



## Building & Safety Division

---

### SINGLE FAMILY CHECK LIST 2013 California Building Code

---

Codes Section designation  
California Residential Code (RXXX)  
California Building Code (XXX)  
Santa Monica Municipal Code (SMMC)

#### **APPLICATION**

**The following items will be required at the permit counter before permit issuance; they do not need to necessarily get reflected on the plans:**

1. Provide fully dimensioned plot plan to scale in ink, for the permit application, showing:
  - a) Lot dimensions
  - b) Building dimensions
  - c) Type of construction
  - d) Number of stories
  - e) Location of adjoining streets
  - f) Location of easements (if any)
2. Show the name and California license/registration number of the architect / engineer responsible for the design.
3. Show the contractor's name, address, state contractors license number / classification, and phone number.
4. Contractor or property owner must sign the building permit application.
5. A separate permit is required for (grading), (demolition), (retaining walls), (block walls), (swimming pool), (signs), \_\_\_\_\_
6. The revised total floor area shows that a supplemental plan check fee of \$ \_\_\_\_\_ is required to be paid prior to plan re-submittal.
7. The scope of the work is for alterations exceeding 50% of the replacement cost of the structure; therefore, the entire structure is being reviewed as new unless shown otherwise per SMMC 8.84.040.

#### **CLEARANCES**

7. California State Division of Industrial Safety permit is required for excavations five (5) or more feet in depth to bottom of excavation and for the demolition or construction of buildings over 3 stories in height.
8. AQMD (Air Quality Management District) notification is required for projects involving demolition activity where asbestos containing material is present. For more information contact AQMD at (909)-396-2336 or search [www.aqmd.gov](http://www.aqmd.gov).

9. Provide safeguarding features during construction such as protection of adjoining property as required below and other items such as site fencing and barriers (CBC 3306), sanitation (CBC 3305), etc.
10. Provide protection of adjoining property when excavation is to a greater depth than the walls or foundation of an adjacent building or structure and the adjacent building or structure is located closer to the property line than the depth of the excavation. Submit to B&S (prior to issuance of permit) evidence of adjoining property owner(s) written notification and provide plans for temporary shoring [CBC 3307].
11. The project is located in a Coastal Zone and requires the Coastal Commission Approval prior to permit issuance. Please upload the approval/exemption letter into project dox supporting dox folder prior to resubmittal. You can verify at [http://desktop.private/isd/gis/interactive\\_maps/index.html](http://desktop.private/isd/gis/interactive_maps/index.html) Click OPIS then coastal zone layer.
- 12.

***\*Provide a Detailed response to the items below. Reference the sheet and detail number where the item is addressed for each correction.***

**PLANS**

**ARCHITECTURAL (GENERAL)**

13. Provide the following with each set of plans:
  - a. Complete site plan showing yard set backs, easements, lot dimensions, distance between buildings, size of building, etc.
  - b. Fully dimensioned floor plan of each level identifying all rated wallsRoof plan.
  - c. Foundation plan.
  - d. Construction sections.
  - e. Building elevations. Show floor and top of roof elevations, natural and finished grade around the perimeter of the building.
  - f. Architectural details.
  - g. Door/window schedule.
  - h. Address of the building, the name and address of the owner(s), and of the person(s) preparing the plans.
  - i. Occupancy Group R-3/U
  - j. Type of construction V-B

Response:

---

14. Show finish floor elevations, elevations of finish grade adjacent to buildings, established street grades, drainage patterns and locations and gradients of cut or fill slopes. [R106.1.1]

Response:

---

15. Finish grade around the structure/addition shall slope away from the foundation a minimum of 5% (2% by impervious surface) for a minimum distance of 10 feet or by drainage. Include a note on the site plan or show on a foundation detail. [1804.3, R401.3]

Response:

---

16. On graded sites, the top of any exterior foundation shall extend above the elevation of the street gutter at point of discharge at the inlet of an approved drainage device a minimum 12 inches plus 2 %. Provide elevations on the site plan to show compliance. [1808.7.4]

Response:

---

17. Show on the site plan [R106.2]:
- a. Size and location of new construction
  - b. Size and location of existing structures
  - c. Distance to lot lines of new and existing structures
  - d. Structures to be Demolished

Response:

---

18. Provide a statement on the title sheet of the plans that this project shall comply with Title 24 and 2013 California Building Code (CBC), 2013 California Residential Code (CRC), California Mechanical Code (CMC), California Plumbing Code (CPC), California Electrical Code (CEC), and California Energy Code (CEC).

Response:

---

19. Plans shall be quality blue or black ink line drawings with uniform light background color 24"x36" in size.

Response:

---

20. You are encouraged to schedule a meeting with the Plan Check Engineer prior to re-submitting the plans. Please call the plan check engineer directly at the number provided at the end of this list.

Response:

---

21. The final 2 sets of plans must be signed by an engineer or architect licensed by the State of California. Plans for elements of the structure designed by others must be reviewed and approved by engineer or architect of record. [California Business and Professional Code 5536.1, 6735]

Response:

---

22. An application for the demolition of any existing structures at the site must be filed and approved prior to building permit issuance. Since this process may take up to several months, it is highly recommended that demolition application be filed as soon as possible.

Response:

---

23. On the elevations show the street number location on the building for both the street side and alley (if app). [R319, SMMC 8.48.120]

Response:

---

24. Clearly show the maximum building height and story heights based on the definition in CBC Section 502 (R202).

Response:

---

25. Clearly show if the lower level is a basement or story, based on the definitions in CBC Section Chp 2 (R202).

Response:

---

26. Specify the existing and proposed use of all rooms and areas. [302, R106.1]

Response:

---

27. Provide a separate existing and proposed floor plan for all altered areas within an existing building. Plans shall be dimensioned or scaled. [R106.1.1]

Response:

---

28. Wall rating and opening protection of exterior walls of the buildings shall be determined based on fire separation distance defined as follows. [702, R202]:

The distance measured from the building face to one of the following:

1. The closest interior lot line;
2. To the centerline of a street, an alley or public way; or
3. To an imaginary line between two buildings on the property

Response:

---

29. In sprinkled structures provide 1-hour rated construction for walls less than 3 ft from property line. No openings are permitted less than 3 ft from property lines. [CRC TR302.1(2)]

Response:

---

30. In non-sprinkled structures provide 1-hour rated construction for walls less than 5 ft from property line. No openings are permitted less than 3 ft from property lines and no more than 25% openings is permitted between 3 ft to 5 ft from property lines [705.8, TR302.1(1)]

Response:

---

31. Maintain fire-resistive rating of exterior wall through attic or other concealed spaces. [709.4, R302.2.1]

Response:

---

Provide a parapet on the exterior wall [705.11.1] unless one of the exceptions of section 705.11 applies.

Response:

---

32. For all walls, at or near a property line, provide a complete wall section from the foundation to the roof and locate the property line on the cross section. [R106.1.1]

Response:

---

33. Maintain minimum access and parking headroom clearance of not less than 7 ft [CBC 406.4.1] to any ceiling, beam, pipe or similar construction. [R305.1]

Response:

---

34. Projections of dwelling units and accessory structures in a non-sprinkled building are not permitted less than 2' to the property line and are required to be 1 hour fire rated on the underside with a fire separation distance between 2' and 5'. [TR302.1(1)]

Response:

---

35. Projections of dwelling units and accessory structures within a sprinkled building are not permitted less than 2' to the property line and are required to be 1 hour fire rated on the underside with a fire separation distance between 2' and 3'. [TR302.1(2)]

Response:

---

36. Balconies and similar projections of combustible construction (705.2.3) located where openings are not permitted or where protection of openings is required shall be of at least 1-hr fire resistance rated construction, Type IV construction, fire-retardant treated wood or as required by Section 1406.3.

