# CRESS ACCESSORY DWELLING UNIT

# SHASTA COUNTY PRE-APPROVED ADUS



NOTICE NOT LESS THAN 48-HOUR NOTICE IS REQUIRED PRIOR TO STARTING ANY EXCAVATION NEAR UNDERGROUND UTILITIES BELONGING TO P.G. & E., SBC, OR THE COUNTY OF SHASTA, PLEASE CALL, TOLL FREE, "ONE CALL" UNDERGROUND SERVICE ALERT (USA) 811/1-800-227-2600. FOR CHARTER COMMUNICATIONS FACILITIES, CALL 866-731-5420

NOTICE THE CONTRACTOR SHALL, AND IT IS THEIR RESPONSIBILITY TO, OBTAIN ANY AND ALL REQUIRED PERMITS FROM ALL FEDERAL, STATE, COUNTY AND LOCAL AGENCIES WHICH MAY REQUIRE SUCH PERMITS, PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES RELATED TO THIS PROJECT.

NOTE: FINISHED GRADE AROUND THE STRUCTURE SHALL BE A MINIMUM SLOPE OF 6" WITHIN 10 FEET FROM THE EXTERIOR OR FOUNDATION WALL.

## SEE SHEET T2 FOR ADU OPTIONS

SECTION R327 - AGING-IN-PLACE DESIGN AND FALL PREVENTION

R327.1 AGING-IN-PLACE DESIGN AND FALL PREVENTION. NEWLY CONSTRUCTED DWELLINGS SUBJECT TO THE REQUIREMENTS OF THIS CODE SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTIONS R327.1.1 THROUGH R327.1.4.

AGE IN PLACE REQUIREMENTS FOR NEW RESIDENCES:

### **EXCEPTIONS:**

1. COVERED MULTIFAMILY DWELLINGS DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH CHAPTER 11A OF THE CALIFORNIA BUILDING CODE.

2. PUBLIC HOUSING AND PLACES OF PUBLIC ACCOMMODATION REQUIRED TO COMPLY WITH CHAPTER 11B OF THE CALIFORNIA BUILDING CODE.

### R327.1.1 REINFORCEMENT OF GRAB BARS.

AT LEAST ONE BATHROOM OF THE ENTRY LEVEL SHALL BE PROVIDED WITH REINFORCEMENT INSTALLED IN ACCORDANCE WITH THIS SECTION. WHERE THERE IS NO BATHROOM ON THE ENTRY LEVEL, AT LEAST ONE BATHROOM ON THE SECOND OR THIRD FLOOR OF THE DWELLING SHALL COMPLY WITH THIS SECTION.

- 1. REINFORCEMENT SHALL BE SOLID LUMBER OR OTHER CONSTRUCTION MATERIALS APPROVED BY THE ENFORCING AGENCY.
- 2. REINFORCEMENT SHALL NOT BE LESS THAN 2 BY 8 INCH NOMINAL LUMBER. [1-1/2 INCH BY 7-1/4 INCH ACTUAL DIMENSION] OR OTHER CONSTRUCTION MATERIAL PROVIDING EQUAL HEIGHT AND LOAD CAPACITY. REINFORCEMENT SHALL BE LOCATED BETWEEN 32 INCHES AND 39-1/4 INCHES ABOVE THE FINISHED FLOOR FLUSH WITH THE WALL FRAMING.

- 3. WATER CLOSET REINFORCEMENT SHALL BE INSTALLED ON BOTH SIDE WALLS OF THE FIXTURE. OR ONE SIDE WALL AND BACK WALL.
- 4. SHOWER REINFORCEMENT SHALL BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED.
- 5. BATHTUB AND COMBINATION BATHTUB/SHOWER REINFORCEMENT SHALL BE CONTINUOUS ON EACH END OF THE BATHTUB AND THE BACK WALL. ADDITIONALLY, BACK WALL REINFORCEMENT FOR A LOWER GRAB BAR SHALL BE PROVIDED WITH THE BOTTOM EDGE LOCATED NO MORE THAN 6 INCHES (152.4 MM) ABOVE THE BATHTUB

### **EXCEPTIONS:**

- 1. WHERE THE WATER CLOSET IS NOT PLACED ADJACENT TO A SIDE WALL CAPABLE OF ACCOMMODATING A GRAB BAR, THE BATHROOM SHALL HAVE PROVISIONS FOR INSTALLATION OF FLOOR-MOUNTED, FOLDAWAY OR SIMILAR ALTERNATE GRAB BAR REINFORCEMENTS APPROVED BY THE ENFORCING AGENCY.
- 2. REINFORCEMENT SHALL NOT BE REQUIRED IN WALL FRAMING FOR PRE-FABRICATED SHOWER ENCLOSURES AND BATHTUB WALL PANELS WITH INTEGRAL FACTORY-INSTALLED GRAB BARS OR WHEN FACTORY-INSTALLED REINFORCEMENT FOR GRAB BARS IS PROVIDED.
- 3. SHOWER ENCLOSURES THAT DO NOT PERMIT INSTALLATION OF REINFORCEMENT AND/OR GRAB BARS SHALL BE PERMITTED, PROVIDED REINFORCEMENT FOR INSTALLATION OF FLOOR-MOUNTED GRAB BARS OR AN ALTERNATE METHOD IS APPROVED BY THE ENFORCING AGENCY.

- 4. BATHTUBS WITH NO SURROUNDING WALLS, OR WHERE WALL PANELS DO NOT PERMIT THE INSTALLATION OF REINFORCEMENT SHALL BE PERMITTED, PROVIDED REINFORCEMENT FOR INSTALLATION OF FLOOR-MOUNTED GRAB BARS ADJACENT TO THE BATHTUB OR AN ALTERNATE METHOD IS APPROVED BY THE ENFORCING AGENCY.
- 5. REINFORCEMENT OF FLOORS SHALL NOT BE REQUIRED FOR BATHTUBS AND WATER CLOSETS INSTALLED ON CONCRETE SLAB FLOORS.

R327.1.1.1 DOCUMENTATION FOR GRAB BAR REINFORCEMENT. INFORMATION AND/OR DRAWINGS IDENTIFYING THE LOCATION OF GRAB BAR REINFORCEMENT SHALL BE PLACED IN THE OPERATION AND MAINTENANCE MANUAL IN ACCORDANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS CODE, CHAPTER 4, DIVISION 4.4.

## **CODES & DESIGN CRITERIA:**

SHEET INDEX:

**OPTIONS** 

FLOOR PLAN - OPTION 'B' FLOOR PLAN - OPTION 'C' FLOOR PLAN - OPTION 'D'

SECTIONS - OPTION 'B'

**ELECTRICAL PLAN - OPTION 'A' ELECTRICAL PLAN - OPTION 'B'** ELECTRICAL PLAN - OPTION 'C' **ELECTRICAL PLAN - OPTION 'D'** 

T2

S2D

TITLE SHEET/CODE DATA - ALL OPTIONS

FLOOR PLAN - OPTION 'A' & MIRRORED OPTION

EXTERIOR ELEVATIONS & SECTIONS - OPTION 'A'

EXTERIOR ELEVATIONS & SECTIONS - OPTION 'C' EXTERIOR ELEVATIONS & SECTIONS - OPTION 'D'

EXTERIOR ELEVATIONS - OPTION 'B'

STRUCTURAL NOTES - ALL OPTIONS

FOUNDATION PLAN - OPTION 'D' ROOF FRAMING PLAN - OPTION 'D' STRUCTURAL DETAILS - ALL OPTIONS STRUCTURAL DETAILS - ALL OPTIONS

**EXTERIOR ELEVATIONS & SECTIONS - MIRRORED OPTION** 

CALIFORNIA GREEN BUILDING STANDARDS - ALL OPTIONS

FOUNDATION PLAN / ROOF FRAMING PLAN - OPTION 'A' FOUNDATION PLAN / ROOF FRAMING PLAN - OPTION 'B'

FOUNDATION PLAN / ROOF FRAMING PLAN - OPTION 'C'

CALIFORNIA BUILDING CODE	2022 EDITION
CALIFORNIA RESIDENTIAL CODE	2022 EDITION
CALIFORNIA PLUMBING CODE	2022 EDITION
CALIFORNIA MECHANICAL CODE	2022 EDITION
CALIFORNIA ELECTRICAL CODE	2022 EDITION
CALIFORNIA FIRE CODE	2022 EDITION
CALIFORNIA ENERGY CODE	2022 EDITION
CALIFORNIA GREEN CODE	2022 EDITION
WIND LOAD EXP C (3 SEC. GUST)	95 MPH
ROOF LIVE LOAD	20 PSF
ROOF SNOW LOAD	70 PSF / 50 PSI
FLOOR LIVE LOAD	40 PSF
SEISMIC DESIGN CATEGORY	D <sub>0</sub>
SOIL CLASS	D
RISK CATEGORY	II
1	

## PROJECT DESCRIPTION:

NEW TWO BEDROOM SINGLE FAMILY RESIDENCE USING STANDARD FRAME CONSTRUCTION.

## OCCUPANCY & BUILDING SUMMARY:

OCCUPANCY GROUPTYPE OF CONSTRUCTIONSTORIESWILDLAND URBAN INTERFACE AREA	.V-B .1
NEW RESIDENCE AREA	780 SQ. FT
NEW GARAGE AREA (OPTION 'B' ONLY)	336 SQ. FT
NEW COVERED PORCHES OPTION 'A'	-

15. DO NOT MODIFY THE WORK SHOWN EXCEPT WITH WRITTEN INSTRUCTIONS FROM

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

## **DEFERRED SUBMITTAL:**

- \* FIRE SPRINKLER PLAN
- \* PHOTOVOLTAIC SYSTEM \* ENERGY CALCULATIONS
- \* FINAL TRUSS CALCULATIONS

<u>STIPULATION FOR REUSE</u> THIS DRAWING WAS PREPARED IN CONTRACT WITH SHASTA COUNTY FOR DISTRIBUTION AND USE BY THE RESIDENTS OF SHASTA COUNTY WITH A SNOW LOAD OF 70 PSF OR LESS. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS. REPRODUCTION OF THIS DRAWING FOR REUSE ON PROJECTS OUTS OF SHASTA COUNTY BUILDING DEPARTMENT IS NOT AUTHORIZED AN

CMC ARCHITECTURE RETAINS ALL RIGHTS TO PROPRIETARY

INFORMATION, INCLUDING, WITHOUT LIMITATION, METHODOLOGIES

KNOWLEDGE, AND EXPERIENCE POSSESSED BY CMC ARCHITECTURE PRIOR TO, OR ACQUIRED DURING THE DEVELOPMENT OF THIS PROJEC

AND SHALL NOT BE RESTRICTED IN ANY WAY WITH RESPECT THERETO

AND METHODS OF ANALYSIS, IDEAS, CONCEPTS, ARRANGEMENTS PLANS, EXPRESSIONS, KNOW HOW, METHODS, TECHNIQUES, SKILLS

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**★**\ RENEWAL: 2/28/25 /**★**//

CODE

SU

TITLE CRESS A

## **GENERAL NOTES:**

1. ALL WORK SHALL CONFORM WITH THE CURRENT CALIFORNIA BUILDING CODE, CALIFORNIA STATE BARRIER-FREE STANDARDS, 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. 5% MIN. FOR 10'-0".
- 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.

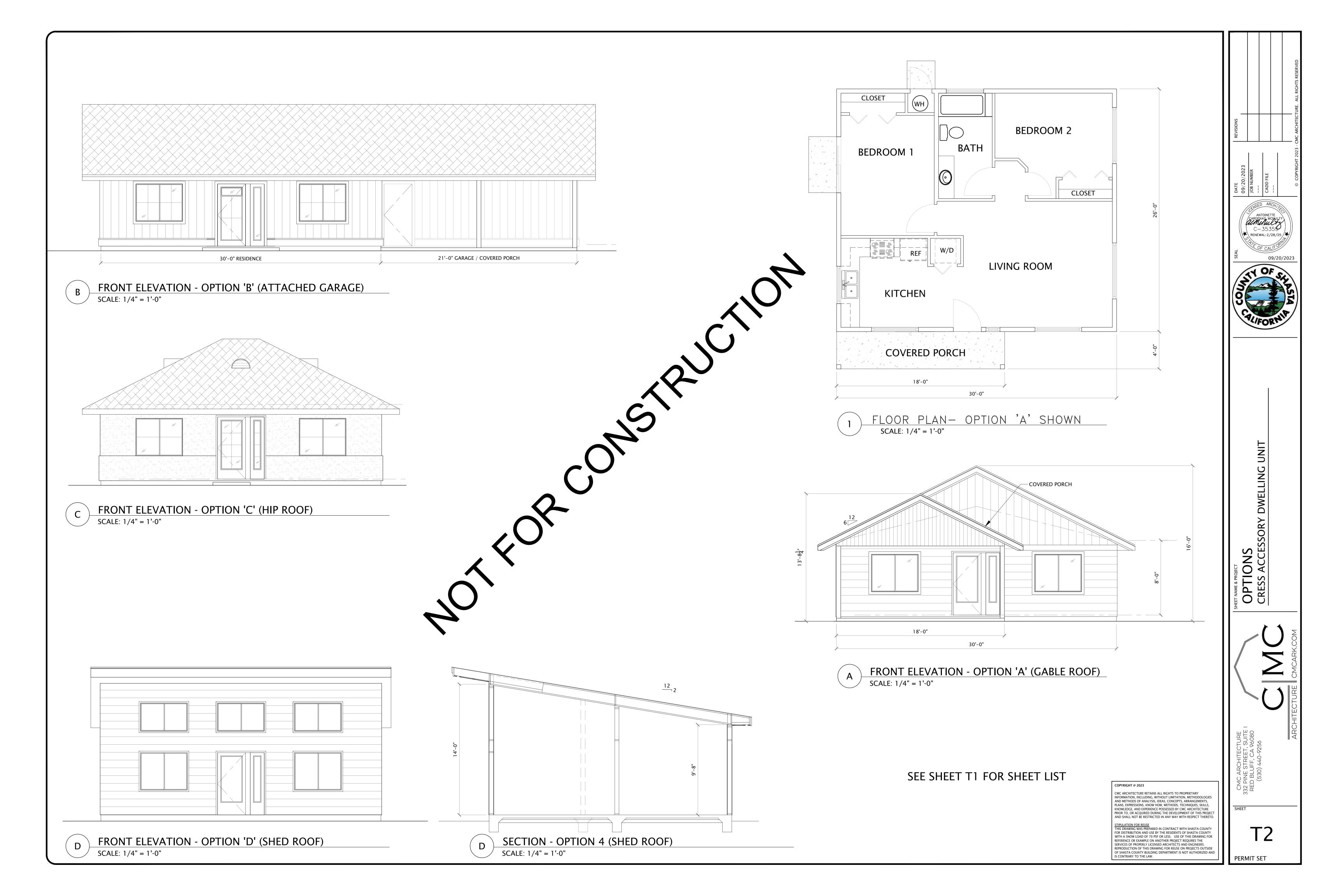
12. ALL DIMENSION INDICATED ARE TO FACE OF STUD, FACE OF STOREFRONT MULLION, OR FACE OF CONCRETE UNLESS OTHERWISE NOTED

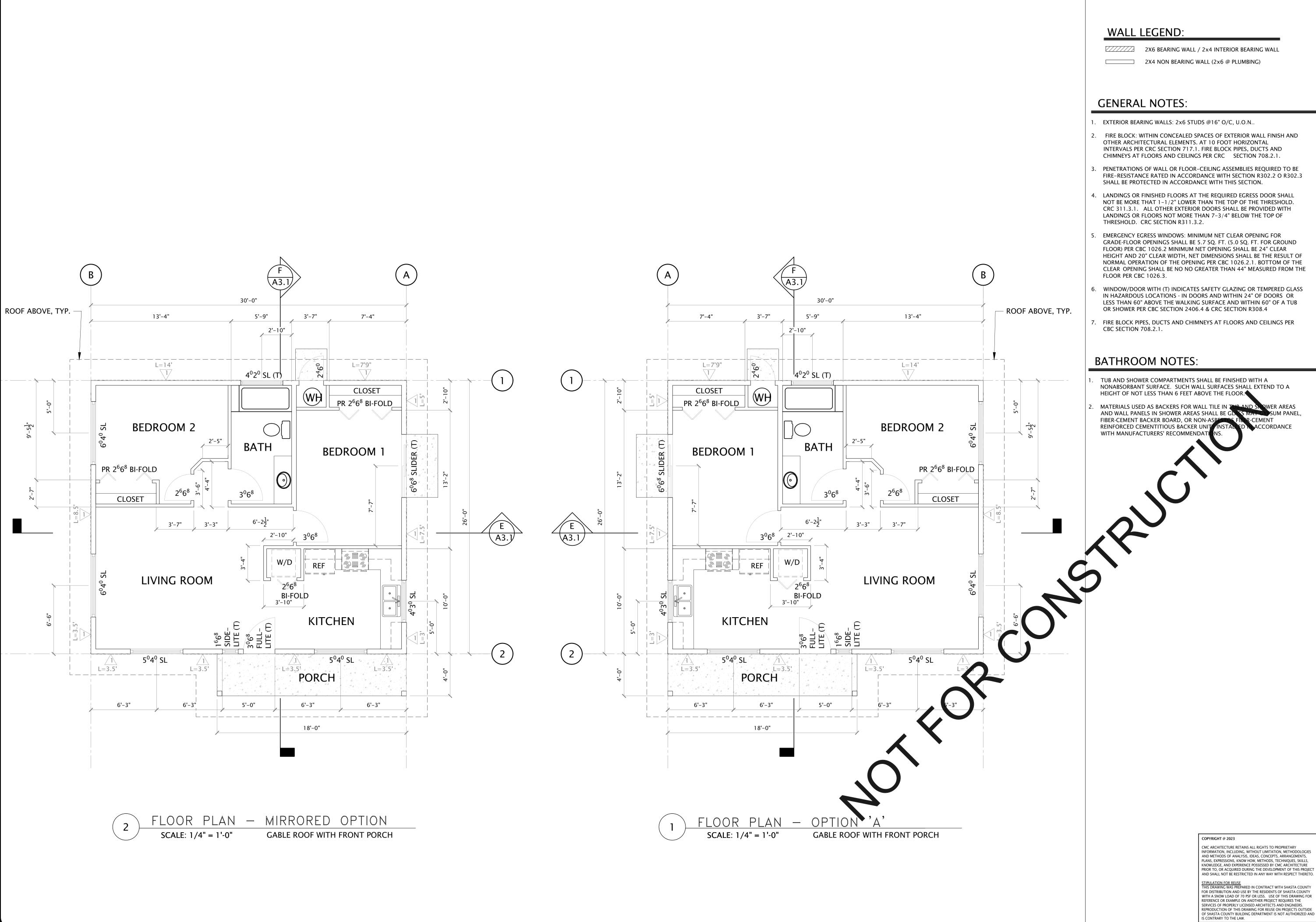
13. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS.

14. VERIFY ALL DIMENSIONS, DATUMS AND LEVEL PRIOR TO CONSTRUCTION.

THE ARCHITECT OR ENGINEER.

ARCHITECT OR ENGINEER.





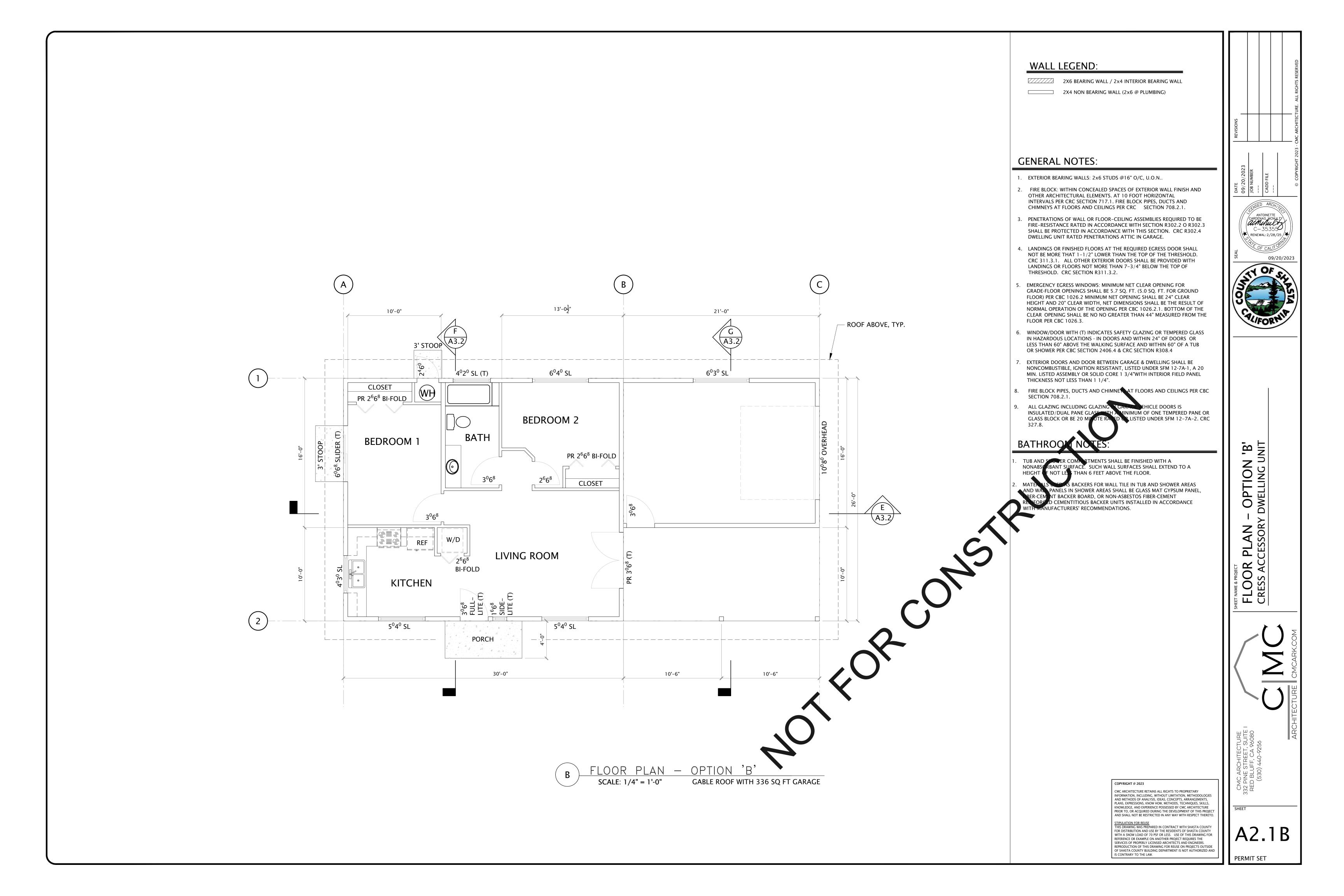
- FIRE-RESISTANCE RATED IN ACCORDANCE WITH SECTION R302.2 O R302.3
- GRADE-FLOOR OPENINGS SHALL BE 5.7 SQ. FT. (5.0 SQ. FT. FOR GROUND HEIGHT AND 20" CLEAR WIDTH, NET DIMENSIONS SHALL BE THE RESULT OF NORMAL OPERATION OF THE OPENING PER CBC 1026.2.1. BOTTOM OF THE CLEAR OPENING SHALL BE NO NO GREATER THAN 44" MEASURED FROM THE
- IN HAZARDOUS LOCATIONS IN DOORS AND WITHIN 24" OF DOORS OR LESS THAN 60" ABOVE THE WALKING SURFACE AND WITHIN 60" OF A TUB

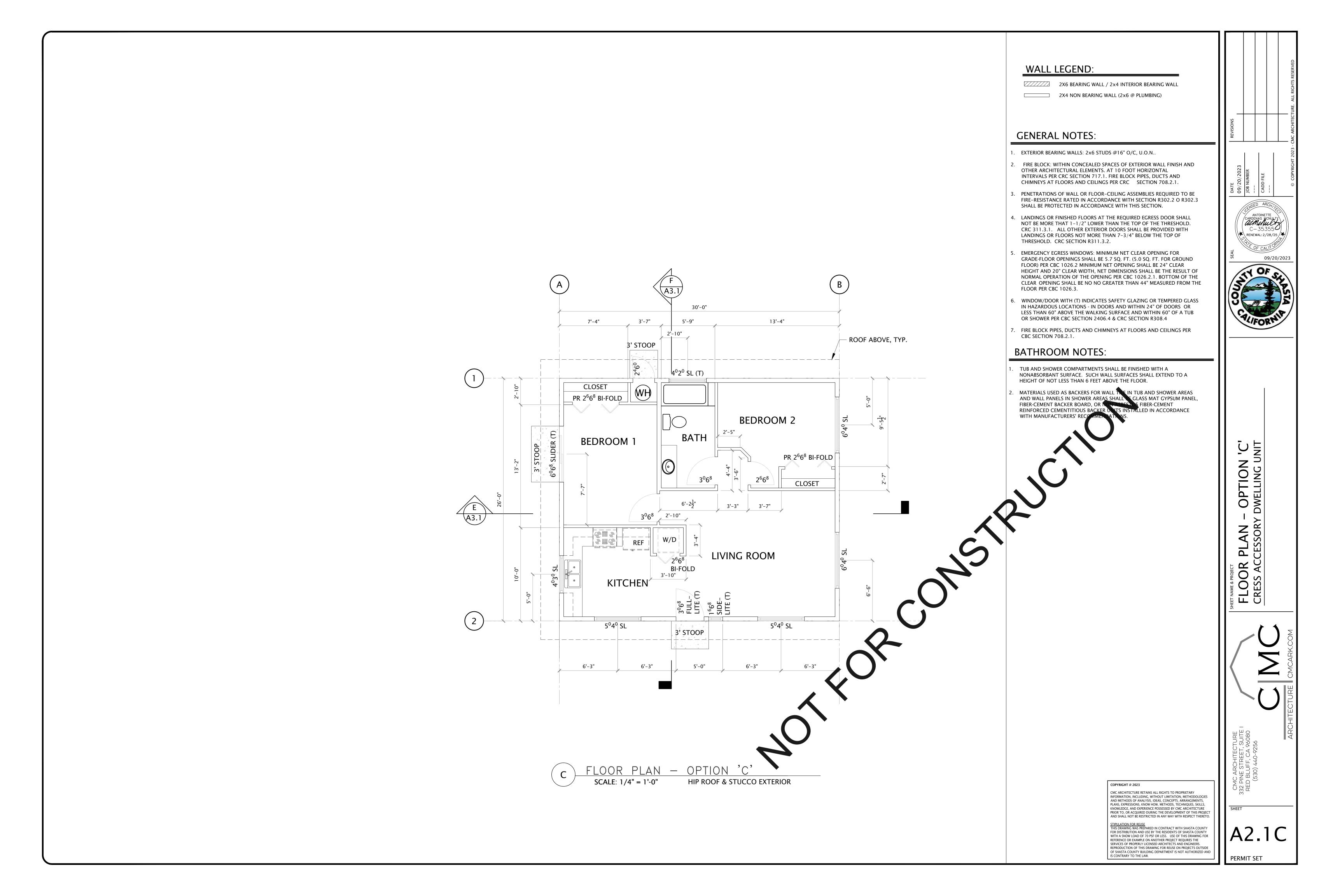
FLOOR PLAN - OPTION CRESS ACCESSORY DWELLING

