



## Plan Review Checklist and Submittal Guide for One and Two Family Dwellings

### Adopted Codes:

**2013 California Residential Code (CRC)**

**2013 California Building Code (CBC)**

**2013 California Mechanical Code (CMC)**

**2013 California Electrical Code (CEC)**

**2013 California Plumbing Code (CPC)**

**2013 California Energy Code (effective date July 1, 2014)**

**2013 California Green Building Standards Code (CalGreen)**

The intent of this General information and Plan Review Checklist is to assist designers, contractors and homeowners in identifying the most common code items; in need of being placed on building plans to identify compliance with the current Building Codes and Standards adopted and enforced by Tuolumne County.

Please keep in mind that this checklist does not list all requirements in the current California Building Standards Codes. Additional comments may be required upon completion of project reviews. Please note all items listed in the Plan Review Checklist, to the greatest extent possible, should be provided in graphic form on the plans. While general notes are an acceptable means of providing information in some instances it is not the intent of this guide or checklist to have information applied in text form on the plans.

### **GENERAL**

1. Please be prepared to provide the following when applying for a Building Permit:
  - a. 1 completed Land Development and Indemnification Agreement.
  - b. 3 sets of complete building plans.
  - c. 3 sets of complete PLOT PLANS that show compliance with the Tuolumne County Plot Plan Check List.
  - d. 2 sets of an appropriate Energy Compliance Report with appropriate registration number if applicable.
  - e. 2 sets of wet stamped and signed structural calculations if applicable.
  - f. 2 sets of wet stamped and signed truss calculations if applicable.
  - g. A receipt or other verification from the Tuolumne County Superintendent of Schools office certifying all appropriate development fees have been satisfied.
  - h. Two (2) sets of fire sprinkler plans and hydraulic calculations must be submitted or listed as deferred on the Title sheet of the plans. Please note submittal and approval of residential sprinkler plans is required, prior to a frame inspection. If prepared by a C-16 Contractor or Licensed Design Professional sprinkler plans and calculations shall have license number signature and/or wet stamp of the person/firm preparing the design.
  
2. The address of the building, assessor's parcel number (APN), zoning, the name, address and phone number of the owner(s) and person(s) preparing the plans are required on all sheets of the plans (R106.1.1).

3. A complete TITLE SHEET shall be provided with all of the following information:
  - a. Occupancy type, type of construction and square footage of all proposed construction.
  - b. Current Code Editions (2013 CRC, CBC, CEC, CMC, CPC, CGBSC and the 2013 CA Energy Code).
  - c. A complete sheet index that identifies all plan sheet numbers as well as the content of each designated sheet.
  - d. All Special Inspections required either by the Engineer/Architect of Record or as designated in the provided Energy Compliance Report (HERS Verifications).
  - e. All structural criteria, such as Ground Snow Load, Seismic Design Criteria and Wind Speed including Exposure. All projects with a Licensed Architect or Engineer shall include all structural information required per CBC 1603.
  - f. A complete scope of work for the proposed project.
  - g. Clearly identify all of the required compliance measures for the proposed structure(s) from the Energy Compliance Report. This shall include all of the following:
    - i. Heating/Cooling source AFUE, SEER and EER.
    - ii. Duct insulation R- Value.
    - iii. Window SHGC and U Factor
    - iv. Wall, Floor and roof/ceiling insulation R-Value
    - v. Water heater type and efficiency requirement
    - vi. Identify Radiant Barrier if applicable
    - vii. Identify Cool Roof if applicable
    - viii. Identify slab insulation if applicable(hydronic floor systems)
4. Provide complete FLOOR PLANS that show all dimensions and labels the use of each room as well as location, size, operation and type of windows and doors. See Plan Review Checklist for further requirements.
5. Provide a complete ELECTRICAL plan that identifies all electrical fixtures and appliances, plumbing and heating fixtures, mechanical supply and return locations as well as any required manifolds etc.. See Plan Review Checklist for further requirements.
6. Provide a completely dimensioned FOUNDATION plan including exterior and interior footing locations with appropriate detail references. Identify and note the locations, type and size of anchor bolts, rebar, straps, hold-downs, connectors etc. on plans. See Plan Review Checklist for further requirements.
7. Provide complete EXTERIOR ELEVATIONS with a minimum of four (4) elevation views showing all openings, wall, and roof finish materials, original and finish grade, building height, stepped footing outline, crawl vents, attic vents and roof pitch. See Plan Review Checklist for further requirements.
8. Provide complete ROOF FRAMING plans and FLOOR FRAMING plans. Note framing members and sheathing for floor and roof plans, framing for ceiling plans etc. Show size and spacing of joists, rafters, and beams with grade of lumber to be used. Carry all vertical and lateral loads to footings.
9. Provide appropriate CROSS SECTION details that provide true section through building showing structural elements, fireplace sections, and other sections as needed showing earth to wood clearances, floor to ceiling heights, roof slopes, etc.
10. Provide a complete DETAIL sheet, in which all details are referenced at applicable locations on the plans. Details should be provided for foundation, floor, and roof details, beam connections, etc., special framing and flashing details as necessary for construction. Coordinate with truss calculation requirements as appropriate.