Response:

---

---

37. Specify on elevations the proposed exterior wall finish. Specify material, thickness and attachment requirements [CBC 1405.2, R703]

Response:

---

38. Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a min No. 26 gage sheet steel and have no openings into the garage. [R302.5.2]

Response:

---

39. In combustible construction, fireblocking shall be installed to cut off concealed draft openings (both vertical and horizontal) and shall form an effective barrier between floors, between a top story and a roof or attic space. Fireblocking shall be installed in the locations specified in CBC Sections 718.2.2 through 718.2.7 (R302.11). Provide details on plans or complete notes on the drawings.

Response:

---

40. Detail column fire protection [704.2] and specify column impact protection in garages or other areas subject to impact. As a minimum, show a 22-ga. Steel jacket around each column or corner guards to a height of 5 feet above the ground for impact protection. [704.9]

Response:

---

41. Provide an occupancy separation between dwelling and attached garage. Walls and ceiling to be rated per TR302.6 and a 20-minute fire-rated door with self-closing and self-latching device [406.3.4, R302.5, R302.6]

Response:

---

42. Garage shall not have any openings into a room used for sleeping purposes. [406.3.4, R302.5, ]

Response:

---

43. Provide details for a corrosion-resistant weep screed on all exterior stud walls at or below the foundation plate line a minimum of 4" above grade, or 2" above paved areas [2512.1.2, R703.6.2.1].

Response:

---

44. Indicate two layers of Grade D paper between plywood shear panel and exterior lath.[ 2510.2, R703.2]

Response:

---

45. Provide veneer design and installation details: thickness, anchors, backing, lintels and support systems. [CBC Chapter 14, R703.7]

Response:

---

46. Exterior walls, including basement walls, shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing, as described in Section 1405.4. [1403.2, R703]

Response:

---

47. Show roof specifications, Specify roof covering material. All roofs shall be Class A or B roofing assemblies in accordance with CBC Chapter 15 (CRC Chapter 9).The use of non-fire-retardant wood shingles or non-fire-retardant shakes for new or replacement roofing is prohibited. (SMMC 8.12.070)

Response:

---

48. Fasteners for roof covering shall comply with sections 1507.3.6 and R905.3.6. Nails for slate shingle and clay or concrete tiles shall be corrosion resistant such as copper, brass or stainless steel.

Response:

---

49. Provide a minimum of 20" x 30" attic access opening [CBC 1209.2, R807.1]

Response:

---

50. Provide cross ventilation for attic and enclosed rafter spaces equal to 1/150 of the area of the ventilated space. Provide required free vent area calculation on plan. [CBC 1203.2, R806.2]

Response:

---

51. Provide positive roof drainage (minimum 1/4" per ft) and roof drains at each low point of the roof. [ASCE 7 Section 8.4]

Response:

- 
52. Provide overflow drains or scuppers per section 1101.11.2 of the California Plumbing Code. Overflow drain shall be installed with the inlet flow line 2" above the low point of the roof, and shall not be connected to the roof drain lines unless it complies with the provisions for "Combined System" of that section. [CPC 1101.11.2.2.1&2].

Response:

- 
53. Extend chimney 2' above any part of the building within 10' but not less than 3' where the chimney passes through the roof. [CBC 2113.9, R1003.9]

Response:

- 
54. Indicate on the plans how exterior building openings conform to security provisions. [SMMC] 8.48.020, 8.48.120.

Response:

- 
55. Revise door schedule to show garage door material type. Minimum thickness: of wood 5/16", aluminum 0.0215", fiberglass minimum density 6 oz. per sq. ft. [SMMC 8.48.110]

Response:

- 
56. Revise door schedule to show all wood exterior swing doors are solid core 1.75" thick min. [SMMC 8.48.120]

Response:

- 
57. Provide elevator hoistway [CBC 3004.1] and machine room [CBC 3006.2] ventilation.

Response:

- 
58. Provide guards at floor and roof openings, landings, balconies, and at open sides of stairs, which are more than 30" above grade, or floor below. Guards shall be not less than 42" in height. [1013.2, R312.1, R312.2]

Response:

59. Open guards shall have intermediate rails or an ornamental pattern such that a sphere 4" in diameter cannot pass through. [1013.3, R312.1.3]

Response:

---

## INTERIOR ENVIRONMENT

60. For all occupied spaces provide exterior openings for natural light (8% of floor area) per 1205.2 or artificial lighting per 1205.3. Natural ventilation (4% of floor area) [1203.4] or a mechanical system for all occupied spaces is also required. [1203, 1205, R303.1, 303.4]

Response:

---

61. Artificial light shall be provided that adequate to provide an average illumination of 10 (CRC 6) foot-candles over the area of the room at a height of 30 inches above the floor level AND a whole house ventilation fan is provided. [1205.3, R303.1 exception 2]

Response:

---

62. Provide a mechanical ventilation system in bathrooms containing a bathtub and/or shower, laundry rooms. [1203.4.2.1, R303.3.1, CGBC 4.506.1]

Response:

---

63. Provide a minimum of 7' dimension (in any direction) in all habitable rooms other than kitchen [CBC 1208.1, R304.3]

Response:

---

64. Required ceiling height is 7'-6" (CRC 7') minimum in occupiable spaces, habitable spaces, and corridors, and 7'-0" minimum in kitchens, bathrooms, storage rooms and laundry rooms. [CBC 1208.2, R305.1]

Response:

---

65. Provide a clear space not less than 30" in width toilet compartment, and clear space of 24" in front of the water closet [CPC 40290.5]

Response:

---

66. Provide emergency escape in basements and in every sleeping room below the fourth story. Emergency escape shall open directly into a public way, alley, and yard or exit court and shall be operable from the inside without the use of tools. Escape or rescue windows shall have a minimum net clear openable area of 5.7' square feet, minimum net clear openable height of 24" and minimum net clear openable width 20" and have a sill height not more than 44" above the floor [CBC 1029, R310]

Response:

---

67. Foam plastics [803.4] shall not be used as interior finish except as provided in sections 2603.9 or 2604. [801.2, R316]

Response:

---

68. Walls and soffits of enclosed space under stairs shall be protected on the enclosed side as required for one-hour fire-resistive construction [1009.6.3, R302.6]

Response:

---

69. Provide make, model, and ICC number for manufactured skylight(s) [2610, R308.6] and fireplace(s) [2111, 2113, R1001, R1003].

