

# **Residential Plan Checklist**

**BPC-002**

**The following is only a partial list of required checklist items. Full compliance is required by reference to the following:**

Sonoma County Ordinances 5904 and 5905 (Building Code & Fire Code adoptions)

**Adopted Codes:**

- 2016 California Residential Code (CRC)
- 2016 California Building Code (CBC)
- 2016 California Mechanical Code (CMC)
- 2016 California Electrical Code (CEC)
- 2016 California Plumbing Code (CPC)
- 2016 California Energy Code
- 2016 California Green Building Standards Code (CalGreen)

**PLEASE NOTE:**

Sections 2-7 of this document are considered Life-Safety sections. They apply to all one- and two-family dwellings and their accessory structures as defined by CRC R202.

Sections 8-11 address building structural design and are applicable to non-engineered structures and non-engineered elements of partially engineered structures. Some residential structures in close proximity to known earthquake faults may not be eligible to use the CRC for the structural portion of their design. Resources available to assist with questions about the applicability of the CRC are: The CRC, the Permit Sonoma website, and Permit Sonoma Plan Check staff members.

All applicable and referenced codes can be accessed through the California Building Standards Commission website: <http://www.bsc.ca.gov/codes.aspx>

Adoption and amendments to the applicable codes and regulations by the County of Sonoma (Chapter 7), as well as zoning regulations (Chapter 26) and Fire Safe Standard requirements (Chapter 13) can be found on the Permit Sonoma website: [https://www.municode.com/library/ca/sonoma\\_county/codes/code\\_of\\_ordinances](https://www.municode.com/library/ca/sonoma_county/codes/code_of_ordinances)

**1. GUIDELINES FOR ALL SUBMITTALS**

Items to be considered at earliest possible stage of project development which could affect project:

- A. Land use limitations – County zoning ordinances, contact Planning Division
- B. Earthquake faults – Alquist/Priolo Zones
- C. Geological hazards – Landslides, geotechnical (soils) report
- D. Flood zone – (Sonoma County Code 7B), waterways, creeks, etc.

Submit four sets of all drawings, and two sets of all supporting documentation such as structural calculations, energy compliance forms, soil reports, etc. Preliminary review with staff is encouraged to ensure complete applications. Omission of any items in the following list may result in delay of plan check, requiring resubmission of documents or information. All documents must be signed by the person responsible for preparing them. Residences which are conventionally wood framed and up to two stories in height may not need to be prepared by a licensed design professional; however, the individual preparing and signing plans is responsible to be knowledgeable of all applicable codes and capable of preparing plans drawn to recognized architectural standards. Drawing sheets shall be large enough to accommodate a drawing scale of 1/4" per foot. All drawing sheets shall be the same size and bound together.