## Plan Review Checklist

### Architectural Fire/Life Safety:

1. The use of the California Residential is limited to a maximum of 3,000 square feet for Accessory Structures.
2. Automatic Fire Sprinkler Systems. An automatic residential fire sprinkler system designed and installed in accordance with [CRC R313.3 and/or NFPA 13D] is required for new one- and two- family dwellings and new town houses. This item may be deferred if so indicated on the Title Sheet of the provided plans.
3. Compliance with the provisions of "Wildland Urban Interface" shall be identified on all appropriate locations of the plans. What methods are intended to be used to identify compliance shall be clearly indicated on the plans. [CRC 327].
  - a. All exterior siding shall be noncombustible, ignition resistant or meet the State Fire Marshal Testing standard.
  - b. All exterior glazing shall be have 1 min. tempered pane or be a 20 min. rated assembly.
  - c. All roof projections, at the lowest portion of the roof rafter or truss shall be protected with noncombustible materials, ignition resistant materials or meet the State Fire Marshal Testing Standard. Covered porches etc. shall have ceilings protected. This requirement does not apply to gable end eaves or unenclosed porches without ceilings.
  - d. Eave vents are prohibited or shall be of the type to resist intrusion of embers and flames.
  - e. All gutters shall be provided with debris barriers.
  - f. Exterior doors shall be 20 min. assemblies, solid core with 1 3/8" thick stiles and rails & 1 1/4" interior field panel thickness or of noncombustible construction.
4. Smoke alarm location within dwelling units. In dwelling units, a smoke alarm shall be installed in each sleeping room and at a point centrally located in the corridor wall or ceiling giving immediate access to each separate sleeping area. For multi-story dwelling units and dwellings with basements, a smoke alarm is required in each story and in basement. When sleeping rooms are on an upper level, the smoke alarm shall be placed at the ceiling of the upper level in close proximity to the stairway. Smoke alarms shall sound an alarm audible in all sleeping areas of the dwelling unit in which they are located. In new construction required smoke alarms shall receive their primary power from a commercial source and have a battery backup. [CRC R314.4].
5. Carbon Monoxide Alarms. For new construction, an approved carbon monoxide alarm shall be installed in dwelling units and in sleeping units within which fuel-burning appliances are installed and in dwelling units that have attached garages. Carbon monoxide alarms shall be installed outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s) and on every level of a dwelling unit including basements.
  - a. When alterations, repairs, or additions have a value in excess of \$1,000 and a permit is required, or when one or more sleeping rooms are added or created, smoke alarms and carbon monoxide alarms shall be installed in accordance with [CRC R314.6] and [CRC R315.2].
6. In climate zones 14 and 16 a Class II vapor retarder shall be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air permeable insulation. [CalEnergy 150(g)(1)].