Response:

---

70. Provide damp-proofing of foundation basement walls by an approved method. [1805, R402]

Response:

---

71. Showers and walls above bathtubs with shower heads shall be finished with a smooth, nonabsorbent surface to a height not less than 72" above the drain inlet. [1210.3, R307.2]

Response:

---

72. Showers stalls shall have a clear interior finish area of 7.1 sq. ft. (1024 sq in) and be able to accommodate a minimum 30 inch circle at the threshold level. These clearances shall be maintained up to a height of 72 inches above shower drain. [CPC 408.6, R307.1]

73. Provide a kitchen exhaust fan (min 100 cfm) vented to the outside per ASHRAE 62.2, specify duct size and length or include default table 7.1. [CEC 150(o)]

Response:

---

**SPECIAL HAZARD REQUIREMENTS**

74. Provide strapping for water heater Per DSA Guidelines. [510.5 CPC, SMMC 8.08.200]

Response:

---

75. Provide carbon monoxide alarm outside of each bedroom and on each level including basements. [CBC 420.4, R315]

Response:

---

76. Guards shall be provided where appliances, equipment, fans, roof hatch openings or other components that require service are located within 10 feet of roof edge or open side of walking surface more than 30 inches above the grade. The guard shall be constructed so as to prevent the passage of a sphere 21 inches in diameter.[1013.5]

Response:

---

77. Provide one-hour fire resistive construction on enclosed usable space of interior stair. [CBC 1009.6.3, R302.7]

Response:

---

78. Specify the window sill plate height above finished floor on building Elevation Views. Guardrails shall be provided at operable windows whose sill height is 30 inches or more above grade and less than 36 inches above the finished floor in residential occupancy. [SMMC 8.12.060, R312.2]

Response:

---

79. Provide automatic earthquake shutoff valve. [SMMC 8.32.070]

Response:

---

80. Provide hardwired smoke alarms compliant with UL 217 and installed in the following locations [NFPA 72 , 907.2.11.2, R314]:

1. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms.
2. In each room used for sleeping purposes.
3. In each story within a dwelling unit, including basements but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

Response:

---

81. Provide fire sprinklers and specify the type of system on the cover sheet (i.e. NFPA 13D). Fire sprinklers are required for all new construction and [SMMC 8.44.050]:
- a) Throughout any existing building, when there is a change in occupancy classification to a more hazardous division, as shown in Table 8.44-A or as determined by the Fire Chief, in 33% or more of the existing building floor area within three calendar years.
  - b) Throughout any existing building greater than 1,000 square feet, whenever more than 50% cumulative, of the existing floor area, including mezzanines, is added to within three calendar years.
  - c) Throughout any existing building 1,000 square feet or less, whenever more than 75% cumulative, of the existing floor area, including mezzanines, is added within three calendar years.
  - d) Throughout any existing building greater than 1,000 square feet, whenever more than 50% of the interior and exterior walls and ceilings are exposed.
  - e) Throughout any existing building 1,000 square feet or less, whenever more than 75% of the interior and exterior walls and ceilings are exposed.
  - f) Throughout any existing building whenever an additional story is added.

Response:

---

82. Provide safety glazing in the following locations: [CBC 2406.4, R308].
- a) Glazing in ingress and egress doors.
  - b) Glazing in fixed and sliding panels of sliding doors and panels in swinging doors.
  - c) Glazing within 2' vertical edge of closed door and within 5' of walking surface.
  - d) Glazing in railings and stair landings.
  - e) Glazing in doors and enclosures for hot tubs, bathtubs, showers, steam rooms within 5' of standing surface and drain inlet
  - f) Glazing with the bottom edge less than 18" to the finish floor.
  - g) Glazing in walls and fences used as the barrier for swimming pools and spas

Response:

---

## EXITS

83. Exit doorway shall provide a minimum clear width of 32" and height of 6'-6" [CBC 1008.1.1, R311.2].

Response:

---

84. The door threshold height shall be limited to 1.5" (7.75" at in-swinging doors). [1008.1.7, R311.3]

Response:

---

Provide a landing (sloped 2% away from building at exterior) width not less than the width of the door or the stair served (whichever is greater). [CBC 1008.1.6, R311.3].

Commented [TK1]: 1 exit permitted for 2 story and basement

Response:

---

85. The maximum travel distance on the third floor or roof deck is 50'. Provide two exits from the space ( \_\_\_\_\_ ) [Table 1015.1, R311.4]

Response:

---

86. Show the following stair details: [1009.4, R311.7].
- a) Minimum 10" run & maximum 7 3/4" rise. The largest rise or run in a flight of stairs may not exceed the smallest by more than 3/8" [1009.4.4, R311.7.4]
  - b) Minimum of 6'-8" headroom clearance at tread nosing [1009.2, R311.7.2]
  - c) Minimum of the stairway width dimension for the landing at the top and bottom of each stairway [1009.5, R311.3]
  - d) Handrails for the length of the stairs (required for 4 or more risers) [1009.12, R311.7.7]. The top of the handrail shall be placed not less than 34" nor more than 38" above tread nosing [1012.2, 312.2(7)]
  - e) Minimum of 36" clear width [1009.1, R311.7.1]
  - f) Handrails with a circular cross-section shall have an outside diameter of at least 1.25 inches and not greater than 2 inches or shall provide equivalent graspability. If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches and not greater than 6.25 inches with a maximum cross-section dimension of 2.25 inches. Edges shall have a minimum radius of 0.01 inch. [1012.3, R311.7.7.3]
  - g) Triangular openings formed by riser, tread and bottom rail shall not allow the passage of a 6" sphere R312.1.3.
  - h) Enclosed area under stairs to be protected per Table R302.6.

Response:

---

87. Provide spiral stairway construction details per R311.7.9.

Response:

---

88. Vertical distance between stairway landings is limited to 12 feet. [CBC 1009.7, R311.7.3]

Response:

---

## STRUCTURAL

89. The final structural plans must be signed by an engineer or architect licensed by the State of California. Plans for elements of the structure designed by others must be reviewed and approved by engineer or architect of record.

Response:

---

90. Provide a complete and consistent grid system with grid lines for each lateral line of resistance on structural framing plans. Lack of grid lines makes the review process difficult and may delay the plan review and permit process.

Response:

---

91. Provide complete material specifications.
- a) Plywood diaphragms: DOC PS 1 or PS 2, Structural I .
  - b) Particleboard: ANSI A208.1-99. Moisture protection is required.
  - c) Wood framing members: Grade and species of all lumber.
  - d) Glue Lam Beams: Identify grade symbol and lamination species per ANSI/ AITC A 190.1 and ASTM D3737.
  - e) Steel: Structural steel ASTM A36, Structural Pipe ASTM A53 Grade B, Tubing ASTM A 500, Reinforcing bars ASTM A615.
  - f) Concrete: Standard 2500psi concrete. 3000 psi min. for grade beams and caissons.

Response:

---

92. Construction documents shall show the size, section and relative locations of structural members with floor levels, column centers and offsets dimensioned.

Response:

---

93. The design loads and other information pertinent to the structural design required by Sections 1603.1.1 through 1603.1.9 shall be indicated on the construction documents:[1603.1]

Response:

---

94. Structural observation is required. Provide complete notes on the plans and clearly indicate stages of construction and items where observation is required [SMMC 8.08.120, 1704].

Note on plan:

**Preconstruction Meeting.** The owner or owner's representative shall coordinate and hold a preconstruction meeting between the engineer or architect responsible for the structural design, structural observer, contractor, affected subcontractors and special inspectors. The structural observer shall preside over the meeting. The purpose of the meeting shall be to identify the major structural elements and connections that affect the vertical and lateral load systems of the structure and to review scheduling of the required observations. A record of the meeting shall be included in the first observation report submitted to the Building Officer.