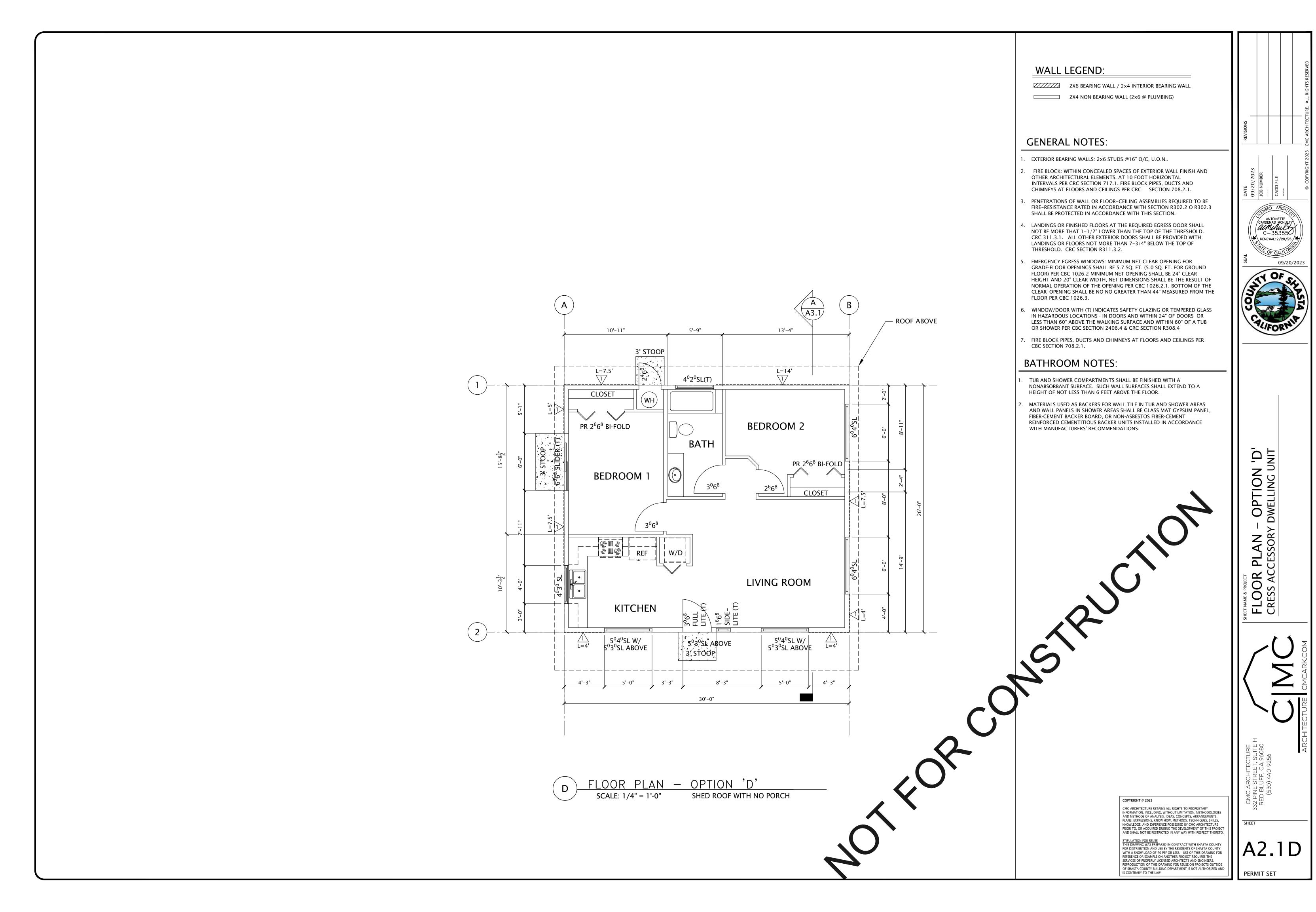
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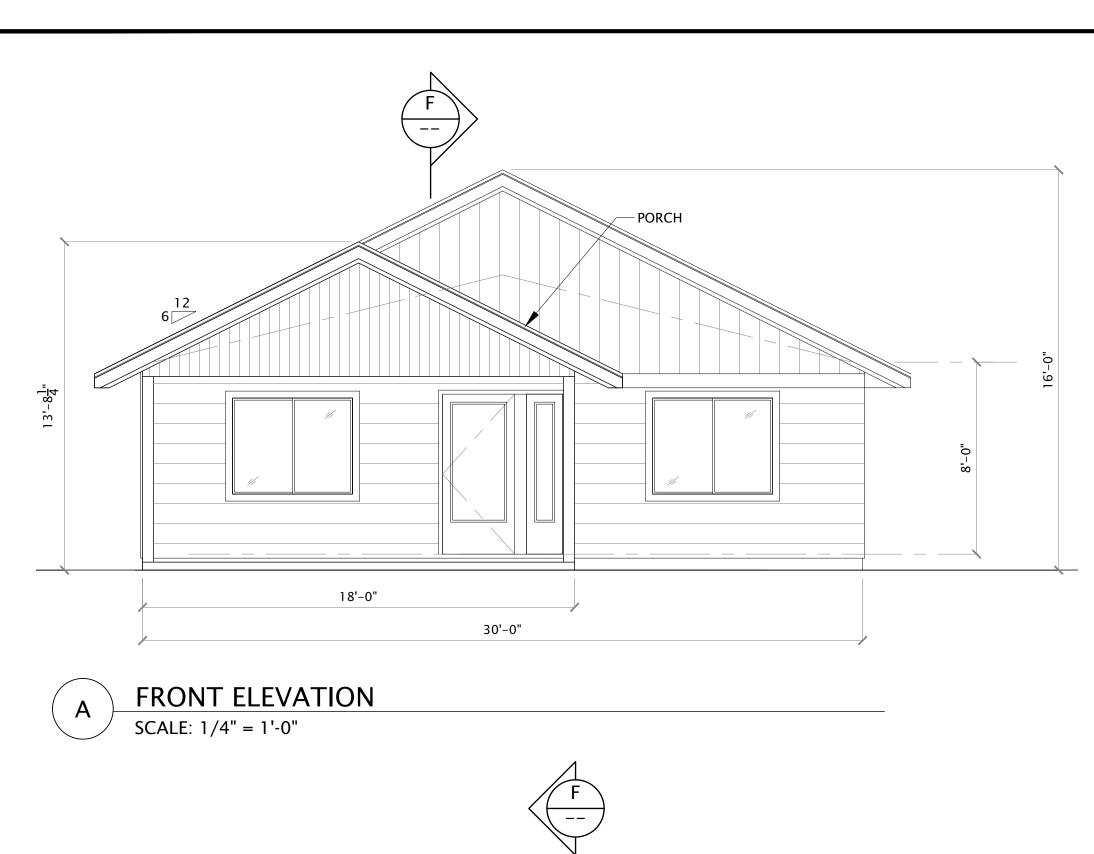
\\**X**\ RENEWAL: 2/28/25 **/ X**//

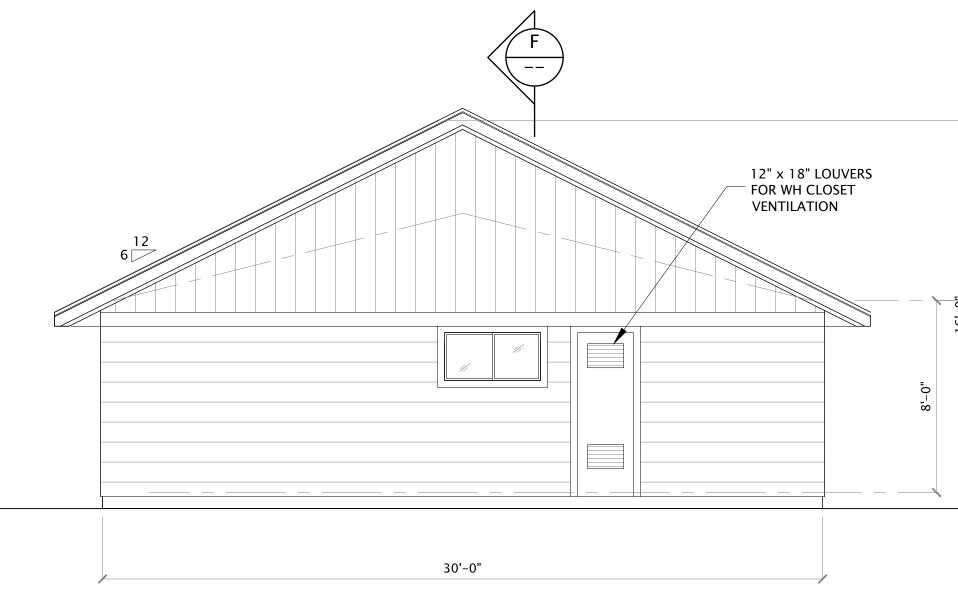
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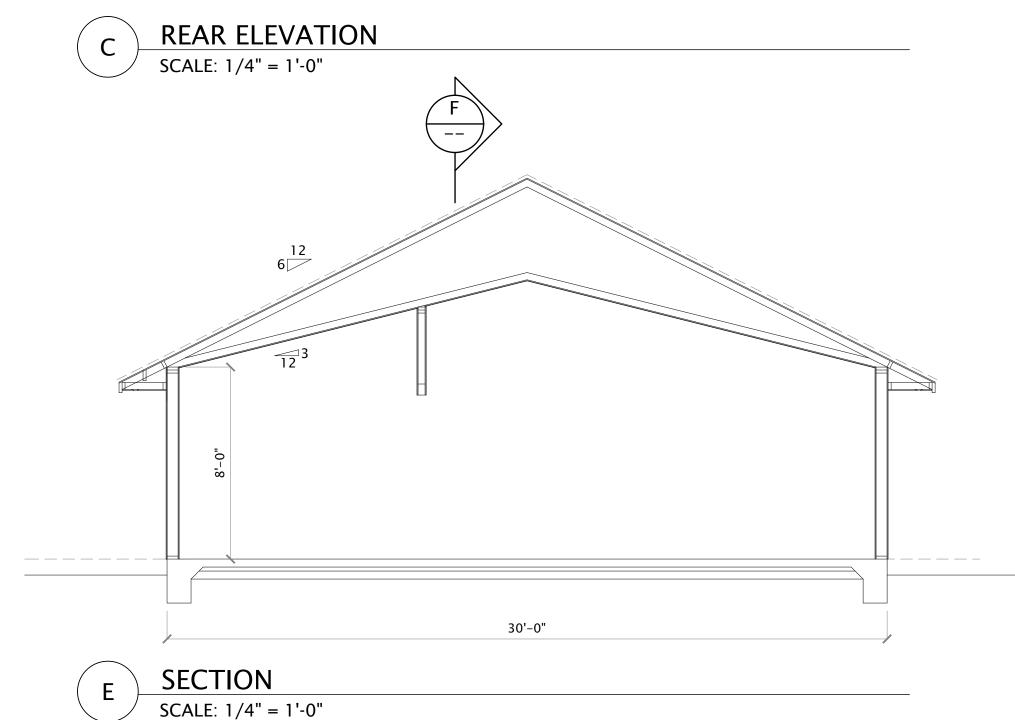












## CALIFORNIA CHAPTER 7A REQUIREMENTS

- ADU BUILT IN PARTS OF SHASTA COUNTY THAT ARE 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 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
- \* EXTERIOR WINDOWS, SKYLIGHTS, AND DOORS TO COMPLY WITH SECTION R337.8. \* ROOFING: CLASS A ROOFING REQUIRED

CORE 1 3/4" WITH INTERIOR FIELD PANEL THICKNESS NOT LESS THAN 1 1/4".

- \* 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') \* 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.

### **GLAZING NOTES:**

- 1. GLAZING ADJACENT TO STAIRS AND RAMPS TO BE SAFETY GLAZED. CRC 2022 SECTION
- 2. IF GLAZING ADJACENT TO BOTTOM OF STAIR LANDING ARE EXPOSED, SAFETY GLAZING TO BE PROVIDED PER CRC 2022, SECTION R308.4.7.
- 3. GLAZING ADJACENT TO WET SURFACES TO BE SAFETY GLAZED PER CRC 2022, SECTION R308-4.5. GLAZING IN WALLS, ENCLOSURES, OR FENCES, CONTAINING, OR FACING HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, INDOOR AND OUTDOOR SWIMMING POOLS WHERE THE BOTTOM OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE. THIS SHALL APPLY TO SINGLE GLAZING AND EACH PANE IN MULTIPLE GLAZING. EXCEPTION: GLAZING THAT IS MORE THAN 60 INCHES MEASURED HORIZONTALLY, FROM THE WATER'S EDGE OF A BATHTUB, HOT TUB, WHIRLPOOL, SWIMMING POOL, SHOWER, SAUNA, OR STEAM ROOM. CRC 308, 308.4
- 4. 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 2022, 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
- 5. 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:

- 1. IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS
- INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING. 2. 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.

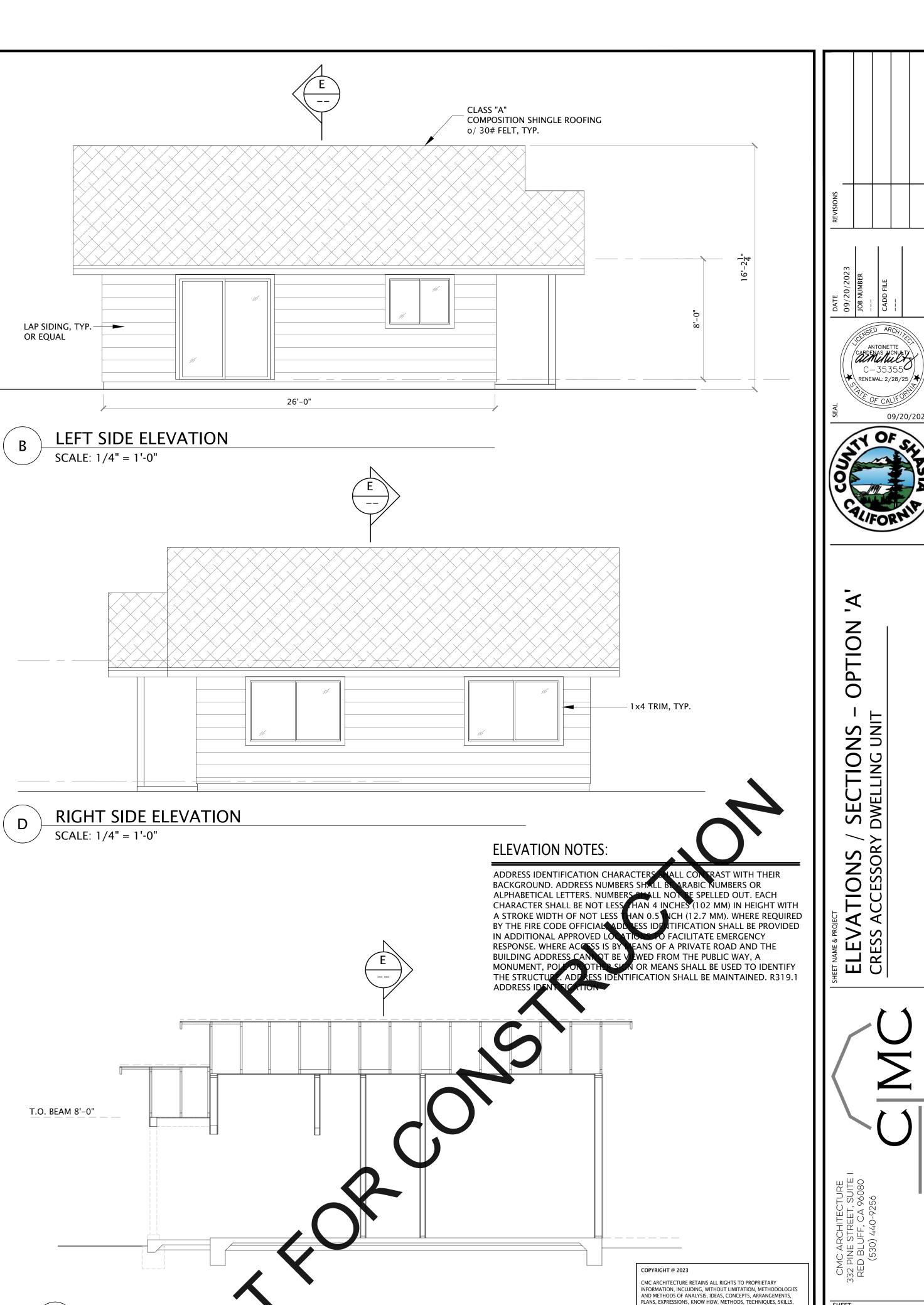
UPPER VENTILATORS SHALL BE LOCATED NOT MORE THAN 3 FEET (914 mm) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY, WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER 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 794 SQ. FT.  $\times 1/150 = 5.3$  SQ. FT. OF FREE VENT AREA REQUIRED.
- \* ROOF ATTIC SPACE (SEE CALIFORNIA CHAPTER 7A REQUIREMENTS IF APPLICABLE) RIDGE VENT: 22' LONG  $\times$  2"  $\times$  0.8 = 2.9 SQ. FT. EAVE VENTS: 3 EA. SIDE, 6 TOTAL  $\times$  3.5  $\times$  22  $\times$  0.8 = 2.5 SQ. FT.

ADJUST NUMBER OF VENTS CONSIDERING SPECS OF VENT USED TO MEET THE

**SECTION** 

MINIMUM REQUIRED VENTILATION.



KNOWLEDGE, AND EXPERIENCE POSSESSED BY CMC ARCHITECTURE

STIPULATION FOR REUSE
THIS DRAWING WAS PREPARED IN CONTRACT WITH SHASTA COUNTY
FOR DISTRIBUTION AND USE BY THE RESIDENTS OF SHASTA COUNTY WITH A SNOW LOAD OF 70 PSF OR LESS. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE

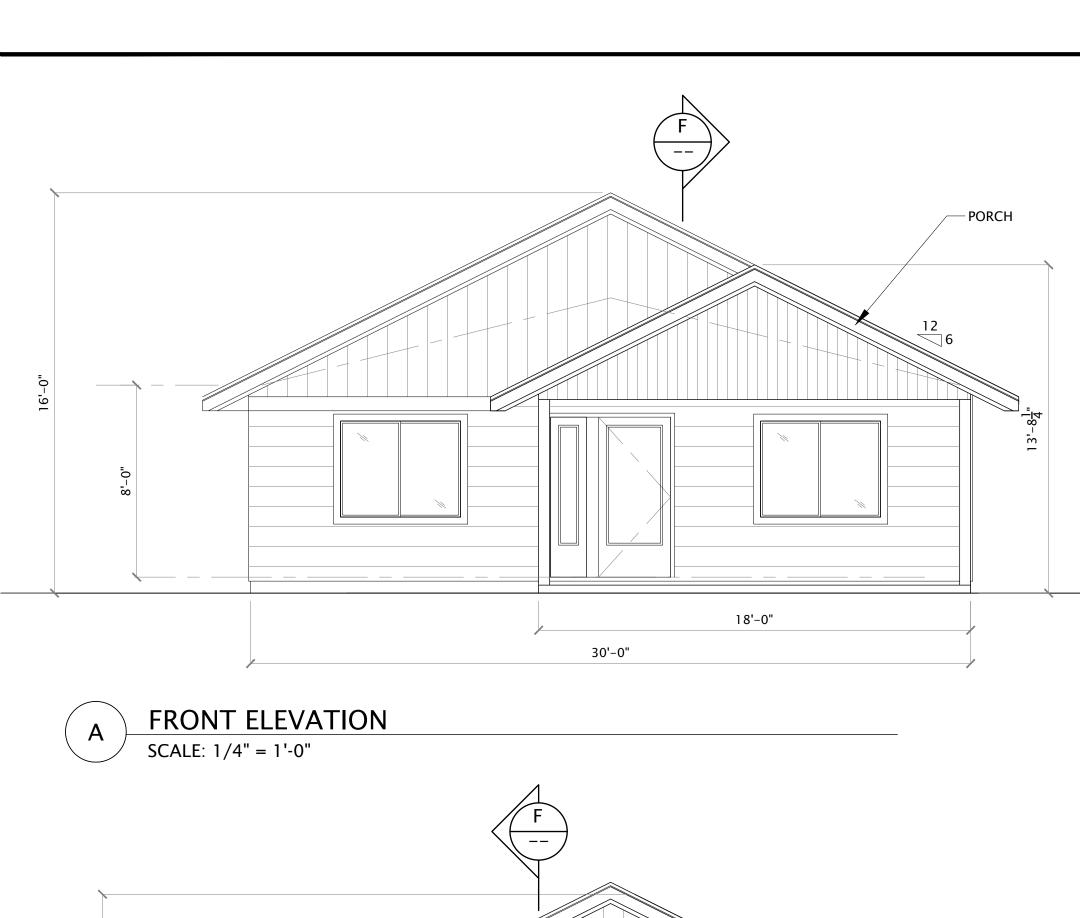
SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON PROJECTS OUTSIDE

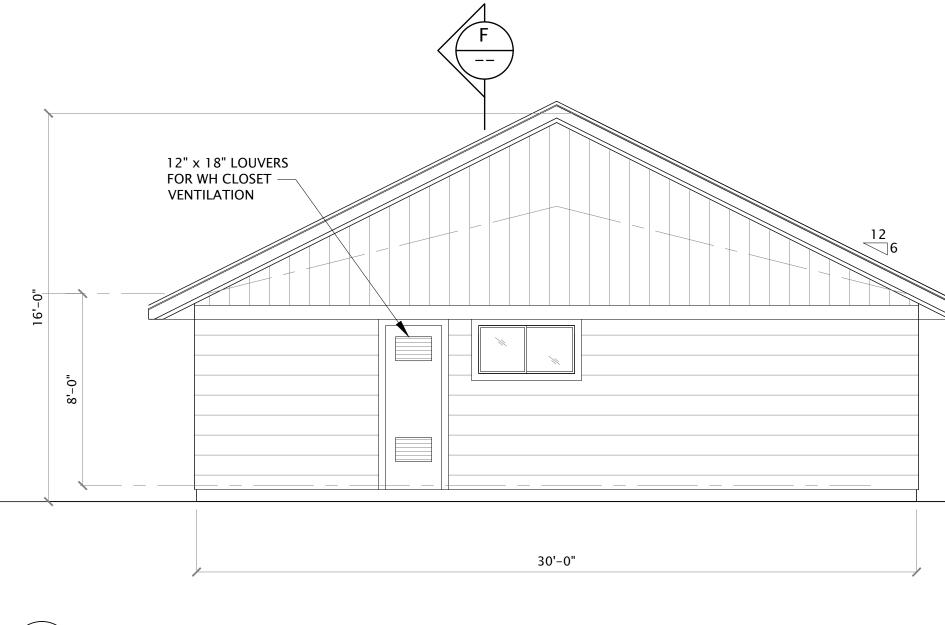
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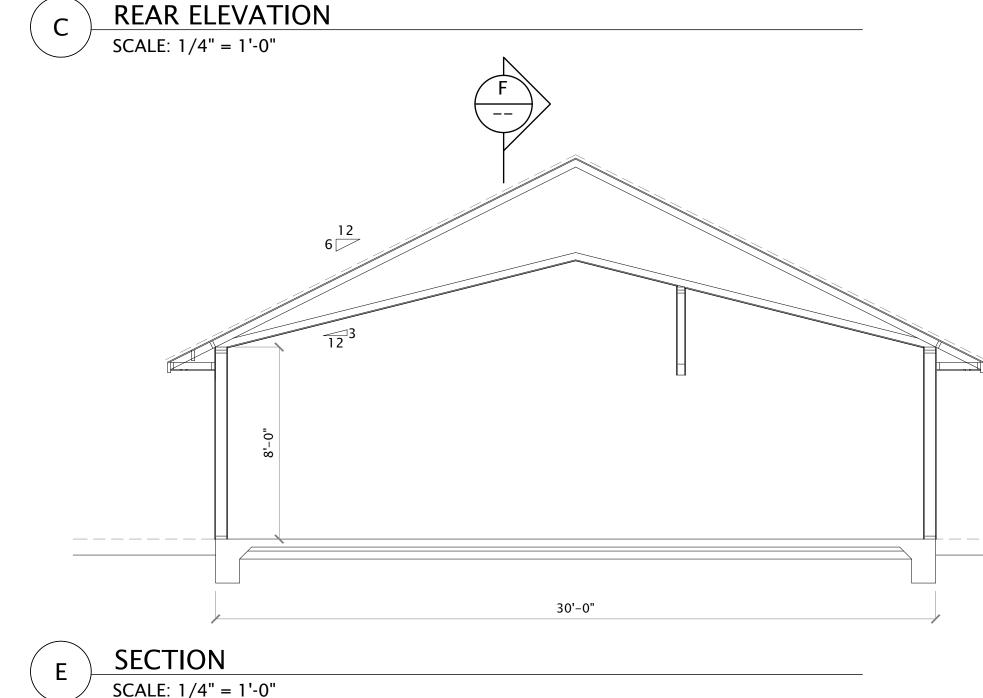
OF SHASTA COUNTY BUILDING DEPARTMENT IS NOT AUTHORIZED IS CONTRARY TO THE LAW.

PRIOR TO OR ACCUIRED DURING THE DEVELOPMENT OF THIS PROJECT

AND SHALL NOT BE RESTRICTED IN ANY WAY WITH RESPECT THERETO.







## CALIFORNIA CHAPTER 7A REQUIREMENTS

ADU BUILT IN PARTS OF SHASTA COUNTY THAT ARE 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 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". EXTERIOR WINDOWS, SKYLIGHTS, AND DOORS TO COMPLY WITH SECTION R337.8. \* 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') \* 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.

## **GLAZING NOTES:**

- 1. GLAZING ADJACENT TO STAIRS AND RAMPS TO BE SAFETY GLAZED. CRC 2022 SECTION
- 2. IF GLAZING ADJACENT TO BOTTOM OF STAIR LANDING ARE EXPOSED, SAFETY GLAZING TO BE PROVIDED PER CRC 2022, SECTION R308.4.7.
- 3. GLAZING ADJACENT TO WET SURFACES TO BE SAFETY GLAZED PER CRC 2022, SECTION R308-4.5. GLAZING IN WALLS, ENCLOSURES, OR FENCES, CONTAINING, OR FACING HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, INDOOR AND OUTDOOR SWIMMING POOLS WHERE THE BOTTOM OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE. THIS SHALL APPLY TO SINGLE GLAZING AND EACH PANE IN MULTIPLE GLAZING. EXCEPTION: GLAZING THAT IS MORE THAN 60 INCHES MEASURED HORIZONTALLY, FROM THE WATER'S EDGE OF A BATHTUB, HOT TUB, WHIRLPOOL, SWIMMING POOL, SHOWER, SAUNA, OR STEAM ROOM. CRC 308, 308.4
- 4. 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 2022, 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

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

1. IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS

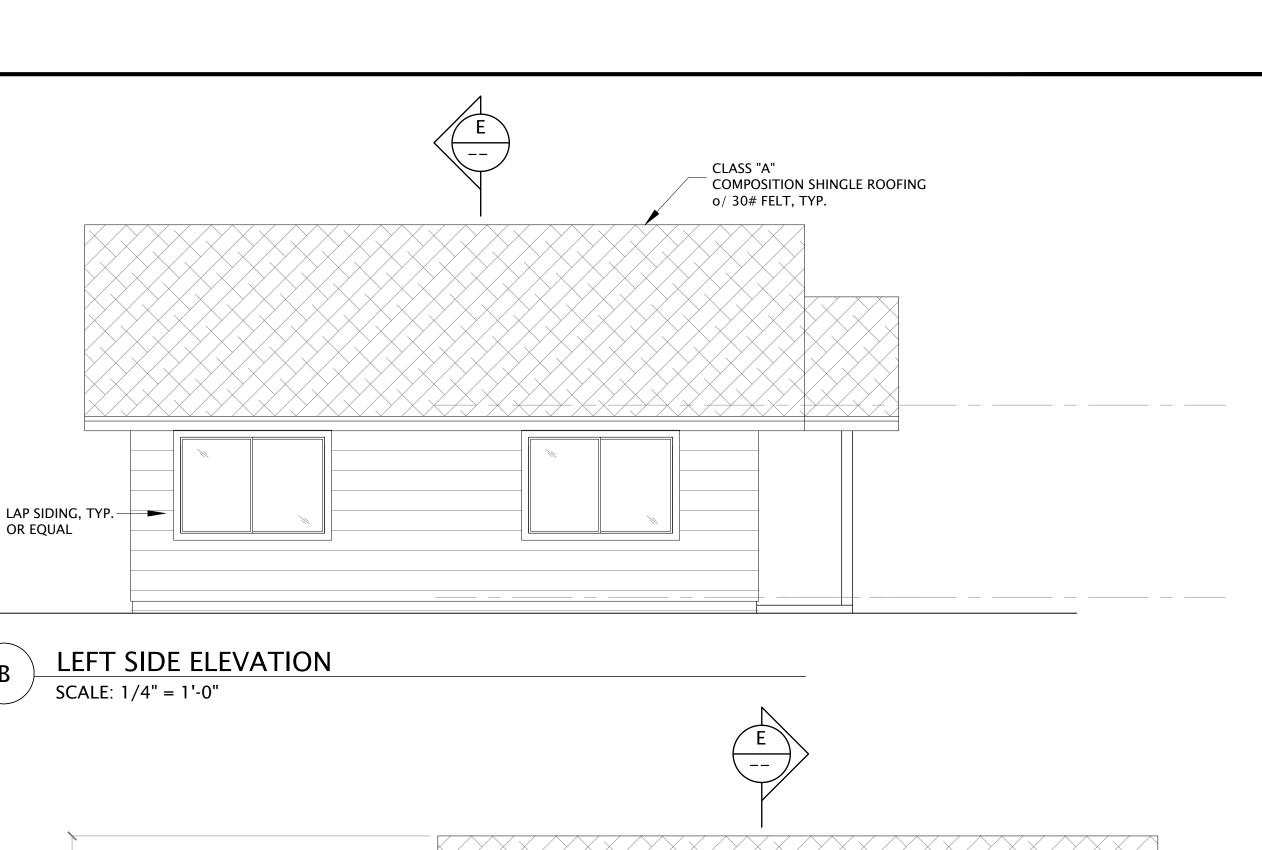
INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING. 2. NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE.

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.

