



**City of Atascadero
Community Development Department**

PUBLIC INFORMATION - BUILDING SERVICES

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**PLAN COMPLETENESS GUIDE
based on 2010 CALIFORNIA RESIDENTIAL CODE**

SEISMIC DESIGN CATEGORY C, D or E - CLIMATE ZONE 4 - WIND ZONES 85 M.P.H - EXPOSURE ZONE "B" OR "C"
ZONING ORDINANCE - NATIVE TREE ORDINANCE - ATASCADERO MUNICIPAL CODE - 2010 CBC - 2010 CRC - 2010 CEC
2010 CPC - 2010 CMC - 2010 CGBC - ENGINEERING STANDARDS - CALIFORNIA STATE ENERGY COMPLIANCE (TITLE 24)

Plan Completeness Guide for Single-family and Duplex Residential Structures and Residential Accessory Structures Designed under the 2010 California Residential Code (CRC)

Plans prepared using the following list as a guide should be deemed complete, and should expedite the review process. Please understand that this list is not totally complete for all conditions, and the California Building Codes must be reviewed for all code requirements. California Building Codes are available online at: <http://public.resource.org/bsc.ca.gov/index.html>

GENERAL:

1. Plan sets shall include: [AMC]
 - a. Title sheet
 - b. Site plan
 - c. Grading and drainage plan
 - i. Erosion control
 - d. Construction drawings
 - i. Foundation plan
 - ii. Floor plan
 - iii. Elevations
 - iv. Plumbing, mechanical and electrical sheet
 - v. Sections/profiles/details
2. Title 24 energy documentation
 - a. Mandatory Features MF1-R
 - b. CF-1R or Energy Compliance Report
3. CalGreen Code compliance documentation
 - a. Mandatory Measures Sheet
4. All plans sheets must be signed by the preparer. [BSP]
 - a. Licensed architect or engineer must stamp and sign sheets prepared under their direction.
 - b. Support documents (soils report, truss calcs, etc) must be stamped and signed by their responsible licensed professional, and reviewed and approved for consistency by the design professional in responsible charge.

5. Provide the following information on the Title Sheet. [CRC 106]:
 - a. Site info (Address, Parcel Number, lot size)
 - b. Occupancy type. (Typically R-3 and U if it applies)
 - c. Type of Construction (Typically V-B)
 - d. Basic Floor Area calculations. Include both existing and proposed floor areas.
 - e. Owner's name, address and phone number
 - f. Designer's name, address and phone number
6. List applicable codes on Title Sheet (Typically 2010 CRC, 2010 CMC, 2010 CRC, 2010 CPC, 2010 California Energy Code, 2010 CalGreen Code)
7. Clearly state the scope of the project on the cover sheet. [CRC 106]
8. Provide the following information on the site plan:
 - a. North Arrow
 - b. All existing and proposed structures
 - c. All property lines
 - d. Setbacks
 - e. Driveway
 - f. Easements
 - g. Utilities
 - h. Native trees
 - i. Topography
 - j. Site drainage
 - k. Bench mark for project
 - l. Flood Hazard information if in or near a 100-year flood plain or floodway
 - m. Septic or sewer information
9. Provide a special note 'block' on the cover sheet clearly listing deferred submittals for the project. This list shall include, at a minimum, submittals for the following [CRC 106]:
 - a. Trusses (must be submitted and reviewed review prior to permit issuance)
 - b. Fire Sprinkler System (fire sprinkler system must be submitted for prior to main permit issuance).
10. If the project requires special inspections based on CBC 1701, the owner or the project engineer/architect, acting as the owner's agent, shall employ special inspector(s) to provide inspection(s) of the following types of work during construction [CBC 1701]. Provide a special note 'block' on the cover sheet clearly listing special inspections required for the project.
11. See [Soils Report Handout](#) for soils report requirement. Provide a note on the Grading and Drainage Plan referencing Soils Engineer of record, the reference number on the report, and how it is dated. Summarize on the plans the procedures outlined in the report. Recommendations specific to the foundation design are to be listed on the foundation plan. [CRC 106]
12. For new SFR's obtain a Will Serve Letter from the Atascadero Mutual Water Company. [AMWC]