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- 1.1 **COVER SHEET:** Identify all applicable codes, scope of work, type of construction, sheet index, building address, parcel number, parcel size, and itemized square footages of all existing, proposed, and altered building areas (e.g. dwelling area, garage area, covered porches, decks, retained square footage retained at the face of retaining walls, storage areas, basements, etc.)
- 1.2 **SITE PLAN:** Show property lines, easements and new and existing building locations. Dimension front, side and rear distances to property lines and between structures. Indicate finished and existing grade elevations, i.e. contour lines. Provide adequate drainage information, e.g. sub-drain and dissipation locations. Show other relative information such as driveways, wells, septic systems, source of emergency water supply, and dimension emergency vehicle access. Provide North Arrow and drawing scale. Print job title or description, address and assessor's parcel number and drawing index on the cover sheet.
- 1.3 **FLOOR PLAN:** Show all proposed building dimensions (outside wall dimensions) and label use of each room, cross reference locations and sizes of windows and doors to window and door schedules, show electric outlets, plumbing and heating fixtures (identify furnace size), carbon monoxide, and smoke detectors . Show location and type of all braced panels or shear walls.
- 1.4 **FOUNDATION PLAN:** Completely dimension plan including interior footings. Label and locate porches, patios, decks, garage, tec. Locate and note size and spacing of anchor bolts, straps and tie downs on plan. Note size, number and position of crawl space vents.
- 1.5 **EXTERIOR ELEVATIONS:** Provide a minimum of four elevation views showing all openings, wall and roof finish materials, original and finished grades, stepped footing outline, underfloor vents and roof pitch.
- 1.6 **FRAMING PLANS:** Identify framing members and sheathing for floor and roof & ceiling plans. Show size and spacing of joists and rafters and nail types and spacing for all plywood diaphragms, identify all beams with grade of lumber or engineered wood type and dimensions to be used. Show how all gravity and lateral loads are carried to foundation through specific, cross-referenced connection details.
- 1.7 **WALL BRACING PLANS/SHEAR WALL PLANS:** Provide plans which adequately dimension all braced wall segments and locations for non-engineered plans, and/or identify and dimension engineered shear wall locations and minimum lengths. Justify the amount of bracing provided at each wall line, per wind and seismic requirements of the CRC for non-engineered structures. Provide adequate identifications of assumed braced wall lines for conventional bracing, and provide on the plans lateral load resisting gridlines, corresponding to the structural calculations, for engineered structures.
- 1.8 **CROSS SECTIONS:** Provide sections through building showing structural elements, and other sections as needed, including earth to wood clearances, floor to ceiling heights, roof slopes, etc. Note typical finishes; call out insulation type and value.
- 1.9 **DETAILS:** Submit foundation, floor and roof details, beam connections, special framing and flashing details as necessary for construction.
- 1.10 **CALCULATIONS:** Provide engineers' or architects' design calculations for engineered plans. Design methodology and loading criteria shall be taken from ASCE 7-10 or other applicable referenced documents.
- 1.11 The job address must be posted at the job site and at the county road, and the building location shall be staked prior to submitting for the permit application.
- 1.12 **Specific County of Sonoma Design Requirements:**
  - A. Wind: Basic LRFD wind speed for dwellings is 110 mph, and 100 mph for uninhabitable accessory structures. Most sites will be classified as Exposure C. Exposure D shall be used close to the coast and Exposure B may be used with justification. When CRC Table 602.10.3 is utilized, the Ultimate Design Wind Speed of 110 mph shall be assumed.
  - B. Seismic: Seismic Design Category is site specific and will typically be D2 or E.



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- C. Allowable soil bearing pressure for sites not requiring a geotechnical report is 1500 psf.
- D. Minimum soil pressures on retaining and foundations walls shall be 60 pcf for active pressure and 100 pcf for at-rest pressure without an applicable geotechnical report. (CBC Table 1610.1)
- E. Climate zone: Most sites are climate zone 2. Climate zone 1 shall be use in coastal areas.

## **2. Light, Ventilation, Room Dimensions**

- 2.1 Required window area for light shall be not less than 8 percent of the floor area of the room served; the minimum openable area to the outdoors shall be 4 percent of the floor area being ventilated. The glazed area need not be openable for ventilation when a whole-house ventilation system is installed. (R303.1)
- 2.2 Every sleeping room and any basement must have at least one openable window or door approved for emergency rescue with a minimum net clear opening of 5.7 square feet, except the windows at the grade floor shall have a minimum net area of 5.0 square feet. The minimum net vertical opening dimension shall be 24". The minimum net clear opening width dimension shall be 20". The bottom of the clear opening shall be no more than 44" from the floor. (R 310.1)
- 2.3 Bathrooms, water closet compartments and similar rooms shall have window at least 3 sq. feet in area, half of which must be openable, or mechanical ventilation must be provided. (R303.3)
- 2.4 Each bathroom containing a bathing facility shall be mechanically ventilated for the purposes of humidity control. (R303.3.1)
- 2.5 Provide ventilation for products of combustion to outside air. (CMC 802.0)
- 2.6 Attic ventilation: 1/150 of attic area. If 40% – 50% of the vents are no more than 3 feet below the ridge or highest point of the roof area; then the ratio may be reduced to 1/300. (R806.2) Unvented attics may be allowed if meeting the requirements of R806.5.
- 2.7 Enclosed rafter spaces shall have a minimum 1" space between the insulation and roof sheathing and at the location of all eave and cornice vents. (R806.3)
- 2.8 Underfloor space shall have a ventilation opening area of 1/150 square feet of underfloor area. If a Class I vapor retarder is used the ratio may be reduced to 1/1500. One opening shall be placed within 3 feet of each building corner. Openings shall be covered with a covering having openings no greater than 1/4". (R408.2)
- 2.9 Heating system is required to maintain 68 degrees at 3 feet above floor level and 2 feet from exterior walls in all habitable room. (R303.9)
- 2.10 Air infiltration, insulation, space heating, space cooling, water heating, etc shall meet CA Energy Commission Standards.
- 2.11 All habitable rooms except kitchens shall be at least 70 square feet in area and shall have a width of at least 7 feet. In addition there shall be at least one room with a minimum of 120 square feet in each dwelling. Minimum ceiling height shall be 7 feet. See CRC for exceptions. (R304/R305)