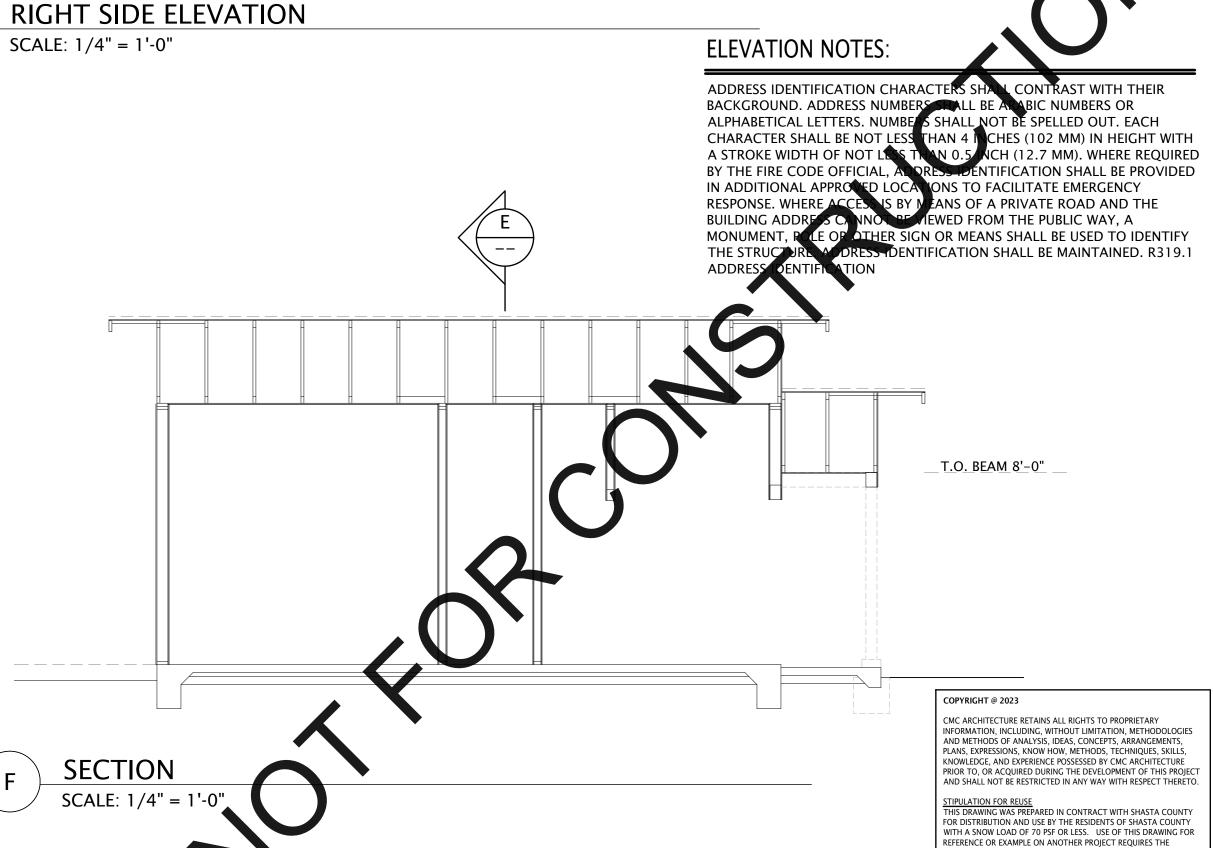
- \* ROOF ATTIC SPACE AREA 794 SQ. FT.  $\times 1/150 = 5.3$  SQ. FT. OF FREE VENT AREA REQUIRED.
- \* ROOF ATTIC SPACE (SEE CALIFORNIA CHAPTER 7A REQUIREMENTS IF APPLICABLE) RIDGE VENT: 22' LONG  $\times$  2"  $\times$  0.8 = 2.9 SQ. FT. EAVE VENTS: 3 EA. SIDE, 6 TOTAL  $\times$  3.5  $\times$  22  $\times$  0.8 = 2.5 SQ. FT.

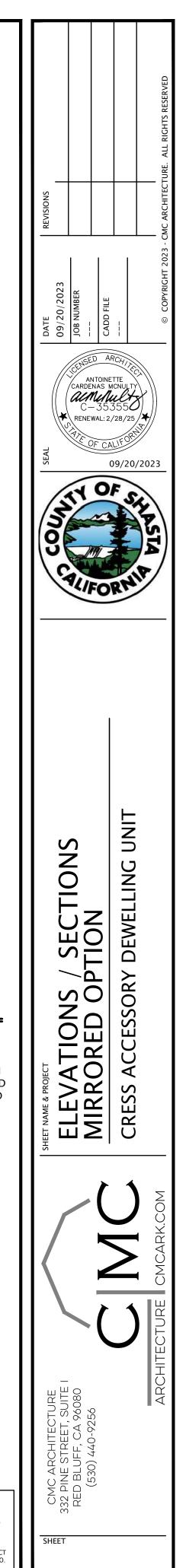
MINIMUM REQUIRED VENTILATION.

ADJUST NUMBER OF VENTS CONSIDERING SPECS OF VENT USED TO MEET THE





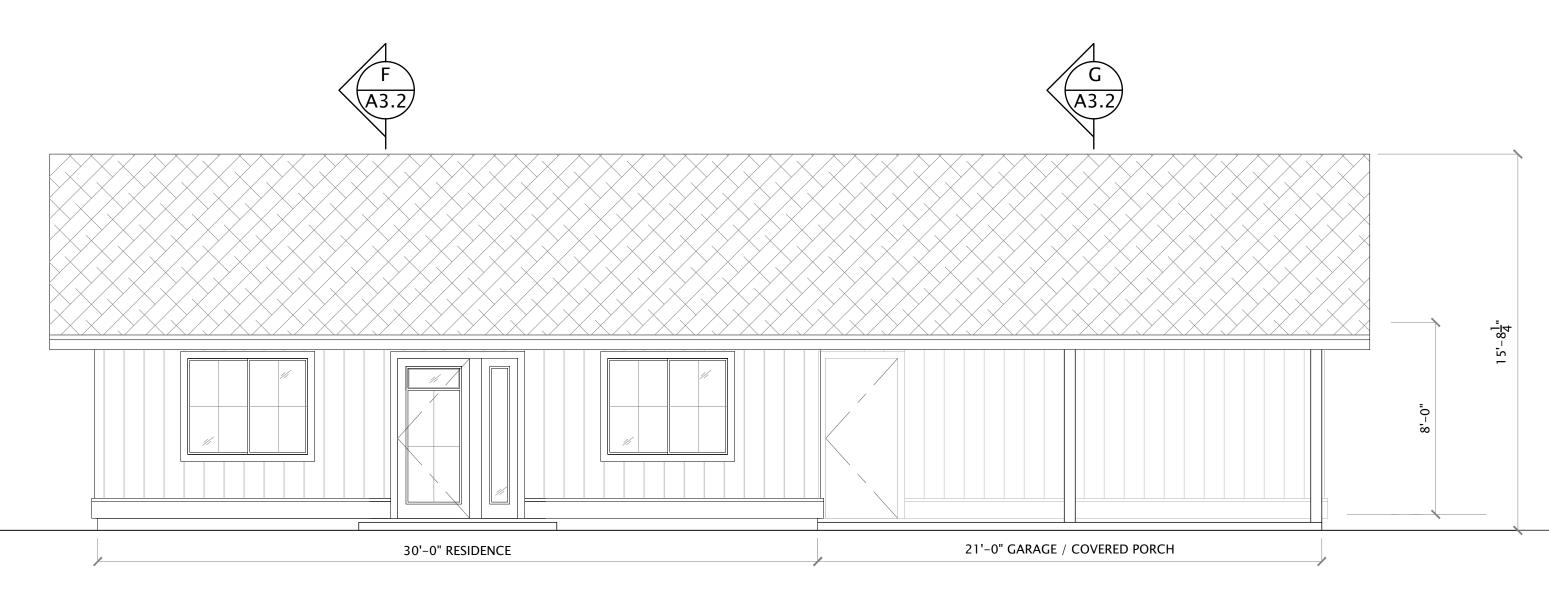


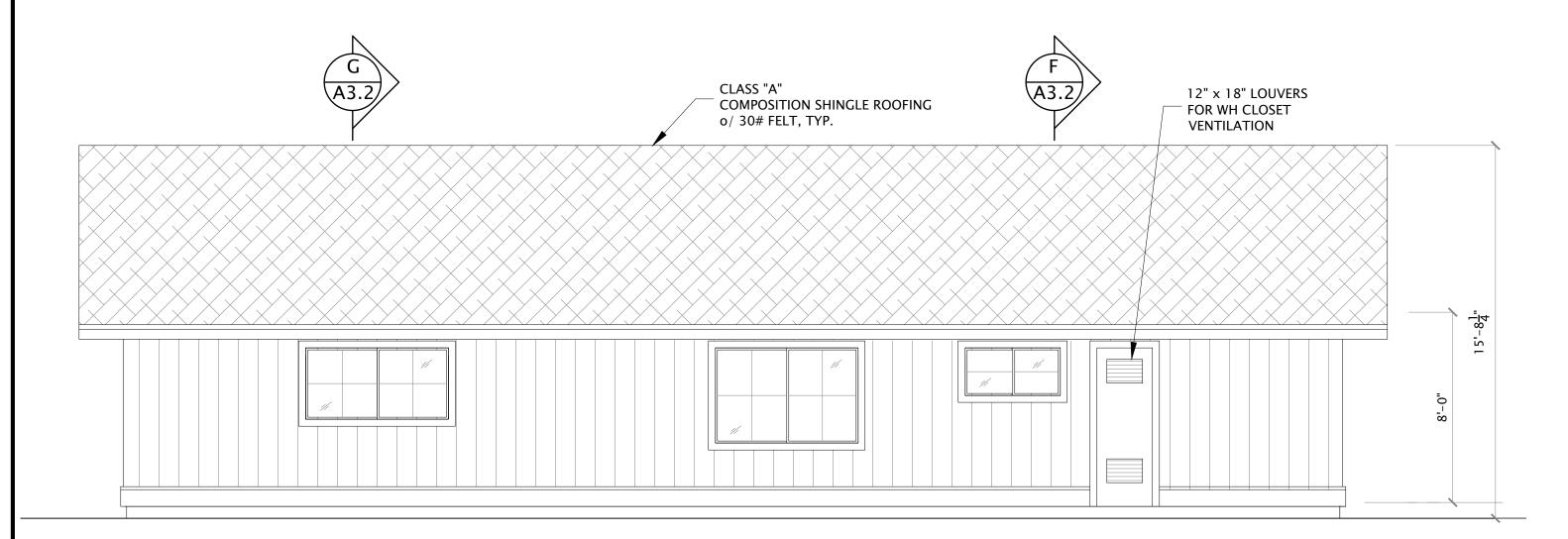


SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.
REPRODUCTION OF THIS DRAWING FOR REUSE ON PROJECTS OUTSIDE

PERMIT SET

OF SHASTA COUNTY BUILDING DEPARTMENT IS NOT AUTHORIZED IS CONTRARY TO THE LAW.





C REAR ELEVATION

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

FRONT ELEVATION

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

## CALIFORNIA CHAPTER 7A REQUIREMENTS

ADU BUILT IN PARTS OF SHASTA COUNTY THAT ARE SUBJECT TO WUI REQUIREMENTS:

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

REPER 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

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".

\* EXTERIOR WINDOWS, SKYLIGHTS, AND DOORS TO COMPLY WITH SECTION R337.8.

\* 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')

\* 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.

## **GLAZING NOTES:**

- 1. GLAZING ADJACENT TO STAIRS AND RAMPS TO BE SAFETY GLAZED. CRC 2022 SECTION R308.4.6
- 2. IF GLAZING ADJACENT TO BOTTOM OF STAIR LANDING ARE EXPOSED, SAFETY GLAZING TO BE PROVIDED PER CRC 2022, SECTION R308.4.7.
- 3. GLAZING ADJACENT TO WET SURFACES TO BE SAFETY GLAZED PER CRC 2022, SECTION R308-4.5. GLAZING IN WALLS, ENCLOSURES, OR FENCES, CONTAINING, OR FACING HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, INDOOR AND OUTDOOR SWIMMING POOLS WHERE THE BOTTOM OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE. THIS SHALL APPLY TO SINGLE GLAZING AND EACH PANE IN MULTIPLE GLAZING. EXCEPTION: GLAZING THAT IS MORE THAN 60 INCHES MEASURED HORIZONTALLY, FROM THE WATER'S EDGE OF A BATHTUB, HOT TUB, WHIRLPOOL, SWIMMING POOL, SHOWER, SAUNA, OR STEAM ROOM. CRC 308, 308.4
- 4. 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 2022, SECTION R308.4.2
c. GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND

5. 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

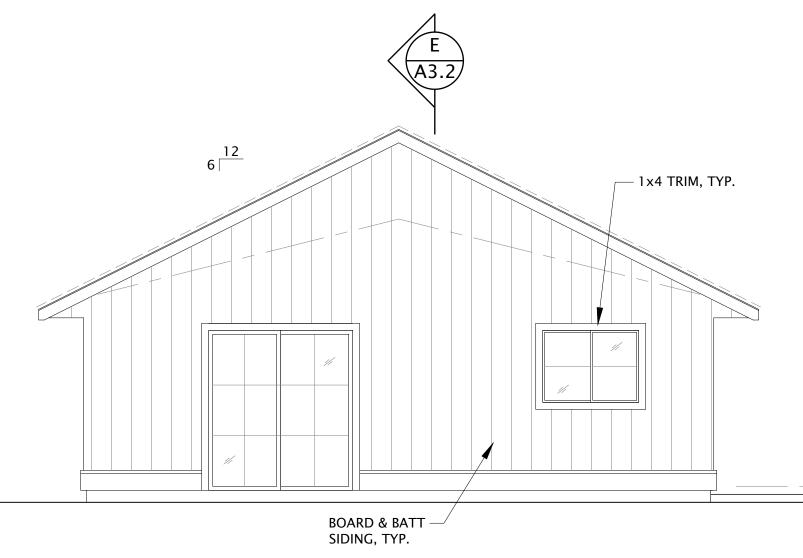
OF THE CLEAR OPENING SHALL BE NO NO GREATER THAN 44" MEASURED FROM THE

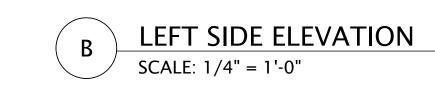
BIFOLD DOORS SHALL BE CONSIDERED A HAZARDOUS LOCATION. CRC

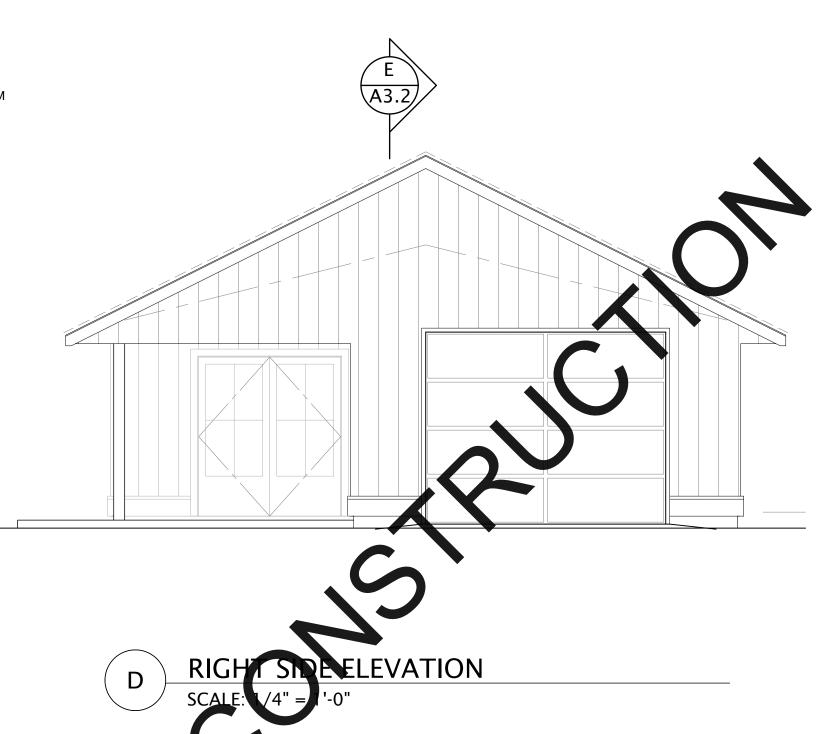
## **ELEVATION NOTES:**

FLOOR PER CRC R310.2.

ADDRESS IDENTIFICATION CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND. ADDRESS NUMBERS SHALL BE ARABIC NUMBERS OR ALPHABETICAL LETTERS. NUMBERS SHALL NOT BE SPELLED OUT. EACH CHARACTER SHALL BE NOT LESS THAN 4 INCHES (102 MM) IN HEIGHT WITH A STROKE WIDTH OF NOT LESS THAN 0.5 INCH (12.7 MM). WHERE REQUIRED BY THE FIRE CODE OFFICIAL, ADDRESS IDENTIFICATION SHALL BE PROVIDED IN ADDITIONAL APPROVED LOCATIONS TO FACILITATE EMERGENCY RESPONSE. WHERE ACCESS IS BY MEANS OF A PRIVATE ROAD AND THE BUILDING ADDRESS CANNOT BE VIEWED FROM THE PUBLIC WAY, A MONUMENT, POLE OR OTHER SIGN OR MEANS SHALL BE USED TO IDENTIFY THE STRUCTURE. ADDRESS IDENTIFICATION SHALL BE MAINTAINED. R319.1 ADDRESS IDENTIFICATION







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STIPULATION FOR REUSE
THIS DRAWING WAS PREPARED IN CONTRACT WITH SHASTA COUNTY
FOR DISTRIBUTION AND USE BY THE RESIDENTS OF SHASTA COUNTY
WITH A SNOW LOAD OF 70 PSF OR LESS. USE OF THIS DRAWING FOR
REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE
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REPRODUCTION OF THIS DRAWING FOR REUSE ON PROJECTS OUTSIDE
OF SHASTA COUNTY BUILDING DEPARTMENT IS NOT AUTHORIZED AND
IS CONTRARY TO THE LAW.

AND SHALL NOT BE RESTRICTED IN ANY WAY WITH RESPECT THERETO.

DATE

DATE

DATE

09/20/2023

JOB NUMBER

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CADD FILE

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CADO

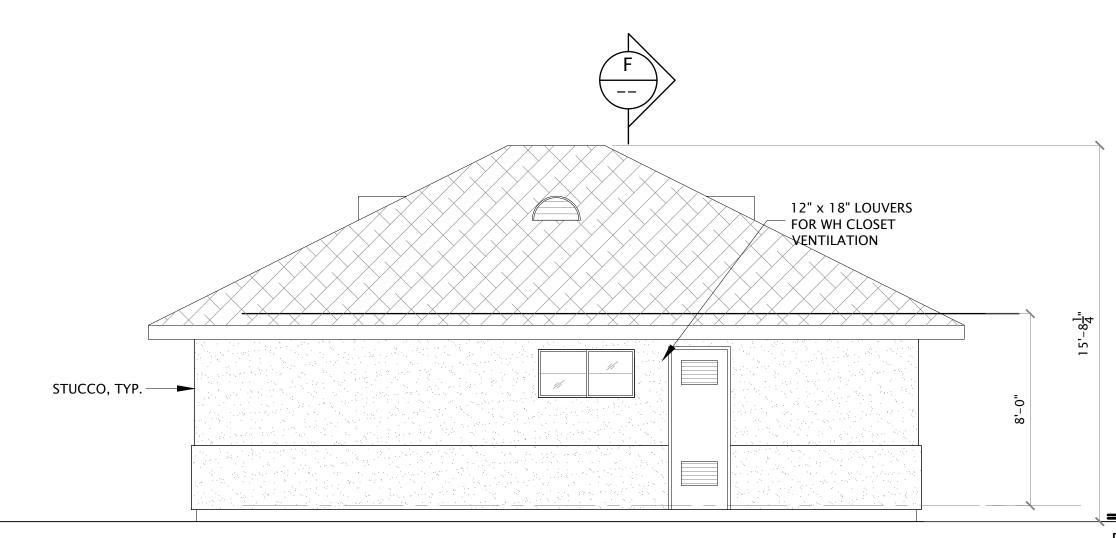


ELEVATIONS – OPTION 'B'
CRESS ACCESSORY DWELLING UNIT

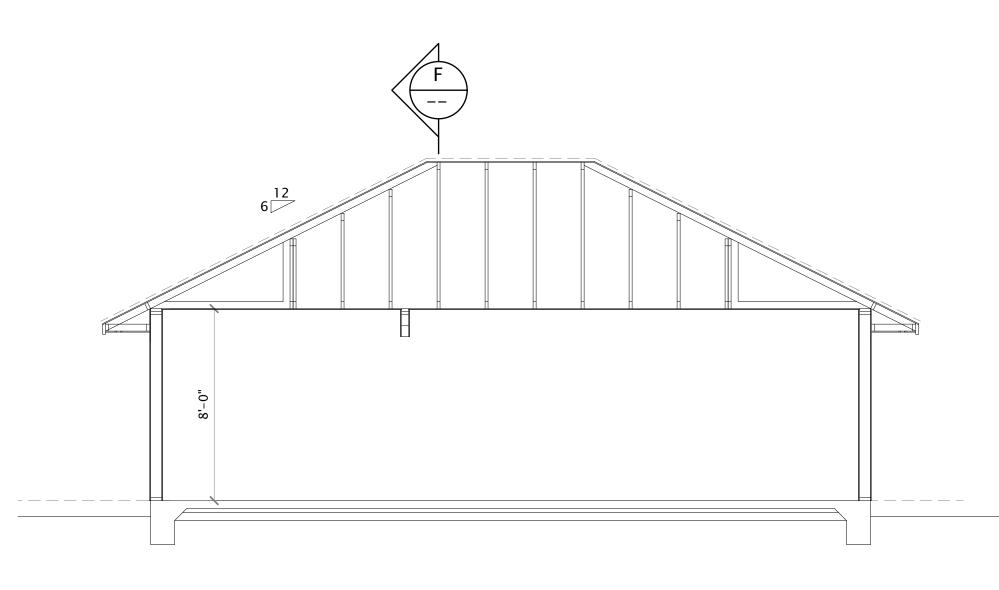
CMC ARCHITECTURE
332 PINE STREET, SUITE I
RED BLUFF, CA 96080
(530) 440-9256







## **REAR ELEVATION** SCALE: 1/4" = 1'-0"



## **SECTION** SCALE: 1/4" = 1'-0"

## CALIFORNIA CHAPTER 7A REQUIREMENTS

ADU BUILT IN PARTS OF SHASTA COUNTY THAT ARE SUBJECT TO WUI REQUIREMENTS: \* REFER TO WILDLAND-URBAN INTERFACE (WUI) FIRE AREA AND NEEDS TO MEET THE

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CORE 1 3/4" WITH INTERIOR FIELD PANEL THICKNESS NOT LESS THAN 1 1/4". \* EXTERIOR WINDOWS, SKYLIGHTS, AND DOORS TO COMPLY WITH SECTION R337.8.

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

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\* 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') \* 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.

### **GLAZING NOTES:**

- 1. GLAZING ADJACENT TO STAIRS AND RAMPS TO BE SAFETY GLAZED. CRC 2022 SECTION
- 2. IF GLAZING ADJACENT TO BOTTOM OF STAIR LANDING ARE EXPOSED, SAFETY GLAZING TO BE PROVIDED PER CRC 2022, SECTION R308.4.7.
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BIFOLD DOORS SHALL BE CONSIDERED A HAZARDOUS LOCATION. CRC R308.4.1.

5. 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

## 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:

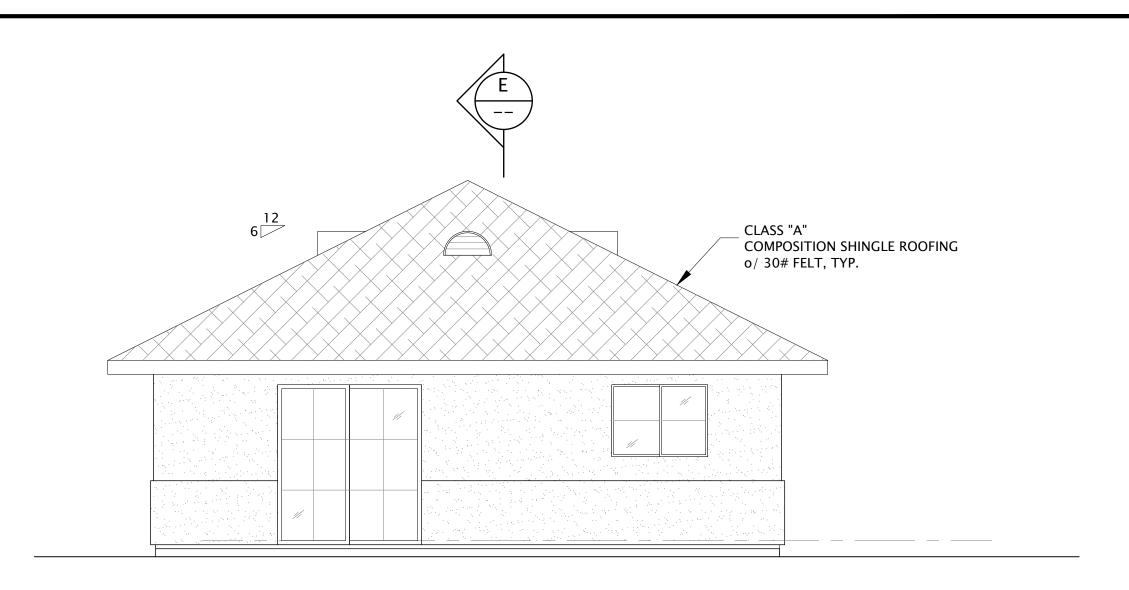
1. IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING. 2. NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE.

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 780 SQ. FT.  $\times 1/150 = 5.2$  SQ. FT. OF FREE VENT AREA REQUIRED.

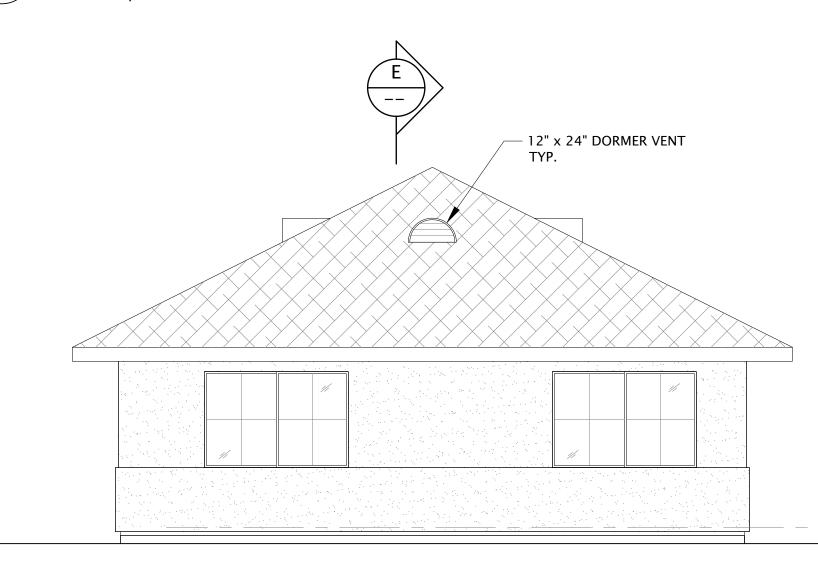
2 \* ROOF ATTIC SPACE (SEE CALIFORNIA CHAPTER 7A REQUIREMENTS IF APPLICABLE)  $12" \times 24"$  DORMER VENTS: (4) x .69 N.F.V EACH = 2.7 SQ. FT. EAVE VENTS: 6 TOTAL EVENLY SPACED x  $3.5 \times 22 \times 0.8 = 2.5 \text{ SQ. FT.}$ 

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





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



RIGHT SIDE ELEVATION

SCALE: 1/4" = 1'-0" **ELEVATION NOTES** CHARACTERS SHALL CONTRAST WITH THEIR NMBER SHALL BE ARABIC NUMBERS OR UMBERS SHALL NOT BE SPELLED OUT. EACH LESS THAN 0.5 INCH (12.7 MM). WHERE REQUIRED LOCATIONS TO FACILITATE EMERGENCY CCESS IS BY MEANS OF A PRIVATE ROAD AND THE CANNOT BE VIEWED FROM THE PUBLIC WAY, A POLE OR OTHER SIGN OR MEANS SHALL BE USED TO IDENTIFY URE. ADDRESS IDENTIFICATION SHALL BE MAINTAINED. R319.1 COPYRIGHT @ 2023 CMC ARCHITECTURE RETAINS ALL RIGHTS TO PROPRIETARY FORMATION, INCLUDING, WITHOUT LIMITATION, METHODOLOGIES AND METHODS OF ANALYSIS, IDEAS, CONCEPTS, ARRANGEMENTS. PLANS, EXPRESSIONS, KNOW HOW, METHODS, TECHNIQUES, SKILLS KNOWLEDGE, AND EXPERIENCE POSSESSED BY CMC ARCHITECTURE PRIOR TO, OR ACQUIRED DURING THE DEVELOPMENT OF THIS PROJECT AND SHALL NOT BE RESTRICTED IN ANY WAY WITH RESPECT THERETO

<u>TIPULATION FOR REUSE</u> THIS DRAWING WAS PREPARED IN CONTRACT WITH SHASTA COUNTY FOR DISTRIBUTION AND USE BY THE RESIDENTS OF SHASTA COUNTY WITH A SNOW LOAD OF 70 PSF OR LESS. USE OF THIS DRAWING FOR

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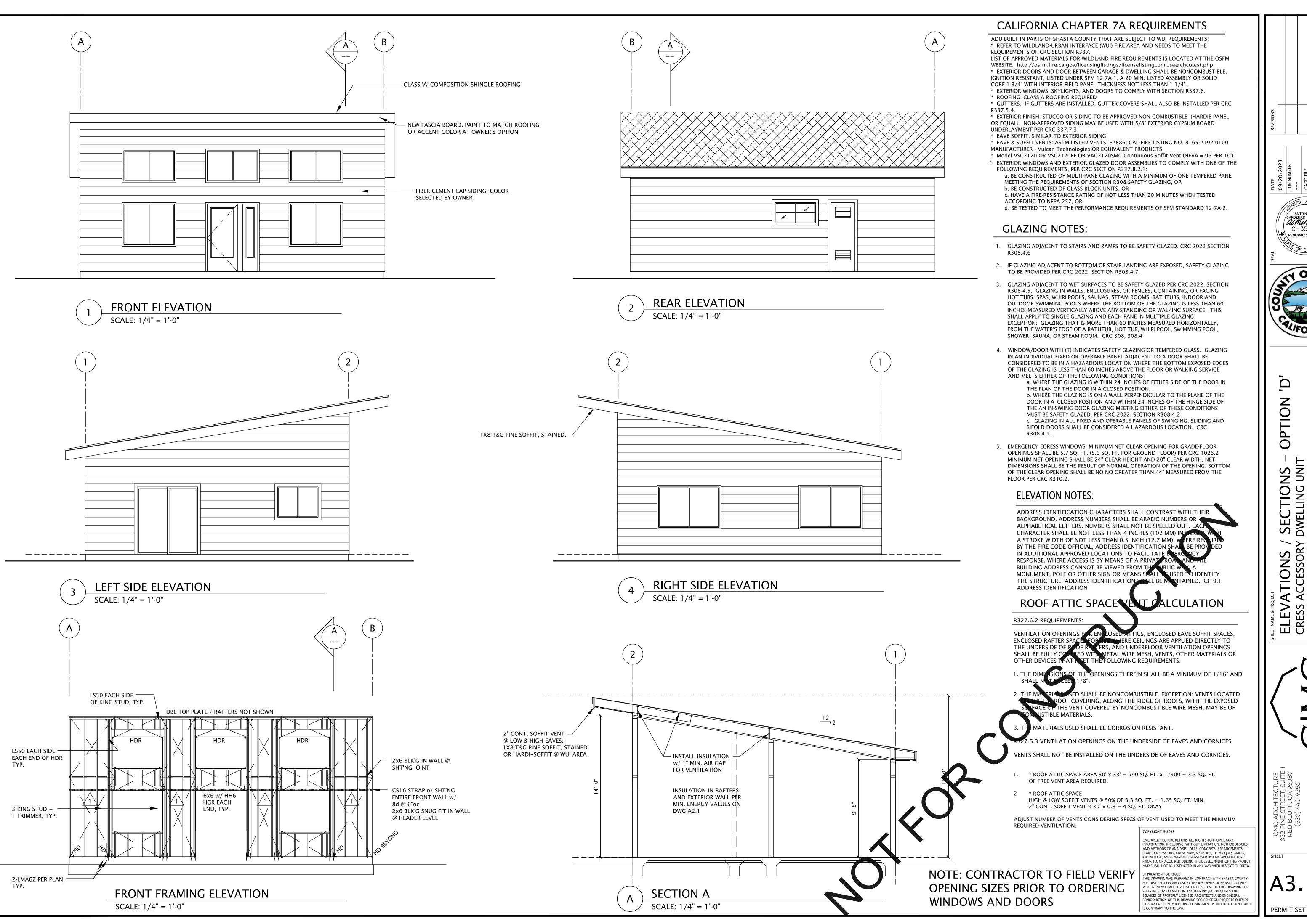
REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.

