

WEB SITE ADDRESS:

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PLAN REVIEW CORRECTION LIST

**Non-Residential Building, Residential Tracts,
Multi-Family V-N Construction
(CBC 2007 Edition)
Effective Date January 1, 2008**

GENERAL REQUIREMENTS

1. RETURN THIS LIST with corrected plans. To facilitate rechecking of plans, please indicate Sheet Number, detail number and note number on the left side of each item where the corresponding correction has been made.
2. Please respond to marked-up corrections on the plans at the same location to facilitate resubmittal plan review.
3. Where handout number is mentioned in the item, please download it from our website noted above or you may request the copy from the counter.
4. Incomplete, inconsistent or illegible drawings and/or calculations are unacceptable. VCBC 106
5. Plans are inadequate and incomplete for plan review at this time. Plan checking will continue after the receipt of 100% complete plans and calculations. Please download handout B-1 from our website noted above to check over minimum requirements on plans for Residential Construction. VCBC 106
6. Plans and calculations require the wet signature, stamp and expiration date of a California-registered civil or structural engineer or architect upon final submission of plans. BPC 6735, 5536.1
7. Refer to comments in red ink on the first submittal marked-up set of plans.
8. Refer to comments in red ink on the first submittal marked up calculations.
9. Refer to marked-up set of plans and make the changes indicated by the comments circled in black ink.
10. Add owner's name and the address of the project to each sheet of plans. VCBC 106
11. Add sheet index to the front sheet of the plans/calculations.
12. Add this note to the plans, "Special inspection is required per CBC 1704 and 1707 for _____
*construction." (*Use type of construction circled below)
 - a. Over 2500 psi foundation concrete
 - b. Concrete stem walls
 - c. shotcrete
 - d. post-tensioning system
 - e. masonry construction
 - f. steel frame
 - g. field welding and/or high-strength bolting
 - h. piling/caissons
 - i. structural wood
 - j. others _____

13. Add this note to the plans: "All structural weldings shall be done in an approved fabricating shop. In absence of an approved fabricating shop, structural welding shall be done under the supervision of a Certified Special Inspector." CBC 1704.2.2, 1704.3
14. Provide structural observation program in the following format and sequence per CBC 106.3.4.1 and 1709. It is desirable to have this program on the front sheet of structural drawings.
 - a. Write **heading** "Structural Observation Program".
 - b. **Add this note:** "The owner shall employ the Engineer or Architect registered/licensed in State of California who is responsible for the structural design to do structural observation".
 - c. **Name:** Write the name, reg./lic. # of Engineer or Architect responsible for structural design.
 - d. **Designated name:** Write the name, reg./lic. # of the Engineer or Architect designated by the Engineer or Architect of Record to do structural observation.
 - e. **Add This Note:** "The Engineer or Architect responsible for the Structural Observation, the Contractor, and appropriate Subcontractors shall hold a pre-construction meeting to review the details of the structural system to be structurally observed."
 - f. **Foundation:** List the structural elements to be observed prior to placement of concrete in the foundation. If portions of structural elements are to be observed in two or three construction stages, identify clearly the structural elements to be observed at each stage.
 - g. **Roof nailing:** List the structural elements of roof framing to be observed prior to covering the roof.
 - h. **Exterior Framing prior to prewrap:** List the exterior structural elements to be observed prior to weather-protecting the building.
 - i. **Final Observation:** List the structural to be observed at the final visit for the complete structural system.
 - j. **Reports:** Engineer of record or the designated engineer shall submit reports to this office on the prescribed form.
15. Add to the plans statement of special inspections as required per CBC 1704.1.1.
16. To avoid additional plan review fee, please comply with all the remaining corrections by next resubmittal. You may make an appointment with your plan checker to discuss the corrections before revising the drawings. Please note that plans are not checked at the counter.
17. We have reviewed your plans three times and have provided the service covered by the plan review fee we received. Plan review fees will be charged by the hour until approved.
18. Provide site/plot plan; show size and location, setbacks, use, location and extent of retaining walls, and distance between each existing and proposed buildings. Show complete outline of parcel on the plot plan as well as all easements and their dedicated size and use. VCBC 106.2
19. Provide a soil report to enable plan review of foundation design. VCBC 1802
20. The soil engineer shall provide the expansive index of the soil to enable plan review of foundation.
21. The soil engineer shall provide recommendations and design parameters for retaining wall piles/caissons.
22. The soil engineer shall provide soil parameters for seismic design per CBC 1613.5.2, 1613.5.3.
23. The original soil report is more than one year old. Please provide an update letter. VCBC 1802
24. A Pre-Plan Check Inspection of the site is required prior to re-submittal of plans for second review. Please contact the counter staff to schedule.
25. Soil engineer shall review and sign site/plot plan and foundation plan to affirm correctness and consistency with the soil report.
26. Draw grid lines on the floor, framing and foundation plans to facilitate planchecking.