## **3. DOORS, STAIRWAYS AND LANDINGS (INCLUDING DECKS)**

- 3.1. Required egress door shall be side hinged and have a minimum net clear width of 32" and a minimum height of 78". (R311.2)
- 3.2. There shall be a landing at each side of all doors not more than 1 1/2" lower than the threshold at the required egress door, and not more than 7 3/4" for other exterior doors. The landing shall be at least as wide as the door served and 36" minimum length measured in the direction of travel. A landing is not required at doors other than the required egress door where a stairway of two or fewer risers is located on the exterior of the door, and the door does not swing over the stairway. (R311.3)



- 3.3. Stairway rise shall be 4" min and 7.75" max. Run shall be 10" min. Headroom shall be 80" minimum. Width shall be 36" minimum. Handrails shall provide graspability and be 34"–38" above tread nosing with openings less than 4 3/8" clear, except openings formed by the riser, tread, and bottom rail of the guard may be 6" maximum diameter. (R 311.7 & R312.1.3 ex. 1 & 2)
- 3.4. Enclosed useable space under interior stairs shall be finished with 1/2" gypsum board (R302.7)
- 3.5. Fireblocking is required in concealed spaces between stair stringers at the top and bottom of the run. (R302.11)
- 3.6. There shall be a floor or landing at the top and bottom of each stairway. Width and length of landings shall be not less than the width of the stairway served. A floor or landing is not required at the top of an interior flight of stairs, including stairs in an enclosed garage, provided a door does not swing over the stairs. (R311.7.6)
- 3.7. Guards shall be located along open sided walking surfaces, including stairs, ramps, landings, and decks, that are more than 30" above the floor or grade, measured at any point within 36" horizontally. Required guards shall be not less than 42" above the adjacent walking surface. Except that handrails may be considered as guards at stairways. Openings in guards shall not exceed 4". (R312)
- 3.8. Exterior deck support posts shall be cross braced in two directions for lateral stability.
- 3.9. For posts over 30" in height provide mechanical connection at post base.
- 3.10. Provide detail at junction of exterior decking, wall and interior floor framing. Show elevations, flashing, and anchorage. Deck framing shall be positively attached to building framing at a minimum of 2 locations within 24" of each end of the deck with hold-down tension devices having an allowable design capacity of not less than 1500 pounds each, or at a minimum of 4 locations with hold-down tension devices of not less than 750 pounds allowable design capacity. (R507.2.4)
- 3.11. Deck framing and support posts to be of preservative treated or naturally durable lumber. (R317.1) Hardware and fasteners shall be hot-dipped galvanized, stainless steel, silicon bronze, or copper. (R317.3.1)

#### 4. **WEATHER AND CORROSION DAMAGE PREVENTION MEASURES**

- 4.1. Naturally durable wood or preservative treated wood, per AWPA U1, shall be required in the following locations (R317.1):
  - A. Wood joists and girders closer than 18" or 12", respectively, to the exposed ground.
  - B. Wood framing members that rest on concrete or masonry and are less than 8" from the exposed ground.
  - C. Sills and sleepers on a concrete or masonry slab that is in direct contact with the ground unless separated by an impervious moisture barrier.
  - D. Wood siding, sheathing and wall framing on the exterior of the building having a clearance of less than 6" from the ground or less than 2" from a horizontal concrete surface.
  - E. All wood in contact with the ground.
  - F. All wood embedded in concrete that is in direct contact with the ground or exposed to weather and that supports structures intended for human occupancy.
- 4.2. Exposed glu-lams shall be preservative treated, applied by the manufacturer, or made from naturally durable wood.
- 4.3. Weatherproofing of exterior surfaces above and below grade is required. (R406 & R703)
- 4.4. Concrete slabs shall be separated from earth by a minimum 6-mil vapor retarder, with edges lapped a minimum of 6". This may be omitted if the space above is not heated and is not likely to become heated in the future. (R506.2.3)
- 4.5. A capillary break shall be installed when concrete slab-on-ground floors are required to have a vapor retarder. This capillary break shall be a 4" thick base of 1/2" or larger clean aggregate with a vapor retarder in direct



contact with concrete. The concrete mix design shall address bleeding, shrinkage, and curling, in accordance with ACI 302.2R-06. As an alternative the slab design may be prepared by a licensed design professional. (CalGreen 4.505.2.1)