PERMIT SET

RENEWAL: 2/28/25 / 🕌 /

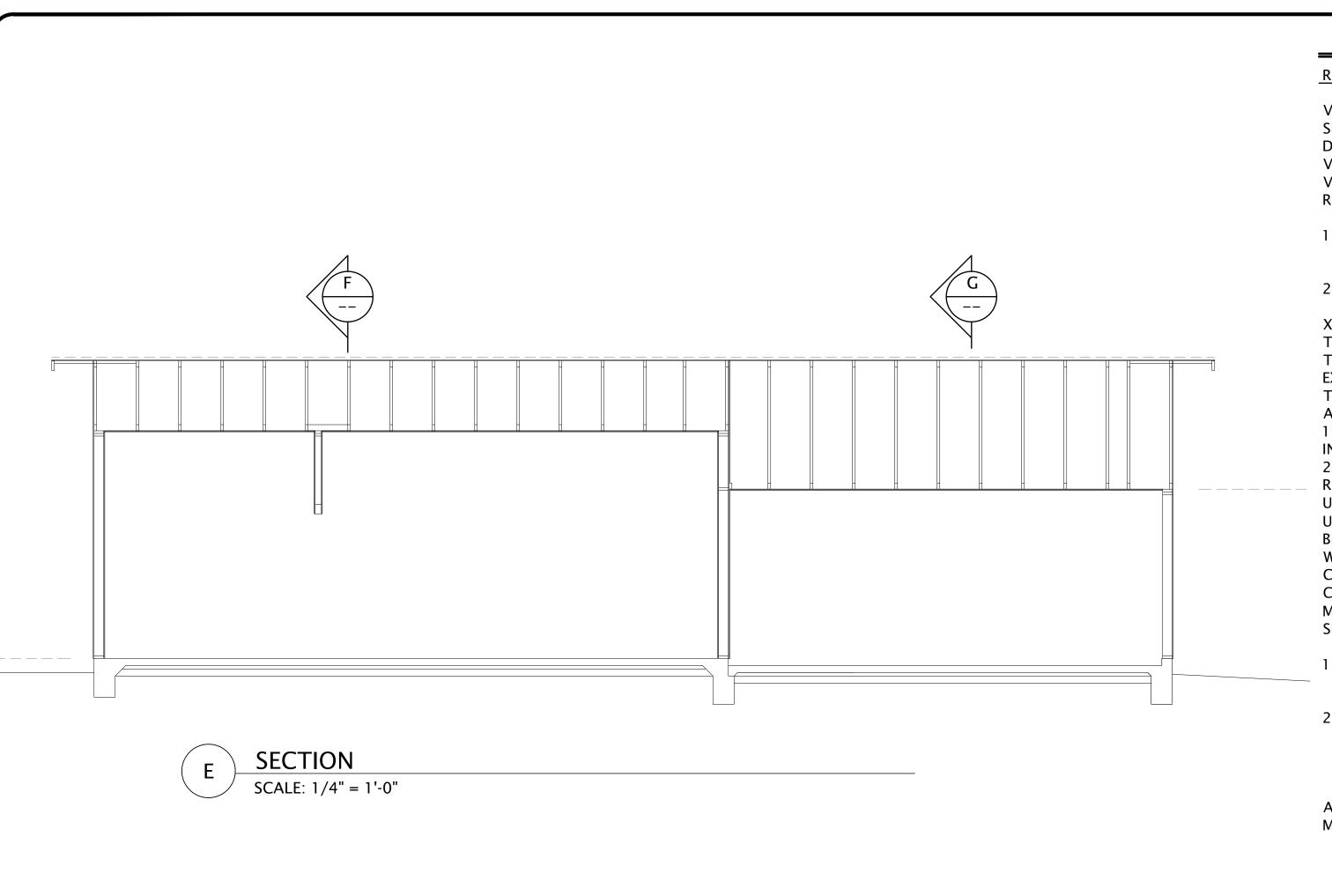
CARDENAS MONULTY

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CARDENAS MONULTY RENEWAL: 2/28/25 / 🕌 /





## 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:

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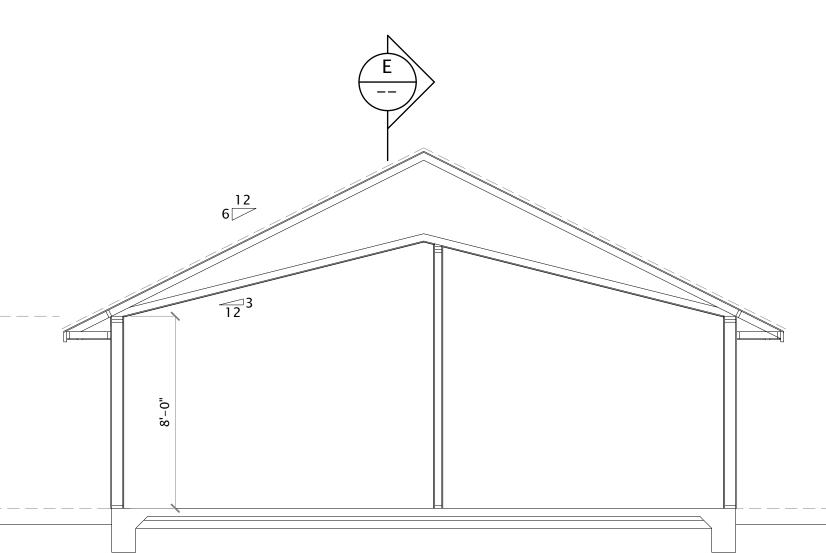
1. IN CLIMATE ZONES 14 AND 16, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING.

2. 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.

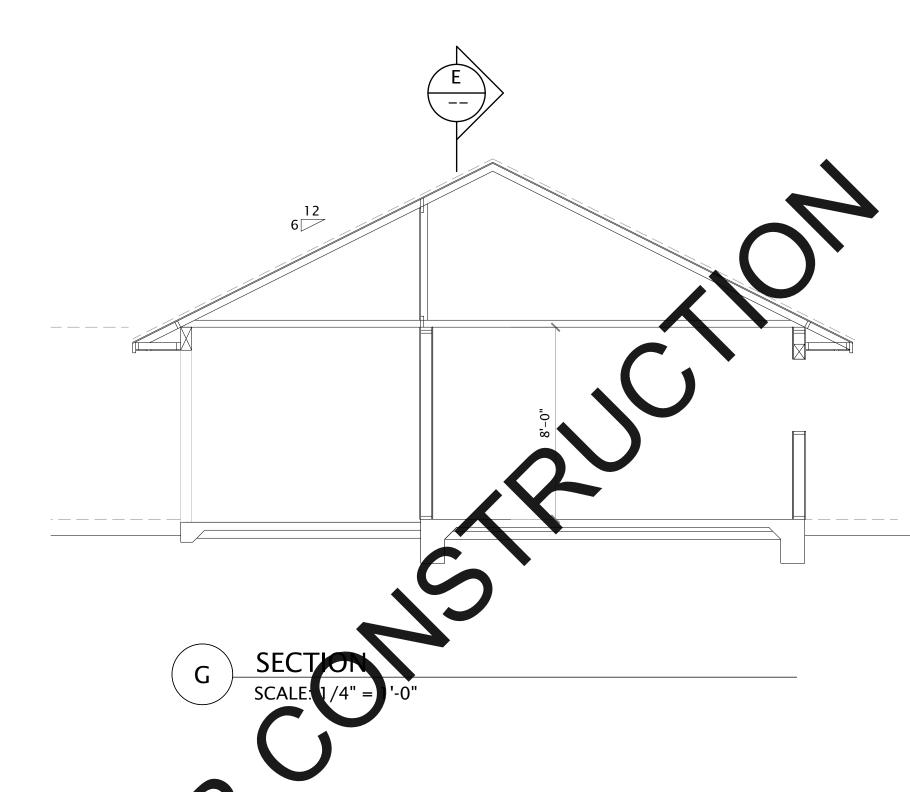
UPPER VENTILATORS SHALL BE LOCATED NOT MORE THAN 3 FEET (914 mm) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY, WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER 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 1116 SQ. FT.  $\times$  1/150 = 7.4 SQ. FT. OF FREE VENT AREA REQUIRED.
- \* ROOF ATTIC SPACE
  (SEE CALIFORNIA CHAPTER 7A REQUIREMENTS IF APPLICABLE)
  RIDGE VENT: 28' LONG x 2" x 0.8 = 3.7 SQ. FT.
  EAVE VENTS: 5 EA. SIDE, 10 TOTAL x 3.5 x 22 x 0.8 = 4.2 SQ. FT.

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







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DATE

DO9/20/2023

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S – OPTION 'B' SSORY DWELLING UNIT

CMC ARCHITECTURE 32 PINE STREET, SUITE I RED BLUFF, CA 96080 (530) 440-9256

A3.2

- ALL RECEPTACLES SHALL BE CONNECTED TO THE CIRCUIT INDICATED USING # 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.

- KITCHEN HOOD TO HAVE 100 CFM MIN. AIRFLOW
- 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
- ALL APPLIANCES, FIXTURES AND EQUIPMENT TO BE INSTALLED AS PER CODE AND MANUFACTURE'S SPECIFICATIONS.
- 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.
- DRYER TO VENT TO OUTSIDE AIR 14' MAX. W/ 2 BENDS MAX. PER CMC
- 9. USE CEILING FAN BOXES LISTED PER CEC 422-18.

E. CRAWL SPACES

- 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. SEE MANDATORY MEASURES SUMMARY ON TITLE 24 ENERGY
- CALCULATIONS FOR ADDITIONAL LIGHTING REQUIREMENTS AND ARE
- 12. COMBUSTION APPLIANCES MUST BE PROPERLY VENTED AND INSTALLED TO PREVENT BACK DRAFT 13. AUTOMATIC GARAGE DOOR OPENERS MUST BE UL LISTED – R309.4.
- GARAGE DOOR SPRINGS PER SECTION 1211 CBC 14. REQUIRED 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
- 17. NOT USED.
- NOT USED
- 19. ALL PERMANENTLY INSTALLED LUMINARIES SHALL BE HIGH EFFICACY CA ENERGY CODE SECTION 150.0(k)1A.
- 20. ALL LIGHTING MUST BE SWITCHED SEPARATELY FROM EXHAUST
- 21. ALL LIGHTING CONTROLS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
- 22. 3-WAY AND 4-WAY SWITCHES AND OTHER LIGHTING 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 24. ELECTRICAL RECEPTACLES FOR DISHWASHER AND GARBAGE DISPOSAL TO BE LOCATED UNDER SINK, NOT MORE THAN 36"
- RECEPTACLE IN BATHROOMS, LAUNDRY, GARAGE AND HALLS 10' LONG AND WITHIN 24" ALONG KITCHEN COUNTER SPACES 12' AND WIDER, AND EVERY 12' ALONG ISLANDS PER CEC 210-57
- OUTDOOR WEATHER PROOF GFI RECEPTACLES IN FRONT AND BACK OF RESIDENCE PER CEC 210-52 AND 410-57.
- 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
- 29. PROVIDE DISCONNECT WITHIN SIGHT OF AIR CONDITIONING EOUIPMENT PER CEC 440-14.
- 30. PROVIDE 30" WIDE X 36" DEEP WORKING CLEARANCE AT AC
- SMOKE DETECTORS SHALL BE HARD WIRED, INTERCONNECTED, W/ BATTERY BACKUP, AND AUDIBLE IN ALL BEDROOMS PER CEC
- 32. DEDICATED 20-AMP CIRCUIT FOR ALL BATHROOM RECEPTACLES PER CEC 210-11.(c) (2) 20 AMP SMALL APPLIANCE BRANCH CIRCUITS IN KITCHEN.
- 33. SWITCHED LIGHT AND RECEPTACLE IN ATTIC AND UNDER FLOOR SPACES WITH MECHANICAL EQUIPMENT PER CEC 210-70.(3Xc)
- 34. PROVIDE A LIGHT WITH SWITCH AT ALL EXITS PER CEC 210-70
- ROOMS PER CEC 504.5
- 36. EXHAUST FAN DUCTS TO BE INSTALLED PROPERLY WITHOUT DIPS WHERE MOISTURE CAN COLLECT.
- 37. VENTILATION SYSTEM CONTROLS SHALL RELABLED "VENTILATION CONTROL" AND THE HOME OWNER SHALL BE PROVIDED WITH INSTRUCTIONS ON HOW TO OPERATE THE SYSTEM.

35. DIRECT VENT IS REQUIRED FOR WARM AIR FURNACES IN SLEEPING

- 38. MECHANICAL SYSTEMS INCLUDING HEATING AND AIR CONDITIONING SYSTEMS THAT SUPPLY AIR TO HABITABLE SPACES
- 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 TO BE FILLED OUT AND PROVIDED TO BUILDING INSPECTOR AT
- WHOLE BUILDING VENTILATION FANS AND LOCAL BUILDING VENTILATION FANS ARE TO COMPLY WITH CF-6R-MECH-0 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. OF 3' FROM ANY OPENINGS INTO THE BUILDING (DRYERS, BATH AND UTILITY FANS ETC) MUST BE 3' AWAY FROM DOORS. WINDOWS, OPENING SKYLIGHTS, OR ATTIC VENTS PER CMC 504.5.
- 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.
- 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 406.1
- 47. ATTIC FURNACE NEEDS A 30"X30" PLATFORM AND 24" WALKWAY, A MAXIMUM OF 20' FROM THE ACCESS UNLESS 6' OF HEADROOM
- 48. LIGHT AND RECEPTACLE IN ATTIC. SWITCHED AT THE ACCESS. FOR ATTIC EQUIPMENT. LIGHT IN ATTIC TO BE HIGH EFFICIENCY OR CONTROLLED BY A DIMMER OR VACANCY SENSOR.

### RESIDENTIAL LIGHTING REQUIREMENTS:

BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS:

- 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
- 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 RUNNING. LIGHTS IN WET/DAMP LOCATIONS MUST COMPLY WITH CEC 410.10.
- CLOSETS AND HALLWAYS LIGHTING LIGHTING FOR CLOSET LESS THAN 70 SOUARE 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.
- WET / DAMP LOCATIONS ALL EXTERIOR LIGHTS, PORCH LIGHTS, BATHROOM OR LAUNDRY ROOM LIGHTS MUST MEET THE REQUIREMENTS FOR DAMP LOCATIONS PER CEC 410.10
- OUTDOOR LIGHTING 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 CONTROL TYPES PHOTOCONTROL AND MOTION SENSOR, OR
- \* PHOTOCONTROL AND AUTOMATIC TIME SWITCH CONTROL, OR \* ASTRONOMICAL TIME CLOCK THAT AUTOMATICALLY TURN OUTDOOR LIGHTING OFF DURING DAYLIGHT HOURS, OR 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 LIGHTING OFF DURING DAYLIGHT HOURS
- 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 FXHAIIST 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 EILING, 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 "IA8-2016-E". FOR INSTANCE PIN-BASED CFLS MUST BE IA8 CERTIFIED TO BE INSTALLED IN CEILING RECESSED DOWNLIGHTS, ALL CEILING RECESSED DOWNLIGHTS AND ENCLOSED LUMINAIRES MUST BE CONTROLLED BY A DIMMER OR VACANCY SENSOR
- RI ANK FLECTRICAL 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
- 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

\* MULTISCENE PROGRAMMABLE CONTROLLER MAY BE USED TO COMPLY WITH DIMMER

### EV CHARGER REQUIREMENTS

SENSOR OR DIMMER REQUIREMENTS.

AS "EV CAPABLE"

1). THE BUILDER SHALL INSTALL A NOMINAL ONE (1) INCH INSIDE DIAMETER, LISTED RACEWAY TO ACCOMMODATE A DEDICATED A 208/240 VOLT BRANCH CIRCUIT. THE RACEWAY SHALL ORIGINATE IN THE MAIN OR SUB PANEL, AND WILL TERMINATE INTO A LISTED BOX AT THE PURPOSED SITE OF THE EV CHARGER. THIS AND ALL ADDITIONAL SPECIFICATIONS OF CALIFORNIA GREEN BUILDING STANDARDS SECTION 4.106.4 SHALL 2). THE ELECTRICAL LOAD CALCULATIONS INCLUDED TO ACCOMMODATE FOR A DEDICATED 40 AMP CIRCUIT FOR THE EV CHARGING CENTER. CGBS 4.106.4.1 3). THE SERVICE OR SUBPANEL CIRCUIT DIRECTORY SHALL IDENTIFY THE OVERCORRECT PROTECTION DEVICE SPACE(S) AS RESERVED FOR FUTURE EV CHARGING AS "EV CAPABLE.

THE RACEWAY TERMINATION LOCATION SHALL BE PERMANENTLY AND VISIBLY MARKED

## **GENERAL PLUMBING NOTES:**

- 1. 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.
- 2. 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.
- 3. 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 SHOWER AND TUB PER CPC SECTION 420.0.
- 4. OPTION TO ADD ON DEMAND HOT WATER HEATER 140,000 BTU/HR INPUT, 91 RECOVERY EFFICIENCY OR EQUAL, OR HEAT PUMP TANKED WH

OPERATION AT A TIME.

- 6. 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

\* 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."

### **ENERGY STORAGE SYSTEMS (ESS) READY**

ALL SINGLE-FAMILY RESIDENCES THAT INCLUDE ONE OR TWO DWELLING UNITS SHALL MEET THE FOLLOWING. ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE:

- 1. AT LEAST ONE OF THE FOLLOWING SHALL BE PROVIDED
- A. ESS READY INTERCONNECTION EQUIPMENT WITH A MINIMUM BACKED-UP CAPACITY OF 60 AMPS AND A MINIMUM OF FOUR ESS-SUPPLIED BRANCH CIRCUITS, OR
- B. A DEDICATED RACEWAY FROM THE MAIN SERVICE TO A PANELBOARD (SUBPANEL) THAT SUPPLIES THE BRANCH CIRCUITS IN SECTION 150.0(s)(2). ALL BRANCH CIRCUITS ARE PERMITTED TO BE SUPPLIED BY THE MAIN SERVICE PANEL PRIOR TO THE INSTALLATION OF AN ESS. THE TRADE SIZE OF THE RACEWAY SHALL NOT BE LESS THAN 1 INCH. THE PANELBOARD THAT SUPPLIES THE BRANCH CIRCUITS (SUBPANEL) MUST BE LABELED "SUBPANEL SHALL INCLUDE ALL BACKED-UP LOAD CIRCUITS."
- 2. A MINIMUM OF FOUR BRANCH CIRCUITS SHALL BE IDENTIFIED AND HAVE THEIR SOURCE OF SUPPLY COLLOCATED AT A SINGLE PANELBOARD SUITABLE TO BE SUPPLIED BY THE ESS. AT LEAST ONE CIRCUIT SHALL SUPPLY THE REFRIGERATOR, ONE LIGHTING CIRCUIT SHALL BE LOCATED NEAR THE PRIMARY EGRESS AND AT LEAST ONE CIRCUIT SHALL SUPPLY A SLEEPING ROOM RECEPTACLE OUTLET.
- 3. THE MAIN PANELBOARD SHALL HAVE A MINIMUM BUSBAR RATING OF 225
- 4. SUFFICIENT SPACE SHALL BE RESERVED TO ALLOW FUTURE INSTALLATION OF A SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH WITHIN 3 FEET OF THE MAIN PANELBOARD. RACEWAYS SHALL BE INSTALLED BETWEEN THE PANELBOARD AND THE SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH LOCATION TO ALLOW THE CONNECTION OF BACKUP POWER SOURCE.

### R328.8.1 ENERGY STORAGE SYSTEMS (ESS) VEHICLE PROTECTION IN GARAGE

WHERE AN ESS IS INSTALLED IN THE NORMAL DRIVING PATH OF VEHICLE TRAVEL WITHIN A GARAGE, IMPACT PROTECTION COMPLYING WITH SECTION 1207.11.7.3 SHALL BE PROVIDED. THE NORMAL DRIVING PATH IS A SPACE BETWEEN THE GARAGE VEHICLE OPENING AND THE INTERIOR FACE OF THE BACK WALL TO A HEIGHT OF 48 INCHES (1219 MM) ABOVE THE FINISHED FLOOR. THE WIDTH OF THE NORMAL DRIVING PATH SHALL BE EQUAL TO THE WIDTH OF THE GARAGE DOOR OPENING. IMPACT PROTECTION SHALL ALSO BE PROVIDED FOR ESS INSTALLED AT EITHER OF THE FOLLOWING LOCATIONS (SEE FIGURE R328.8.1):

- 1. ON THE INTERIOR FACE OF THE BACK WALL AND LOCATED WITHIN 36 INCHES (914 MM) TO THE LEFT OR TO THE RIGHT OF THE NORMAL DRIVING
- 2. ON THE INTERIOR FACE OF A SIDE WALL AND LOCATED WITHIN 24 INCHES (609 MM) FROM THE BACK WALL AND 36 INCHES (914 MM) OF THE NORMAL DRIVING PATH.
- EXCEPTION: WHERE THE CLEAR HEIGHT OF THE VEHICLE GARAGE OPENING IS 7 FEET 6 INCHES (2286 MM) OR LESS, ESS INSTALLED NOT LESS THAN 36 INCHES (914 MM) ABOVE FINISHED FLOOR ARE NOT SUBJECT TO VEHICLE IMPACT PROTECTION REQUIREMENTS.

### CPC604.1.2 PFX

[HCD 1 & HCD 2] ALL INSTALLATIONS OF PEX PIPE WHERE IT IS THE INITIAL PLUMBING PIPING INSTALLED IN NEW CONSTRUCTION SHALL BE FLUSHED TWICE OVER A PERIOD OF AT LEAST ONE WEEK. THE PIPE SYSTEM SHALL BE FIRST FLUSHED FOR AT LEAST 10 MINUTES AND THEN FILLED AND ALLOWED TO STAND FOR NO LESS THAN 1 WEEK, AFTER WHICH ALL THE BRANCHES OF THE PIPE SYSTEM MUST BE FLUSHED LONG ENOUGH TO FULLY EMPTY THE CONTAINED VOLUME. THIS PROVISION SHALL NOT APPLY TO THE INSTALLATION OF PEX PIPE WHERE IT REPLACES AN EXISTING PIPE SYSTEM OF ANY MATERIAL. (1) AT THE TIME OF FILL, EACH FIXTURE SHALL HAVE A REMOVABLE TAG APPLIED STATING:

- (a) "THIS NEW PLUMBING SYSTEM WAS FIRST FILLED AND FLUSHED ON \_\_\_\_\_ (NAME). THE STATE OF CALIFORNIA REQUIRES THAT THE SYSTEM BE FLUSHED AFTER STANDING AT LEAST ONE WEEK AFTER THE FILL DATE SPECIFIED ABOVE. IF THIS SYSTEM IS USED EARLIER THAN ONE WEEK AFTER THE FILL DATE, THE WATER MUST BE ALLOWED TO RUN FOR AT LEAST TWO MINUTES PRIOR TO USE FOR HUMAN CONSUMPTION. THIS TAG MAY NOT BE REMOVED PRIOR TO THE COMPLETION OF THE REQUIRED SECOND FLUSHING, EXCEPT BY THE BUILDING OWNER OR OCCUPANT."
- (2) PRIOR TO ISSUING A BUILDING PERMIT TO INSTALL PEX PIPE, THE BUILDING OFFICIAL SHALL REQUIRE AS PART OF THE PERMITTING PROCESS THAT THE CONTRACTOR, OR THE APPROPRIATE PLUMBING SUBCONTRACTORS, PROVIDE WRITTEN CERTIFICATION THAT HE OR SHE WILL COMPLY WITH THE FLUSHING PROCEDURES SET FORTH IN THE CODE.
- (3) THE BUILDING OFFICIAL SHALL NOT GIVE FINAL PERMIT APPROVAL OF ANY PEX PLUMBING INSTALLATION UNLESS HE OR SHE FINDS THAT THE MATERIAL HAS BEEN INSTALLED IN COMPLIANCE WITH THE REQUIREMENTS OF THE CODE, INCLUDING THE REQUIREMENTS TO FLUSH AND TAG THE SYSTEMS.
- (4) ANY CONTRACTOR OR SUBCONTRACTOR FOUND TO HAVE FAILED TO COMPLY WITH THE PEX FLUSHING REQUIREMENTS SHALL BE SUBJECT TO THE PENALTIES IN HEALTH AND SAFETY CODE, DIVISION 13, PART 1.5, CHAPTER 6 (SECTION 17995, ET SEQ.)