7. Emergency escape and rescue, from basements in dwelling units and every sleeping room below the fourth story, shall have at least one operable window or door approved for emergency escape or rescue that shall open directly into a public way, yard, or court that opens to a public way. [CRC R310]
  - a. Minimum size of Single Hung windows for Egress purposes shall be 3'x5'. All other window operations will be evaluated for appropriate clearances with a reduction of 4" in each direction.
  - b. Minimum net clear opening area of 5.7 ft<sup>2</sup>  
Exception: 5 ft<sup>2</sup> required for grade-floor openings, net clear opening not greater than 44-in above grade.
  - c. 24-in minimum net clear opening height
  - d. 20-in minimum net clear opening width, and
  - e. Bottom net clear opening not greater than 44-in above the finished floor.
8. All garages (U occupancies) attached to single-family dwellings (R-3 occupancies) shall be separated by a minimum of ½-in gypsum board applied to the garage side. The separation requires self-closing, tight fitting solid wood doors or honeycomb core steel doors not less than 1 3/8-in thick, or a self-closing and self-latching 20-minute doors. [CRC R302.6]
9. The underside of floor framing members, in an area intended for storage or containing a fuel fired appliance shall be provided with a minimum ½" gypsum board or 5/8" wood structural panel. [CRC 501.3 exception 2]
10. Ducts within private garages are to be constructed of steel having a thickness not less than No. 26 gage 0.019-inch sheet steel and have no openings into the garage. [CRC R302.5.2]
11. Natural light required for all habitable rooms at 8% minimum of the floor area served by means of exterior glazed openings. [CRC R303.1]
12. Natural ventilation required for all habitable rooms at 4% minimum of the floor area served by means of operable exterior openings. [CRC R303.1]
13. Minimum room widths for habitable spaces in any dimension other than a kitchen shall be no less than 7-ft. Kitchens. [CRC R304.3].
14. Ceiling height in habitable space, hallways, bathrooms, toilet rooms, laundry rooms and portions of basements containing these spaces shall have a ceiling height of not less than 7 feet. [CRC R305.1].
15. Safety glazing is required for all glazing located in "hazardous locations" such as: [CRC R308]
  - a. Ingress and egress doors (except jalousies); fixed and sliding panels of sliding door assemblies and panels in sliding and bi-fold closet door assemblies; in swinging doors; storm doors.
  - b. Glazing in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers; glazing in walls enclosing these compartments where bottom exposed edge of the glazing is less than 60-in above a standing surface and drain inlet.
  - c. Fixed or operable panels adjacent to a door where the nearest exposed edge of the glazing is within a 24-in arc of either vertical edge of the door in a closed position, and where the bottom exposed edge of the glazing is less than 60-in above the walking surface.

- d. In an individual fixed or operable panel that meets all of the following: a) exposed area of individual pane is greater than 9 ft<sup>2</sup>; b) exposed bottom edge is less than 18-in above floor; c) exposed top edge is greater than 36-in above floor; and d) one or more walking surfaces are within 36-in horizontally of the plane of the glazing.
  - e. Railings, regardless of height above a walking surface, including structural baluster panels and non-structural in-fill panels.
  - f. In walls and fences used as the barrier for indoor and outdoor swimming pools and spas when it meets all of the following: a) bottom edge of glazing is less than 60" above pool side of glazing, and b) glazing is within 5-ft of a swimming pool or spa water's edge.
  - g. In walls enclosing stairway landings or within 5-ft of the bottom and top of stairways where the bottom edge of the glass is less than 60in above a walking surface.
16. Under-stair protection. Enclosed accessible space under stairs shall have walls, under-stair surface and any soffits protected on the enclosed side with ½ -inch gypsum board. [CRC R302.7].
17. Stairways. Stair treads and risers shall meet these requirements. [CRC R311.7]
- a. 7 ¾ -in maximum rise [CRC R311.7.4.1], 10-in minimum run [CRC R311.7.4.2], 36-in minimum width. [CRC R311.7.1]
  - b. The largest tread run and greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8-in.
  - c. A nosing of not less than ¾-in and not more than 1 ¼-in shall be provided on stairways with solid risers where the tread depth is less than 11-in.
  - d. Maintain 6-ft 8-in minimum headroom clearance and 12-ft maximum vertical distance between landings. [CRC R311.7.2] [CRC R311.7.5]
18. Handrails are required on at least one side of each continuous run of treads or flight with four or more risers. [R311.7.8]. Handrails shall meet the following:
- a. Railing height minimum 34-in and maximum 38-in above the nosing of the treads. [CRC R311.7.7.1]
  - b. Graspable rails required 1¼-in to 2-in; maximum projection of 1½-in between wall and rail; ends to return to wall or newel posts.
  - c. Non-circular handrails shall have dimensions not to exceed 2 ¼ -in in cross sectional area and a perimeter dimension of at least 4-in but not to exceed 6 1/4-in. [CRC R311.8.3.1]
19. Guardrails in dwellings (R-3 and U Occupancies) are required on elevated areas of 30-in or greater above surrounding grade or floor level within 36"horizontally (i.e., walkways, porches, balconies) shall meet the following: [CRC R312]
- a. 42-in minimum height.
  - b. Guards on open sides of stairs shall not have openings which allow passage of a sphere 4 3/8 inches in diameter. Were the guard also serves as a handrail on the open side, shall not be less than 34 inches and not more than 38 inches in height. [CRC R312.2]
  - c. Required guards shall not have openings from the walking surface to the required guard height which allow passage of a sphere 4 inches in diameter. [CRC R312.3]
20. Landings at stairways and doors shall have a width of not less than the width of the door or the width of the stairway served, whichever is greater. For dwelling units and garages, landings shall have a length measured in the direction of travel of not less than 36-in. [CRC R311.7.6]
21. Interior spaces intended for human occupancy shall be provided with heating facilities capable of maintaining a room temperature of 68° F at a point 3-ft above the floor in all habitable rooms. [CRC R303.9]