SITE/GRADING/DRAINAGE PLAN:

13. Provide Assessor's Parcel Number and Complete Address. [CRC 106]
14. Provide fully dimensioned site plan drawn to scale showing location, size and use of all improvements on the lot. Identify property lines and show lot dimensions. [CRC 106]
15. Show location of all trees 4" or more in diameter. Show accurate drip lines of trees. (AMC)
16. Show tree protection complying with the City of Atascadero Tree Ordinance and Tree Protection Guidelines. Show location of tree protection fencing and trunk protection locations and details on Site Plan if construction is proposed within 20-feet of a native tree drip line. [AMC]
17. Provide an arborist report if construction of a new SFR is proposed under an existing native tree dripline or proposed removal(s) of a native tree. Any native tree removal of 24-inches or greater in DBH will require an additional Planning Application and Planning Commission approval.
18. If construction occurs on parcels with an average slope of greater than 10%, please consultant a Planner for a potential precise plan for consistency with CEQA (CGC 15300.2).
19. Show all utility locations. Show true north. Call out finish floor elevation. Show spot elevations at points along perimeter of structure and at entrance to garage. [CRC 106]
20. All utilities are to be placed underground (Atascadero GP)
21. Cut and fill slopes are not to exceed 2:1 slope without a soils report and supporting analysis by Geotechnical Engineer. [AMC]
22. Provide construction details and calculations of retaining walls. See City approved retaining wall design for site walls without surcharge. [AMC, CRC 106]
23. Plant all graded slopes to minimize erosion. [AMC]
24. Intercepting drain is required at top of cut slopes. [AMC]
25. No drainage permitted to flow over cut or fill slopes. [AMC]
26. If grading quantities exceed 50 cu yds, a grading plan prepared by a licensed professional is required.
 - a. Soils report is required.
 - b. Erosion control is required to be shown on plans.
 - c. Drainage plan, prepared by a licensed professional is required if drainage moving off site is modified, even if grading less than 50 cu yds
 - d. Plan shall contain the name, stamp, and wet signature of the responsible professional. [BPC]

27. A drainage basin is required if 1,000 sq ft of impervious surface is added to the site. [AMC]
28. An offsite improvement plan is required if valuation of new construction is 20% or more of the assessed value of existing improvements. Check with Public Works. [AMC]
29. Flood hazard protection is required if the project is next to a flood hazard area (creek). Show 100-year flood elevation on the plans. [AMC Title 11]

SEPTIC SYSTEM:

30. Provide percolation test. [AMC]
31. Detail septic system on site plan (draw to scale). System is to comply with Title 8 (Atascadero Building Regulations). [AMC]
32. Percolation rate exceeding 30 min./inch requires system to be designed and its installation certified by a registered engineer. [AMC]
33. Provide a 100% expansion area for septic system. [AMC]
34. A 15' minimum horizontal distance from the bottom of the leach line trench to face of slope is required. [AMC]
35. Leach lines are not permitted in fill areas, under driveways, or on slopes exceeding 30%. System is to be designed, inspected and certified by engineer when absorption field slope exceeds 20%. [AMC]
36. Leach lines are not permitted within 100' of a watercourse or in areas subject to inundation from a ten-year flood. [AMC]
37. Provide documentation necessary to insure that the existing septic system is of adequate capacity to serve the existing home and newly proposed work. [AMC]
38. Abandoned septic tanks are to be filled with pea gravel or slurry and be inspected prior to covering. [AMC]

SITE/FIRE SAFETY REQUIREMENTS:

39. Fire Department Standards: [F-1](#), [F-2](#), [F-3](#), [F-7](#), [F-8](#)
40. Slope of private residential driveways:
 - a. 0 – 11.99%
 - i. Maintained road capable of holding a vehicle weighing 48,000
 - b. 12 – 15.99 %
 - i. Asphalt, concrete, Same as above
 - c. 16 – 20%
 - i. Asphalt, concrete, Cross Hatched.