### **HVAC SYSTEMS:**

Mitsubishi Electric Model MUZ-HM24NA + 3 FANS 2 TON HEAT PUMP DUCTLESS SYSTEM HSPF 8.5 /18 SEER - 12.5 EER

### LOAD CALCULATION:

100 AMP SUB-PANEL ADU: LIGHTING: 3 VA/SQFT X 795 SQFT => 2385 VA 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: 14385 VA FIRST 10000 VA @ 100% = 10000 VA REMAINDER (CALCULATED AT 10385) @ 40% = 4154 VA 2 TON DUCTLESS HEAT PUMP + 3 FAN UNITS = 3500 VA TOTAL DEMAND = 17654 VA TOTAL AMPERAGE ON A 240 VOLT SYSTEM = 74 AMPS

PIPE CONNECTION SIZE SCHEDULE								
FIXTURE	WASTE	VENT	COLD WATER	HOT WATER	CLEANOUT			
WC	4"	2"	<u>1</u> "	-	YES			
LAVATORY/SINK	2"	1 – ½"	<u>1</u> "	<u>1</u> "	YES			
SHOWER/TUB	2"	$1 - \frac{1}{2}$ "	<u>1</u> "	<u>1</u>	YES			
WATER HEATER	NA	NA	<u>3</u> "	<u>3</u> "	NO			

# 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 STEEL THREADED	BELOW GRADE: PVC COATED BLK.STL. THREADED OR WELDED POLYETHYLENE	ABOVE GRADE: BLK. STL. THREADED	-

## **ELECTRICAL SYMBOLS**

\* smoke and carbon monoxide alarms shall be interconnected in such a manner that the activation of one alarm will active all of the alarms in

the individual unit. [CRC R314.4 & R315.5] \* smoke alarms and carbon monoxide alarms shall receive their primary power from the building wiring and shall be equipped with a battery backup. [CRC R314.6 & R315.6]

SINGLE POLE SWITCH DUAL SWITCHED SINGLE POLE SWITCH SMOKE DETECTOR 115V

> SMOKE DETECTOR SHALL BE INSTALLED A MINIMUM OF 20' FROM A PERMANENTLY INSTALLED COOKING APPLIANCE IONIZATION SMOKE ALARM W/ SILENCING SWITCH OR PHOTOELECTRIC SMOKE ALARM REQUIRED WHEN ALARM IS INSTALLED LESS THAN 20', BUT NOT LESS THAN 10' FROM A PERMANENTLY INSTALLED COOKING APPLIANCE. \* SMOKE DETECTOR SHALL BE INSTALLED A MINIMUM OF 3' FROM A BATHROOM OPENING. CRC 314.3.3

CARBON MONOXIDE DETECTOR 115V 100 SQ. IN. MAKEUP AIR

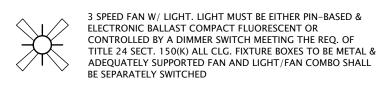
GAS SHUT OFF VALVE HOSE BII

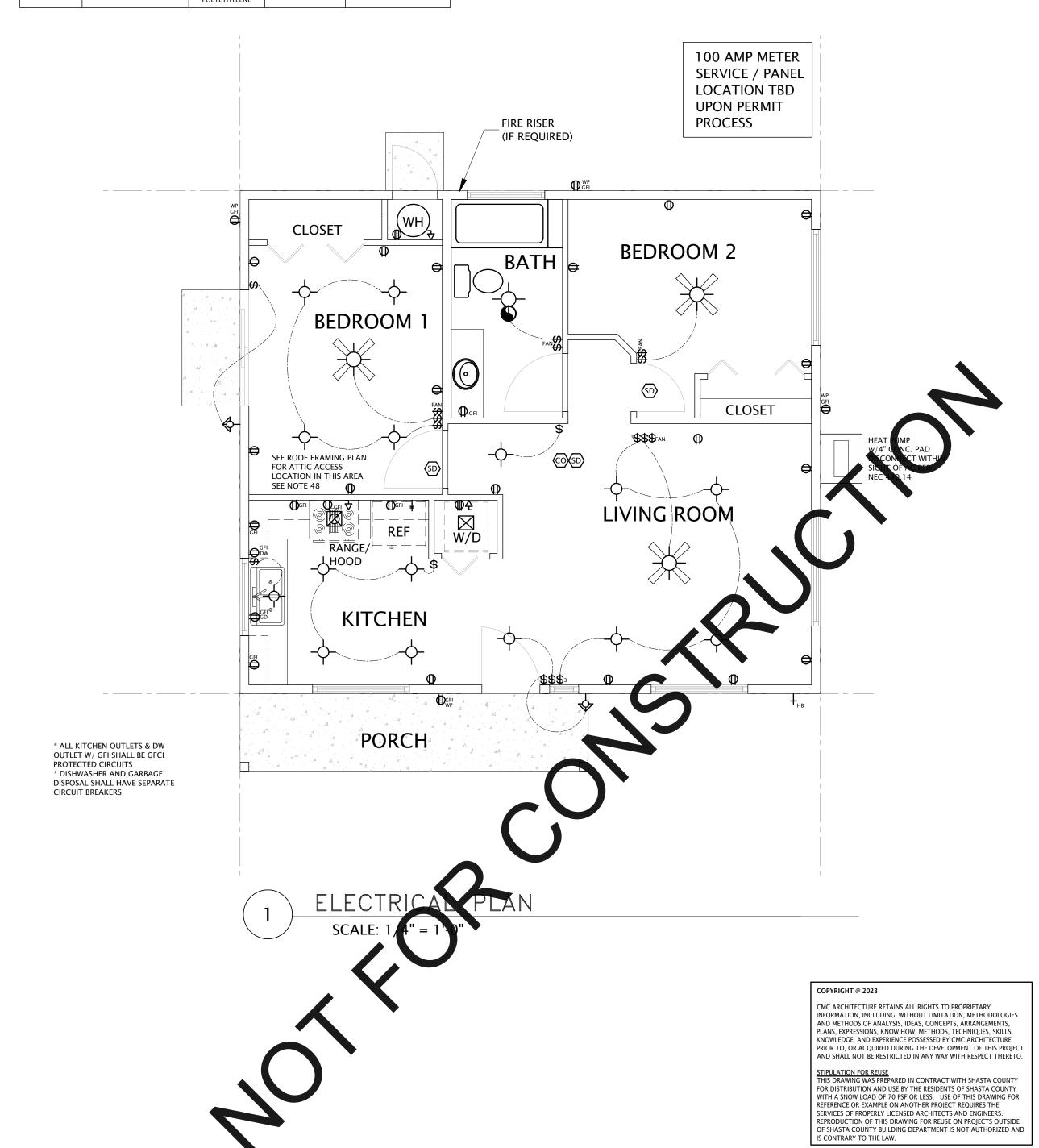
OPTIONAL ICE WATER STUB OUT

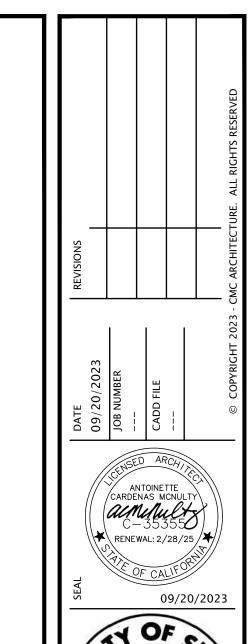
DISCONNECT BOX OMS MOTION SENSOR CLOSET LIGHT 115v DUPLEX +15" TO BOTTOM OR ABOVE COUNTERTOP 115v GROUND FAULT INDICATED DUPLEX OUTLET (GFCI CIRCUIT @ KITCHEN) EXTERIOR WALL MOUNT LIGHT W/ PHOTO CELL CEILING MOUNT OR RECESSED LIGHT

SCONCE LIGHT LIGHT / 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 DEHLIMIDISTAT WALL CONTROL "CONT" NOTATION, SEE BELOW

> EXHAUST FAN - SEE LIGHT / EXHAUST FAN NOTE, OR ONE CONTINUOUS WHOLE HOUSE VENTILATION NOTED AS "CONT", THE SWITCH OPEATING THE FAN BE LABLED TO STATE "FAN SHOULD BE ON WHENEVER THE HOME IS OCCUPIED". THE FAN SHALL BE 37 CFM (MIN.), 1 SONE OR LESS W/ 4" DUCT TO









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- ALL RECEPTACLES SHALL BE CONNECTED TO THE CIRCUIT INDICATED USING # 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.

- KITCHEN HOOD TO HAVE 100 CFM MIN. AIRFLOW
- KITCHEN VENTILATION HOOD REQUIRES MANUEACTURE'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 INSTALLED FAN AND DUCT
- ALL APPLIANCES, FIXTURES AND EQUIPMENT TO BE INSTALLED AS PER CODE AND MANUFACTURE'S SPECIFICATIONS.

D. ALL RECEPTACLES AT KITCHEN COUNTER TOPS.

- 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
- DRYER TO VENT TO OUTSIDE AIR 14' MAX. W/ 2 BENDS MAX. PER CMC
- 9. USE CEILING FAN BOXES LISTED PER CEC 422-18.

E. CRAWL SPACES

- 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
- SEE MANDATORY MEASURES SUMMARY ON TITLE 24 ENERGY CALCULATIONS FOR ADDITIONAL LIGHTING REQUIREMENTS AND ARE
- 12. COMBUSTION APPLIANCES MUST BE PROPERLY VENTED AND INSTALLED TO PREVENT BACK DRAFT
- 13. AUTOMATIC GARAGE DOOR OPENERS MUST BE UL LISTED R309.4. GARAGE DOOR SPRINGS - PER SECTION 1211 CBC
- 14. REQUIRED 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
- 17. NOT USED.
- NOT USED
- 19. ALL PERMANENTLY INSTALLED LUMINARIES SHALL BE HIGH EFFICACY CA ENERGY CODE SECTION 150.0(k)1A.
- 20. ALL LIGHTING MUST BE SWITCHED SEPARATELY FROM EXHAUST
- 21. ALL LIGHTING CONTROLS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
- 22. 3-WAY AND 4-WAY SWITCHES AND OTHER LIGHTING 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 24. ELECTRICAL RECEPTACLES FOR DISHWASHER AND GARBAGE DISPOSAL TO BE LOCATED UNDER SINK, NOT MORE THAN 36"
- RECEPTACLE IN BATHROOMS, LAUNDRY, GARAGE AND HALLS 10' LONG AND WITHIN 24" ALONG KITCHEN COUNTER SPACES 12' AND WIDER, AND EVERY 12' ALONG ISLANDS PER CEC 210-57
- OUTDOOR WEATHER PROOF GFI RECEPTACLES IN FRONT AND BACK OF RESIDENCE PER CEC 210-52 AND 410-57.
- PROVIDE AN OUTDOOR WEATHER PROOF GELRECEPTACLE 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
- 29. PROVIDE DISCONNECT WITHIN SIGHT OF AIR CONDITIONING EOUIPMENT PER CEC 440-14.
- 30. PROVIDE 30" WIDE X 36" DEEP WORKING CLEARANCE AT AC DISCONNECT PER CEC 210-12.(b)
- SMOKE DETECTORS SHALL BE HARD WIRED, INTERCONNECTED, W/ BATTERY BACKUP, AND AUDIBLE IN ALL BEDROOMS PER CEC
- 32. DEDICATED 20-AMP CIRCUIT FOR ALL BATHROOM RECEPTACLES PER CEC 210-11.(c) (2) 20 AMP SMALL APPLIANCE BRANCH CIRCUITS IN KITCHEN.
- 33. SWITCHED LIGHT AND RECEPTACLE IN ATTIC AND UNDER FLOOR
- SPACES WITH MECHANICAL EQUIPMENT PER CEC 210-70.(3Xc) 34. PROVIDE A LIGHT WITH SWITCH AT ALL EXITS PER CEC 210-70
- 35. DIRECT VENT IS REQUIRED FOR WARM AIR FURNACES IN SLEEPING ROOMS PER CEC 504.5
- 36. EXHAUST FAN DUCTS TO BE INSTALLED PROPERLY WITHOUT DIPS WHERE MOISTURE CAN COLLECT.
- 37 VENTILATION SYSTEM CONTROLS SHALL BE LABLED "VENTILATION CONTROL" AND THE HOME OWNER SHALL BE PROVIDED WITH
- 38. MECHANICAL SYSTEMS INCLUDING HEATING AND AIR CONDITIONING SYSTEMS THAT SUPPLY AIR TO HABITABLE SPACES

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 TO BE FILLED OUT AND PROVIDED TO BUILDING INSPECTOR AT

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. OF 3' FROM ANY OPENINGS INTO THE BUILDING (DRYERS, BATH AND UTILITY FANS ETC) MUST BE 3' AWAY FROM DOORS. WINDOWS, OPENING SKYLIGHTS, OR ATTIC VENTS PER CMC 504.5.
- 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.
- 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 406.1
- 47. ATTIC FURNACE NEEDS A 30"X30" PLATFORM AND 24" WALKWAY, A MAXIMUM OF 20' FROM THE ACCESS UNLESS 6' OF HEADROOM
- 48. LIGHT AND RECEPTACLE IN ATTIC. SWITCHED AT THE ACCESS. FOR ATTIC EQUIPMENT. LIGHT IN ATTIC TO BE HIGH EFFICIENCY OR CONTROLLED BY A DIMMER OR VACANCY SENSOR.

### **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 RUNNING. LIGHTS IN WET/DAMP LOCATIONS MUST COMPLY WITH CEC 410.10
- CLOSETS AND HALLWAYS LIGHTING:

WET / DAMP LOCATIONS:

- LIGHTING FOR CLOSET LESS THAN 70 SQUARE FEET AND HALLWAYS MUST BE HIGH EFFICACY. LIGHTING FOR CLOSETS LARGER THAN 70 SOUARE 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.
- ALL EXTERIOR LIGHTS, PORCH LIGHTS, BATHROOM OR LAUNDRY ROOM LIGHTS MUST MEET THE REQUIREMENTS FOR DAMP LOCATIONS PER CEC 410.10 OUTDOOR LIGHTING
- \* PHOTOCONTROL AND MOTION SENSOR, OR \* PHOTOCONTROL AND AUTOMATIC TIME SWITCH CONTROL, OR \* ASTRONOMICAL TIME CLOCK THAT AUTOMATICALLY TURN OUTDOOR LIGHTING OFF DURING DAYLIGHT HOURS, OR 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

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

- LIGHTING OFF DURING DAYLIGHT HOURS. 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 R328.8.1 ENERGY STORAGE SYSTEMS (ESS) VEHICLE PROTECTION IN GARAGE 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 "IA8-2016-E". FOR INSTANCE. PIN-BASED CFLS MUST BE IA8 CERTIFIED TO BE INSTALLED IN CEILING RECESSED DOWNLIGHTS. ALL CEILING RECESSED DOWNLIGHTS AND ENCLOSED LUMINAIRES MUST BE CONTROLLED BY A DIMMER
- 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
- OFF WHILE 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

EXHAUST FAN WITH INTEGRAL LIGHTING WHERE THE LIGHTING SYSTEM CAN BE MANUALLY TURNED

### **GENERAL PLUMBING NOTES:**

OR VACANCY SENSOR.

- 1. 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
- 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 SHOWER AND TUB PER CPC SECTION 420.0.
- 4. OPTION TO ADD ON DEMAND HOT WATER HEATER 140,000 BTU/HR INPUT, 91 RECOVERY EFFICIENCY OR EQUAL, OR HEAT PUMP TANKED WH
- 6. 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."

### **ENERGY STORAGE SYSTEMS (ESS) READY**

ALL SINGLE-FAMILY RESIDENCES THAT INCLUDE ONE OR TWO DWELLING UNITS SHALL MEET THE FOLLOWING. ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE:

- 1. AT LEAST ONE OF THE FOLLOWING SHALL BE PROVIDED:
- A. ESS READY INTERCONNECTION EQUIPMENT WITH A MINIMUM BACKED-UP CAPACITY OF 60 AMPS AND A MINIMUM OF FOUR ESS-SUPPLIED BRANCH CIRCUITS, OR
- A DEDICATED RACEWAY FROM THE MAIN SERVICE TO A PANELBOARD (SUBPANEL) THAT SUPPLIES THE BRANCH CIRCUITS IN SECTION 150.0(s)(2). ALL BRANCH CIRCUITS ARE PERMITTED TO BE SUPPLIED BY THE MAIN SERVICE PANEL PRIOR TO THE INSTALLATION OF AN ESS. THE TRADE SIZE OF THE RACEWAY SHALL NOT BE LESS THAN 1 INCH. THE PANELBOARD THAT SUPPLIES THE BRANCH CIRCUITS (SUBPANEL) MUST BE LABELED "SUBPANEL SHALL INCLUDE ALL BACKED-UP LOAD CIRCUITS."
- 2. A MINIMUM OF FOUR BRANCH CIRCUITS SHALL BE IDENTIFIED AND HAVE THEIR SOURCE OF SUPPLY COLLOCATED AT A SINGLE PANELBOARD SUITABLE TO BE SUPPLIED BY THE ESS. AT LEAST ONE CIRCUIT SHALL SUPPLY THE REFRIGERATOR, ONE LIGHTING CIRCUIT SHALL BE LOCATED NEAR THE PRIMARY EGRESS AND AT LEAST ONE CIRCUIT SHALL SUPPLY A SLEEPING ROOM RECEPTACLE OUTLET.
- THE MAIN PANELBOARD SHALL HAVE A MINIMUM BUSBAR RATING OF 225
- 4. SUFFICIENT SPACE SHALL BE RESERVED TO ALLOW FUTURE INSTALLATION OF A SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH WITHIN 3 FEET OF THE MAIN PANELBOARD. RACEWAYS SHALL BE INSTALLED BETWEEN THE PANELBOARD AND THE SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH LOCATION TO ALLOW THE CONNECTION OF BACKUP POWER SOURCE.

WHERE AN ESS IS INSTALLED IN THE NORMAL DRIVING PATH OF VEHICLE TRAVEL WITHIN A GARAGE, IMPACT PROTECTION COMPLYING WITH SECTION 1207.11.7.3 SHALL BE PROVIDED. THE NORMAL DRIVING PATH IS A SPACE BETWEEN THE GARAGE VEHICLE OPENING AND THE INTERIOR FACE OF THE BACK WALL TO A HEIGHT OF 48 INCHES (1219 MM) ABOVE THE FINISHED FLOOR. THE WIDTH OF THE NORMAL DRIVING PATH SHALL BE EQUAL TO THE WIDTH OF THE GARAGE DOOR OPENING. IMPACT PROTECTION SHALL ALSO BE PROVIDED FOR ESS INSTALLED AT EITHER OF THE FOLLOWING LOCATIONS (SEE FIGURE

1. ON THE INTERIOR FACE OF THE BACK WALL AND LOCATED WITHIN 36 INCHES (914 MM) TO THE LEFT OR TO THE RIGHT OF THE NORMAL DRIVING

2. ON THE INTERIOR FACE OF A SIDE WALL AND LOCATED WITHIN 24 INCHES (609 MM) FROM THE BACK WALL AND 36 INCHES (914 MM) OF THE NORMAL DRIVING PATH.

EXCEPTION: WHERE THE CLEAR HEIGHT OF THE VEHICLE GARAGE OPENING IS 7 FEET 6 INCHES (2286 MM) OR LESS, ESS INSTALLED NOT LESS THAN 36 INCHES (914 MM) ABOVE FINISHED FLOOR ARE NOT SUBJECT TO VEHICLE IMPACT PROTECTION REQUIREMENTS.

### EV CHARGER REOUIREMENTS:

1). THE BUILDER SHALL INSTALL A NOMINAL ONE (1) INCH INSIDE DIAMETER, LISTED RACEWAY TO ACCOMMODATE A DEDICATED A 208/240 VOLT BRANCH CIRCUIT. THE RACEWAY SHALL ORIGINATE IN THE MAIN OR SUB PANEL, AND WILL TERMINATE INTO A LISTED BOX AT THE PURPOSED SITE OF THE EV CHARGER. THIS AND ALL ADDITIONAL

2). THE ELECTRICAL LOAD CALCULATIONS INCLUDED TO ACCOMMODATE FOR A DEDICATED 40 AMP CIRCUIT FOR THE EV CHARGING CENTER. CGBS 4.106.4.1 3). THE SERVICE OR SUBPANEL CIRCUIT DIRECTORY SHALL IDENTIFY THE OVERCORRECT PROTECTION DEVICE SPACE(S) AS RESERVED FOR FUTURE EV CHARGING AS "EV CAPABLE. THE RACEWAY TERMINATION LOCATION SHALL BE PERMANENTLY AND VISIBLY MARKED AS "EV CAPABLE"

### CPC604.1.2 PEX

[HCD 1 & HCD 2] ALL INSTALLATIONS OF PEX PIPE WHERE IT IS THE INITIAL PLUMBING PIPING INSTALLED IN NEW CONSTRUCTION SHALL BE FLUSHED TWICE OVER A PERIOD OF AT LEAST ONE WEEK. THE PIPE SYSTEM SHALL BE FIRST FLUSHED FOR AT LEAST 10 MINUTES AND THEN FILLED AND ALLOWED TO STAND FOR NO LESS THAN 1 WEEK, AFTER WHICH ALL THE BRANCHES OF THE PIPE SYSTEM MUST BE FLUSHED LONG ENOUGH TO FULLY EMPTY THE CONTAINED VOLUME. THIS PROVISION SHALL NOT APPLY TO THE INSTALLATION OF PEX PIPE WHERE IT REPLACES AN EXISTING PIPE SYSTEM OF ANY MATERIAL. (1) AT THE TIME OF FILL, EACH FIXTURE SHALL HAVE A REMOVABLE TAG APPLIED STATING:

- (a) "THIS NEW PLUMBING SYSTEM WAS FIRST FILLED AND FLUSHED ON \_ (DATE) BY \_\_\_\_\_ (NAME). THE STATE OF CALIFORNIA REQUIRES THAT THE SYSTEM BE FLUSHED AFTER STANDING AT LEAST ONE WEEK AFTER THE FILL DATE SPECIFIED ABOVE. IF THIS SYSTEM IS USED EARLIER THAN ONE WEEK AFTER THE FILL DATE, THE WATER MUST BE ALLOWED TO RUN FOR AT LEAST TWO MINUTES PRIOR TO USE FOR HUMAN CONSUMPTION. THIS TAG MAY NOT BE REMOVED PRIOR TO THE COMPLETION OF THE REQUIRED SECOND FLUSHING, EXCEPT BY THE BUILDING OWNER OR OCCUPANT."
- (2) PRIOR TO ISSUING A BUILDING PERMIT TO INSTALL PEX PIPE, THE BUILDING OFFICIAL SHALL REQUIRE AS PART OF THE PERMITTING PROCESS THAT THE CONTRACTOR, OR THE APPROPRIATE PLUMBING SUBCONTRACTORS, PROVIDE WRITTEN CERTIFICATION THAT HE OR SHE WILL COMPLY WITH THE FLUSHING PROCEDURES SET FORTH IN THE CODE.
- (3) THE BUILDING OFFICIAL SHALL NOT GIVE FINAL PERMIT APPROVAL OF ANY PEX PLUMBING INSTALLATION UNLESS HE OR SHE FINDS THAT THE MATERIAL HAS BEEN INSTALLED IN COMPLIANCE WITH THE REQUIREMENTS OF THE CODE, INCLUDING THE REQUIREMENTS TO FLUSH AND TAG THE SYSTEMS.
- (4) ANY CONTRACTOR OR SUBCONTRACTOR FOUND TO HAVE FAILED TO COMPLY WITH THE PEX FLUSHING REQUIREMENTS SHALL BE SUBJECT TO THE PENALTIES IN HEALTH AND SAFETY CODE, DIVISION 13, PART 1.5, CHAPTER 6 (SECTION 17995, ET SEQ.)

## **ELECTRICAL SYMBOLS**

\* smoke and carbon monoxide alarms shall be interconnected in such a manner that the activation of one alarm will active all of the alarms in the individual unit. [CRC R314.4 & R315.5] \* smoke alarms and carbon monoxide alarms shall receive their primary power from the building wiring and shall be equipped with a battery

SINGLE POLE SWITCH DUAL SWITCHED SINGLE POLE SWITCH

backup. [CRC R314.6 & R315.6]

**SMOKE DETECTOR 115V** SMOKE DETECTOR SHALL BE INSTALLED A MINIMUM OF 20' FROM A PERMANENTLY INSTALLED COOKING APPLIANCE IONIZATION SMOKE ALARM W/ SILENCING SWITCH OR PHOTOELECTRIC SMOKE ALARM REQUIRED WHEN ALARM IS INSTALLED LESS THAN 20', BUT NOT LESS THAN 10' FROM A PERMANENTLY NSTALLED COOKING APPLIANCE.

CRC314.3.3

- SMOKE DETECTOR SHALL BE INSTALLED A MINIMUM OF 3' FROM A BATHROOM OPENING. CRC 314.3.3 CARBON MONOXIDE DETECTOR 115V
- 100 SQ. IN. MAKEUP AIR GAS SHUT OFF VALVE
  - OPTIONAL ICE WATER STUB OUT

- DISCONNECT BOX
- MOTION SENSOR CLOSET LIGHT 115v DUPLEX +15" TO BOTTOM OR ABOVE COUNTERTOR
- 115v GROUND FAULT INDICATED DUPLEX OUTLET (GFCI CIRCUIT @ KITCHEN)
- EXTERIOR WALL MOUNT LIGHT W/ PHOTO CELL CEILING MOUNT OR RECESSED LIGHT

220v OUTLET

SCONCE LIGHT

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

CONT" NOTATION, SEE BELOW

EXHAUST FAN - SEE LIGHT / EXHAUST FAN NOTE, OR ONE CONTINUOUS WHOLE HOUSE VENTILATION NOTED AS CONT". THE SWITCH OPEATING THE FAN BE LABLED TO STATE FAN SHOULD BE ON WHENEVER THE HOME IS OCCUPIED". THE

FAN SHALL BE 37 CFM (MIN.), 1 SONE OR LESS W/ 4" DUCT TO



BE SEPARATELY SWITCHED

## **HVAC SYSTEMS:**

Mitsubishi Electric Model MUZ-HM24NA + 3 FANS 2 TON HEAT PUMP DUCTLESS SYSTEM HSPF 8.5 /18 SEER - 12.5 EER

### LOAD CALCULATION:

### 100 AMP SUB-PANEL ADU:

LIGHTING: 3 VA/SQFT X 795 SQFT	=> 2385 VA
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: 14385 VA	

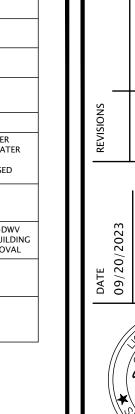
FIRST 10000 VA @ 100% = 10000 VA REMAINDER (CALCULATED AT 10385) @ 40% = 4154 VA 2 TON DUCTLESS HEAT PUMP + 3 FAN UNITS = 3500 VA TOTAL DEMAND = 17654 VA TOTAL AMPERAGE ON A 240 VOLT SYSTEM = 74 AMPS

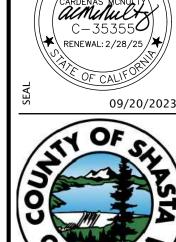
WC	4"	2" ½"		_	YE	ES	
LAVATORY/SINK	2"	$1 - \frac{1}{2}$	"	<u>1</u> "	<u>1</u> "	YE	ES
SHOWER/TUB	2"	$1-\frac{1}{2}$	"	<u>1</u> "	<u>1</u> "	YE	ES
WATER HEATER	NA	NA		<u>3</u> " 4	<u>3</u> " 4	NO	)
PIPING MATERIAL SCHEDULE							
TYPE	INTERIOR	₹		EXTERIOR	INSULATION	N	OTES
COLD WATER	ABOVE FINISH FLOOR TYPE "M" COPPER OR EQUAL BELOW GRADE: TYPE"K" SOFT COPPER		SC	CHEDULE 40 PVC	IN ATTIC AND EXTERIOR WALLS	FOR 1ST 18"	"L" COPPER FROM WATER ATER BING IS USED
HOT WATER	SAME AS	SAME AS CW		NA	ALL HOT WATER LIN TO BE INSULATED	SAME	AS CW
WASTE AND VENT	NO-HUB CAST IRON PVC – DWV		SCR-35 PVC		NA	MAY BE USED	40 PVC-DWV WITH BUILDI NT APPROVAL
FIRE SPRINKLER	ABOVE FINISH FLOOR TYPE "L" COPPER OR CPVC			-	EXTERIOR WALLS, IN ATTIC & OUTSIDE		-
GAS	SCHEDULE 40 BLACK STEEL THREADED		PVC (	ELOW GRADE: COATED BLK.STL. ADED OR WELDED OLYETHYLENE	ABOVE GRADE: BLK. STL. THREADE		-

PIPE CONNECTION SIZE SCHEDULE

VENT COLD WATER HOT WATER

# 100 AMP METER **SERVICE / PANEL LOCATION TBD UPON PERMIT** PROCESS FIRE RISER (IF REQUIRED) w/4" CONC. PAD DISCONNECT WITHIN SIGHT OF AC PER NEC 440.14 BEDROOM 2 RFDROOM ODOR OPENER W/ LIGHT SEE ROOF FRAMING PLAN FOR ATTIC ACCESS CLOSET LOCATION IN THIS AREA SEE NOTE 48 SEE ROOF FRAMING PLAN FOR ATTIC ACCESS LOCATION IN THIS AREA SEE NOTE 48 LIVING ROOM \* ALL KITCHEN OUTLETS & DW OUTLET W/ GFI SHALL BE GFCI PROTECTED CIRCUITS DISHWASHER AND GARBAGE DISPOSAL SHALL HAVE SEPARATE CIRCUIT BREAKERS COPYRIGHT @ 2023 CMC ARCHITECTURE RETAINS ALL RIGHTS TO PROPRIETARY NFORMATION, INCLUDING, WITHOUT LIMITATION, METHODOLOGIES AND METHODS OF ANALYSIS, IDEAS, CONCEPTS, ARRANGEMENTS PLANS, EXPRESSIONS, KNOW HOW, METHODS, TECHNIQUES, SKILLS KNOWLEDGE. AND EXPERIENCE POSSESSED BY CMC ARCHITECTURE PRIOR TO, OR ACQUIRED DURING THE DEVELOPMENT OF THIS PROJECT AND SHALL NOT BE RESTRICTED IN ANY WAY WITH RESPECT THERETO <u>Stipulation for reuse</u> This drawing was prepared in contract with shasta count FOR DISTRIBUTION AND USE BY THE RESIDENTS OF SHASTA COUNTY WITH A SNOW LOAD OF 70 PSF OR LESS. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE SERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.





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REPRODUCTION OF THIS DRAWING FOR REUSE ON PROJECTS OUTSIDE OF SHASTA COUNTY BUILDING DEPARTMENT IS NOT AUTHORIZED AN PERMIT SET

S CONTRARY TO THE LAW.