**Duties of the Structural Observer.** Observed deficiencies shall be reported in writing to the owner's representative, special inspector, contractor and the Building Officer. Upon the form prescribed by the Building Officer, the structural observer shall submit to the Building Officer a written statement at each significant construction stage stating that the site visit has been made and identifying any reported deficiencies that, to the best of the structural observer's knowledge, have not been resolved. A final report by the structural observer, which accurately states that all observed deficiencies have been resolved, is required before acceptance of the work by the Building Officer.

Response:

---

95. Special inspection (by a certified inspector) is required for field welding, high strength bolting, sprayed on fire proofing, concrete with strength > 2500 psi, high-lift grouting, special moment-resisting frames, piles, drilled piers, caissons and shotcrete. Please note on the plans [1704].

Response:

---

96. For each type of special inspection, identification as to whether it will be continuous special inspection or periodic special inspection.

Response:

---

97. Special inspections for wind requirements and seismic requirements shall comply with Sections 1704.3.2 and 1704.3.3.

Response:

---

98. Reference/identify all applicable sections and details as to location on plans.

Response:

---

99. Show foundation sections: Width, thickness, and depth below undisturbed ground surface or engineered compacted fill per approved compaction report.

Response:

---

100. When using existing footings to support new loads:

- a) Verify that existing footing meets the current code requirements for footings such as reinforcement and strength of the concrete, or
- b) Underpin the footing continuously with new footings per current code.

Response:

---

101. Provide details of anchorage of roof mounted mechanical, electrical, and plumbing equipment as applicable (>400 lb). Include the unit weight in the calculations as necessary. [ASCE 7 13.1]

Response:

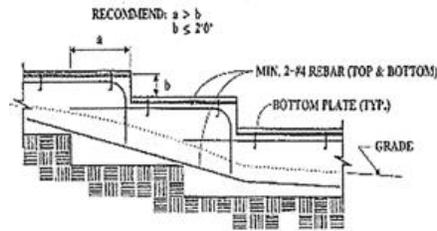
---

102. Provide details of (balcony) (stairway) railing base connection capable of withstanding a load of at least 200 lbs. applied in any direction at any point of the rail. Provide calculations to verify above. [1607.8]

Response:

---

103. Detail stepped foundations on ground sloping more than 1 unit vertical in 10 units horizontal. Steps must be such that both top and bottom are level. [1808] [SMMC 8.16.030 (a)]. See detail below:



104. STEPPED FOUNDATIONS

Response:

---

105. Provide pile ties to interconnect individual pile caps and caissons. Ties shall be capable of resisting, in tension or compression, a minimum horizontal force of 10% of the larger column vertical load multiplied by  $S_{DS}$ . [1810].

Response:

---

106. Submit Soils/Geotechnical report for review and approval [1803.2].

Response:

---

107. Revise calculations for foundation and retaining walls supporting more than 6' of backfill to include the force from the dynamic seismic lateral earth pressure. [1803.5.12(1)]

Response:

---

108. Show on the building or grading plans the name, address and phone number of the Project Geotechnical Consultant and a list of all applicable geotechnical reports.

Response:

---

109. Include a note on the grading and foundation plans that states: "Excavations shall be made in compliance with CAL/OSHA Regulations."

Response:

---

110. Provide a notation on the foundation plans that states: "All foundation excavations must be observed and approved by the Project Geotechnical Consultant prior to placement of reinforcing steel."

Response:

---

111. Provide complete shoring plans for the subterranean excavation or provide plans and sections showing cut slopes as recommended per approved soils report. Before commencing the excavation, proof of notification to adjoining property owners shall be submitted. [3307]

Response:

---

112. When applicable, include on the building and drainage plans all surface and subsurface non-erosive drainage devices, flow lines and catch basins.

Response:

---

113. Final shoring and foundation plans shall be reviewed, signed and wet-stamped by the Project Geotechnical Consultant.

Response:

---

114. Show hold-down hardware locations on foundation plan.

Response:

---

115. Specify on the plans the type, size, embedment, edge distance, and spacing of all anchor bolts. Bolt size and spacing shall be designed per chapter 19, 21 and 23 requirements. [2301.2]

Response:

---

116. Holddown connector bolts into wood posts require steel plate washers on the post on the opposite side of the anchorage device. Plates shall be 3"x3"x0.229" in size. [SMMC 18.12.140 (d)]

Response:

---

117. Specify minimum 3"x3"x0.229" plate washers for all anchor bolts [2308.12.8, SPDWS 4.3.6.4.3]

Response:

---

118. Fasteners in pressure treated wood sill plates shall be hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper. [CBC 2304.9.5]

Response:

---

119. Note on plans that all hold-down connectors shall be re-tightened just prior to enclosure.

Response:

---

120. Note on the plans that common nail length and gage must be per Table 2304.9.1 of the 2010 CBC.

Response:

---

121. Extend foundation a minimum of 8" above adjacent finish grade/surface. [2304.11.2.2]

Response:

---

122. Specify plywood thickness, grade, span, panel index, nailing schedule and panel layout for roof and floor diaphragms.

Response:

---

123. Provide 2 x 6 studs in plumbing walls to prevent excessive notching or boring of studs.

Response:

---

124. Provide complete design/details of truss system (s).

Response:

---

125. Provide the Simpson Strong-Wall or Hardy Frame manufacturer's detail sheets on the plan. [1603.1]

Response:

---

126. Studs supporting two floors, ceiling, and roof must be 3x4 or 2x6 at 16" o.c. [Table 2308.9.1]

Response:

---

127. Studs in bearing walls are limited to 10 feet in height unless an approval design is submitted. [Table 2308.9.1]

Response:

---

128. Call out size of headers for wall openings 4 feet or greater. [2308.9.5]

Response:

---

129. Exterior egress balconies, exterior exit stairs and similar means of egress components shall be positively anchored to the primary structure at not over 8' on center. [2308.12.7]

Response:

---

130. Posts and columns in enclosed crawl spaces supported by a concrete pier or metal pedestal shall be a minimum 8 inches above exposed ground and shall be separated by an impervious moisture barrier (alternate, provide a preservative-treated wood post or column). [2304.111.2.7 Exception 2]

Response:

---

131. Provide positive connections at all post-beam connections to account for uplift forces and lateral displacements. [2304.9.7].

Response:

---

132. Provide shear transfer details where standard shear wall schedule requirements do not apply.

Response:

---

133. Structures using wood shear walls and diaphragms to resist wind, seismic, and other lateral loads shall be designed and constructed in accordance with AF&PA SDPWS and the provisions of Sections 2305, 2306, and 2307.

Response:

---

134. Openings in shear walls that materially affect their strength shall be detailed on the plans and shall have their edges adequately reinforced to transfer all shearing stresses. [2305.1.1]

Response:

---

135. Provide shear wall schedule on the plans and specify the maximum design shear load for each shear wall type. Sheathing shall be greater than 3/8" in thickness or limited to 200 plf (ASD). [SMMC 8.12.140(f)].