22. Wood burning stoves shall be listed for their proposed installation and shall be identified to meet EPA Phase II criteria on the plans. [CALGreen 4.503.1] Identify the appropriate listing on the plans.
23. Factory built chimneys and factory built fireplaces shall be listed and installed in accordance with the terms of their listing and manufacturer's instructions. [CRC R1004.1] [CBG 4.503] any installed gas fireplace shall be a direct-vent sealed-combustion type.
24. Masonry chimneys, unless a specified design is provided, shall be constructed, reinforced and anchored. Required clearances to combustibles materials shall be maintained. [CRC R1003]
25. Fire blocking required for combustible construction in the following concealed spaces of stud walls and partitions spaces, including furred spaces as follows: [CRC R302.11]
  - a. Vertically at the ceiling and floor levels.
  - b. Horizontally at intervals not exceeding 10-ft.
  - c. Interconnections between concealed vertical stud walls and concealed horizontal spaces created by floor systems, soffits, drop ceilings, cove ceilings, and similar locations.
  - d. Between stair stringers at top and bottom of run.
  - e. Around vent openings, pipes, ducts, chimneys, fireplaces, similar openings that afford passage for fire.
26. Attic / Under-floor net free ventilation required of not less than 1 ft<sup>2</sup> for each 150 ft<sup>2</sup> of space to be ventilated. Provide calculations and identify compliance on the plans [CRC R408.2] [CRC R806.1]
  - a. OR 1 ft<sup>2</sup> for each 300 ft<sup>2</sup> if 50% of venting near top.
  - b. OR install vapor barrier on warm side of attic insulation.
  - c. Openings for ventilation to be covered with corrosion-resistant metal mesh not exceeding ¼-in openings.
  - d. Vents placed in eave locations shall be approved by the California State Fire Marshal to resist the intrusion of Flame and Embers.
  - e. Allow for 1-in minimum air space between insulation and roof sheathing at eaves or cornice vents.
27. Crawl space access opening shall be provided and be not less than 18-in x 24-in. or the size of any equipment installed in this area whichever is greater. [CRC R408.4]
28. Attic access. The rough-framed opening shall not be less than 22 inches by 30 inches, or the size of any equipment installed in the attic space, whichever is greater and shall be located in a hallway or other readily accessible location with 30-in minimum vertical headroom. [CRC R807]

\*Note: Attics with a maximum vertical height of less than 30-in need not be provided with access openings.
29. Exterior stucco application shall consist of a 3-coat system, 7/8-in minimum thick; two layers of Grade "D" building paper over sheathing; 26 Gauge galvanized weep screed at foundation plate line at least 4-in above grade (or 2-in above concrete or paving). [CRC R703.6]
30. Address shall be placed on the front-main entrance area of all new buildings that is plainly visible and legible from the street or road on which the property is addressed. Address numbers shall be permanent and contrast with their background. The numbers shall be a minimum of 4 inches in height with a minim ½" stroke. Numbers shall be reflecting and of contrasting color. Houses further than 50' from the road shall have the numbers posted at the beginning of the driveway. [TC Ord. Code 12.12.080] [CRC R319]