- d. over 20%
 - i. Not permitted
41. Length of residential driveways:
- e. 400 – 800 feet
 - i. One turnout required in middle of driveway.
 - a. Dimensions: 40' in length, 10' taper each end, 10' width
 - b. Surface: all weather required for turnouts.
 - f. +800 feet
 - i. Review by the Fire Marshal required.
42. Distance from fire hydrants:
- g. Distance of structure from hydrant
 - i. 800 feet max, measured along street & driveway to within 50 feet of the residence.
 - h. Fire hydrant spacing on streets
 - i. 500 feet spacing along street
 - i. Dry standpipes may be used in areas with adequate fire hydrants subject to approval by the Fire Marshal.
43. Fire Truck turnaround:
- j. Turn around to be located within 150 feet of the most remote part of the structure.
44. Review Standard F-1 & F-7 for Commercial and F-2 & F-8 for residential.
- k. Fire truck staging area within 150 feet of the most remote portion of the structure. (150 foot hoses) Review standard F-3.
45. Residential driveway widths: Fire Department Access Standards
- l. 12 foot width:
 - i. Less than 150' long
 - ii. Less than 12%
 - iii. Serving 1 or 2 residence.
 - m. 12 foot wide with (2) 2 foot shoulders (16 foot total)
 - i. More than 150' long
 - ii. Less than 12%
 - iii. Serving 1 or 2 residence
 - iv. Requires turnaround
 - n. 16 foot width:
 - i. More than 150' long
 - ii. More than 12%
 - iii. Less then 16%
 - iv. Serving 1 or 2 residence
 - v. Requires a turnaround
 - o. 16 foot wide with (2) 2 foot shoulders (20 foot total)
 - i. More than 150' long
 - ii. 16% or more,
 - iii. Serving 1 or 2 residence
 - iv. Requires a turnaround

- p. 20 foot width:
 - i. Any driveway serving 3 or more residence must be 20' paved. See standard drawings F-1 through F-3 for turnaround requirements and approved design requirements.
 - q. 24 foot width:
 - i. 10 or more dwelling units
46. Show location of nearest fire hydrant. A new hydrant is required if the distance from the nearest existing hydrant to the approved fire department turnaround at the structure exceeds 800', when measured along its primary access route. Location of a new hydrant is to be approved by the Fire Authority. [CFC, AMC]
47. Provide a Knox keyed gate for Fire Department access. Contact the Fire Authority for purchase forms. [CFC, AMC]
48. Provide a Knox Box for Fire Department access. Note on plan that location of the Knox Box is to be at discretion of the Fire Authority. Contact the Fire Authority for purchase forms. Provide permanent contact information for tenant, and provide an access key for Knox Box prior to calling for final inspection. [CFC]
49. Exterior walls of dwellings with automatic residential fire sprinkler protection that are closer than 3' to the property line are to be one-hour fire resistive rated with exposure from both sides. [CRC Table R302.1(2)]
50. Openings (doors, windows, vents, etc.) in exterior walls of Dwellings with automatic residential fire sprinkler protection are not allowed closer than 3 ft from the property line. [CRC Table R302.1(2)]
51. Projections (cornices, eave overhangs, exterior balconies and similar projections) of Dwellings with automatic residential fire protection are not required to be protected when at least 3 ft from the property line. Projections are required to be 1 hour fire-resistance rating on the underside when located between 2 and 3 ft from property line. [CRC Table R302.1(2)] Penetrations in exterior walls that are less than 3 ft from property line shall be protected in accordance with CRC R302.4.
52. For Dwellings without residential fire sprinkler protection, refer to CRC Table R302.1(1) for walls, projections, openings and penetration protection. [CRC]

RESIDENTIAL FIRE SPRINKLER SYSTEM

53. Residential fire sprinklers required: See [Fire Sprinkler System Handout](#)
54. If Fire Sprinklers are required for your project, please provide sprinkler layouts and calculations. Fire sprinkler system is a separate submittal (addendum to main permit), and must be submitted for review prior to main permit issuance. [AMC, CRC]