Response:

---

Shear Wall Tables 2306.3(1), 2306.3(2), 2306.3(3) are only permitted in SDC A, B, or C unless cyclic testing data is submitted for review and approval to substantiate the allowable shear values. [SMMC 8.12.140(f)]

136. Specify minimum length of all shear walls on plans.

Response:

---

137. The use of rectangular HSS (steel tubes) are not permitted for bracing members, unless filled solid with cement grout having a minimum compressive strength of 3000 psi. [SMMC 8.16.060]

Response:

---

138. Provide the following for all shear walls with a shear value greater than 350 plf (ASD): [SMMC 8.12.140(f)].

- a) 3 x foundation sill plates.
- b) 3 x framing members receiving edge nailing from abutting panels.
- c) Diaphragms and shear wall nailing shall utilize common nails or galvanized box where untreated wood is used.
- d) Diaphragms and shear wall nailing to sill plates shall be compatible with other fasteners used and with the chemical composition of the preservative used to treat the wood. Provide specifications.
- e) 1/2" edge distance for plywood boundary nailing.

Response:

---

### **STRUCTURAL CALCULATIONS**

139. Provide calculations for (roof) (floor) trusses.

Response:

---

140. Provide key plans cross-referencing all design elements, and details to the plans.

Response:

---

141. Provide a table of contents for the calculations accounting for all pages of the clacs.

Response:

---

142. Provide deflection calculations for all horizontal gravity members and walls to show compliance with Table 1604.3 and per sections 1604.3.2 through 1604.3.5 for the more restrictive limitations. [1604.3]

Response:

---

143. Design ceiling framing for a live load of 10 psf for attic less than 42" in height and 20 psf for attic 42" or more in height. [T 1607.1 item 25].

Response:

---

144. Provide factor of safety of 1.5 to resist sliding and overturning for design of retaining walls. [1807.2.3].

Response:

---

145. Provide design details and calculations for masonry or concrete fireplace and chimney. Show compliance with seismic anchorage [Chapter 8.16.120 SMMC]

Response:

---

146. Provide calculations for wind loading on the building showing compliance with ASCE 7 Chapter 26-30. Indicate in the calculations which method is being used. [1609.1.1]

Response:

---

147. Structure shall be designed with redundancy factor ( $\rho$ ) =1.3 unless one of the conditions enumerated in section 12.3.4.2 of ASCE 7 is satisfied.

Response:

---

148. Limit height/length ratio of plywood shear walls to 2:1 (3.5:1 when shear wall capacity is reduced  $2b_s/h$ ) [SDPWS T4.3.4]. Provide complete calculations (including deflections) and show details where force transfer around the opening [SDPWS 4.3.5.2] or perforated shear wall [SDPWS 4.3.5.3] concepts are used.

Response:

---

149. Where force transfer around opening analysis is provided [SDPWS 4.3.5.2]  
a. Each wall pier shall not be less than 2'  
b. a full height wall segment shall be located at each end of the wall  
c. out-of-plane offsets are not permitted  
d. Collectors for shear transfer shall be provided through the full length of the wall.

Response:

---

150. Provide calculations and details for chord splices and drag struts between shear walls. See structural plans for location.

Response:

---

151. For stacked shear walls, calculate the cumulative overturning forces due to the respective lateral loads applied at all stories above the reference level.

Response:

---

152. Allowable holdown hardware values shall be based on 75% of the Research Report unless the device is tested for cyclic loading [SMMC 8.12.140(d)].

Response:

---

153. When determining the maximum uplift force for hold-down design, multiply the dead load resisting moment by  $0.9 \cdot 2S_{DS}$  for seismic or wind forces for LRFD combination or  $0.6 \cdot 1.4 S_{DS}$  if basic ASD load combinations used. [1605.2, 1605.3].

Response:

---

154. Cantilevered columns resisting seismic forces shall be designed with an appropriate  $R$ ,  $\Omega$  and  $C_d$  factor per ASCE 7 T12.2-1 Item G and shall be limited to a maximum drift of  $0.025h$ . [T 12.12-1].

Response:

---

155. Foundations and other elements used to provided overturning at the base of a cantilever column shall resist load combinations with overstrength factor. [ASCE 7 12.2.5.2]

156. Cantilevered columns resisting seismic forces shall be designed with an appropriate  $R$ ,  $\Omega$  and  $C_d$  factor per ASCE 7 T12.2-1 Item G and shall be limited to a maximum drift of 0.025h. The columns shall not exceed 15% of the axial strength. [ASCE 7 T 12.12-1 & 12.2.5.2].

157. Wood diaphragms are not permitted to transfer lateral loads by rotation unless material deformation compatibility, deflection, span, and aspect ratios of SDPWS 4.2 are checked.

Response:

---

158. When using flexible diaphragm approach, cantilevered diaphragms supporting floors or roof shall not exceed 25' or 2/3 of the diaphragm distance between adjacent lines of lateral-load resisting elements from which the diaphragm cantilevers. The depth to width ratio of the cantilevered diaphragm shall not exceed SDPWS 4.2.4.

Response:

---

159. Structural support elements of discontinuous lateral-load resisting systems (including concrete structural slabs) shall be designed to resist the load combinations with overstrength factor specified in ASCE 7-05 Chapter 12. Applicable loads shall be considered including both earthquake and wind, in accordance with the specified load combinations of Section 1605.

Response:

---

160. Provide shrinkage analysis for wood stud walls and bearing partitions supporting more than two floors and roof [2304.3.3].

Response:

---

161. Provide sections through glass block wall showing: reinforcement in each direction, size of glass panels; lateral support and expansion joints. Submit lateral calculations. [2110].

Response:

---

162. In concrete design strength reduction factor,  $\Phi$ , shall be  $\Phi = .9$  for tension controlled sections,  $\Phi = .75$  for shear and torsion controlled sections, and  $\Phi = .65$  for compression controlled sections. Provide calculations/justification for using alternate  $\Phi$  value. ACI 9.3

Response:

---

163. Where  $\Phi V_c > V_u > .5\Phi V_c$ : Minimum shear reinforcement shall be provided in all reinforced concrete flexural members. [ACI 11.4.6]

Response:

---

---

164. Masonry structures and components shall comply with the requirements in Section 1.17 of TMS 402/ ACI 530/ ASCE 5-11 depending on the structure's seismic design category as determined in Section 1613. [2106]. See Section 2107 for allowable stress design, Section 2108 for strength design, and Section 2109 for empirical design of masonry.

Response:

---

165. Where no soils report is provided then: [SM Geotechnical Guidelines Version 1.6 Section 2.1.3]

a. Note on foundation plan "I \_\_\_\_\_ (the property owner) acknowledge that in using the Santa Monica minimum design requirements for small additions and remodels in lieu of recommendations based on subsurface exploration and laboratory testing may result in soil related movements to the structure due to lot specific circumstances that could only be identified in a soils report with subsurface exploration and laboratory testing.

Owners Signature: \_\_\_\_\_ Date: \_\_\_\_\_ "

[SM Geotechnical Guidelines Version 1.6 Section 2.1.3]

b. Note on foundation plan "Footings are to be supported on like material and on two feet of certified compacted fill or on competent older alluvium, or bedrock. Slabs shall be supported on at least two feet of prepared subgrade, moisture condition to 2 to 4% above optimum and compacted to a minimum relative compaction of 90%."

c. Footing embedment depth shall be a minimum 24" below adjacent grade.

d. Slab and foundation are structurally designed per CBC Section 1808.6 for expansive soils with a weighted plasticity index of 60.

e. Dowel new footings to existing. Provide and key in construction details.

f. Cold joints require dowels.

g. Slabs are required to be doweled to the foundations.

h. Grade beam is required at garage door and crawl holes.

i. Specify a minimum 10 mil vapor barrier below the slab.

j. All foundations are to be continuous.