GRADING AND SITE/DRAINAGE

27. When a grading permit is required, submit grading plans and obtain a grading permit from the Public Works Development Services Division. CBC Appendix J
28. When a grading permit is not required, add a signed statement to the drainage plan/site plan as noted here. "No grading required". CBC Appendix J103.

29. Drainage plan/site plan must show the existing and proposed topography by means of contours and elevations.
30. Show finished floor elevation of the garage, first floor, and basement, if any.
31. Show property lines, driveways, access roads and streets. VCBC 106
32. Show retaining walls and finished grade elevations at top of stem and base of stem. CBC 1805.3.4, 1806, Appendix J104.2
33. Show location and provide construction detail for all catch basins, sumps, concrete or asphalt drainage ditches and swales, culverts, drain pipes, collectors, or similar drainage devices. CBC Appendix J
34. Show swales and drainage flow lines by means of arrows or other appropriate symbols. Indicate the high point(s) on the lot and a minimum slope of 2% toward a street, storm drain, or approved watercourse or disposal area. CBC 1805.3.4, CBC Appendix J
35. Provide a cross section of the site topography at location(s) marked on the plans. CBC Appendix J
36. Show minimum building setback from ascending slopes and minimum footing setback from descending slopes. Refer to Ventura County Technical Bulletin B-70. CBC 1805.3, Appendix J
37. Add this note to the site/plot plan/foundation plan: "Soil compaction report shall be provided to the building inspector at the job site prior to placement of concrete for the foundation."
38. Add this note to the foundation plan: "Soil engineer shall inspect foundation prior to placement of concrete for the foundation."
39. Add this note to the plans: "A certification for 90% compaction of backfill from a geotechnical engineer shall be provided to the building inspector prior to final sign off and acceptance of retaining wall."
40. Identify existing structures on the site plan which are not part of this permit application, as "Existing."
41. Add Grading Permit number to the site plan.
42. When grade adjacent to the dwelling is steeper than 3 horizontal to 1 vertical, site plan shall be prepared by a California-registered engineer. CBC 1805.3, CBC Appendix 106.3.4
43. Show drainage away from the structures for a minimum of 2% for 5' feet to an approved drainage course. CBC 1803.3

HEIGHT AND LOCATION

44. Exterior walls less than the specified fire separation distance from property line shall be of fire-resistive construction per CBC 602.
45. Openings in exterior fire-resistive wall shall have fire rating per CBC Tables 715.4, 715.5.
46. Openings in exterior wall less than 3' feet from property line are not permitted per CBC Table 704.8.
47. For "R-3" occupancy, openings in exterior wall between 3' to 5' from property line shall not exceed 25% of the exterior wall area per CBC Table 704.8.
48. Exterior walls of agricultural building (U occupancy) less than 30 feet from property line shall be of one-hour fire resistive construction. CBC Table 602
49. The height of the building exceeds the limits specified in CBC Table 503 / Zoning Clearance.
50. Refer to the definitions of "Grade," "Grade Plane" per VCBC 202, "Basement," and "Story" per CBC Chapter 2. Show grade elevations on the site plan and grade lines on building elevations. Justify basement on the building elevations by showing distance from grade or grade plane to the top of floor above.

EXIT FACILITIES

51. Provide construction details of stairway to show compliance with CBC 1009, 1012, 1607.7.1 and Table 1607.1. Indicate width, rise, run, headroom (6'-8" minimum), handrail shape, height (34"-38") and connections, stringer size and supporting arrangement, foundation and anchorage on the construction detail.
52. Winding/curved/spiral stairway does not comply with CBC 1009. Redesign. See Ventura County handout B-55. Please download the handout from our website.
53. The unobstructed width of stairway serving an occupant load of less than 50 shall be minimum 36". CBC 1009.1
54. Exterior stairway serving as an element of a required means of egress is not permitted less than 10 ft. from property line. CBC 1023.5, 1024.3

