

## **SLAB NOTES:**

SLAB @ DWELLING:  $3\frac{1}{2}$ " (MIN) CONCRETE SLAB (CRC R506.1) USING 4" MIN. IS >SUGGESTED < STEEL AT MID-DEPTH (#3 @ 24"oc E.W. OR 6x6 - W4.0 x W4.0) O/ OPTIONAL/SUGGESTED 2" (HOLD) SAND O/ 15 MIL VAPOR BARRIER O/ 4" (MIN) FREE-DRAINING GRAVEL BASE (1/2" TO 1")

#### **HOLD DOWN LEGEND**

\* CONTRACTOR TO COORDINATE HOLDOWN BOLT LOCATIONS W/ FRAMING PLAN AND TIE ALL HOLDOWN BOLTS INTO PLACE PRIOR TO CONCRETE PLACEMENT.

> HTT4 HOLDOWN W/ DBL FULL HEIGHT STUDS (KING @ OPENING) LAMINATED TOGETHER W/ 16d @ 6"oc & W/ SSTB20 ANCHOR @ FOUNDATION LEVEL

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PERMIT SET

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



8'-0"

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

8'-0"

24'-0"

8'-0"