- 4.6. The ground adjacent to the foundation shall be sloped so that the grade shall fall a minimum of 6" within the first 10'. Impervious surfaces may be sloped at 2% minimum. (R401.3)
- 4.7. All fasteners used for attachment of siding shall be corrosion-resistant. (R703.3.2)
- 4.8. Corrosion resistant flashing shall be provided at openings and intersections/attachments. (R703.4)
- 4.9. All roof areas of buildings shall be provided with gutters or roof drains. Provide adequate roof slope for drainage (1/4" per foot, min.) or submit deflection and ponding calculations. Primary roof drains shall be designed based on a 60 minute storm with a 100 year return period, per Table D of the CPC. Secondary roof drains shall be provided not less than 2" above the roof surface. (CPC 1101.12)

## **5. GARAGE & CARPORT**

- 5.1. Common wall between garage and dwelling shall have 1/2" gypsum board applied on the garage side. Garage ceiling with habitable space above shall have 5/8" type X gyp board applied to the ceiling. Carports with no enclosed uses above do not need protection. (R302.6)
- 5.2. No openings may be provided between a garage and a sleeping room. Other openings shall be equipped with solid wood or steel doors 1 3/8" in thickness and shall be self-closing and self-latching. (R302.5.1)
- 5.3. Garage and carport floor surfaces shall be of approved noncombustible material. Asphaltic surfaces shall be permitted at ground level in carport. (R309.1 & R309.2)
- 5.4. Appliances and receptacles installed in garages and carports generating a glow, spark, or flame shall be located 18" min. above the floor unless listed as flammable vapor ignition resistant. Provide protective bollard or other impact barrier or located out of the normal path for vehicles. (CMC 305.1)

## **6. ELECTRICAL**

- 6.1. Do not install electrical panels larger than 16 square inches in rated fire walls. Garage to dwelling unit separation is not a rated fire wall. (R302.4.2) Never install electrical panels in closet. Maintain a clearance of 36" in front of the panels. (CEC 110.26)
- 6.2. Provide a minimum of one 20 Amp receptacle in areas designated for laundry equipment. (CEC 210.52F)
- 6.3. Kitchens and dining areas must have a minimum of two 20 Amp circuits. Kitchen counter outlets must be installed in every counter space 12" or wider, not greater than 4' o.c. and within 24" of the end of any counter space. (CEC 210.52)
- 6.4. GFCI outlets are required for all kitchen receptacles that are designed to serve countertop surfaces, in bathrooms, in underfloor spaces at or below grade level, in exterior outlets, in laundry areas, and in all garage outlets not dedicated to a single device or appliance. (CEC 210.8) All dwellings must have at least one exterior outlet at the front and the back of the dwelling. (CEC 210.52E)
- 6.5. Receptacles must be installed at 12' o.c. maximum in walls. Walls longer than 2 feet and halls longer than 10' must have a receptacle. A receptacle must be provided within 3' of bathroom sinks. (CEC 210.52)
- 6.6. Bond all metal gas and water pipes to ground. All ground clamps must be accessible and of an approved type. (CEC 250.104)
- 6.7. Furnaces installed in attics and crawl spaces must have an access platform (catwalk in attics), light, light switch, and receptacle in the space. (CMC 904.10)



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- 6.8. New dwellings must have a 120V powered smoke alarm in every sleeping room, outside each sleeping room, on every story of the dwelling, including basements and habitable attics, but not including crawl spaces or uninhabitable attics. (R314.3)
- 6.9. When more than one smoke alarm or carbon monoxide alarm is required the alarm devices shall be interconnected. If the proposed scope of work does not result in the removal of wall and ceiling finishes exposing areas requiring installation, in buildings built prior to January 1, 2011, devices may be battery operated. (R314.4 & R315.7)
- 6.10. When alterations, repairs, or additions require a permit or sleeping rooms are added or created, smoke alarms shall be installed where required in new dwellings. (R314.2.2)
- 6.11. For new construction and work in an existing dwelling, where an addition is made to an existing dwelling or a fuel-burning appliance is added, carbon monoxide alarms shall be installed in sleeping rooms within which fuel-burning appliances are installed, outside of each sleeping area, and on each occupiable level. Carbon monoxide alarms are not required in dwellings where there is no fuel-fired appliance or attached garage. (R315.1; R315.2)
- 6.12. All 120-volt 15 and 20 amp branch circuits in dwelling units except those in bathrooms, unfinished basements, garages and outdoors shall have AFCI protection. (CEC 210.12)
- 6.13. Receptacles on 120-volt 15 and 20 amp circuits shall be tamper resistant. Except when located more than 5.5' above the floor or when part of a luminaire or appliance. (CEC 406.12)