55. Provide a letter from the Atascadero Mutual Water Company stating the minimum design pressure of the sprinkler system. Incorporate this information onto the cover page of the plans. [BSP]
56. A double-check backflow prevention valve is required on sprinkler system. Provide Manufacturer and Model Number of the device. [CPC, AMC]
57. Provide calculations for fire sprinkler system that shows a head loss across the backflow prevention device and the water meter. [CRC]

SMOKE ALARMS:

58. Show smoke alarms on plans at the following locations [CRC 314.3]:
 - a. Sleeping rooms (any room with a wardrobe closet is considered a bedroom for smoke detector purposes)
 - b. Outside each sleeping area in the immediate vicinity of the bedrooms.
 - c. In each story, basement, habitable attic or split level.
59. Provide note: smoke alarms shall receive their power from the building wiring and shall be equipped with a battery backup. [CRC 314.4]
60. For alterations, repairs, or additions, or when one or more sleeping rooms are added/created, the smoke alarms shall be required for new dwellings. [CRC 314.3.1]

CARBON MONOXIDE ALARMS:

61. Show carbon monoxide alarms in the following locations [CRC 315.3]:
 - a. Outside each separate dwelling unit sleeping area in the immediate vicinity of the bedrooms.
 - b. On every level of a dwelling unit including the basement.
62. Provide note: carbon monoxide alarms shall receive their power from the building wiring and shall be equipped with a battery backup. [CRC 315.1.1]
63. When more than one carbon monoxide alarm is required to be installed, the alarms shall be interconnected in a manner that activation of one will activate all. [CRC 315.1.2]
64. For alterations, repairs or additions exceeding \$1,000, existing dwelling/sleeping units that have attached garages or fuel-burning appliances shall be provided with a carbon monoxide alarm. [CRC 315.2.2]

FIRE-RATED CONSTRUCTION:

65. If project requires fire rated construction, provide a listing for the approved fire-resistive rated assembly shown on the drawings (i.e., item number if from a table in chapter 7 of the UBC,

listing number from the Fire Resistance Design Manual published by the Gypsum Association, etc.). [CRC 302]

66. Note on the plans the listed assembly to be used for penetrations in the fire-resistive wall or floor-ceiling assembly shown on the drawings. [CRC 302]

STRUCTURAL:

67. Provide roof/floor framing plan. Show rafter/floor joist size, spacing and length. Show posts and beams, drag struts, connection details, identify all connectors, shear walls and their lengths, etc. on the plan. [CRC 106.1.1]
68. Delete all notes and details on the plans that do not apply to this project. [CRC 106]
69. Specify all header sizes. [CRC 106]
70. Truss calculations shall be signed by the architect or engineer of record for project consistency. [BPC]
71. Note on plan the size and location of all hold downs and anchor bolt placement. Note on plan location of any straps, bolting, and sill nailing. [CRC 106]
72. Show roof/floor framing connections. [CRC 106]
73. Balconies, decks and landings more than 30 inches above grade shall be provided with a guard (guardrail), minimum 42 inches high. Open space between intermediate rails/balusters shall not exceed 4 inches. [CRC 312]
74. If structural calculations are provided, the professional responsible for the structural design shall stamp and wet sign the cover sheet of the calculations, and stamp and sign the plan sheets covered by the calculations. [BPC]

FOUNDATION PLAN:

75. For soils report requirements see [Soils Report](#) handout. [AMC]
76. If a soils report is required for your project, include foundation design elements from the soils report in construction plans. [AMC]
77. Soils report shall be signed by the architect or engineer of record for project consistency [BSP]
78. Minimum City approved foundation without a soils report is 12" wide, 27" deep with #5 bars top and bottom. Please provide appropriate detail on construction plans. [AMC]