## **Mechanical System Requirements:**

31. Domestic clothes dryer moisture exhaust ducts to be installed as follows: [CMC 504.3.1]
  - a. Terminate on the outside of the building and be equipped with a back draft damper.
  - b. Not be connected or installed with sheet metal screws or other fasteners, which will obstruct the flow.
  - c. 14-ft maximum run with two 90° bends, deduct 2-ft per 90° bend in excess of two bends as required by the manufacturer's installation instructions and approved by the building official.
32. When a closet is designed for the installation of a clothes dryer, a minimum opening of 100 in<sup>2</sup> for make- up air shall be provided in the door or by other approved means. [504.3]
33. Listed cooking appliance or microwave oven above a listed cooking appliance shall conform to the conditions of the upper appliance's listing and the manufacturer's installation instructions. [CMC 916.2]
34. Kitchens shall be provided with mechanical exhaust hood capable of 100cfm or provide continuous mechanical ventilation providing for 5 air changes per hour [2013 Energy Standards ASHRAE 62.2].
35. Rooms containing bathtubs, showers, spas and similar bathing fixtures shall be provided with mechanical ventilation as per [CMC 402.5]. [CRC R303.3] and shall be provided a humidistat or other means of humidity control [CALGreen 4.506.1].
36. Domestic range vents, or ducts used for domestic kitchen range ventilation, shall be of metal and have smooth interior surfaces. [CMC 504.2].

Exception: Downdraft grill-range ventilation installed under a concrete slab floor may be of approved Schedule 40 PVC provided:

  - A. The under-floor trench where duct is installed is completely backfilled with sand or gravel.
  - B. Not more than 1-in of 6-in diameter PVC coupling may protrude above the concrete floor surface.
  - C. PVC pipe joints shall be solvent cemented to provide an air- and grease-tight duct.
  - D. Duct shall terminate above grade outside the building and be equipped with a backdraft damper.
37. All Exhaust vents shall terminate outside the building and be equipped with backdraft dampers [CMC 504.1]. Termination of all environmental air ducts shall be a minimum of 3-ft from any openings into the building (i.e., dryers, bath and utility fans, etc., must be 3-ft away from doors, windows, opening skylights or attic vents). [CMC 504.5].
38. Fuel burning equipment shall be assured a sufficient supply of combustion air as per CMC Chapter 7. Identify compliance on the plans
39. Unvented fuel-burning room heaters shall not be installed, used, maintained, or permitted to exist in a dwelling unit. [CMC 924]

40. Appliances located in attics shall be accessible through an opening and passageway large enough to accommodate the largest piece of equipment and, and in no case be less than 22-in 30-in x 30-in. Also it shall have the following: [CMC 904.8]
- a. The distance from the passageway access to the appliance shall not exceed 20-ft when the headroom clearance is less than 6-ft and be measured along the centerline of the passageway.
  - b. Passageway shall be unobstructed and shall have a continuous solid flooring not less than 24-in wide from the entrance opening to the appliance.
  - c. A level working platform not less than 30-in in depth and width provided in front of the service side of the appliance.
  - d. A permanent electric outlet and lighting fixture controlled by a switch located at the passageway opening shall be provided at or near the appliance.
41. Vent termination type B or L vents with listed vent caps 12-in in size or smaller shall be permitted to be terminated in accordance with Figure 8-2, provided they are located at least 8-ft from the vertical wall or similar obstruction. All other Type B gas vents shall terminate not less than 2-ft above the highest point where they pass through the roof and at least 2-ft higher than any portion of a building within 10-ft. [CMC 802.6]
- \*Note: Single wall metal vent connectors shall not originate in an unoccupied attic or concealed space and shall not pass through an attic, inside wall or concealed space.
42. Equipment covered by this code that is located in a garage and generates a glow, spark or flame capable of lighting flammable vapors shall be installed on an enclosed platform with sources of ignition at least 18-in above the floor level. [CMC 308.1]
43. Approval of equipment, whether listed or unlisted equipment shall comply with provisions of [CMC Section 302.2].
44. Vented decorative appliances, floor furnaces, vented wall furnaces, unit heaters and room heaters shall comply with the provisions of CMC Chapter 9.

**Electrical Systems Requirements:**

45. All Dwellings 3,000 square feet or larger shall provide complete electrical sizing calculations for the main service panel or clearly designate a minimum 200amp panel.
46. A grounding electrode shall be provided per [CEC Article 250-50].
47. Branch circuits for lighting and for appliances, including motor-operated appliances, shall be provided to supply the loads computed in accordance with CEC Article 220. In addition, branch circuits shall be provided where required elsewhere in this code and for dwelling unit loads as specified in [CEC Article 210.11(c)].
48. Provide two or more 20-amp small-appliance circuits to serve all countertop, wall and floor receptacles in the kitchen, pantry, breakfast room, dining room, or similar areas. Receptacle outlets shall be installed at each wall, island and peninsular counter space in kitchens and dining rooms per the requirements found in [CEC Article 210.52 (B) and (C)]. Such circuits shall have no other outlets.
49. At least one 20-ampere branch circuit shall be dedicated to supply bathroom receptacles. At least one receptacle is required within 3-ft of each basin.[CEC Articles 210.11(C)(3)] [CEC 210.52(D)]