## **7. MISCELLANEOUS LIFE-SAFETY**

- 7.1. Provide pressure relief valve with drain to outside for water heater. (CPC 608.3) Provide seismic strapping or anchorage resisting overturning of water heater. (CPC 507.2, CRC R301.2.2.3.7)
- 7.2. Liquefied petroleum gas (LPG) appliances shall not be installed in a pit, basement or similar location. LPG appliances shall not be installed in an above grade underfloor space or basement unless such location is provide with an approved means for removal of unburned gas (CMC 303.7.1)
- 7.3. Provide combustion air for all gas fired appliances. (CMC Chapter 7)
- 7.4. Fuel burning water heater is not allowed in bedroom or bathroom unless direct vent type or complying with CPC 504.1.
- 7.5. Vent clothes dryer to outside of building (not to underfloor area). Vent length shall be 14' maximum and the vent diameter shall not be less than 4". (CMC 504.4.2)
- 7.6. Water closet shall be located in a space not less than 30" in width with 24" minimum clearance in front. (CPC 402.5)
- 7.7. Showers and tubs with showers require a non-absorbent surface up to 72" above the floor. (R307.2). Provide curtain rod or approved enclosure material.
- 7.8. Provide backflow preventers on all hose bibs. (CPC 603.5.7)
- 7.9. Safety glazing shall be required within 24" of a door edge or within 36" of a stairway, landing or ramp when the bottom edge of the glazing is less than 60" from the floor or walking surface. (R308.4.2 & R308.4.3)
- 7.10. Safety glazing is required in all fixed and operable panels of swinging, sliding and bi-fold doors. (R308.4.1)
- 7.11. Safety glazing is required in enclosures and walls facing hot tubs, saunas, steam rooms, showers and tubs where the bottom edge of the glazing is less than 60" from any standing or walking surface. (R308.4.5)



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- 7.12. Wood burning appliances shall be EPA phase II certified in the Northern Sonoma County Air Pollution Control District. In the Bay Area Air Quality Management District wood burning appliances are not allowed. (Sonoma County Ordinance)
- 7.13. Provide 18" x 24" foundation access within 5' of all plumbing cleanouts. (R408.4; CPC 707.9)
- 7.14. Fireblocking shall be provided in concealed spaces of stud walls and partitions, including furred spaces, and parallel rows of studs or staggered studs; vertically at floor and ceiling levels, horizontally at intervals not to exceed 10'. (R302.11)
- 7.15. Show minimum 22" x 30" access opening to attic. (CMC 304.4; R807.1) In attics in which an appliance is installed, an opening and passageway at least as large as the largest component of the appliance shall be required. (CMC 903.2.3)
- 7.16. Roof construction and covering shall comply with R905 and local ordinance. All roofing shall be of Class A fire resistive material, supported by solid sheathing (Chapter 7 Sonoma County Code).
- 7.17. Storage use or placement of a fuel burning appliance in an underfloor area may trigger the requirement for a 1/2 inch gypsum wallboard or 5/8 inch wood panel membrane on the underside of the floor framing member. See Section R302.13 of the CRC for exceptions.

**8. FOUNDATIONS AND CONCRETE**

8.1. Concrete shall be 3000 psi minimum for foundation and retaining walls (including stem walls), garage floor slabs, and porches or steps exposed to weather and 2500 psi minimum for all other concrete. (R402.2; Table R402.2; R608.5.1.5)

8.2. Conventional Residential Foundation Requirements (R404.1.4.2; Table R403.1(1))

**Foundations for Stud Bearing Walls – Min. Requirements**

No. of stories	Thickness of stem wall concrete *	Width of footing	Thickness of footing	Depth below undisturbed ground surface
1	6.0"	12"	6"	12"
2	6.0"	15"	6"	12"

\* Foundation walls exceeding 4'6" shall be minimum 7.5" thick.