Response:

---

## **ENERGY**

166. Show the method of compliance with the 2010 California Energy Code (CEnC). The envelope, space-conditioning, indoor and outdoor lighting systems, water-heating systems of new low-rise residential buildings shall meet either the performance standards (energy budgets) or the prescriptive standards (alternative component packages) set forth for the climate zone in which the building will be located. [151(a) CEnC]

Response:

---

167. Include forms CF-1R, MF-1R, and WS-5R as part of the blue line plans.

Response:

---

168. Provide a list of the mandatory measures for all applicable portions of the project. (Envelope, space-conditioning, lighting, service water-heating, etc.) [110-119 CEnC]

Response:

---

169. The plans are inconsistent with the mandatory measures specified in the energy documentation/notes. [110-119 CEnC]

Response:

---

170. Form CF-1R needs to be signed by the documentation author AND either the designer or owner.

Response:

---

171. Correct the energy documents as red marked.

Response:

---

172. The (fenestration areas) (opaque surfaces) (building type) (fuel type) are inconsistent with the plans. As shown the (north, east, south, west) appears to be \_\_\_\_\_ sq. ft. Please clarify.

Response:

---

#### ADDITIONS/ALTERATIONS

173. New space-conditioning systems or components other than ducts shall meet the requirements of the CEnC and shall be limited to natural gas, liquefied petroleum gas or the existing fuel type [152(b)(1)(C)(ii) CEnC]

Response:

---

174. When more than 40 ft of new or replacement space-conditioning ducts are installed in unconditioned space, the new ducts shall meet the insulation requirements of Package D. [152(b)(1)(D) CEnC]

Response:

---

175. The addition will increase the total number of water heaters in the building. Therefore the new water heater needs to be either a gas storage non-recirculating water-heating system that does not exceed 50 gallons capacity or, if no natural gas is connected to the building, an electric storage water heater that does not exceed 50 gallons capacity. [152(a) CEnC]

Response:

---

176. If 50 sq. ft. or more of fenestration area is added to an existing building, then the fenestration must meet the requirements of package D for U factor, fenestration area, and SHGC. The area requirement means that the total fenestration area for the whole building, including the added fenestration must not exceed 20% of the conditioned floor area. If less than 50 sq. ft. of fenestration is added, then the fenestration needs to meet the package D requirements for U factor and SHGC only. [152(a)(1) CEnC]

Response:

---

177. Prescriptive approach .Additions to existing buildings shall meet the following requirements:

- a) Fenestration in additions up to 100sqft shall not have more than 50 sf of fenestration area and shall meet the U-factor and SHGC requirements of Package D. section 151(f)3A, 151(f)4 and table 151-C.
- b) Additions up to 1000 sq ft shall meet all the requirements of package D and the glazing area limit is the maximum allowed by package D plus the glazing that was removed by the addition.
- c) Additions of more than 1000 sf shall meet all the requirements of package D section 151(f )and table 151-C

Response:

---

## ENVELOPE

178. The insulation shown on the plans does not match the insulation called for in the energy package.

Response:

---

179. Clearly show on a section or details the insulation and its R-value. Verify a complete building envelope is provided.

Response:

---

180. Note on the plans, "Joints and other openings in the building envelope that are potential sources of air leakage shall be caulked, gasketed, weather-stripped or otherwise sealed to limit infiltration and exfiltration." [117 CEnC]

Response:

---

#### SPACE CONDITIONING

181. Portions of supply-air and return-air ducts and plenums shall either be insulated to a minimum installed level of R-4.2 or be enclosed entirely in conditioned space. If the package method is used, higher minimum insulation may apply. [150(k)(m) CEnC]

Response:

---

182. Note on the plans, "All pressure-sensitive tapes, mastics, aerosol sealants, or other closure systems used for installing field-fabricated duct systems shall meet the applicable requirements of UL181, UL181A or UL 181B." [124(b)(2) CEnC]

Response:

---

183. Air conditioners and condensing units shall meet the minimum efficiency requirements (SER) of Table 112-A.

Response:

---

184. The supply heating and cooling energy to each space-conditioning zone or dwelling unit shall be controlled by an individual thermostatic control that responds to temperature within the zone. [122(a) CEnC]

Response:

---

185. Note on the plans for installation of fireplaces, decorative gas appliances and gas logs:  
If a masonry or factory built fireplace is installed, it shall have the following:

- a) Closable metal or glass door covering the entire opening of the fire box;
- b) A combustion air intake to draw air from the outside of the building directly into the firebox with a minimum 6 sq inch in area a tight fitting damper or combustion –air control device, for exception see 150(e)1B
- c) A flue damper with a readily accessible control

Response:

---

LIGHTING

186. Provide form MF-1R to show compliance with the 2010 California Energy Code for lighting in the kitchen. 50% of the wattage must be high efficacy. [150(k)(8) CEnC]

Response:

---

187. Note on the plans or indicate in the light fixture schedule, "Lights in bathrooms, garages, laundry rooms, closets, and utility rooms must be high efficacy or controlled by a manual-on occupant sensor. Such sensors shall be capable of automatically turning off the lights no more than 30 minutes after the area has been vacated." [150(k)(10) CEnC] [119(j) CEnC]

Response:

---

188. Luminaries recessed into insulated ceilings shall be approved for zero clearance insulation contact (IC) by the Underwriters Laboratories or other recognized testing/rating laboratory and shall include a label certifying air tight to show air leakage less than 2.0 CFM at 75 Pascals(1.75 #/sf) when tested in accordance with ASTM E 283 and shall be sealed with a gasket or caulk between the housing and ceiling.[150(k)(12)

Response:

---

189. Note on the plans or indicate in the light fixture schedule, "All outdoor lighting attached to buildings must be high efficacy or controlled by a motion sensor with photo control. Photo control is an electric device that detects changes in illumination, then controls its electric load at predetermined illumination levels." [150(k)(13) CEnC] [101 CEnC]

Response:

---

190. Note on the plans or indicate in the light fixture schedule, "Permanently installed lighting in the enclosed nondwelling spaces of low-rise residential buildings with four or more dwelling units shall be high efficacy luminaries or controlled by an occupant sensor. Such sensors shall be capable of automatically turning off the lights no more than 30 minutes after the area has been vacated." [150(k)(16) CEnC] [101 CEnC]

Response:

---

WATER HEATING

191. Note on the plans, "The first 5 feet of hot and cold water pipes from the storage tank for non-recirculating systems shall be thermally insulated with a minimum of 1" (.75") thick insulation for hot (cold) water pipes with a diameter less than or equal to 2 inches or 1.5" (1") for hot (cold) water pipes with a diameter greater than 2 inches." [150(j)(2) CEnC]

Response:

---

(PRESCRIPTIVE) ALTERNATIVE COMPONENT PACKAGE METHOD

192. Form WS-4R shall be included in the package submittal documents and shall be consistent with the glazing areas on form CF-1R.

Response:

---

193. The requirements for insulation, fenestration, thermal mass, space-heating, space-cooling, ducts, and water-heating shall be based on climate zone specified in Figure 101-A and shall comply with the requirements of Tables 151-B and 151-C.