79. For one-story light framed structures, in lieu of a soils report, you may provide a foundation detail stamped and signed by a licensed architect or engineer specific to your project. [AMC] (Please be advised: The licensed professional will be required to observe the foundation excavation and provide inspection observation note at time of foundation inspection)
80. Use CRC Table 401.4.1 for design soil bearing value for unclassified natural soil. [CRC 401]
81. Provide engineered details for all retaining walls. Indicate location and size of vertical and horizontal steel, maximum height of earth retained, building surcharge and slope of soil behind wall. (See City approved retaining wall design for some cases. [City Approved Retaining Wall Design](#)) [CRC 106]
82. Detail method of moisture proofing wall [CRC 601.3]
83. Dimension interior and exterior bearing wall foundations [CRC 106]
84. Show distance of foundation to edge of cut or fill slopes and show slope and heights of cut and fill slopes. [CRC 403.1.7]
85. Note on plans that wood framing shall be 8" above finish grade. [CRC 317.1]
86. Note on plans that surface water will drain away from building at 5% for 10 feet. (2% for 5 feet may be allowed with justification and prior approval from Building Official). Show drainage pattern and provide spot elevations at key points to show proper drainage. [CRC 405]
87. Dimension foundation plan. Detail footing sections for each different footing configuration shown on plan. [CRC 106.1]
88. Show foundation sills to be pressure treated wood or equivalent. [CRC 317]
89. Show foundation bolt size and spacing. Show bolt edge and end distance. Anchor bolts to be steel with a minimum nominal diameter of 1/2". Plate washers to be minimum 3"x3"x.229" thick. [CRC 602.11]
90. Show size, minimum embedment and location of hold down anchors on foundation plan. [CRC 106.1]
91. Note on plan that foundation anchor bolts and hold down anchors must be secured in place per manufacturer's instructions prior to foundation inspection. [CRC 109.1]
92. Show adequate footings under all bearing walls and shear walls. [CRC 403.1]
93. Show stepped footings level, top and bottom, for slopes steeper than 1:10. [CRC 403.1.5]
94. Show minimum 18" clearance from grade to bottom of floor joists and minimum 12" clearance to bottom of girders. [CRC 408]
95. Note all concrete to be 2500 P.S.I. minimum. [CRC 402.2]

96. Show pier size, spacing and depth into undisturbed soil. [CRC 106.1]
97. Pre-manufactured piers must be listed for their proposed purpose. Evaluation report is required. [CRC 106]
98. Show location of under floor access. Access to be min. 18" x 24". [CRC 408.4]
99. For raised floors, show calculation for minimum under-floor ventilation equal to 1/150 sq. ft. of under-floor area. Show location of under-floor vents. Locate vents as close to corners as practicable and where they will provide adequate cross ventilation. [CRC 408.2]

FRAMING PLANS:

100. Show framing member sizes and wood species information on plans. [CRC 106.1]
101. Provide roof framing plan and floor framing plan. [CRC 106.1]
102. Provide a framing section. [CRC 106.1]
103. Specify all header sizes for openings over 4' wide. [CRC Tables 502.5(1) and 505.5(2)]. Wood structural panel box headers to be constructed in accordance with CRC Table 602.7.2.
104. Note that floor joists and rafters 12" or more in depth shall be supported laterally by bridging at intervals not exceeding 8 feet, unless both edges are held in line. [CRC 502.7.1]
105. Show blocking at ends and at supports of floor joists, and for rafters at exterior walls. [CRC 502.7 and 802.8]
106. Show solid blocking at ridge and at exterior walls on trussed roofs. [CRC 802.10.3]
107. Show double joists. Floor joists to be doubled under bearing partitions running parallel with the joists. [CRC 502.4]
108. Show rafter ties. Rafter ties shall be spaced not more than 4 feet on center. [CRC 802.3.1]
109. Show double top plate with minimum 24" lap splice. [CRC 602.3.2]
110. Show nailing in compliance with CRC 602.3.1 [CRC 602.3]
111. Show stud size and spacing per CRC Table 602.3.5.
112. Note an A.I.T.C. Certificate of Compliance for glued laminated wood members shall be given to the Building Inspector prior to erection. [CRC 301.1.3]