50. Where the 20-ampere circuit supplies a single bathroom, outlets for other equipment within the same bathroom shall be permitted to be supplied in accordance with [CEC Article 210.23(A)(1) and (A)(2)].
51. At least one additional 20-ampere branch circuit shall be dedicated to supply laundry receptacle outlet(s) required by [CEC Articles 210-11(C)(2) & 210-52(F)]. This circuit shall have no other outlets.
52. Provide G.F.C.I. protection to all 125 volt, 15 and 20 amp receptacles serving the following: [CEC Art. 210.8(A)]
- a. countertop surfaces in kitchens
  - b. within 6-ft of laundry
  - c. sinks other than kitchen sinks
  - d. bathrooms
  - e. unfinished basements
  - f. garages and accessory buildings
  - g. crawl spaces at or below grade.
  - h. boathouses
53. Hydro-massage bathtubs and their associated electrical components and all 125-volt single phase receptacles not exceeding 30 amperes and located within 5-ft of them shall be protected by a ground-fault circuit interrupter. [CEC Art. 680-71]
54. Receptacle outlets shall be installed so that no point along the floor line in any wall space is more than 6-ft measured horizontally from an outlet in that space. Receptacle outlets are required in walls 2-ft or greater. Hallways of 10-ft or more in length shall have at least one receptacle outlet. [CEC Art. 210.52(A) and (H)]
55. All 120-volt, single phase, 15- and 20-ampere *branch circuits* supplying outlets installed in dwelling unit family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas shall be protected by a listed arc-fault circuit interrupter, combination type installed to provide protection of the branch circuit. [CEC Art. 210.12]
56. Dwellings with direct grade level access shall have at least one receptacle outlet at grade level at the front and back of the dwelling. All 125 volt, 15 and 20 amp receptacles installed outdoors shall be G.F.C.I. protected. Receptacles installed outdoors in an exterior wet location shall have an enclosure that is weatherproof with the attachment plug cap inserted or removed. [CEC Art. 210.52, 406.8(B)]
57. At least one receptacle outlet, in addition to any provided for laundry equipment, shall be installed in each basement, in each attached garage, and in each detached garage with electric power. [CEC 210.52(G)]
58. At least one wall switch-controlled lighting outlet shall be installed in every habitable room, in bathrooms, hallways, stairways, attached garages, detached garages with electric power, and at outdoor entrances or exits. [CEC 210.70(A)]
59. Tamper-Resistant Receptacles in Dwelling Units. In all areas specified in 210.52, all 125 volt, 15 and 20 ampere receptacles shall be listed as tamper-resistant receptacles. [CEC 406.12]