- 8.3. Horizontal reinforcing at footing and stem wall: one number 4 rebar within top 12" of stem wall and one number 4 rebar 3–4 inches from bottom of footing (R403.1.3.1)
- 8.4. When the stem wall and footing are not poured monolithically a number 4 rebar shall be installed vertically at not more than 4' o.c. The vertical bar shall extend to 3" clear from the bottom of the footing, have a standard hook, and extend a minimum of 14 inches into the stem wall. (R403.1.3.1)
- 8.5. Stepped footings shall be used when slope of footing bottom is greater than 10:1 (H:V). Step footing detail shall be shown on building elevations and foundation plan. (R403.1.5)
- 8.6. Concrete slabs shall be 3.5" thick minimum. (R506.1)
- 8.7. Provide adequate setbacks from slopes greater than 33% gradient equal to half the height of the slope (need not exceed 15 feet) for an adjacent ascending slope surface, and one third the height of the slope (need not exceed 40 feet) for an adjacent descending slope surface. If these setbacks cannot be met a geotechnical report justifying soil characteristics and suitability of the proposed building site shall be provided. (R403.1.7)



- 8.8. Anchor bolts shall be minimum 1/2" x 10" placed at 6' o.c. maximum. Embed bolts 7" min. Locate end bolts neither less than 3.5" nor more than 12" from ends of sill members. (R 403.1.6) Provide 3" x 3" x 0.229" plate washers on each bolt. (R602.11.1)

## 9. FLOORS

- 9.1. Floor joist size, spacing and grade shall conform to Table R502.3.1; or shall be designed by a licensed professional.
- 9.2. Joists under and parallel to bearing partitions shall be doubled. (R502.4)
- 9.3. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls or partitions more than the joist depth. (R502.4)
- 9.4. Girders for single-story construction or supporting one floor shall be 4" x 6" for spans 6' or less, with girders spaced at 8' o.c. For other sizes and spans see Table R602.7 (1, 2, & 3).
- 9.5. Nail spacing for floor plywood sheathing: 6" o.c. at edges, 12" o.c. in field (unless closer nailing is specified). Table R602.3(1)
- 9.6. Provide detail of connection of floor girder at foundation wall.
- 9.7. Solid block all joists at ends and intermediate supports with full-depth solid blocking not less than 2" nominal thickness. (R502.7)
- 9.8. At floor openings where header joist span exceeds 4' show double trimmer joists and headers. Approved hangers shall be used for the header joist to trimmer joist connections when the header joist span exceeds 6'. (R502.10)

## 10. Walls

- 10.1. Show stud size, height, grade and spacing. (Table R602.3(5)) Exterior and interior studs shall be continuous floor to roof unless braced at ceiling.
- 10.2. Balloon frame gable end walls or provide softwall bracing detail.
- 10.3. Minimum header sizes shall be according to Table R602.7(1,2,&3).
- 10.4. Double top plates shall have a minimum lap of 24". Nail with eight 16d common nails on each side of the joint, unless additional nailing is specified. Plates at intersections with bearing walls and corners shall also be overlapped. (Table R602.3)
- 10.5. Sole plate to joist or blocking shall be 16d common nails at 16" o.c. and 2-16d common nails at 16" at braced wall panels. (Table R602.3 item 14)
- 10.6. Foundation cripple walls shall be framed of studs not less in size than the studs of the wall above. Cripple walls exceeding 4' in height shall be framed of studs as required for an additional story. Cripple walls shall be sheathed per R602.10.9 & R602.10.9.1. Cripple walls less than 14" in height shall be continuously sheathed or constructed of solid blocking. (R602.9)
- 10.7. Minimum wood structural panel sheathing nailing: 6" o.c. at edges and 12" o.c. in field. (Table R602.3) Nailing shall be inspected prior to covering.
- 10.8. Provide one layer of No. 15 asphalt felt or other approved material under exterior siding. Material shall have upper layer lapped 2" min over lower layer with 6" min laps at joints. (R703.2) Provide 2 layers of Grade D paper, or equivalent, between wood sheathing and stucco lath. (R703.7.3)





- 10.9. Braced wall lines shall be sized and configured in accordance with section R602.10 in its entirety. Provide and label a layout of all braced wall lines complete with required values for wind and seismic for the specified wall type.
- 10.10. Spacing of braced wall lines shall not exceed 25' (interior & exterior) unless length of required bracing, per Table R602.10.3(3) is adjusted in accordance with Table R602.10.3(4). (R602.10.1.3)