- 1 ALL RECEPTACLES SHALL RE CONNECTED TO THE CIRCUIT INDICATED USING ½" 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 CFM MIN. AIRFLOW KITCHEN VENTILATION HOOD REQUIRES MANUFACTURE'S DOCUMENTATION ON INSTALLED SYSTEM PERFORMANCE. IF

MANUFACTURE DOES NOT PROVIDE PERFORMANCE INFO FOR DUCT SIZE

- AND I FNGTH. PROVIDE FIELD AIRFLOW TESTING MEASURING CFM OF INSTALLED FAN AND DUCT.
- CODE AND MANUFACTURE'S SPECIFICATIONS. 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

ALL APPLIANCES, FIXTURES AND EQUIPMENT TO BE INSTALLED AS PER

D. ALL RECEPTACLES AT KITCHEN COUNTER TOPS. F. CRAWL SPACES F. BASEMENTS

8. DRYER TO VENT TO OUTSIDE AIR – 14' MAX. W/ 2 BENDS MAX. PER CMC

- 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 680.4.7
- 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
- 13. AUTOMATIC GARAGE DOOR OPENERS MUST BE UL LISTED R309.4. GARAGE DOOR SPRINGS - PER SECTION 1211 CBC
- 14. REQUIRED 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
- NOT USED.
- 18. NOT USED
- 19. ALL PERMANENTLY INSTALLED LUMINARIES SHALL BE HIGH EFFICACY CA ENERGY CODE SECTION 150.0(k)1A.
- 20. ALL LIGHTING MUST BE SWITCHED SEPARATELY FROM EXHAUST
- 21. ALL LIGHTING CONTROLS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
- 22. 3-WAY AND 4-WAY SWITCHES AND OTHER LIGHTING 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
- 24. ELECTRICAL RECEPTACLES FOR DISHWASHER AND GARBAGE DISPOSAL TO BE LOCATED UNDER SINK, NOT MORE THAN 36"
- 25. RECEPTACLE IN BATHROOMS, LAUNDRY, GARAGE AND HALLS 10' LONG AND WITHIN 24" ALONG KITCHEN COUNTER SPACES 12" AND WIDER, AND EVERY 12' ALONG ISLANDS PER CEC 210-57
- OUTDOOR WEATHER PROOF CELECEPTACLES IN FRONT AND 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 RRANCH 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
- 29. PROVIDE DISCONNECT WITHIN SIGHT OF AIR CONDITIONING EQUIPMENT PER CEC 440-14.
- 30. PROVIDE 30" WIDE X 36" DEEP WORKING CLEARANCE AT AC DISCONNECT PER CEC 210-12.(b)
- 31. SMOKE DETECTORS SHALL BE HARD WIRED, INTERCONNECTED, W/ BATTERY BACKUP, AND AUDIBLE IN ALL BEDROOMS PER CEC
- 32. DEDICATED 20-AMP CIRCUIT FOR ALL BATHROOM RECEPTACLES PER CEC 210-11.(c) (2) 20 AMP SMALL APPLIANCE BRANCH
- 33. SWITCHED LIGHT AND RECEPTACLE IN ATTIC AND UNDER FLOOR SPACES WITH MECHANICAL EQUIPMENT PER CEC 210-70.(3Xc)
- 34. PROVIDE A LIGHT WITH SWITCH AT ALL EXITS PER CEC 210-70
- 35. DIRECT VENT IS REQUIRED FOR WARM AIR FURNACES IN SLEEPING ROOMS PER CEC 504.5
- 36. EXHAUST FAN DUCTS TO BE INSTALLED PROPERLY WITHOUT DIPS WHERE MOISTURE CAN COLLECT
- VENTILATION SYSTEM CONTROLS SHALL BE LABLED "VENTILATION CONTROL" AND THE HOME OWNER SHALL BE PROVIDED WITH INSTRUCTIONS ON HOW TO OPERATE THE SYSTEM.
- 38. MECHANICAL SYSTEMS INCLUDING HEATING AND AIR CONDITIONING SYSTEMS THAT SUPPLY AIR TO HABITABLE SPACES 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 TO BE FILLED OUT AND PROVIDED TO BUILDING INSPECTOR AT
- 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. OF 3' FROM ANY OPENINGS INTO THE BUILDING (DRYERS, BATH AND UTILITY FANS ETC) MUST BE 3' AWAY FROM DOORS. WINDOWS, OPENING SKYLIGHTS, OR ATTIC VENTS PER CMC 504.5
- 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
- 47. ATTIC FURNACE NEEDS A 30"X30" PLATFORM AND 24" WALKWAY A MAXIMUM OF 20' FROM THE ACCESS UNLESS 6' OF HEADROOM
- 48. LIGHT AND RECEPTACLE IN ATTIC, SWITCHED AT THE ACCESS, FOR ATTIC EQUIPMENT. LIGHT IN ATTIC TO BE HIGH EFFICIENCY OR CONTROLLED BY A DIMMER OR VACANCY SENSOR. CMC 304.4.4. CEC 210.70

### **RESIDENTIAL LIGHTING REQUIREMENTS:**

KITCHEN: 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

RUNNING. LIGHTS IN WET/DAMP LOCATIONS MUST COMPLY WITH CEC 410.10.

- 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
- RY A VACANCY SENSOR OR DIMMER

SHALL BE HIGH EFFICACY AND CONTROLLED BY EITHER BY A VACANCY SENSOR OR DIMMER.

ALL EXTERIOR LIGHTS, PORCH LIGHTS, BATHROOM OR LAUNDRY ROOM LIGHTS MUST MEET THE

REQUIREMENTS FOR DAMP LOCATIONS PER CEC 410.10

\* PHOTOCONTROL AND MOTION SENSOR, OR

- 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 CONTROL TYPES:
- PHOTOCONTROL AND AUTOMATIC TIME SWITCH CONTROL, OR \* ASTRONOMICAL TIME CLOCK THAT AUTOMATICALLY TURN OUTDOOR LIGHTING OFF DURING DAYLIGHT HOURS, OR 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 LIGHTING OFF DURING DAYLIGHT HOURS.
- 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 (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). LARELED 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 IA8 CERTIFIED TO BE INSTALLED IN CEILING RECESSED DOWNLIGHTS. ALL CEILING RECESSED DOWNLIGHTS AND ENCLOSED LUMINAIRES MUST BE CONTROLLED BY A DIMMER OR VACANCY SENSOR.
- 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 WHILE THE FAN IS RUNNING \* LUMINAIRES SHALL BE SWITCHED WITH READILY ACCESSIBLE CONTROLS THAT PERMIT MANUAL 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.

### 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.
- 2. ALL WATER PIPES SHALL BE INSTALLED IN THE EXTERIOR WALL SHALL BE LOCATED ON THE CONDITIONED SIDE OF THE WALL ADJACENT TO THE
- 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 SHOWER AND TUB PER CPC SECTION 420.0.
- 4. OPTION TO ADD ON DEMAND HOT WATER HEATER 140,000 BTU/HR INPUT, 91 RECOVERY EFFICIENCY OR EQUAL, OR HEAT PUMP TANKED WH
- 6. 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.
- 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;

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

c. THE CIRCUIT BREAKER FOR THE BRANCH CIRCUIT SHALL BE ADJACENT TO A

RESERVED CIRCUIT BREAKER SPACE LABELED AS "FUTURE 240V USE."

# ENERGY STORAGE SYSTEMS (ESS) READY

ALL SINGLE-FAMILY RESIDENCES THAT INCLUDE ONE OR TWO DWELLING UNITS SHALL MEET THE FOLLOWING. ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE:

- 1. AT LEAST ONE OF THE FOLLOWING SHALL BE PROVIDED:
- A. ESS READY INTERCONNECTION EQUIPMENT WITH A MINIMUM BACKED-UP CAPACITY OF 60 AMPS AND A MINIMUM OF FOUR ESS-SUPPLIED BRANCH CIRCUITS, OR
- A DEDICATED RACEWAY FROM THE MAIN SERVICE TO A PANELBOARD (SUBPANEL) THAT SUPPLIES THE BRANCH CIRCUITS IN SECTION 150.0(s)(2). ALL BRANCH CIRCUITS ARE PERMITTED TO BE SUPPLIED BY THE MAIN SERVICE PANEL PRIOR TO THE INSTALLATION OF AN ESS. THE TRADE SIZE OF THE RACEWAY SHALL NOT BE LESS THAN 1 INCH. THE PANELBOARD THAT SUPPLIES THE BRANCH CIRCUITS (SUBPANEL) MUST BE LABELED "SUBPANEL SHALL INCLUDE ALL BACKED-UP LOAD CIRCUITS."
- 2. A MINIMUM OF FOUR BRANCH CIRCUITS SHALL BE IDENTIFIED AND HAVE THEIR SOURCE OF SUPPLY COLLOCATED AT A SINGLE PANELBOARD SUITABLE TO BE SUPPLIED BY THE ESS. AT LEAST ONE CIRCUIT SHALL SUPPLY THE REFRIGERATOR, ONE LIGHTING CIRCUIT SHALL BE LOCATED NEAR THE PRIMARY EGRESS AND AT LEAST ONE CIRCUIT SHALL SUPPLY A SLEEPING ROOM RECEPTACLE OUTLET.
- 3. THE MAIN PANELBOARD SHALL HAVE A MINIMUM BUSBAR RATING OF 225
- 4. SUFFICIENT SPACE SHALL BE RESERVED TO ALLOW FUTURE INSTALLATION OF A SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH WITHIN 3 FEET OF THE MAIN PANELBOARD. RACEWAYS SHALL BE INSTALLED BETWEEN THE PANELBOARD AND THE SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH LOCATION TO ALLOW THE CONNECTION OF BACKUP POWER SOURCE.

R328.8.1 ENERGY STORAGE SYSTEMS (ESS) VEHICLE PROTECTION IN GARAGE

WHERE AN ESS IS INSTALLED IN THE NORMAL DRIVING PATH OF VEHICLE TRAVEL WITHIN A GARAGE, IMPACT PROTECTION COMPLYING WITH SECTION 1207.11.7.3 SHALL BE PROVIDED. THE NORMAL DRIVING PATH IS A SPACE BETWEEN THE GARAGE VEHICLE OPENING AND THE INTERIOR FACE OF THE BACK WALL TO A HEIGHT OF 48 INCHES (1219 MM) ABOVE THE FINISHED FLOOR. THE WIDTH OF THE NORMAL DRIVING PATH SHALL BE EQUAL TO THE WIDTH OF THE GARAGE DOOR OPENING. IMPACT PROTECTION SHALL ALSO BE PROVIDED FOR ESS INSTALLED AT EITHER OF THE FOLLOWING LOCATIONS (SEE FIGURE R328.8.1):

1. ON THE INTERIOR FACE OF THE BACK WALL AND LOCATED WITHIN 36 INCHES (914 MM) TO THE LEFT OR TO THE RIGHT OF THE NORMAL DRIVING

2. ON THE INTERIOR FACE OF A SIDE WALL AND LOCATED WITHIN 24 INCHES (609 MM) FROM THE BACK WALL AND 36 INCHES (914 MM) OF THE NORMAL DRIVING PATH.

EXCEPTION: WHERE THE CLEAR HEIGHT OF THE VEHICLE GARAGE OPENING IS 7 FEET 6 INCHES (2286 MM) OR LESS, ESS INSTALLED NOT LESS THAN 36 INCHES (914 MM) ABOVE FINISHED FLOOR ARE NOT SUBJECT TO VEHICLE IMPACT PROTECTION REQUIREMENTS.

### EV CHARGER REQUIREMENTS:

1). THE BUILDER SHALL INSTALL A NOMINAL ONE (1) INCH INSIDE DIAMETER, LISTED RACEWAY TO ACCOMMODATE A DEDICATED A 208/240 VOLT BRANCH CIRCUIT. THE RACEWAY SHALL ORIGINATE IN THE MAIN OR SUR PANEL AND WILL TERMINATE INTO A LISTED BOX AT THE PURPOSED SITE OF THE EV CHARGER. THIS AND ALL ADDITIONAL SPECIFICATIONS OF CALIFORNIA GREEN BUILDING STANDARDS SECTION 4.106.4 SHALL

2). THE ELECTRICAL LOAD CALCULATIONS INCLUDED TO ACCOMMODATE FOR A DEDICATED 40 AMP CIRCUIT FOR THE EV CHARGING CENTER. CGBS 4.106.4.1 3). THE SERVICE OR SUBPANEL CIRCUIT DIRECTORY SHALL IDENTIFY THE OVERCORRECT PROTECTION DEVICE SPACE(S) AS RESERVED FOR FUTURE FV CHARGING AS "FV CAPARIF. THE RACEWAY TERMINATION LOCATION SHALL BE PERMANENTLY AND VISIBLY MARKED

### CPC604.1.2 PEX

AS "EV CAPABLE"

[HCD 1 & HCD 2] ALL INSTALLATIONS OF PEX PIPE WHERE IT IS THE INITIAL PLUMBING PIPING INSTALLED IN NEW CONSTRUCTION SHALL BE FLUSHED TWICE OVER A PERIOD OF AT LEAST ONE WEEK. THE PIPE SYSTEM SHALL BE FIRST FLUSHED FOR AT LEAST 10 MINUTES AND THEN FILLED AND ALLOWED TO STAND FOR NO LESS THAN 1 WEEK, AFTER WHICH ALL THE BRANCHES OF THE PIPE SYSTEM MUST BE FLUSHED LONG ENOUGH TO FULLY EMPTY THE CONTAINED VOLUME. THIS PROVISION SHALL NOT APPLY TO THE INSTALLATION OF PEX PIPE WHERE IT REPLACES AN EXISTING PIPE SYSTEM OF ANY MATERIAL. (1) AT THE TIME OF FILL, EACH FIXTURE SHALL HAVE A REMOVABLE TAG APPLIED STATING:

- (a) "THIS NEW PLUMBING SYSTEM WAS FIRST FILLED AND FLUSHED ON (DATE) BY \_\_\_\_\_ (NAME). THE STATE OF CALIFORNIA REQUIRES THAT THE SYSTEM BE FLUSHED AFTER STANDING AT LEAST ONE WEEK AFTER THE FILL DATE SPECIFIED ABOVE. IF THIS SYSTEM IS USED EARLIER THAN ONE WEEK AFTER THE FILL DATE, THE WATER MUST BE ALLOWED TO RUN FOR AT LEAST TWO MINUTES PRIOR TO USE FOR HUMAN CONSUMPTION. THIS TAG MAY NOT BE REMOVED PRIOR TO THE COMPLETION OF THE REQUIRED SECOND FLUSHING, EXCEPT BY THE BUILDING OWNER
- (2) PRIOR TO ISSUING A BUILDING PERMIT TO INSTALL PEX PIPE, THE BUILDING OFFICIAL SHALL REQUIRE AS PART OF THE PERMITTING PROCESS THAT THE CONTRACTOR, OR THE APPROPRIATE PLUMBING SUBCONTRACTORS, PROVIDE WRITTEN CERTIFICATION THAT HE OR SHE WILL COMPLY WITH THE FLUSHING PROCEDURES SET FORTH IN THE CODE.
- (3) THE BUILDING OFFICIAL SHALL NOT GIVE FINAL PERMIT APPROVAL OF ANY PEX PLUMBING INSTALLATION UNLESS HE OR SHE FINDS THAT THE MATERIAL HAS BEEN INSTALLED IN COMPLIANCE WITH THE REQUIREMENTS OF THE CODE, INCLUDING THE REQUIREMENTS TO FLUSH AND TAG THE SYSTEMS.
- (4) ANY CONTRACTOR OR SUBCONTRACTOR FOUND TO HAVE FAILED TO COMPLY WITH THE PEX FLUSHING REQUIREMENTS SHALL BE SUBJECT TO THE PENALTIES IN HEALTH AND SAFETY CODE, DIVISION 13, PART 1.5, CHAPTER 6 (SECTION 17995, ET SEQ.)

## **ELECTRICAL SYMBOLS**

\* smoke and carbon monoxide alarms shall be interconnected in such a manner that the activation of one alarm will active all of the alarms in the individual unit. [CRC R314.4 & R315.5] \* smoke alarms and carbon monoxide alarms shall receive their primary power from the building wiring and shall be equipped with a battery

# SINGLE POLE SWITCH

backup. [CRC R314.6 & R315.6]

DUAL SWITCHED SINGLE POLE SWITCH

SMOKE DETECTOR 115V \* SMOKE DETECTOR SHALL BE INSTALLED A MINIMUM OF 20' FROM A PERMANENTLY INSTALLED COOKING APPLIANCE. IONIZATION SMOKE ALARM W/ SILENCING SWITCH OR PHOTOFI FCTRIC SMOKE ALARM REQUIRED WHEN ALARM IS INSTALLED LESS THAN 20', BUT NOT LESS THAN 10' FROM A PERMANENTLY INSTALLED COOKING APPLIANCE. CRC314.3.3

SMOKE DETECTOR SHALL BE INSTALLED

A MINIMUM OF 3' FROM A BATHROOM

- CARBON MONOXIDE DETECTOR 115V 100 SQ. IN. MAKEUP AIR GAS SHUT OFF VALVE
- OPTIONAL ICE WATER STUB OUT

HOSE BIB

Mitsubishi Electric Model MUZ-HM24NA + 3 FANS 2 TON HEAT PUMP DUCTLESS SYSTEM HSPF 8.5 /18 SEER - 12.5 EER

**HVAC SYSTEMS:** 

## LOAD CALCULATION:

## 100 AMP SUB-PANEL ADU:

115v DUPLEX +15" TO BOTTOM OR ABOVE COUNTERTOP LIGHTING: 3 VA/SOFT X 795 SOFT => 2385 VA 115v GROUND FAULT INDICATED DUPLEX OUTLET 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: 14385 VA FIRST 10000 VA @ 100% = 10000 VA REMAINDER (CALCULATED AT 10385) @ 40% = 4154 VA

### 2 TON DUCTLESS HEAT PUMP + 3 FAN UNITS = 3500 VA SCONCE LIGHT TOTAL DEMAND = 17654 VA TOTAL AMPERAGE ON A 240 VOLT SYSTEM = 74 AMPS LIGHT / 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 "CONT" NOTATION, SEE BELOW

### ONE CONTINUOUS WHOLE HOUSE VENTILATION NOTED AS CONT", THE SWITCH OPEATING THE FAN BE LABLED TO STATE "FAN SHOULD BE ON WHENEVER THE HOME IS OCCUPIED". THE FAN SHALL BE 3 OUTSIDE

EXHAUST FAN - SEE LIGHT / EXHAUST FAN NOTE, OR

DISCONNECT BOX

220v OUTLET

MS MOTION SENSOR CLOSET LIGHT

(GFCI CIRCUIT @ KITCHEN)

EXTERIOR WALL MOUNT LIGHT W/ PHOTO CELL

CEILING MOUNT OR RECESSED LIGHT

### CLEANOUT FIXTURE COLD WATER HOT WATER VENT YES 1 – <del>1</del> " LAVATORY/SINK SHOWER/TUB $1 - \frac{1}{2}$ " NA NA WATER HEATER PIPING MATERIAL SCHEDULE INTERIOR EXTERIOR NOTES ABOVE FINISH FLOOR TYPE FOR 1ST 18" FROM WATER "M" COPPER OR EQUAL IN ATTIC AND COLD WATER SCHEDULE 40 PVC BELOW GRADE: EXTERIOR WALLS IF PEX TUBING IS USED TYPE"K" SOFT COPPER ALL HOT WATER LINES SAME AS CW SAME AS CW HOT WATER TO BE INSULATED

SCR-35 PVC

BELOW GRADE

PVC COATED BLK.STL.

POLYETHYLENE

THREADED OR WELDED BLK. STL. THREADED

EXTERIOR WALLS.

& OUTSIDE

ABOVE GRADE:

WITH A SNOW LOAD OF 70 PSF OR LESS. USE OF THIS DRAWING FOR REFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE

REPRODUCTION OF THIS DRAWING FOR REUSE ON PROJECTS OUTSIDE

F SHASTA COUNTY BUILDING DEPARTMENT IS NOT AUTHORIZED AN

PERMIT SET

FRVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS

CONTRARY TO THE LAW.

NO-HUB CAST IRON

AROVE FINISH FLOOR TYP

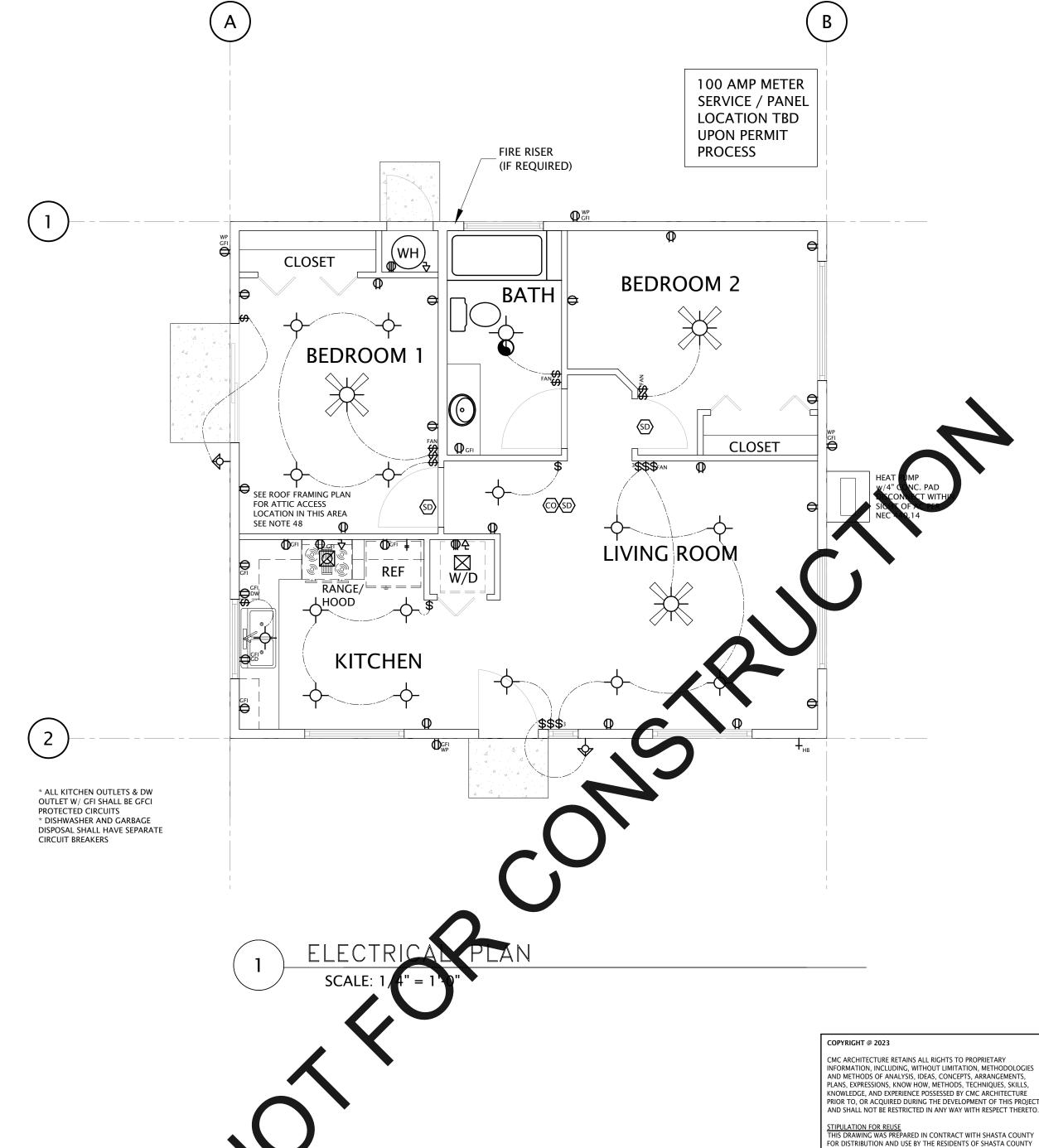
"L" COPPER OR CPVC

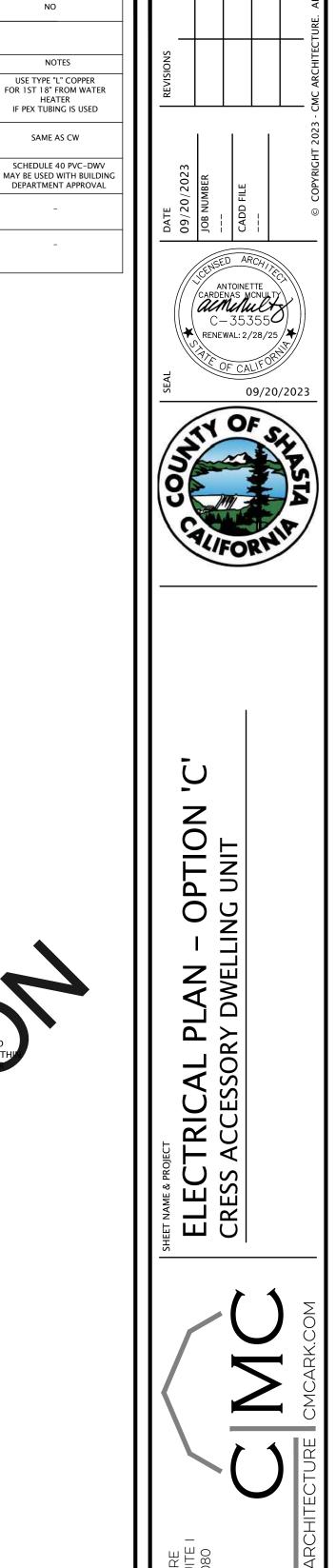
VASTE AND VENT

FIRE SPRINKLER

PIPE CONNECTION SIZE SCHEDULE

FAN SHALL BE 37 CFM (MIN.), 1 SONE OR LESS W/ 4" DUCT TO OUTSIDE
3 SPEED FAN W/ LIGHT. LIGHT MUST BE EITHER PIN-BASED & ELECTRONIC BALLAST COMPACT FLUORESCENT OR CONTROLLED BY A DIMMER SWITCH MEETING THE REQ. OF TITLE 24 SECT. 150(K) ALL CLG. FIXTURE BOXES TO BE METAL & ADEQUATELY SUPPORTED FAN AND LIGHT/FAN COMBO SHALL BE SEPARATELY SWITCHED





- 1 ALL RECEPTACLES SHALL RE CONNECTED TO THE CIRCUIT INDICATED USING ½" 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 CFM MIN. AIRFLOW

CODE AND MANUFACTURE'S SPECIFICATIONS.

- KITCHEN VENTILATION HOOD REQUIRES MANUFACTURE'S DOCUMENTATION ON INSTALLED SYSTEM PERFORMANCE. IF MANUFACTURE DOES NOT PROVIDE PERFORMANCE INFO FOR DUCT SIZE AND I FNGTH. PROVIDE FIELD AIRFLOW TESTING MEASURING CFM OF INSTALLED FAN AND DUCT.
- ALL APPLIANCES, FIXTURES AND EQUIPMENT TO BE INSTALLED AS PER
- 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.
- 8. DRYER TO VENT TO OUTSIDE AIR 14' MAX. W/ 2 BENDS MAX. PER CMC
- 9. USE CEILING FAN BOXES LISTED PER CEC 422–18.

F. CRAWL SPACES

F. BASEMENTS

- 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.
- 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
- 13. AUTOMATIC GARAGE DOOR OPENERS MUST BE UL LISTED R309.4. GARAGE DOOR SPRINGS - PER SECTION 1211 CBC
- 14. 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
- 17. NOT USED.
- 18. NOT USED
- 19. ALL PERMANENTLY INSTALLED LUMINARIES SHALL BE HIGH EFFICACY CA ENERGY CODE SECTION 150.0(k)1A.
- 20. ALL LIGHTING MUST BE SWITCHED SEPARATELY FROM EXHAUST
- 21. ALL LIGHTING CONTROLS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.
- 22. 3-WAY AND 4-WAY SWITCHES AND OTHER LIGHTING 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
- 24. ELECTRICAL RECEPTACLES FOR DISHWASHER AND GARBAGE DISPOSAL TO BE LOCATED UNDER SINK, NOT MORE THAN 36"
- 25. RECEPTACLE IN BATHROOMS, LAUNDRY, GARAGE AND HALLS 10' LONG AND WITHIN 24" ALONG KITCHEN COUNTER SPACES 12" AND WIDER, AND EVERY 12' ALONG ISLANDS PER CEC 210-57.
- OUTDOOR WEATHER PROOF GELRECEPTACLES IN FRONT AN 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
- 29. PROVIDE DISCONNECT WITHIN SIGHT OF AIR CONDITIONING EQUIPMENT PER CEC 440-14.
- 30. PROVIDE 30" WIDE X 36" DEEP WORKING CLEARANCE AT AC DISCONNECT PER CEC 210-12.(b)
- 31. SMOKE DETECTORS SHALL BE HARD WIRED, INTERCONNECTED, W/ BATTERY BACKUP, AND AUDIBLE IN ALL BEDROOMS PER CEC
- 32. DEDICATED 20-AMP CIRCUIT FOR ALL BATHROOM RECEPTACLES PER CEC 210-11.(c) (2) 20 AMP SMALL APPLIANCE BRANCH
- 33. SWITCHED LIGHT AND RECEPTACLE IN ATTIC AND UNDER FLOOR SPACES WITH MECHANICAL EQUIPMENT PER CEC 210-70.(3Xc)
- 34. PROVIDE A LIGHT WITH SWITCH AT ALL EXITS PER CEC 210-70
- 35. DIRECT VENT IS REQUIRED FOR WARM AIR FURNACES IN SLEEPING ROOMS PER CEC 504.5
- 36. EXHAUST FAN DUCTS TO BE INSTALLED PROPERLY WITHOUT DIPS WHERE MOISTURE CAN COLLECT
- VENTILATION SYSTEM CONTROLS SHALL BE LABLED "VENTILATION CONTROL" AND THE HOME OWNER SHALL BE PROVIDED WITH INSTRUCTIONS ON HOW TO OPERATE THE SYSTEM.
- 38. MECHANICAL SYSTEMS INCLUDING HEATING AND AIR CONDITIONING SYSTEMS THAT SUPPLY AIR TO HABITABLE SPACES 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 TO BE FILLED OUT AND PROVIDED TO BUILDING INSPECTOR AT

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. OF 3' FROM ANY OPENINGS INTO THE BUILDING (DRYERS, BATH AND UTILITY FANS ETC) MUST BE 3' AWAY FROM DOORS. WINDOWS, OPENING SKYLIGHTS, OR ATTIC VENTS PER CMC 504.5
- 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
- 47. ATTIC FURNACE NEEDS A 30"X30" PLATFORM AND 24" WALKWAY A MAXIMUM OF 20' FROM THE ACCESS UNLESS 6' OF HEADROOM
- 48. LIGHT AND RECEPTACLE IN ATTIC, SWITCHED AT THE ACCESS, FOR ATTIC EQUIPMENT. LIGHT IN ATTIC TO BE HIGH EFFICIENCY OR CONTROLLED BY A DIMMER OR VACANCY SENSOR. CMC 304.4.4, CEC 210.70

### **RESIDENTIAL LIGHTING REQUIREMENTS:**

### KITCHEN:

- 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 RUNNING. LIGHTS IN WET/DAMP LOCATIONS MUST COMPLY WITH CEC 410.10. 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 RY A VACANCY SENSOR OR DIMMER
- SHALL BE HIGH EFFICACY AND CONTROLLED BY EITHER BY A VACANCY SENSOR OR DIMMER. ALL EXTERIOR LIGHTS, PORCH LIGHTS, BATHROOM OR LAUNDRY ROOM LIGHTS MUST MEET THE

REQUIREMENTS FOR DAMP LOCATIONS PER CEC 410.10

- 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
- CONTROL TYPES: \* PHOTOCONTROL AND MOTION SENSOR, OR PHOTOCONTROL AND AUTOMATIC TIME SWITCH CONTROL, OR \* ASTRONOMICAL TIME CLOCK THAT AUTOMATICALLY TURN OUTDOOR LIGHTING OFF DURING DAYLIGHT HOURS, OR 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

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 OFF DURING DAYLIGHT HOURS.