60. Light fixtures that weight more than 6lbs or exceed 16-in in any dimension shall not be supported by the screw shell of a lamp holder. [CEC Art. 410.30(A)]
61. Outlet boxes or outlet box systems used as the sole support of a ceiling-suspended (paddle) fan shall be listed and marked by the manufacturer as suitable for this purpose. The required marking shall include the maximum weight to be supported for ceiling fans that weigh more than 35-lbs. [CEC Art. 314.27(D), 422.18]
62. Electric water heaters require a disconnecting means within sight from the appliance or have a rated switch or circuit breaker capable of being locked in the open position. [CEC Art. 422.31(B)]
63. Provide a disconnecting means at air condition units and heat pumps with sight from and readily accessible. Provide fuses or approved circuit breakers to protect the A.C. equipment and the branch circuit serving such equipment and the unit nameplate ratings. [CEC Art. 440.14, 440-52(B)]
64. An accessible 125-volt, single phase, 15 or 20 amp rated receptacle outlet shall be installed on the same level and within 25-ft of heating and air conditioning equipment. This service receptacle shall not be connected to the load side of the equipment disconnecting means. [CEC Art. 210.63]
65. Receptacles within bathtub or shower space are prohibited, even if enclosed. [CEC Art. 406.9(C)]
66. Cord-connected lighting fixtures, lighting tracks or ceiling-suspended (paddle) fans within 3-ft of horizontal edge and 8-ft vertical above top of tub/shower dam are prohibited. [CEC Art. 410.10(D)]
67. Service or Sub-Service Electrical Panels shall not be located in the vicinity of easily ignitable material(s) such as clothes closets or located in bathrooms. [CEC Art. 240.24(D), 240.24(E)].
68. Lighting in Garages, Laundry Rooms, and Utility Rooms shall be high efficacy and controlled by a Vacancy Sensor [Cal Energy 150.0(k)6.]
69. Lighting for Bathrooms shall have at least one high efficacy luminaire. All other lighting shall be high efficacy or controlled by a Vacancy Sensor [CAL Energy 150.0(k)5]
70. At least half of the rated lighting wattage installed in a kitchen shall be high efficacy luminaires. [Cal Energy 150.0(K)3A]
71. Lighting for Other Rooms shall be high efficacy or dimmable or controlled by a Vacancy Sensor. [Cal Energy 150.0(k)7]
72. All lighting attached to the residence or to other buildings on the same lot must be high efficacy, or controlled by a motion sensor and either a photocell or an astronomical time clock. [Cal Energy 150.0(k)9]
73. Install minimum 1" trade size ID conduit run directly from the main or sub service panel location and terminate at an approved box, listed cabinet or other approved enclosure in an area that could accommodate an EV Charger and vehicle. The service panel shall be labeled and identify a minimum 40amp breaker or reserved space for future installation for the EV charger. [CAL Green 4.106.4.1]

## **Plumbing System Requirements:**

74. No under-floor cleanout shall be located more than 20-ft from an access door, trap door or crawl hole. Maintain the following clearances in front of the respective cleanouts 2" or less drain requires 12-in clearance greater than 2" drain, 18-in. [CPC 707.9]
75. Joints where a fixture meets wall or floor must be sealed and made watertight. [CPC 407.2]
76. Water heaters located in a garage generating a glow, spark, or flame capable of igniting flammable vapors, shall provide the pilots, burners or heating elements, and switches at least 18-in above floor. If W/H is subject to mechanical damage, protect with adequate barriers (i.e., bollard) or relocate out of normal path of vehicle. [CPC 507.13]
77. Water heaters may be installed in closets of bedrooms and bathrooms provided the door of the closet is self-closing and gasketed with a sealed threshold. All combustion air shall be obtained from the outdoors and the closet shall not be used for anything other than the water heater.[CPC 504.1, NFPA 54:10.28.1]
78. Water heater strapping or anchoring required at upper and lower 1/3 of appliance. Maintain a minimum 4" above the controls with the strapping [CPC 507.2]
79. Combustion air shall be provided for fuel burning water heaters. [CPC 506]
80. The minimum capacity of a Water Heater shall be equivalent to not less than first hour rating per CPC Table 501.1 [CPC 501]
81. Relief valves located inside a building shall be provided with a drain of galvanized, steel, hard drawn copper piping and fittings, CPVC, or listed valve drain. The drain shall extend from the valve to the outside of the building with the end of the pipe not more than 2-ft nor less than 6-in above the ground and pointing downward. [CPC 608.5]
  - A. Note 1: No part of such drainpipe shall be trapped, and the terminal end of the drainpipe shall not be threaded.
  - B. Note 2: Discharge from a relief valve into a water heater pan shall be prohibited. [CPC 508.5]
82. Shut-off valves shall be installed in the fuel supply piping outside of each appliance. [ANZI Z21.24, NFPA 54:9.6.1]
83. Showers & tub-shower combinations shall be provided with individual control valves of the pressure balance or thermostatic mixing valve type with a maximum mixed water setting of 120 degrees. [CPC 408.3]
84. Showers shall be finished with a smooth, hard, nonabsorbent surface to a height not less than 6 feet above the floor. [CRC R308.4.5]
85. The following water lines associated with the water heating system shall be insulated as follows [CALEnergy 150.0(j) 2]
  - a. All hot water lines larger than ¾" shall be fully insulated and all hot water lines regardless of size directly from the water heater to the kitchen supply shall be insulated with R4.5 min.
  - b. The first 5' of *hot and cold water* lines at the water heater shall be insulated with R4.5 min [CALEnergy 150(j)2(i).
  - c. All hot water pipes from the heating source to the kitchen fixtures shall be insulated with R4.5 min.

86. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following low flow requirements.
  - a. Showers 2gpm@80psi combined
  - b. Lavatory 1.5gpm@ 60psi max. & 0.8@ 20psi min.
  - c. Kitchen Faucet 1.8@ 60 max
  - d. Water closet 1.28 max
87. Shower compartments, regardless of shape, shall have a shower pan total area of 1,024 in<sup>2</sup> and be capable of encompassing a 30-in circle up to 70-in. [CPC 408.6]
88. Water closets shall be located in a clear space not less than 30-in in width; clear space in front shall not be less than 24-in. [CPC 402.5]
89. Gas outlets located in a barbecue or fireplace shall be controlled by an approved operating valve located in the same room and outside the hearth but not more than 6-ft from such outlets. [NFPA 5.5.4]
90. Potable water outlets with hose attachments, other than water heater drains, boiler drains, and clothes washer connectors, shall be protected a listed non-removable hose bibb type backflow prevention device, a non-removable hose bib type vacuum breaker or by a listed atmospheric vacuum breaker. [CPC 603.5.7]
91. Dishwasher air gap fitting required above sink flood rim. [CPC 807.4]

#### **Structural Drawings and Information on Plans:**

*Please note the following items are intended to provide a list of items required to be reflected or specifically provided on plans; however due to the relative and fluid nature of structural designs, the following items do not identify specific structural design parameters and are not inclusive of all of the information that should be provided on structural plan sheets. Please see the **General** Submittal guide for more information regarding structural drawings.*

92. The use of the California Residential Code Conventional Light Frame Structural Provisions is limited to a maximum of 3,000 square feet for Accessory Structures.
93. All structural design criteria for the specific project shall be identified on the plans. See **General** submittal information required on the Title Sheet of the plans.
94. For projects choosing to use one of the Prescriptive Conventional Bracing methods for structural Bracing compliance, a complete Braced Wall Plan shall be provided that accurately reflects the identified method of Prescriptive Bracing as listed in CRC Chapter 6 or CBC Chapter 23 respectively. The Braced wall plan shall identify the location of all Braced Wall Lines as well as all Braced Wall Panels located in such lines to include their respective lengths and the type of Bracing method employed in such Braced Wall Line.
95. All projects provided with structural analysis, provided from a Licensed Architect or Engineer shall provide a complete Shear Wall Plan that identifies appropriate shear wall locations as well as an appropriate method of the requirements of each type of shear wall such as a Shear Wall Schedule or other clear designation.
96. Roof Framing and Floor Framing plans shall clearly identify all beam/girder sizes and lumber/member grade or design information. Additionally all supporting members locations for such beams/members shall be clearly identified on the plans. This shall be done by either specific call out by beam/girder/member location or with appropriate reference to an appropriate structural member schedule.

97. Provide an appropriate Fastening Schedule as well as identify specific connectors on the plans. All appropriate fasteners for proprietary connectors shall be noted or specifically called out. This shall include specific connectors etc. as specified in any provided truss calculations or pre-manufactured truss or structural packages.
98. Provide a completely dimensioned FOUNDATION plan including exterior and interior footing locations with appropriate detail references. Identify and note the locations, type and size of anchor bolts, rebar, straps, hold-downs, connectors etc. on plans. See Plan Review Checklist for further requirements. Additionally clearly identify all required vapor barriers etc. for slab on grade construction
99. Provide complete ROOF FRAMING plans and FLOOR FRAMING plans. Note framing members and sheathing for floor and roof plans, framing for ceiling plans etc. Show size and spacing of joists, rafters, and beams with grade of lumber to be used. Carry all vertical and lateral loads to footings.
100. Provide a complete DETAIL sheet, in which all details are referenced at applicable locations on the plans. Details should be provided for foundation, floor, and roof details, beam connections, etc., special framing and flashing details as necessary for construction. Coordinate with truss calculation requirements as appropriate. Additionally clearly identify all required vapor barriers etc. for slab on grade construction
101. Identify on plans that all wood members identified as Pressure Treated shall have fasteners and connectors that are hot dipped zinc coated galvanized steel, stainless steel, silicon bronze, or copper.
102. Provide a plan sheet that provides appropriate structural notes. The notes included in this sheet may include various items mentioned in this list and should include but not be limited to:
  - a. Required compressive strength of all proposed concrete.
  - b. Allowable soil bearing pressure of a maximum of 1500psi or that allowed by a justified soils analysis.
  - c. The species and grade of all proposed lumber materials.