113. Detail all post to beam and post to footing connections. [CRC 106.1]
114. Detail shear transfer connections at edges of roof and floor diaphragms. [CRC 106.1]
115. Structural glue laminated timbers shall be manufactured and identified as required in ANSI/AITC A190.1 and ASTM D 3737 [CRC 802.1.4]
116. If braced wall lines do not meet the prescriptive requirement of the CRC, provide lateral analysis stamped and signed by a licensed architect or engineer. [CRC 104.11]
117. In areas subject to water splash and in exterior locations, wood columns and posts are to be supported by concrete piers or metal pedestals projecting at least 6" above finished grade or 1" above concrete or masonry floors or decks unless of treated wood or foundation grade redwood or cedar. [CRC 317.1.4]
118. Show 1-hr separation between units in a duplex. [CRC 302.3]
119. When roof pitch is less than 3:12, design ridge as a beam. [CRC 802.3]
120. Show plywood sheathing over exposed eave or other weather exposed areas, is exterior grade. [CRC 803.2.1.1]
121. Show a weep screed at the foundation plate line on all exterior stud walls to be plastered. [CRC 703.6.2.1]
122. Ridge hips, and valleys shall be at least one size larger than supported rafters. [CRC 802.3]
123. Truss calculations for approved projects are required to be submitted and reviewed prior to permit issuance. [CRC 106]
124. Truss calculations shall include the wet-stamp and signature of the truss design engineer. In addition, and if an architect or engineer is a part of the design team, they shall include on the cover sheet a wet-signed statement from the project's design engineer that truss calculations and layouts are in substantial conformance with the structural design and intent of the structure. [BPC]

ROOFING:

125. Specify roof pitch. [CRC 106]
126. Provide note: Minimum Class 'A' roofing required. [AMC]
127. Show attic ventilation calculation on plans. Minimum vent area is 1/150 of attic area or 1/300 of attic area is at least 50%, but no more than 80% of the required vent is at least 3 feet above eave or cornice vents or a Class 1 or 2 vapor barrier installed on the warm-in-winter side of the ceiling. [CRC 806.2]

128. For flat roofs, specify roof slope of ¼" per ft. minimum for drainage or design to support accumulated water. [CRC 903.4]
129. Show roof drains and overflows. [CRC 903.4]
130. Skylights and sloped glazing to comply with CRC 308.6.

PLUMBING:

131. Provide PRV (pressure regulator valve) to limit water pressure to 80 psi. [CPC 608.2]
132. Provide a minimum combustion air for water heater – 100 Sq. In. net free area within 12" of compartment ceiling and 100 Sq. In. net free area within 12" of floor. [CPC 507.3]
133. Note an approved pressure relief valve for water heater, and metallic drain or CPVC to exterior of building. [CPC 608]
134. Show water heater compartment to provide minimum clearances to combustible construction per manufacturer's requirements. [CPC 503]
135. For non-welded fittings or spa motor, provide tub plumbing access. [CPC 405]
136. Show location and size of LPG tank. [CRC 106]
137. If finish floor is below next upstream sewer, back-flow prevention is required. A sewage ejection pump may also be required. [CPC 602]
138. Show location of water heater. Provide make, model number and BTU rating. [CPC 106]
139. Show water heater in garage to be on 18" high platform. [CPC 510]
140. Note water heater shall be anchored or strapped to resist displacement due to earthquake motion. [CPC 510.5]
141. Show shower compartment to have minimum interior finished area of 1,024 square inches and capable of encompassing a 30" minimum diameter circle. [CPC 412.7]

MECHANICAL:

142. Provide all required Title 24 Energy compliance forms. [CA Energy Code]
143. Indicate make, model number, BTU rating, and seasonal efficiency rating of heating and air conditioning equipment. [CRC 106]