Response:

---

194. For electric-resistant water heating is allowed per footnote 7 Table 151-B-C-D [Table 151-B-C-D CEnC]

Response:

---

195. The West-facing fenestration area includes skylights tilted to the west or tilted in any direction when the pitch is less than 1:12. [151(f)(3)(c) CEnC]

Response:

---

196. For systems serving individual dwelling units, a single gas or propane storage or instantaneous type water heater with no recirculation pumps with an input of 75,000 BTU per hour or less and meets tank insulation requirements of Sections 111 and 113 shall be installed. [151(f)(8)(A&B) CEnC] (This comment does not apply to additions, see addition/alteration section)

Response:

---

**PLUMBING**

197. The plumbing plans are incomplete. Provide complete plumbing plans showing fixtures, equipment location and access, gas, water, vent, and waste lines and their sizes, and how combustion air is achieved for gas appliances. Additional corrections may apply.[422.1 & 301.4.3 CPC]

Response:

---

198. Show the proposed plumbing fixtures on the floor plans. [422.1 CPC]

Response:

---

199. Specify the BTU of all gas appliances which are under this permit. Specify gas line sizes and lengths of runs from the meter to the equipment. [1208.1 CPC]

Response:

---

200. Indicate on the plans that hose bibs shall be fitted with a non-removable back-flow device. [603.5.7 CPC]

Response:

---

201. Show the location of the water heater on the floor plans. [501.1 CPC]

Response:

---

202. Provide combustion air for the water heater [506 CPC]

Response:

---

203. Water heater shall be provided with temperature and pressure relief valves [504 CPC]. The relief valves shall be provided with a drain which extends from the valves to the outside of the building. Show the drain line on the plans. [608.5 CPC]

Response:

---

204. For the installation of tankless water heaters specify whether they are electric or gas and add the following notes to the plans: "Tankless water heaters shall be nationally listed and be installed in accordance with the installation instructions that were approved as part of their listing." "The gas piping serving this appliance must be sized in compliance with the water heater's listed installation instructions and the 2013 California Plumbing Code."

Response:

---

Response:

---

#### APPLIANCES/ LOCATION

205. Water heaters are prohibited in a bedroom or bathroom unless they are of the direct vent type or compliance with 504.1 (1) and 504.1(2) is demonstrated. [504 CPC]

Response:

---

206. Show the following on the plans for the water heater installed in the attic: [508.4 CPC]

- a) Attic access a minimum of 22"x30" not over 20' from the equipment.
- b) Unobstructed passageway 24" wide x 30" high with solid continuous flooring from the access to the equipment/control panel. The passageway shall be at least as large as the largest component of the appliance.
- c) A level, unobstructed work platform not less than 30" square in front of the equipment with 30" headroom.
- d) A 120V receptacle and a light near the equipment. The light switch shall be located at the attic access.

Response:

---

207. Place the water heater which is in the garage on top of a platform which places the source of ignition at least 18" above the floor level. Appliances such as the water heater, installed in the garage where they may be subject to mechanical damage, shall be elevated or installed behind protective barriers. [507.13 CPC]

Response:

---

#### FIXTURES

208. Tank-type toilets shall have a maximum flush of 1.28 gallons [403.2.1 CPC]

Response:

---

209. Showers and shower-tubs shall be provided with individual control valves of the pressure balance, thermostatic, or combination pressure balance/thermostatic mixing valve type that provide scald and thermal shock protection. [408.3 CPC]

Response:

---

210. Provide a permanently accessible 12-inch square bathtub trap access or note on plan that a non-slip-joint trap will be used. [402.11 CPC]

Response:

---

211. Provide a removable panel for the whirlpool bathtub pump located not more than 20' from the pump if through a crawl space. The panel shall be large enough to access and remove the pump. [409 CPC]

Response:

---

---

**MECHANICAL**

212. The mechanical plans are incomplete. Provide complete mechanical plans showing equipment location and access, ducts and their sizes, register and return air grills, and how combustion air is achieved for gas appliances. Additional corrections may apply. [112.2 CMC]

Response:

---

213. Show the location of the forced air unit (F.A.U.) and return air grill on the floor plan. [112.2 CMC]

Response:

---

214. Indicate how the addition is going to be heated. Show the location of new and existing heating units on the floor plans. If the existing system is to be used, show the location of the proposed registers. [112.2 CMC]

Response:

---

215. Provide the manufacturer's listing and installation instructions so that working space, equipment loads, combustion air, etc. can be checked. [112.3 CMC]

Response:

---

216. Provide combustion air for the F.A.U. [701 CMC]

Response:

---

**APPLIANCES/ LOCATION**

217. Central heating furnaces are prohibited in a bedroom or bathroom unless they are of the direct vent type or compliance with 904.1 (1), 904.1.1 & 904.1.2 is demonstrated. [904.1 CMC]

Response:

---

218. Show the following on the plans for heating/cooling equipment installed in the attic: [904 CMC]

- a) Attic access a minimum of 22"x30" not over 20' from the equipment.
- b) Unobstructed passageway 24" wide x 30" high with solid continuous flooring from the access to the equipment/control panel. The passageway shall be at least as large as the largest component of the appliance.

- c) A level, unobstructed work platform not less than 30" square in front of the equipment with 30" headroom. [§305 CMC]
- d) A 120V receptacle and a light near the equipment. The light switch shall be located at the attic access.

Response:

---

219. Show the following on the plans for heating/cooling equipment installed on/under the floor [§912 CMC] :

- a) Underfloor access a minimum of 24"x18"
- b) Unobstructed passageway 24" x 18" in cross sectional dimension. The passageway shall be at least as large as the largest component of the appliance.
- c) A level, unobstructed work platform not less than 30" square in front of the equipment with 30" headroom. [305 CMC]
- d) The lowest portion of the floor furnace shall have at least a 6" clearance from the general ground level. [912.7 CMC]

Response:

---

220. Place the F.A.U. which is in the garage on top of a platform which places the source of ignition at least 18" above the floor level. Appliances such as the FAU, installed in the garage where they may be subject to mechanical damage, shall be elevated or installed behind protective barriers. [308.1 CMC]

Response:

---

221. Pad supporting compressor/condenser shall be a minimum of 3" above the grade. [1106.2 CMC]

Response:

---

222. Means for interrupting the electrical supply to the air conditioning equipment and to its associated cooling tower shall be provided within sight of and not over 50 ft. from the air-conditioner and cooling tower. [903.7 CMC]

Response:

---

223. Clothes dryer moisture exhaust ducts shall terminate outside the building and have a back-draft damper. Exhaust duct is limited to 14' with two elbows. This shall be reduced 2' for every elbow in excess of two. Show minimum 4" diameter, smooth, metal duct, and show duct route on plan. [504.3.2 CMC]

Response:

---

224. Provide makeup air for the clothes dryer. When a closet is designed for the installation of a clothes dryer, a minimum opening of 100 in<sup>2</sup> shall be provided in the door. [504.3.2 CMC]

Response:

---

## ELECTRICAL

225. The electrical plans are incomplete. Provide complete electrical plans which include panel schedules with load calculations, receptacles, luminaires, and switch locations. Provide a single line diagram of the electrical system. Additional corrections may apply.