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). LARELED 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 IA8 CERTIFIED TO BE INSTALLED IN CEILING RECESSED DOWNLIGHTS. ALL CEILING RECESSED DOWNLIGHTS AND ENCLOSED LUMINAIRES MUST BE CONTROLLED BY A DIMMER OR VACANCY SENSOR.
- 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 WHILE THE FAN IS RUNNING \* LUMINAIRES SHALL BE SWITCHED WITH READILY ACCESSIBLE CONTROLS THAT PERMIT MANUAL
- 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.

### **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.
- 2. 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 SHOWER AND TUB PER CPC SECTION 420.0.
- 4. OPTION TO ADD ON DEMAND HOT WATER HEATER 140,000 BTU/HR INPUT, 91 RECOVERY EFFICIENCY OR EQUAL, OR HEAT PUMP TANKED WH

### 5. NA.

6. 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
- 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."

### **ENERGY STORAGE SYSTEMS (ESS) READY**

ALL SINGLE-FAMILY RESIDENCES THAT INCLUDE ONE OR TWO DWELLING UNITS \* smoke and carbon monoxide alarms shall be interconnected in such a SHALL MEET THE FOLLOWING. ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE:

- 1. AT LEAST ONE OF THE FOLLOWING SHALL BE PROVIDED:
  - ESS READY INTERCONNECTION EQUIPMENT WITH A MINIMUM BACKED-UP CAPACITY OF 60 AMPS AND A MINIMUM OF FOUR ESS-SUPPLIED BRANCH CIRCUITS, OR
- A DEDICATED RACEWAY FROM THE MAIN SERVICE TO A PANELBOARD (SUBPANEL) THAT SUPPLIES THE BRANCH CIRCUITS IN SECTION 150.0(s)(2). ALL BRANCH CIRCUITS ARE PERMITTED TO BE SUPPLIED BY THE MAIN SERVICE PANEL PRIOR TO THE INSTALLATION OF AN ESS. THE TRADE SIZE OF THE RACEWAY SHALL NOT BE LESS THAN 1 INCH. THE PANELBOARD THAT SUPPLIES THE BRANCH CIRCUITS (SUBPANEL) MUST BE LABELED "SUBPANEL SHALL INCLUDE ALL BACKED-UP LOAD CIRCUITS."
- A MINIMUM OF FOUR BRANCH CIRCUITS SHALL BE IDENTIFIED AND HAVE THEIR SOURCE OF SUPPLY COLLOCATED AT A SINGLE PANELBOARD SUITABLE TO BE SUPPLIED BY THE ESS. AT LEAST ONE CIRCUIT SHALL SUPPLY THE REFRIGERATOR, ONE LIGHTING CIRCUIT SHALL BE LOCATED NEAR THE PRIMARY EGRESS AND AT LEAST ONE CIRCUIT SHALL SUPPLY A SLEEPING ROOM RECEPTACLE OUTLET.
- 3. THE MAIN PANELBOARD SHALL HAVE A MINIMUM BUSBAR RATING OF 225
- SUFFICIENT SPACE SHALL BE RESERVED TO ALLOW FUTURE INSTALLATION OF A SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH WITHIN 3 FEET OF THE MAIN PANELBOARD. RACEWAYS SHALL BE INSTALLED BETWEEN THE PANELBOARD AND THE SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH LOCATION TO ALLOW THE CONNECTION OF BACKUP POWER SOURCE.

### R328.8.1 ENERGY STORAGE SYSTEMS (ESS) VEHICLE PROTECTION IN GARAGE

WHERE AN ESS IS INSTALLED IN THE NORMAL DRIVING PATH OF VEHICLE TRAVEL WITHIN A GARAGE, IMPACT PROTECTION COMPLYING WITH SECTION 1207.11.7.3 SHALL BE PROVIDED. THE NORMAL DRIVING PATH IS A SPACE BETWEEN THE GARAGE VEHICLE OPENING AND THE INTERIOR FACE OF THE BACK WALL TO A HEIGHT OF 48 INCHES (1219 MM) ABOVE THE FINISHED FLOOR. THE WIDTH OF THE NORMAL DRIVING PATH SHALL BE EQUAL TO THE WIDTH OF THE GARAGE DOOR OPENING. IMPACT PROTECTION SHALL ALSO BE PROVIDED FOR ESS INSTALLED AT EITHER OF THE FOLLOWING LOCATIONS (SEE FIGURE R328.8.1):

- 1. ON THE INTERIOR FACE OF THE BACK WALL AND LOCATED WITHIN 36 INCHES (914 MM) TO THE LEFT OR TO THE RIGHT OF THE NORMAL DRIVING
- 2. ON THE INTERIOR FACE OF A SIDE WALL AND LOCATED WITHIN 24 INCHES (609 MM) FROM THE BACK WALL AND 36 INCHES (914 MM) OF THE NORMAL DRIVING PATH.

EXCEPTION: WHERE THE CLEAR HEIGHT OF THE VEHICLE GARAGE OPENING IS 7 FEET 6 INCHES (2286 MM) OR LESS, ESS INSTALLED NOT LESS THAN 36 INCHES (914 MM) ABOVE FINISHED FLOOR ARE NOT SUBJECT TO VEHICLE IMPACT PROTECTION REQUIREMENTS

### **EV CHARGER REOUIREMENTS:**

- 1). THE BUILDER SHALL INSTALL A NOMINAL ONE (1) INCH INSIDE DIAMETER, LISTED RACEWAY TO ACCOMMODATE A DEDICATED A 208/240 VOLT BRANCH CIRCUIT. THE RACEWAY SHALL ORIGINATE IN THE MAIN OR SUB PANEL, AND WILL TERMINATE INTO A LISTED BOX AT THE PURPOSED SITE OF THE EV CHARGER. THIS AND ALL ADDITIONAL SPECIFICATIONS OF CALIFORNIA GREEN BUILDING STANDARDS SECTION 4.106.4 SHALL BE MEET.
- 2). THE ELECTRICAL LOAD CALCULATIONS INCLUDED TO ACCOMMODATE FOR A DEDICATED 40 AMP CIRCUIT FOR THE EV CHARGING CENTER. CGBS 4.106.4.1 3). THE SERVICE OR SUBPANEL CIRCUIT DIRECTORY SHALL IDENTIFY THE OVERCORRECT PROTECTION DEVICE SPACE(S) AS RESERVED FOR FUTURE EV CHARGING AS "EV CAPABLE. THE RACEWAY TERMINATION LOCATION SHALL BE PERMANENTLY AND VISIBLY MARKED AS "EV CAPABLE"

### CPC604.1.2 PEX

[HCD 1 & HCD 2] ALL INSTALLATIONS OF PEX PIPE WHERE IT IS THE INITIAL PLUMBING PIPING INSTALLED IN NEW CONSTRUCTION SHALL BE FLUSHED TWICE OVER A PERIOD OF AT LEAST ONE WEEK. THE PIPE SYSTEM SHALL BE FIRST FLUSHED FOR AT LEAST 10 MINUTES AND THEN FILLED AND ALLOWED TO STAND FOR NO LESS THAN 1 WEEK, AFTER WHICH ALL THE BRANCHES OF THE PIPE SYSTEM MUST BE FLUSHED LONG ENOUGH TO FULLY EMPTY THE CONTAINED VOLUME. THIS PROVISION SHALL NOT APPLY TO THE INSTALLATION OF PEX PIPE WHERE IT REPLACES AN EXISTING PIPE SYSTEM OF ANY MATERIAL.

- (1) AT THE TIME OF FILL, EACH FIXTURE SHALL HAVE A REMOVABLE TAG APPLIED STATING:
- (a) "THIS NEW PLUMBING SYSTEM WAS FIRST FILLED AND FLUSHED ON \_ (DATE) BY \_\_\_\_\_ \_\_\_\_ (NAME). THE STATE OF CALIFORNIA REQUIRES THAT THE SYSTEM BE FLUSHED AFTER STANDING AT LEAST ONE WEEK AFTER THE FILL DATE SPECIFIED ABOVE. IF THIS SYSTEM IS USED EARLIER THAN ONE WEEK AFTER THE FILL DATE, THE WATER MUST BE ALLOWED TO RUN FOR AT LEAST TWO MINUTES PRIOR TO USE FOR HUMAN CONSUMPTION. THIS TAG MAY NOT BE REMOVED PRIOR TO THE COMPLETION OF THE REQUIRED SECOND FLUSHING, EXCEPT BY THE BUILDING OWNER OR OCCUPANT."
- (2) PRIOR TO ISSUING A BUILDING PERMIT TO INSTALL PEX PIPE, THE BUILDING OFFICIAL SHALL REQUIRE AS PART OF THE PERMITTING PROCESS THAT THE CONTRACTOR, OR THE APPROPRIATE PLUMBING SUBCONTRACTORS, PROVIDE WRITTEN CERTIFICATION THAT HE OR SHE WILL COMPLY WITH THE FLUSHING PROCEDURES SET FORTH IN THE CODE.
- (3) THE BUILDING OFFICIAL SHALL NOT GIVE FINAL PERMIT APPROVAL OF ANY PEX PLUMBING INSTALLATION UNLESS HE OR SHE FINDS THAT THE MATERIAL HAS BEEN INSTALLED IN COMPLIANCE WITH THE REQUIREMENTS OF THE CODE, INCLUDING THE REQUIREMENTS TO FLUSH AND TAG THE SYSTEMS.
- (4) ANY CONTRACTOR OR SUBCONTRACTOR FOUND TO HAVE FAILED TO COMPLY WITH THE PEX FLUSHING REQUIREMENTS SHALL BE SUBJECT TO THE PENALTIES IN HEALTH AND SAFETY CODE, DIVISION 13, PART 1.5, CHAPTER 6 (SECTION 17995, ET SEQ.)

## **ELECTRICAL SYMBOLS**

manner that the activation of one alarm will active all of the alarms in the individual unit. [CRC R314.4 & R315.5] \* smoke alarms and carbon monoxide alarms shall receive their primary power from the building wiring and shall be equipped with a battery backup. [CRC R314.6 & R315.6]

- SINGLE POLE SWITCH DUAL SWITCHED SINGLE POLE SWITCH SMOKE DETECTOR 115V
- \* SMOKE DETECTOR SHALL RE INSTALLED A MINIMUM OF 20' FROM A PERMANENTL' INSTALLED COOKING APPLIANCE. IONIZATION SMOKE ALARM W/ SILENCING SWITCH OR PHOTOELECTRIC SMOKE ALARM REQUIRED WHEN ALARM IS INSTALLED LESS THAN 20', BUT NOT LESS THAN 10' FROM A PERMANENTLY INSTALLED COOKING APPLIANCE. CRC314.3.3 \* SMOKE DETECTOR SHALL BE INSTALLED A MINIMUM OF 3' FROM A BATHROOM OPENING. CRC 314.3.3
- CARBON MONOXIDE DETECTOR 115V 100 SQ. IN. MAKEUP AIR
- OPTIONAL ICE WATER STUB OUT

GAS SHUT OFF VALVE

HOSE BIB

## DISCONNECT BOX

OMS MOTION SENSOR CLOSET LIGHT 115v DUPLEX +15" TO BOTTOM OR ABOVE COUNTERTOP

115v GROUND FAULT INDICATED DUPLEX OUTLET (GFCI CIRCUIT @ KITCHEN) 220v OUTLET EXTERIOR WALL MOUNT LIGHT W/ PHOTO CELL

CEILING MOUNT OR RECESSED LIGHT O— SCONCE LIGHT

## LIGHT / 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 "CONT" NOTATION, SEE BELOW EXHAUST FAN - SEE LIGHT / EXHAUST FAN NOTE, OR

ONE CONTINUOUS WHOLE HOUSE VENTILATION NOTED AS

"CONT". THE SWITCH OPEATING THE FAN BE LABLED TO STATE

"FAN SHOULD BE ON WHENEVER THE HOME IS OCCUPIED". THE FAN SHALL BE 37 CFM (MIN.), 1 SONE OR LESS W/ 4" DUCT TO 3 SPEED FAN W/ LIGHT. LIGHT MUST BE EITHER PIN-BASED & ELECTRONIC BALLAST COMPACT FLUORESCENT OR

CONTROLLED BY A DIMMER SWITCH MEETING THE REO. OF

BE SEPARATELY SWITCHED

TITLE 24 SECT. 150(K) ALL CLG. FIXTURE BOXES TO BE METAL &

ADEQUATELY SUPPORTED FAN AND LIGHT/FAN COMBO SHALL

### **HVAC SYSTEMS:**

Mitsubishi Electric Model MUZ-HM24NA + 3 FANS 2 TON HEAT PUMP DUCTLESS SYSTEM HSPF 8.5 / 18 SEER - 12.5 EER

## LOAD CALCULATION:

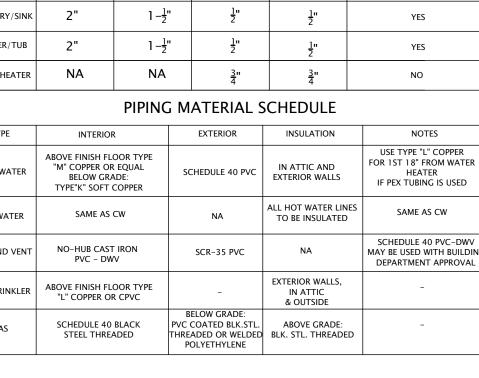
TOO AMP SUB-PANEL ADU:	
LIGHTING: 3 VA/SQFT X 795 SQFT	=> 2385 VA
2 x 1500 VA FOR SMALL APPLIANCE CIRCUITS	=> 3000 VA
1500 VA FOR DISHWASHER	=> 1500 VA
1000 VA FOR GARBAGE DISPOSAL	=> 1000 VA
5000 VA FOR DRYER OR W/D COMBO	=> 5000 VA
1500 VA FOR LAUNDRY	=> 1500 VA
SUR TOTAL: 14385 VA	

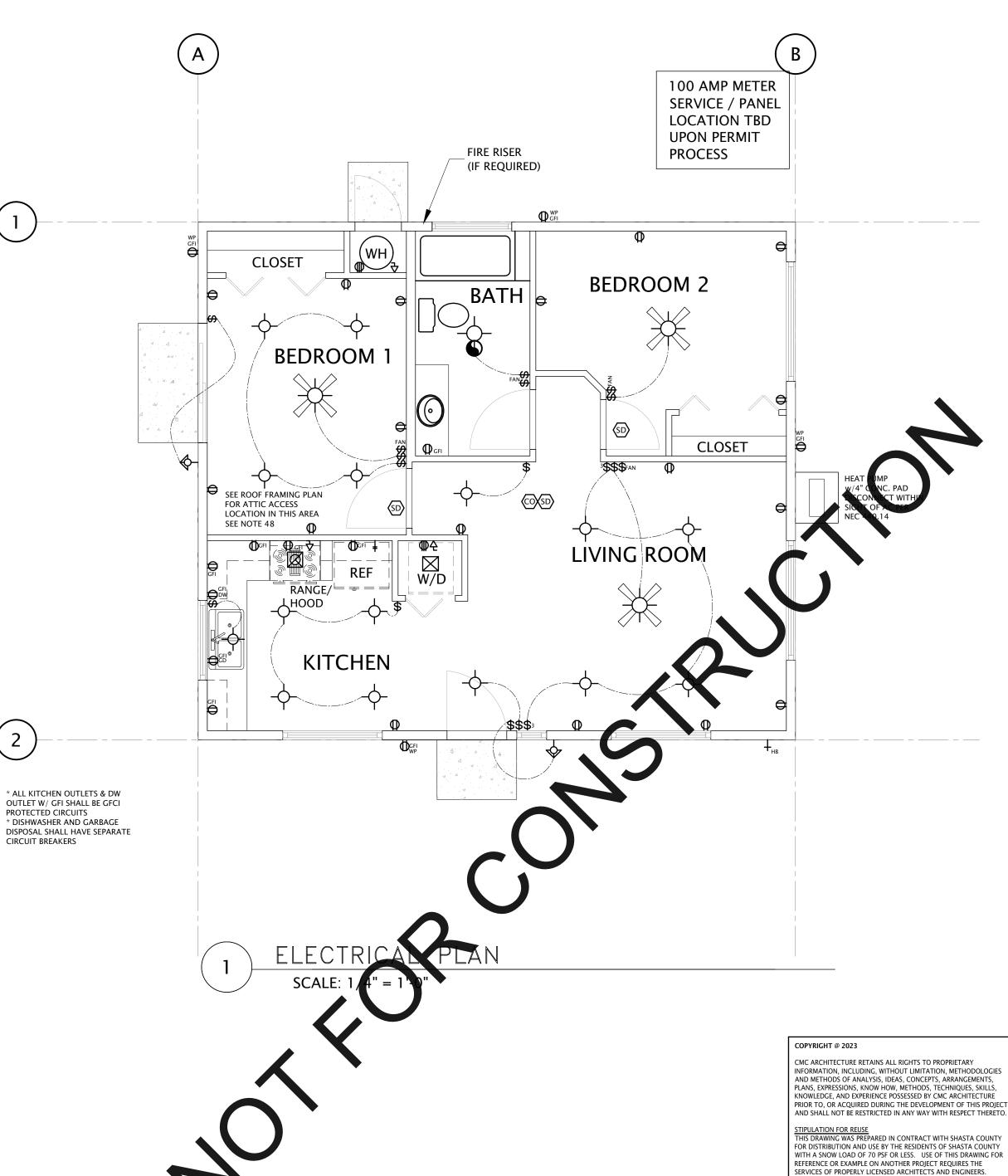
FIRST 10000 VA @ 100% = 10000 VA REMAINDER (CALCULATED AT 10385) @ 40% = 4154 VA 2 TON DUCTLESS HEAT PUMP + 3 FAN UNITS = 3500 VA TOTAL DEMAND = 17654 VA

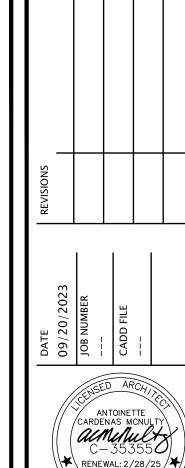
TOTAL AMPERAGE ON A 240 VOLT SYSTEM = 74 AMPS

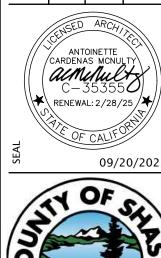
	PIPE CONNECTION SIZE SCHEDULE						
FIXTURE	WASTE	VENT		COLD WATER	HOT WATER		CLEANOUT
WC	4"	2"		<u>1</u> "	_		YES
AVATORY/SINK	2"	1 - ½"		<u>1</u> ''	<u>1</u> "		YES
SHOWER/TUB	2"	1 -\frac{1}{2}"		<u>1</u> "	<u>1</u> "		YES
/ATER HEATER	NA	NA		<u>3</u> " 4	<u>3</u> " 4		NO
PIPING MATERIAL SCHEDULE							
TYPE INTERIOR				EXTERIOR	INSULATION		NOTES

WATER HEATER	NA	NA		<u>3</u> " 4	<u>3</u> " 4	NO		
	PIPING MATERIAL SCHEDULE							
TYPE	INTERIOR			EXTERIOR	INSULATION	NOTES		
COLD WATER	ABOVE FINISH FLOOR TYPE "M" COPPER OR EQUAL BELOW GRADE: TYPE"K" SOFT COPPER			CHEDULE 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 LIN 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	-		
	CCUEDUUE 40 DI ACK			ELOW GRADE:	ADOVE CDADE			









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REPRODUCTION OF THIS DRAWING FOR REUSE ON PROJECTS OUTSIDE

OF SHASTA COUNTY BUILDING DEPARTMENT IS NOT AUTHORIZED AN

S CONTRARY TO THE LAW.

# 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.
- 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.
- 4. 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.
- OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY.

TABLE 4.504.5 FORMALDEHYDE LIMITS

MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

CURRENT LIMIT
0.05
0.05
0.09
0.11
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:

I. 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 W CONCRETE MIX DESIGN, WHICH WILL ADDRESS BLEEDING, SHRINKAGE AND CURLING, SHALL BE USED. FOR ADDITIONAL INFORMATION, SEE AMERICAN CONCRETE OTHER EQUIVALENT METHODS APPROVED BY THE ENFORCING AGENCY.

3. 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 ENCLOSE 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

THE ENFORCING AGENCY AND SHALL SATISFY REQUIREMENTS FOUND IN SECTION 101.8 OF THIS CODE (CGBSC) MOISTURE READINGS SHALL BE TAKEN AT A POINT 2 FEET TO 4 FEET FROM GRADE STAMPED END OF EACH PIECE TO BE VERIFIE AT LEAST 3 RANDOM MOISTURE READINGS SHALL BE PERFORMED ON WALL AND FLOOR FRAMING WITH DOCUMENTATION ASSET 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 DR OR TO ENCLOSURE IN WALL OR FLOOR CAVITIES. WET-APPLIED INSULATION PRODUCTS SHALL FOLLOW THE MANUFACTURERS DRYING RECOMMENDATIONS PRIOR TO ENG

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. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL

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

- a.) HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY PARCE 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 NO. QUIRED TO BE INTEGRAL (BUILT-IN).

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

2. LIGHTING INTEGRAL TO BATHROOM EXHAUST FANS SHALL COMPLY WITH THE CA

### ENVIRONMENTAL COMFORT CGBSC 4.507

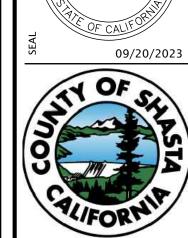
HEATING AND AIR CONDITION SYSTEM DESIGN CGBSC 4.507.2

HEATING AND AIR CONDITIONING SYSTEMS SHALL BE SIZED, DESIGNED AND LAVE THEIR EQUIPMENT SELECTED USING THE FOLLOWING METHODS: THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANS/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 -4 (RESIDENTIAL DUCT SYSTEMS) ASHRAE\_HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

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

ANTOINETTE cardenas monulty AMMALLET **★**\ RENEWAL: 2/28/25 /**★**//



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CMC ARCHITECTURE RETAINS ALL RIGHTS TO PROPRIETA

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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
- 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
- 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. IOISTS 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.)
	2X3	10'-0"
	2X4	14'-0"
	2X6	20'-0"
	3X4	14'-0"
	ED 4 1 411 1 C	EVERDIOD AND IN

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:

 $E = 1.8 \times 10^{\circ} PSI$  $F_h = 2400 PSI$ Fv = 165 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 2022 CBC/CRC

- 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:

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 TOE NAILS EACH SIDE.. BLOCKING BETWEEN JOISTS OR RAFTERS

TO JOIST OR RAFTER BEARINGS - TOE NAILS EACH SIDE ..... 2-8d CROSS BRIDGING BETWEEN IOISTS OR RAFTERS TOE NAILS EACH END..

TO JOIST OR RAFTER - TOE NAILS EACH END....

BLOCKING BETWEEN STUDS ....2-8d TOE NAILS OR 2-16d END NAILS EACH END... TRUSSES OR RAFTERS TO PLATE TOE NAIL ONE SIDE. OTHER SIDE (BACKNAIL) .

DOUBLE TOP PLATES LOWER PLATE TO TOP OF STUD .. UPPER PLATE TO LOWER PLATE ......16d @ 12" STAGGERED UPPER PLATE TO LOWER PLATE AT INTERSECTION ....... 3-16d UPPER PLATE TO LOWER PLATE @ 4'-0" MIN. LAP .....16d @ 6" O.C.

MULTIPLE STUDS...... . 16d @ 12" 

MULTIPLE JOIST 10" OR LESS IN DEPTH.. ..16d @ 12" STAGGERED 

NAILING OF PLYWOOD (UNLESS OTHERWISE SPECIFIED) THICKNESS EDGE NAIL FIELD NAIL

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

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

8d @ 6" O.C.

8d @ 12" O.C.

HORIZONTAL JOINTS.

PLYWOOD GRADES CDX - T&G APA SPAN RATED 32/16. **FLOORS** FACE GRAIN PERPENDICULAR TO

SHEAR PANELS CDX APA, FACE GRAIN UP FULL

3/8" MINIMUM EDG

CDX - APA APPROVED PLYCLIPS AT UNSURPORTED EDGES OVER 24" **ROOF** APA SPAN RATED 24/0.

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

GYPSUM WALLBOAR WALLS, SPECIFIED FOR USE AS SHEAR WALLS, SHEETS SHALL BE CALL WITH ALL EDGES BLOCKED. **INSTALLED VERTI** 

GYPSUN WALLBO ARD FOR THE RATED ASSEMBLIES SHALL BE INSTALLED AS Y REQUIREMENTS.

# REQUIRED NAIL SIZES

NAILING FOR FRAMING

DIAMETER (~) NAIL TYPE LENGTH 8d COMMON 10d COMMON 16d COMMON 8d BOX 10d BOX

NAILING FOR SHEARWALLS, FLOOR & ROOF DIAPHRAGM

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

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FORMATION, INCLUDING, WITHOUT LIMITATION, METHODOLOGIES AND METHODS OF ANALYSIS, IDEAS, CONCEPTS, ARRANGEMENTS,

PLANS, EXPRESSIONS, KNOW HOW, METHODS, TECHNIQUES, SKILLS,

KNOWLEDGE, AND EXPERIENCE POSSESSED BY CMC ARCHITECTURE

PRIOR TO, OR ACQUIRED DURING THE DEVELOPMENT OF THIS PROJECT

AND SHALL NOT BE RESTRICTED IN ANY WAY WITH RESPECT THERETO.

TIPULATION FOR REUSE
HIS DRAWING WAS PREPARED IN CONTRACT WITH SHASTA COUNTY

FOR DISTRIBUTION AND USE BY THE RESIDENTS OF SHASTA COUNTY

EFERENCE OR EXAMPLE ON ANOTHER PROJECT REQUIRES THE ERVICES OF PROPERLY LICENSED ARCHITECTS AND ENGINEERS.

WITH A SNOW LOAD OF 70 PSF OR LESS. USE OF THIS DRAWING FOR

REPRODUCTION OF THIS DRAWING FOR REUSE ON PROJECTS OUTSIDE OF SHASTA COUNTY BUILDING DEPARTMENT IS NOT AUTHORIZED AN S CONTRARY TO THE LAW.

**DESIGN CRITERIA:** 

.. 110 MPH

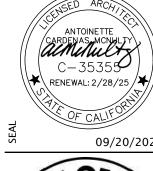
WIND LOAD EXP C (3 SEC. GUST)..

FLOOR LIVE LOAD / SNOW LOAD...

SEISMIC DESIGN CATEGORY.

SOIL CLASS..