144. Provide combustion air to the FAU compartment. Provide a calculation showing the amount required and amount provided. Note that ½ of the required amount is to be provided at the top and ½ is to be provided at the bottom of the enclosure. [CMC 702]
145. Provide the following minimum clearances for FAU per manufacturer's instructions. [CMC 304]
146. Habitable space shall have comfort heating facilities capable of maintaining a room temperature of 68 degrees F at a point 3' above the floor. [CRC 310]
147. Clothes dryer to be vented directly to the outside. [CMC 504]
148. Location of equipment using LPG to be indicated on plans and approved by building official. [CRC 106]
149. Note that passageway to the attic furnace shall be unobstructed and have continuous solid flooring not less than 24 inches wide with a 30" working space in front of the access panel. [CMC 307]
150. Show permanent electrical outlet and lighting fixture controlled by a switch for the attic furnace. [CMC 306]
151. Provide a note on the plans stating that the air conditioning condensing equipment shall be securely fastened to its support base to prevent incidental displacement. [CMC 308]
152. Provide details on mechanical systems using Liquefied Petroleum Gas for fuel in accordance with NFPA 58 and the CFC. [CMC 303.7]

ELECTRICAL:

153. Note on the plan the location and amperage of electrical service. [CRC 106]
154. Show location of all electrical receptacles. [CRC 106]
155. Show GFI protection for receptacles in garage, baths and outdoors. Show location on plan. [CEC 210-8]
156. Show AFCI protected circuits for all outlets (including lighting and smoke/CO alarm outlets) in dwelling unit family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas. [CEC 201.12]
157. All dwelling unit receptacle outlets are to be tamper resistant. [CEC 250.52]
158. Note "UFER" or other approved ground to be provided. [CEC 250-81]

159. Sub-panels, panel boards, other equipment not approved for one-hour fire resistive construction on the garage side are not permitted. Penetrations shall be fire stopped in an approved manner. [CRC 302.5]
160. If 400A service or more, provide single line loading diagram and panel loading table calculations for the electrical system. [CRC 106]
161. In dwelling units, a smoke alarm shall be installed in each sleeping room and smoke and CO alarms at a point centrally located in the corridor or area giving access to each separate sleeping area. [CRC 314 and 315]
162. When a dwelling unit has more than one story and/or a basement, a smoke and CO alarm shall be installed on each story and in the basement. When a story or basement is split into two or more levels, the smoke alarm shall be installed on the upper level, except that when the lower level contains a sleeping area, an alarm shall be installed on each level. When sleeping rooms are on an upper level, the alarm shall be placed at the ceiling of the upper level in close proximity to the stairway. [CRC 314 and 315]
163. When the valuation of an addition, alteration, or repair to a Group R Occupancy exceeds \$1,000 and a permit is required, or when one or more sleeping rooms are added or created in existing Group R Occupancies, smoke detectors shall be installed in accordance with all provisions of the current code. [CRC 314.6]

ROOM SIZES, LIGHT, VENTILATION AND GLAZING:

164. Every dwelling unit shall have at least one habitable room that shall have not less than 120 sq ft gross floor area. [CRC 304.1]
165. Habitable rooms, other than kitchens shall contain at least 70 square feet of floor area. [CRC 310]
166. Habitable space, hallways, bathrooms, toilet rooms, laundry rooms, shall have a ceiling height of not less than 7 ft. [CRC 305.1]
167. All habitable rooms shall have natural light and ventilation provided unless specific exceptions are met. [CRC 303.1]
 - a. Minimum 8% of floor area shall be natural light.
 - b. Minimum 4% of floor area shall be natural ventilation.
168. Bathrooms, water closet compartments, and other similar rooms shall be provided with glazing not less than 3 sq ft, one-half of which is openable or mechanical ventilation of 50 cu ft/min intermittent and 25 cu ft/min if continuous. [CRC 303.3]
169. Attic access, at least 22" x 30" is required where there is an attic space that exceeds 30 sq ft and has at least 30" of headroom clearance. [CRC 807.1]