## 11. ROOF

- 11.1. Show roof rafters and ceiling joists. Spans shall be per Tables R802.4(1) & (2) for ceiling joists and Tables R802.5.1(1) & (2) for rafters. Include the size, spacing and grade of all members.
- 11.2. Nail rafters to adjacent parallel ceiling joists. Where not parallel, use rafter ties at 4' o.c. max. (R802.3.1) Connect ties per Table R802.5.1(9). Rafter ties shall use adjustment factor in footnote h., for the height above supporting wall and the location of the connection must be in lower third of attic space.
- 11.3. Where ceiling joists or rafter ties are not provided trusses shall be used or engineering shall be provided. (R802.3.1 & R802.10)
- 11.4. Solid block all rafters and trusses at exterior walls. (R802.8) Nail blocking to top plate with (3) 8d toe nails per block or provide clips.
- 11.5. For roofs shallower than 3:12 ridges, hips and valleys shall require engineering. (R802.2)
- 11.6. Wood structural panel sheathing when designed to be permanently exposed in outdoor applications, shall be of an exterior exposure durability. Wood structural panel roof sheathing exposed to the underside may be identified as Exposure 1. (R803.2) Minimum nailing per Table R602.3(1) is 6" at edges and 12" in the field, 8d common, box or casing. Nail panels to blocking between rafters.

## 12. GREEN BUILDING AND ENERGY

- 12.1. New construction and additions/alterations increasing a building's conditioned floor area shall comply with applicable provisions of CalGreen. (CalGreen 301.1) Mandatory provisions shall apply only to the specific area of the addition or alteration. (CalGreen 301.1.1)
- 12.2. The Residential California Green Building Checklist shall be filled out and all mandatory and elective features selected shall be identified with adequate notations and details on the proposed project plans. An approved 3<sup>rd</sup> party CALGreen special inspector shall review the proposed checklist and project plans and provide verification that all applicable mandatory and elective elements identified in the checklist have been adequately incorporated into the proposed project plans and details. The field verification of the required CALGreen elements shall also be achieved by the 3<sup>rd</sup> party CALGreen special inspector during the construction and inspection process.
- 12.3. Residential buildings undergoing permitted alterations, additions or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. (CalGreen 301.1.1)
- 12.4. Energy code documentation shall be provided for any additions and alterations to the conditioned envelope, space-conditioning systems, or lighting systems. Energy code documentation shall be registered with the California Energy Commission prior to permit issuance. (California Energy Code Section 100(b))

## 13. FIRE RESISTANT CONSTRUCTION

- 13.1. New structures and remodels and additions to existing structures shall meet the requirements of the PRMD Planning Division, based on parcel specific zoning, use, and setback requirements.
- 13.2. Exterior walls within 5' (or 3' when the structure is equipped with an automatic fire sprinkler system) of an adjacent property line (or an assumed property line between structures) shall be 1 hour rated.



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- 13.3. The exposed underside of projections from exterior walls from 2' to less than 5' from an adjacent property line, or from 2' to less than 3' when the structure is equipped with an automatic fire sprinkler system, shall be 1 hour rated. Exterior wall projections less than 2' from an adjacent property line are not allowed.
- 13.4. When a parcel is located in a State Responsibility Area (SRA) all new construction shall comply with the applicable fire resistant construction requirements of CRC Section R337. Accessory Group U occupancy structures located at least 50' from an applicable building and additions and remodels to structures originally constructed prior to July 1, 2008 are exempt from these requirements.
- 13.5. Structures which are subject to Fire Safe Standards and located in the SRA on parcels 1 acre and larger shall have a minimum 1 hour rating at exterior walls and the underside of exterior projections within 10 feet from an adjacent property line.
- 13.6. Dwelling units in two-family dwellings shall be separated from each other by wall and floor assemblies having not less than a 1-hour fire-resistance rating. Fire-resistance rated floor/ceiling assemblies shall extend to the exterior walls, and the supporting construction shall have an equal or greater fire-resistance rating. Wall assemblies shall extend from the foundation to the underside of the roof sheathing, although wall assemblies need not extend through attic spaces where the ceiling is protected by not less than 5/8" Type X gypsum board, an attic draft stop is provided above and along the wall assembly separating the dwellings, and the structural framing supporting the ceiling is protected by not less than 1/2" gypsum board or equivalent. (R302.3)

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