Response:

---

226. Provide a listed arc-fault circuit interrupter combination type protection for all outlets (not just receptacles) for dwelling unit bedrooms, family rooms, dining rooms, living rooms, parlors, libraries, dens, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas. [210.12 CEC]

Response:

---

227. Specify the method of grounding at the service. [250.24 CEC]

Response:

---

228. Provide detail of the grounding system for alternating current system. [250.20 CEC]

Response:

---

229. Show the location of service and all panels and specify its characteristics.

Response:

---

230. Branch circuit overcurrent devices (fuses and breakers) shall not be located where they will be exposed to physical damage, in the vicinity of easily ignitable materials, such as in clothes closet, bath, or toilet room. [240.24 CEC]

Response:

---

231. The panel/subpanel is located in the middle of a shear wall. Revise the location of the panel or have the engineer of record address shear transfer, increased loading, and edge reinforcing around the opening in the wall. [2305.1.3 CBC]

Response:

---

232. Show on the floor plan or on a separate electrical plan the location of electrical receptacles, lighting fixtures and switches. Generally, receptacles are to be located in a wall every 12 linear feet so that a fixture will not be more than 6 feet from any receptacle. [210.52 CEC]

Response:

---

233. Ground Fault Circuit Interrupter (GFCI) receptacle protection is required at the following locations [210.8 CEC]:

- a. Bathrooms (at least one shall be within 3' of the outside edge of each basin)
- b. Garages
- c. Outdoors
- d. Crawl spaces at or below grade level
- e. Kitchens where the receptacles serve the countertop surfaces
- f. Unfinished basements
- g. Laundry, utility, and wet bar sinks (where the receptacle is within 6 ft of the outside edge of the sink)

Response:

---

234. Provide at least one GFCI receptacle in the garage. [210.52 CEC]

Response:

---

235. A minimum of two 20 amp small appliance branch circuits shall be provided for all receptacle outlets in the kitchen, dining room, pantry, breakfast room or other similar areas [210.11(C)(1) CEC] [210.52(B)(1)(2)(3)]

Response:

---

236. At least one 20 amp branch circuit shall be provided to supply laundry receptacle outlets. Such circuits shall have no other outlets. [210.11(C)(2) CEC]

Response:

---

237. At least one 20 amp branch circuit shall be provided to supply bathroom receptacle outlets. Such circuits shall have no other outlets. [210.11(C)(3) CEC]

Response:

---

238. Show a minimum of one wall switch controlled lighting outlet in every habitable room. In other than kitchens and bathrooms, one or more receptacles controlled by a wall switch are permitted in lieu of lighting outlets. [210.70 CEC]

Response:

---

239. A switched light shall be installed at the exterior side of outdoor entrances or exits with grade level access for dwelling units, attached garages, and detached garages with electric power. [210.70 CEC]

Response:

---

#### **CALGREEN Low-Rise Residential (up to 6 stories) Mandatory Measures**

240. Meet T24 Energy Standards [4.201.1 CGBSC]

Response:

---

241. Demonstrate 20% savings in indoor water use [4.303.1 CGBSC ]

- Show compliance with note on plans. Include a fixture schedule and/or water savings calculations (WS-2 sheets) in plans showing the use of prescriptive or performance measures to comply with this requirement
- If there are multiple showerheads in one shower, they must meet the single fixture flow rate [4.303.2]
  - When single shower fixtures are served by more than one showerhead, the combined flow rate of all showerheads shall not exceed the max flow rates specified in Table 4.303.2 (20% reduction, 2.0 gpm avg)
  - Show compliance with note on plans

Response:

---

242. All plumbing fittings and fixtures must meet standards in CALGreen table 4.303.3 [4.303.3 CGBSC]

- Provide note on plans stating compliance

Response:

---

243. Seal joints and openings in the building envelope between conditioned and unconditioned spaces [4.406.1 CGBSC]

- Provide note on plans showing compliance
- Where details are provided, show sealing/protection on assembly plans

Response:

---

244. Develop an operation and maintenance manual to be supplied to owner at final inspection [4.410.1 CGBSC]

- Provide note on plans that this is being compiled

Response:

---

245. Ensure all fireplaces are direct vent sealed combustion gas [4.503.1 CGBSC]

- Show and identify all fireplaces as compliant on plans

Response:

---

246. Ensure protection and covering of duct openings during storage and construction [4.504.1 CGBSC]

- Provide note on mechanical plans
- Subject to verification during field inspection

Response:

---

247. Low VOC adhesives, sealants, paints, coatings, carpet systems, low formaldehyde wood, low VOC resilient flooring [4.504.2 CGBSC]

- Provide note on plans/have spec sheets readily available
- Subject to verification during field inspection; product specifications and containers must be available

Response:

---

248. Concrete slab foundations required to have a vapor retarder per CBC must have a capillary break [4.505.2 CGBSC]

- This break must be either: a) a 4-inch thick base of ½ inch or larger clean aggregate with a vapor barrier in direct contact with concrete and a concrete mix design that addresses bleeding, shrinkage, and curling; or b) a slab design specified by a licensed design professional
- Show on plans on foundation details

Response:

---

249. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content [4.505.3 CGBSC]

- Moisture content must be verified in compliance with all of the following: 1) Moisture content must be determined with either a probe-type or contact type moisture meter; 2) Moisture readings shall be taken at a point 2 to 4 feet from the grade stamped end to be verified; 3) At least three random moisture readings shall be performed on wall and floor framing with documentation to enclose the wall and floor framing
- Provide note on plans stating compliance
- Subject to verification during field inspection

Response:

---

- 
250. Bathroom exhaust fans must be ENERGY STAR and be ducted to terminate outside of building. Unless the fan is part of a whole house ventilation system, it must be controlled by a readily accessible humidistat which ranges from 50 to 80 percent relative humidity range [4.506.1 CGBSC]
- Provide note on plans showing compliance

Response:

---

251. If there is a whole house exhaust fan, it must have an insulated cover/louver with a minimum insulation of R-4.2 that closes when the fan is off [4.507.1 CGBSC]
- Provide note on plans showing compliance

Response:

---

252. HVAC system must be sized and designed with ACCA manuals J, D, and S. [4.507.2 CGBSC]
- Provide note on plans stating that these calculations will be made

Response:

---

253. Provide an energy compliance report showing that the building is designed to use 15% less energy than required by the California Energy Code. [SMMC 8.106.055, 8.106.180]

Response:

---

254. Provide solar heating as the primary heat source for new swimming pools. [SMMC 8.106.055, 8.106.180]

Response:

---

255. Provide pipe insulation on all exposed and accessible hot water pipes connected to a new water heater per the California Energy Code. [SMMC 8.106.055, 8.106.180]

Response:

---

256. Note on plan: Residential buildings are required to replace noncompliant plumbing fixture with water conserving plumbing fixtures. Noncompliant water fixtures throughout the structure. [CGBC 301.1.1]

Response:

---

257. Residential plumbing fixtures in new and alterations (increase conditioned area, volume, or size) shall have the following rates and pressure. [CGBC 4.303.1]
- a. Showerheads Maximum flow rate 2 gpm @ 80 psi
  - b. Lavatory faucets flow rate between of 1.5-0.8 gpm @ 60-20 psi
  - c. Water Closets 1.28 gallons/effective flush

d. Kitchen faucet 1.8-2.2 gpm

Response:

---

---

Reviewer:

**(310) 458-2201 x**

Supervisor: Orville L. Sabado, PE x5626

Office Hours: 7:30 a.m. – 5:30 p.m. Monday – Thursday

8:00 a.m. – 5:00 p.m. alternate Fridays