170. At least ½ of the common wall must be open and have an opening not less than 25 sq ft if light and ventilation is being supplied from an adjacent room. [CRC 303.2]
171. Glazing subject to human impact shall be tempered:
- a. Where nearest exposed edge of the glass is within a 24" arc of either vertical edge of the floor in a closed position and/or the bottom edge of the glazing is less than 60" above the walking surface.
 - b. When adjacent to stairways, landings, ramps within 36" horizontally of the walking surface and the exposed surface of the glazing is less than 60" above the walking surface.
 - c. When in enclosures for or walls facing hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers where the bottom exposed edge of glazing is less than 60" above any standing or walking surface. [CRC 308.4]
172. Glazing in shower and tub enclosures shall be tempered, laminated or approved plastic (including windows within 5 feet of tub or shower floor). [CRC 308.4]
173. Skylights and sloped glazing shall comply with CRC 308.6
174. Sleeping rooms shall have a window or exterior door for emergency exit. Sill height shall not exceed 44" above the floor. The window must have an openable area of at least 5.7 square feet. The minimum openable width is 20" and the minimum openable height is 24". [CRC 310.1]
175. Show hallway width to be minimum 36". [CRC 311.6]

ENERGY CONSERVATION COMPLIANCE:

176. Provide energy calculation showing compliance with prescriptive or performance method per Title 24 requirements:
- a. Mandatory energy compliance features MF-1R form must be attached to the plans.
 - b. CF-1R form, completely filled out, including all required signatures, must be attached to the plans.
 - c. Show compliance measures on plans.
 - i. Insulation
 - ii. High efficacy lighting
 - iii. Glazing
 - iv. Etc.

GREEN BUILDING STANDARDS

177. Provide Green Building Code Mandatory Measures sheet attached to plans.

GARAGE AND CARPORTS:

178. Show how house/garage or carport occupancy separation meets requirements of Section 302.5.
179. Dwelling/garage opening/penetration protection must comply with R302.5.1 through R302.5.3
180. Show 1 $\frac{3}{8}$ " solid core self-closing door or a tight-fitting door or a door with a fire protection rating of 20 minutes for the opening between the garage and dwelling. [CRC 302.5]
181. Garages are not permitted to open into a room used for sleeping purposes. [302.5.1]
182. Show size of header over garage opening. [Table 502.5(1) and Table 505.2(2)]
183. Provide 18" raised platforms for any FAU, water heater, or any other device which may generate a flame or spark [CMC 307.1]
184. Provide protection from damage to mechanical equipment by automobiles at rear of garage. [CMC 304]

EXITS, STAIRS, AND RAILINGS:

185. Egress from habitable levels including habitable attics and basements not provided with an egress door in accordance with CRC 311.2 shall have a maximum travel distance of 50 feet to a stairway or ramp which provides egress [CRC 311.4]
186. Required exit doorways shall be not less than 36" in width and not less than 6'-8" in height and shall be capable of opening at least 90 degrees. [CRC 311.2]
187. Provide 42" high protective railing for porches, balconies and open sides of landings. Maximum opening between railings shall be less than 4". [CRC 311.2]
188. Provide stairway and landing details. Stairways and landings are to meet the requirements of CRC 311.7 (maximum rise of 7.75" and minimum run of 10"; minimum headroom of 6'-8"; minimum width of 36"). [CRC 311.7]
189. Handrails shall satisfy the requirements of CRC 311.7.7.
190. Every stairway landing shall have a dimension, measured in the direction of travel, of at least 36". [CRC 311.7.5]
191. 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. [CRC 311.7.5 Exception]
192. Provide spiral stairway details. [CRC 311.7.9.1]

193. Exterior stairways shall not project into the 5 foot setback from the property lines. [CRC Table 302.1(1)]

194. The walls and ceiling of the enclosed usable space under interior stairs shall be protected on the enclosed side by ½" gypsum board [CRC 302.7]

MASONRY

195. Show height and construction details of all masonry walls. [CRC 106.1]

196. Grout shall be poured in lifts of 8' maximum height. When a total grout pour exceeds 8' in height, the grout shall be placed in lifts not exceeding 5' and special inspection during grouting shall be required. [CRC 609.4.1]

197. Show floor and roof connections to masonry wall in accordance with CRC 611.9.1 [CR 611.9.1]

198. Provide a detail of the retaining wall. Show how masonry walls retaining earth are to be waterproofed. [CRC 406.1]