.. NA / 50 psf OR 70 psf

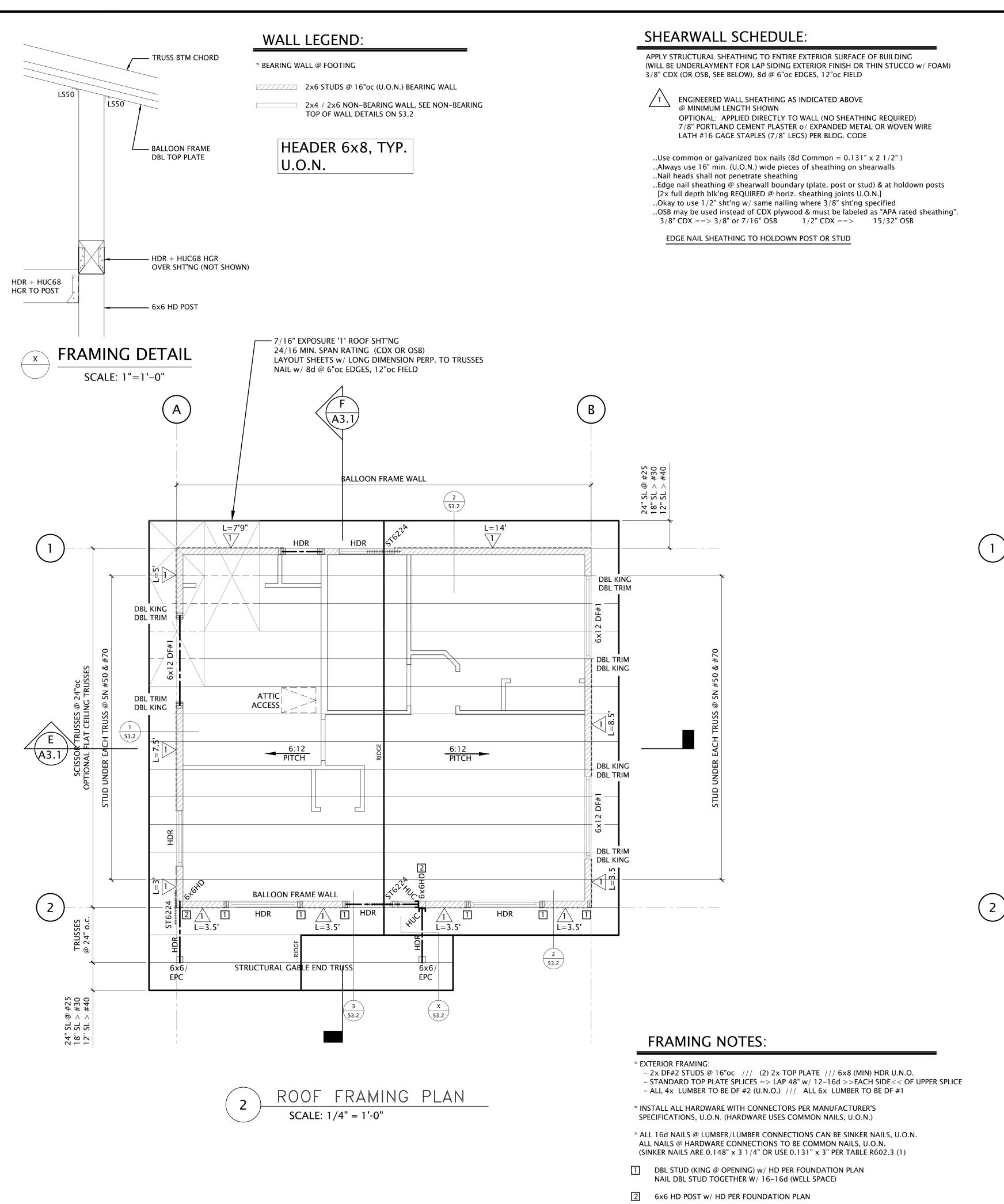




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### **SLAB NOTES:**

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

# SPREAD FOOTING:

O/ 4" (MIN) FREE-DRAINING GRAVEL BASE ( TO 1")

(0.5) NA

2 22" SQ. x 18"DP FTG w/ 2-#4 E.W. @ SNOW LOAD 70 psf 18" SQ. FTG @ SNOW LOAD 50 psf

(3) 18" SQ. FTG @ SNOW LOAD 70 psf NO SPREAD FOOTING REQUIRED @ SNOW LOAD 50 psf

## HOLD DOWN LEGEND

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

HDU2 DOLDOWN w/ SSTB16 ANCHOR @ FOUNDATION LEVEL

L=7'9"

12" FTG.

14" FTG SL #70

18'-0"

=> 18" MIN. DEEP FOOTING

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

\* FOOTING DEPTH 12" DEEP EXCEPT @ FROST ZONE

FOUNDATION PLAN

30'-0"

## **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

\* 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

\* 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 @ 48"oc (MAX.) w/ 7" MIN. EMBED. (CRC R403.1.6/ CBC 2308.6)

- ALL BOLTS REQUIRE 3" x 3" x 1/4" PLATE WASHERS (CRC R403.1.6.1/ CBC 2308.12.)

ANTOINETTE acmenulty ★ RENEWAL: 2/28/25 /★//

Z ()

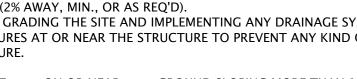
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FOOTING

CMC ARCHITECTURE RETAINS ALL RIGHTS TO PROPRIETARY INFORMATION, INCLUDING, WITHOUT LIMITATION, METHODOLOGIES AND METHODS OF ANALYSIS, IDEAS, CONCEPTS, ARRANGEMENTS, PLANS, EXPRESSIONS, KNOW HOW, METHODS, TECHNIQUES, SKILLS, KNOWLEDGE, AND EXPERIENCE POSSESSED BY CMC ARCHITECTURE PRIOR TO, OR ACQUIRED DURING THE DEVELOPMENT OF THIS PROJECT AND SHALL NOT BE RESTRICTED IN ANY WAY WITH RESPECT THERETO.

<u>STIPULATION FOR REUSE</u>
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SLOPES ON THE SITE (CONTACT DESIGNER FOR ACCEPTABLE ALTERNATIVES).

PROMOTE BONDING w/ STEEL

L=14'

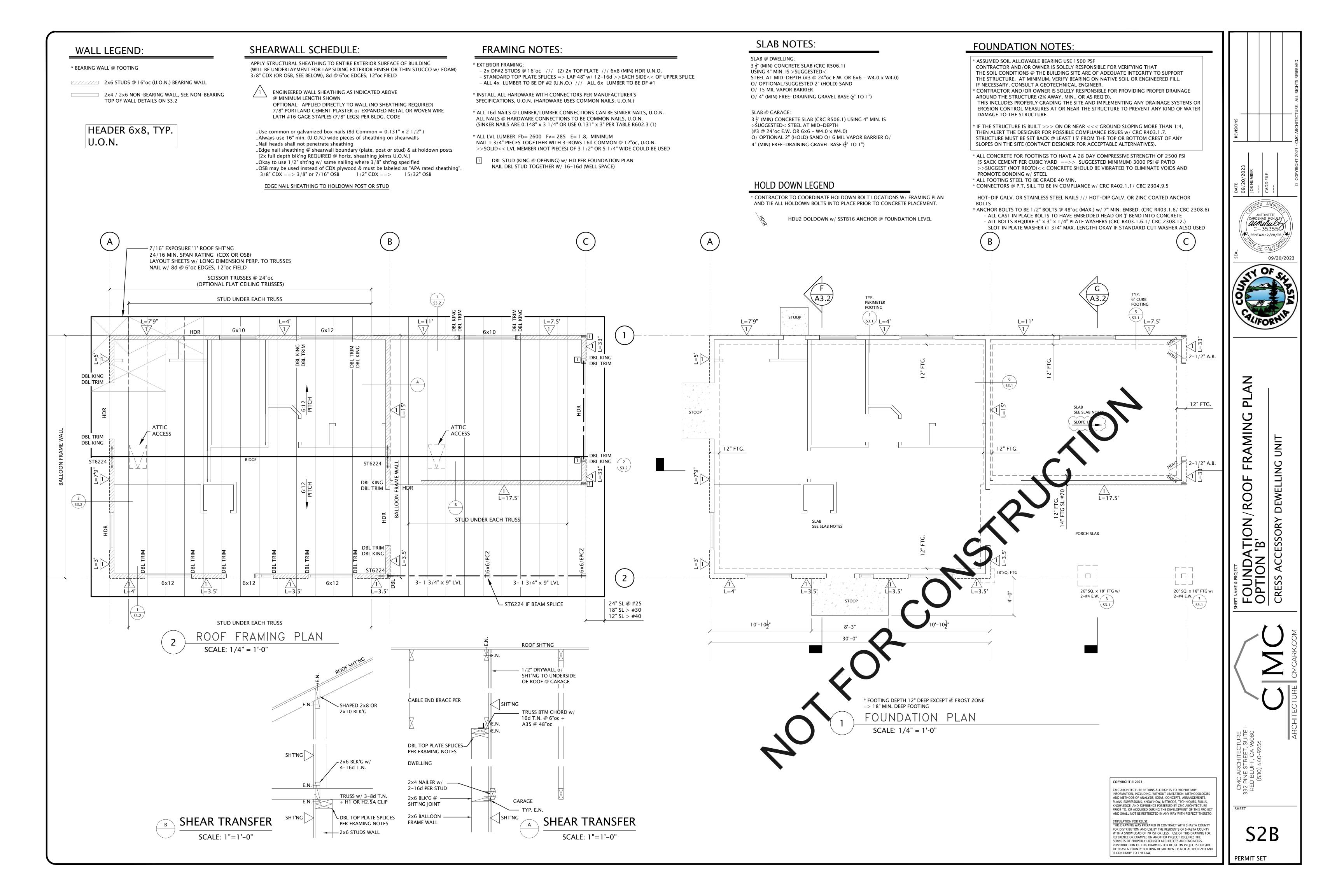
12" FTG. 14" FTG SL #70

L=3.5'

\_ 20"SQ x 18" DP FTG w/ (2) #4 E.W. TYP. 3 S3.1

- ALL CAST IN PLACE BOLTS TO HAVE EMBEDDED HEAD OR 'J' BEND INTO CONCRETE

SLOT IN PLATE WASHER (1 3/4" MAX. LENGTH) OKAY IF STANDARD CUT WASHER ALSO USED



## WALL LEGEND:

\* BEARING WALL @ FOOTING

2x6 STUDS @ 16"oc (U.O.N.) BEARING WALL

2x4 / 2x6 NON-BEARING WALL w/ DTC CLIPS @ 48"oc

HEADER 6x8, TYP. U.O.N.

## SHEARWALL SCHEDULE:

APPLY STRUCTURAL SHEATHING TO ENTIRE EXTERIOR SURFACE OF BUILDING (WILL BE UNDERLAYMENT FOR LAP SIDING EXTERIOR FINISH OR THIN STUCCO w/ FOAM) 3/8" CDX (OR OSB, SEE BELOW), 8d @ 6"oc EDGES, 12"oc FIELD

ENGINEERED WALL SHEATHING AS INDICATED ABOVE @ MINIMUM LENGTH SHOWN

OPTIONAL: APPLIED DIRECTLY TO WALL (NO SHEATHING REQUIRED) 7/8" PORTLAND CEMENT PLASTER o/ EXPANDED METAL OR WOVEN WIRE LATH #16 GAGE STAPLES (7/8" LEGS) PER BLDG. CODE

..Use common or galvanized box nails (8d Common = 0.131" x 2 1/2") ..Always use 16" min. (U.O.N.) wide pieces of sheathing on shearwalls

..Nail heads shall not penetrate sheathing ..Edge nail sheathing @ shearwall boundary (plate, post or stud) & at holdown posts [2x full depth blk'ng REQUIRED @ horiz. sheathing joints U.O.N.]

..Okay to use 1/2" sht'ng w/ same nailing where 3/8" sht'ng specified ..OSB may be used instead of CDX plywood & must be labeled as "APA rated sheathing". 3/8" CDX ==> 3/8" or 7/16" OSB 1/2" CDX ==> 15/32" OSB

EDGE NAIL SHEATHING TO HOLDOWN POST OR STUD

## **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 ( TO 1") \* ASSUMED SOIL ALLOWABLE BEARING USE 1500 PSF

**FOUNDATION NOTES:** 

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).

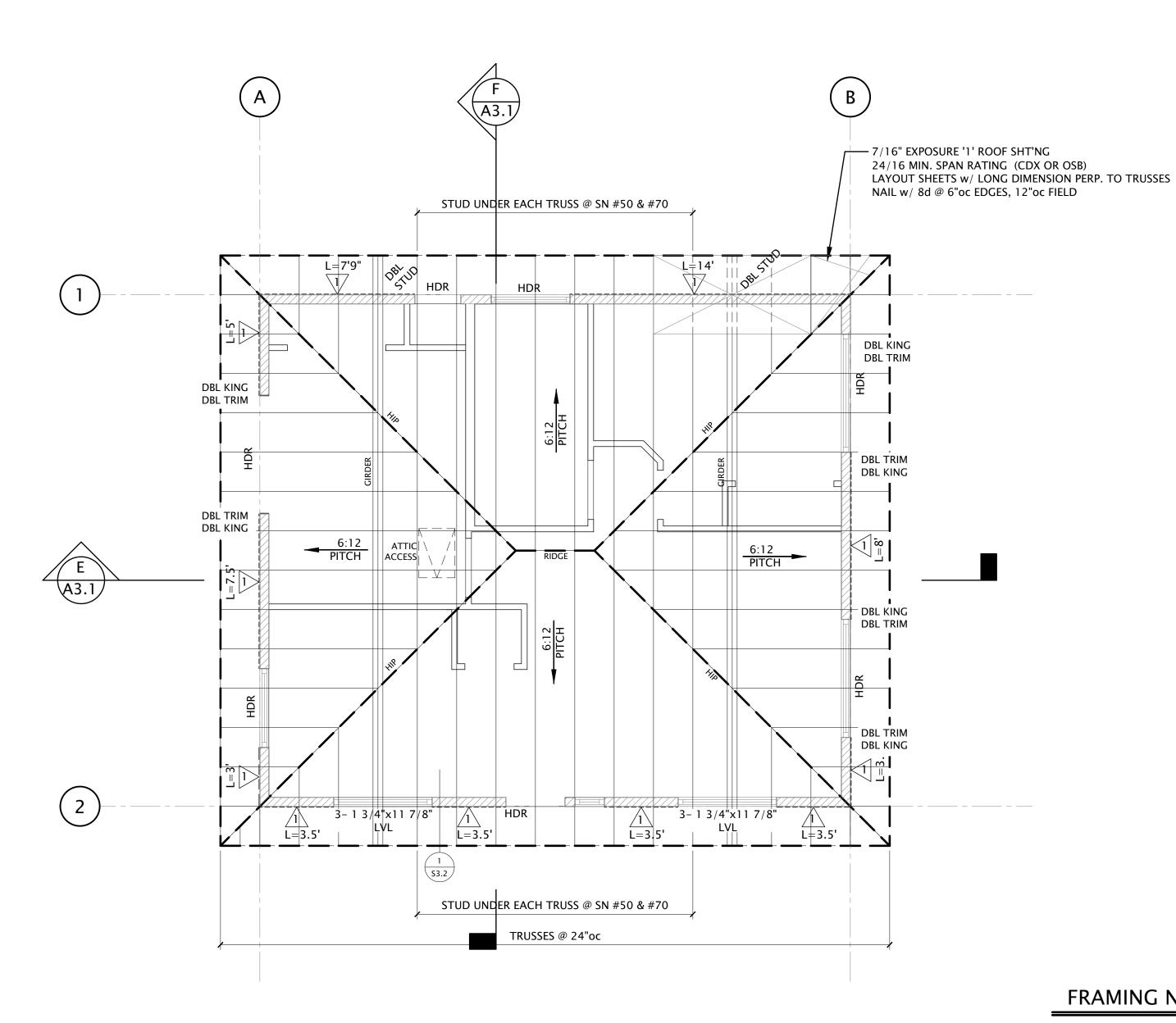
\* ALL CONCRETE FOR FOOTINGS TO HAVE A 28 DAY COMPRESSIVE STRENGTH OF 2500 PSI (5 SACK CEMENT PER CUBIC YARD ==>> SUGGESTED MINIMUM) 3000 PSI @ PATIO >>SUGGEST (NOT REQ'D)<< CONCRETE SHOULD BE VIBRATED TO ELIMINATE VOIDS AND PROMOTE BONDING w/ STEEL

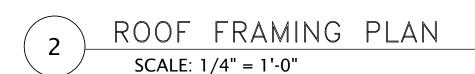
\* ALL FOOTING STEEL TO BE GRADE 40 MIN.

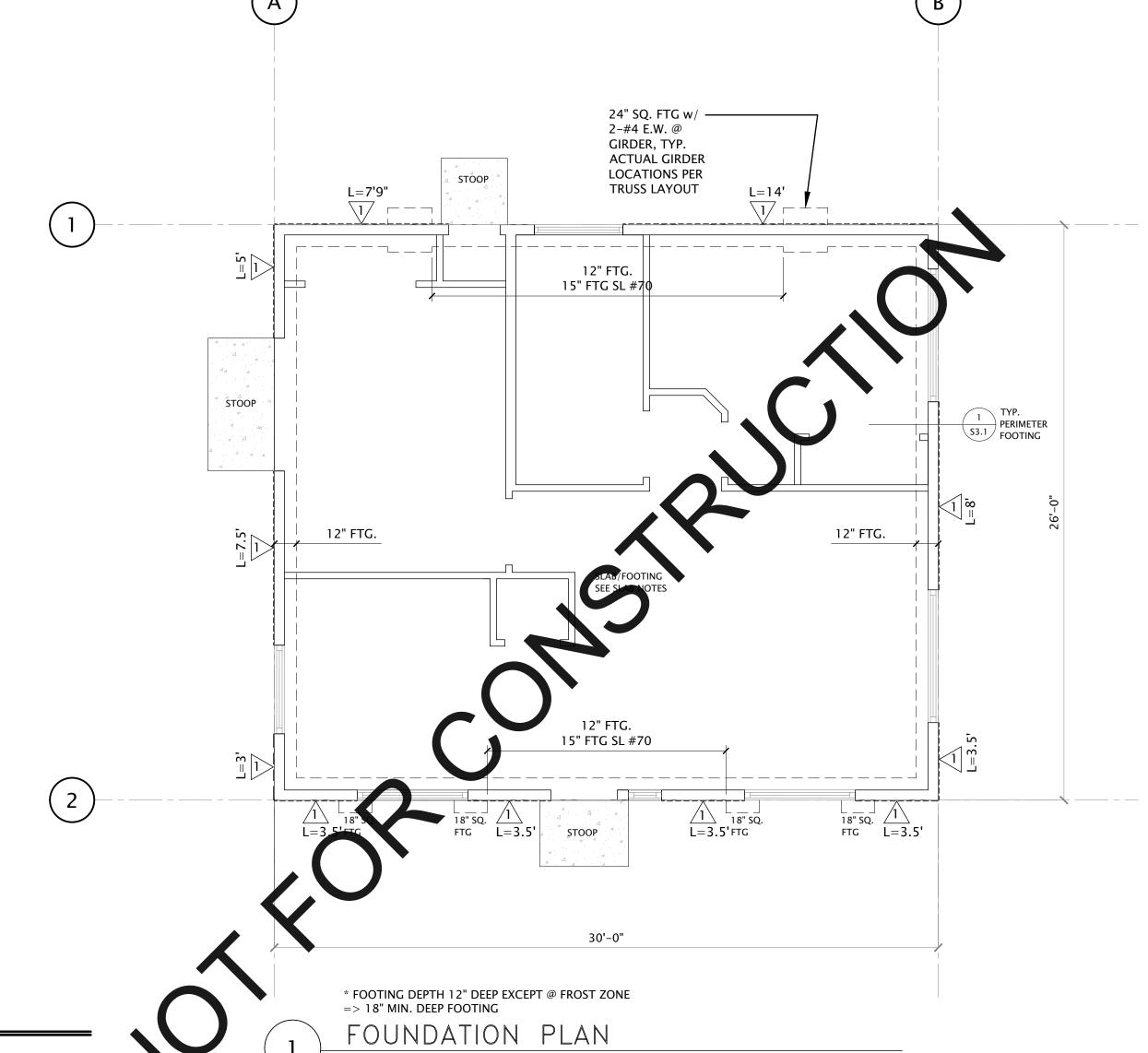
\* CONNECTORS @ P.T. SILL TO BE IN COMPLIANCE w/ CRC R402.1.1/ CBC 2304.9.5

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

\* ANCHOR BOLTS TO BE 1/2" BOLTS @ 48"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







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

FRAMING NOTES:

\* EXTERIOR FRAMING: - 2x DF#2 STUDS @ 16"oc /// (2) 2x TOP PLATE /// 6x8 (MIN) HDR U.N.O. - STANDARD TOP PLATE SPLICES => LAP 48" w/ 12-16d >> EACH SIDE << OF UPPER SPL - ALL 4x LUMBER TO BE DF #2 (U.N.O.) /// ALL 6x LUMBER TO BE DF #1

\* INSTALL ALL HARDWARE WITH CONNECTORS PER MANUFACTURER'S SPECIFICATIONS, U.O.N. (HARDWARE USES COMMON NAILS, U.O.N.)

\* ALL 16d NAILS @ LUMBER/LUMBER CONNECTIONS CAN BE SINKER NAILS, U.O.N. ALL NAILS @ HARDWARE CONNECTIONS TO BE COMMON NAILS, U.O.N. (SINKER NAILS ARE 0.148" x 3 1/4" OR USE 0.131" x 3" PER TABLE R602.3 (1))

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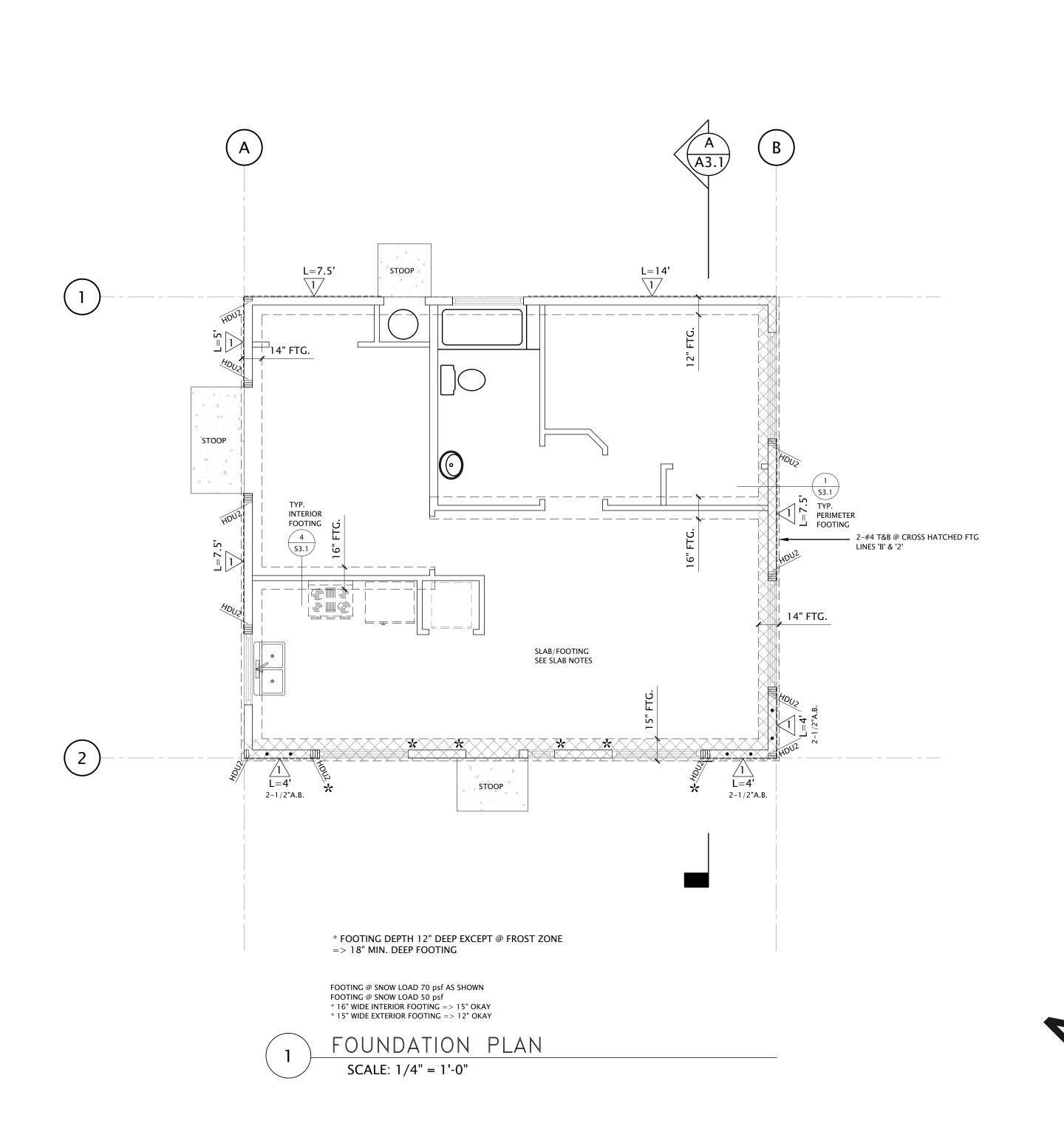
STIPULATION FOR REUSE
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REPRODUCTION OF THIS DRAWING FOR REUSE ON PROJECTS OUTSIDE OF SHASTA COUNTY BUILDING DEPARTMENT IS NOT AUTHORIZED AND IS CONTRARY TO THE LAW.





AMIN

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## **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.
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## **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  $(\frac{1}{2}$ " TO 1")

## HOLD DOWN / BASE ANCHOR LEGEND

\* CONTRACTOR TO COORDINATE HOLDOWN BOLT LOCAT AND TIE ALL HOLDOWN BOLTS INTO PLACE PRIOR T E PLACEMENT.

HDU2 HOLDOWN W/ DBL FULL HEIGHT STUDS DBL KING OR TPL KING @ OPENING) LAMINATED TOGETHER W/ 16 🙅 & W/ STB16 ANCHOR @ FOUNDATION LEVEL

🖈 AT ASTERISK, 2-LMA6Z, SEE FRAMING ELEV USE TWO SIMPSON LMA6Z @ 4.5" APART ONE TO KING STUD + ONE TO 2x6 TRIMMER \* EACH LEG OF LMA6Z DIRECT O SIDE OF SILL PLATE & POST W/ 4–10d x 1.5" (EACH) )PTION

ANTOINETTE

CARDENAS MCNULTY

ACMUNICATION

RENEWAL: 2/28/25 / \*//

PERMIT SET

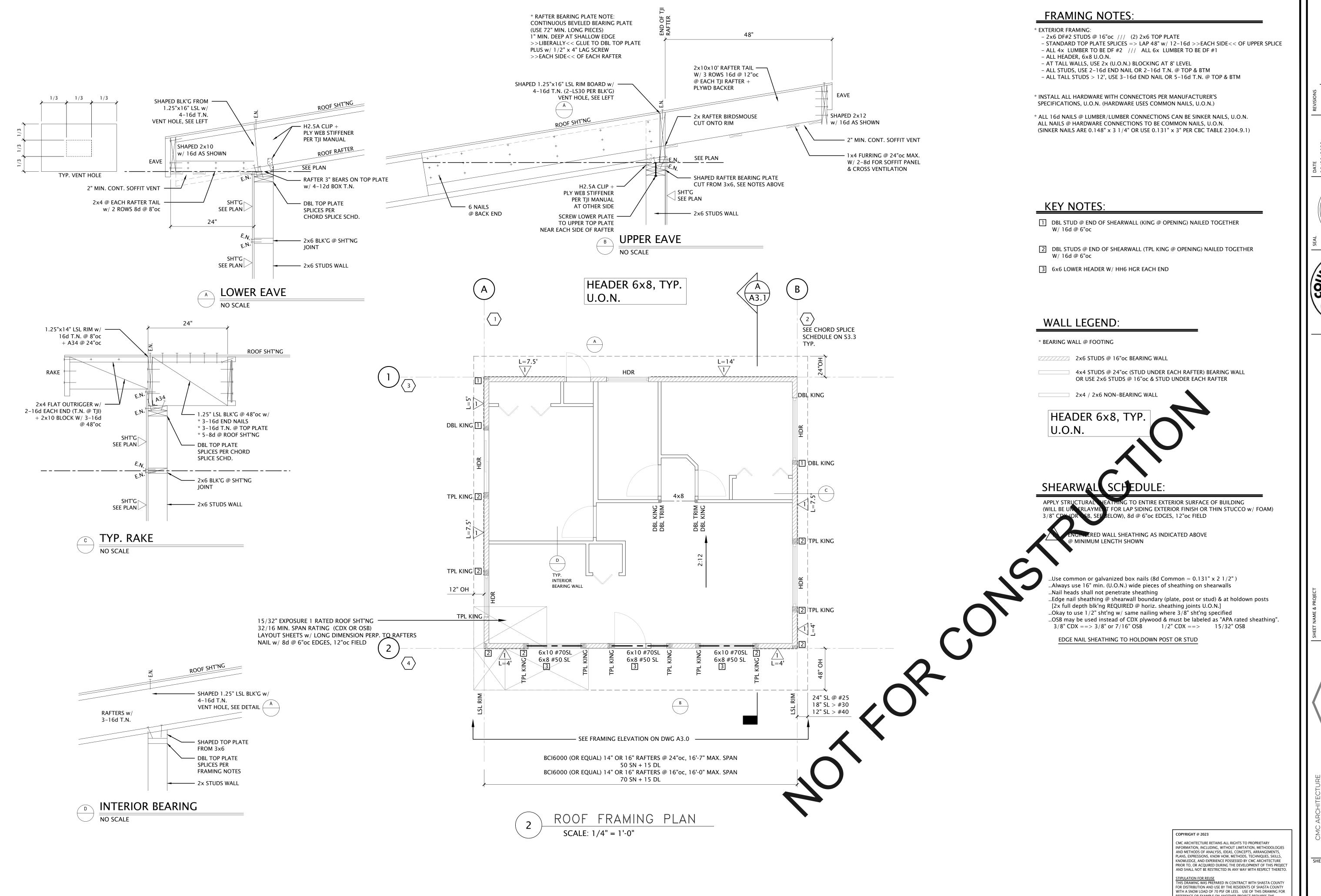
REINFORCE EMBEDDED END OF LMA6Z W #3 HOOK (AT HOLE) + 9" EMBED TO FTG

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ANTOINETTE CARDENAS MCNULTY C - 35355
RENEWAL: 2/28/25

OF CALIFORM

09/20/2023



ROOF FRAMING PLAN – OPTION 'I CRESS ACCESSORY DWELLING UNIT

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

HEET

S3D