55. Doors, when fully open, shall not reduce the required width of the landing by more than 7". CBC 1008.1.5
56. The depth of the stairway landing shall be not less than the width of the stairway. CBC 1008.1.5
57. The depth of landing at door shall be per CBC 1008.1.5.
58. Add this note. "All handrails shall have height between 34" to 38" measured from the tread nosing. Handrails with circular cross-section shall have outside diameter between 1.25" to 2". Handrails with non-circular cross-section shall have perimeter dimension between 4" and 6¼" with a maximum cross-section dimension of 2¼". Edges shall have a minimum radius of 0.01". Opening between the guards (balusters or ornamental patterns) shall not allow a sphere of 4" pass through the opening. Handrail shall be capable to resist a single concentrated load of 200# applied in any direction at any point along the top. CBC 1012.2, 1012.3, 1013.3, 1607.7.1
59. Add this note to the plans: "Provide emergency exit door or window from basement and/or sleeping room(s). Net clear window opening area shall be not less than 5.7 sq. ft. (except at grade floor opening shall be minimum 5.0 sq. ft.). Min. net window opening height dimension, 24" clear; min. net opening width dimension, 20" clear. Finished sill height max. 44" above floor." CBC 1026.2, 1026.3
60. Exit court width shall be not less than 36". CBC 1024.5.1
61. Provide 4'-0" clear width of side yard since the required window openings of a three story building occur on this side yard. CBC 1206.2
62. Hallway width shall be not less than 44" when serving an occupant load of 10 or more. CBC 1133B.3.1
63. Walls and ceilings of the enclosed space under stairway shall be protected on the enclosed side with ½" thick gypsum board. CBC 1009.5.3

LIGHT, VENTILATION AND SANITATION

64. Window area shall be not less than 8 percent of the floor area of the room and not less than 4 percent of the required window area shall be openable. CBC 1205.2, 1203.4.1
65. In bathroom containing bathtubs, showers, spas, and similar bathing, fixtures shall be mechanically ventilated in accordance with California Mechanical Code 2007 CBC 1203.4.2.1
66. Justify by calculations mechanical ventilating system in accordance with California Mechanical Code 2007 CBC 1203.1
67. To consider ventilation for the adjoining room, opening to the adjoining room shall be not less than 8 percent of the floor area of the interior room, but not less than 25 sq. ft., whichever is greater. CBC 1203.4.1.1
68. To consider natural light for the adjoining room common wall between the rooms shall be 50% open and shall provide opening of not less than $\frac{1}{10}$ of floor area of interior room or 25 sq. ft, whichever is greater. CBC 1205.2.1
69. Where artificial light is provided, it shall provide an average illumination of 10 foot-candles (107 Lux) over the area of the room at a height of 30" above the floor. CBC 1205.3
70. Add this note to the plan: "The plumbing fixtures and plumbing fitting shall meet the standards noted below:
- a. Water Closet = 1.6 gallons per flush max
 - b. Showerhead = 2.5 gpm max
 - c. Lavatory faucets = 2.2 gpm max
 - d. Sink faucets = 2.2 gpm max" Title 24, VCBC, UPC

ROOM DIMENSIONS

71. At least one habitable room shall have a floor area not less than 120 sq. ft; min. 7 ft. in any dimension. CBC 1208.1, 1208.3
72. Ceiling height shall be not less than 7'-6" in habitable space and 7'-0" in kitchen, halls, bathrooms and toilet rooms. CBC 1208.2
73. Efficiency dwelling unit shall contain a living room having not less than 220 sq. ft. of superficial floor area. CBC 1208.4
74. Call out missing dimensions at locations indicated on plans. CBC Appendix 106.3
75. Habitable or non-habitable use of attic space shall be designed in compliance with "R-3" occupancy requirements per item # 28 of Table 1607.1. Revise plans.

76. Label each room on the floor plan and cross sections to indicate its use. CBC Appendix 106.3
77. Provide description of material used, handled, stored and product manufactured in the workshop. This is required to classify group occupancy per California Building Code Chapter 3.
78. Laundry and refuse chutes, elevator, and dumbwaiter shaft enclosures shall have one hour fire resistive walls and openings. Callout the materials for the walls and rated assembly for the openings. CBC 707.13, 707.14, 707.4, 707.7
79. Provide details of one hour fire resistive walls and floors separating dwelling units. CBC 708.1
80. Identify existing and new construction. You may shade/cross-hatch new construction for clarity.
81. Add wall legend for clarity on floor, framing and foundation plans. CBC Appendix 106.3

GARAGE

82. Provide $\frac{1}{2}$ " thick gypsum board between garage and dwelling on garage wall side only. CBC 406.1.4
83. Door opening between garage and dwelling shall be protected by $1\frac{3}{8}$ " thick, tight-fitting, self-closing solid core wood door or 20-minute fire rated door. Specify. CBC 406.1.4, 715.4.3
84. Show fire protection on all members supporting the garage ceiling or specify heavy timber: minimum 6 x 10 beam and 8 x 8 wood posts unless covered with $\frac{5}{8}$ " type X gypsum board. CBC 602.4.1, CBC 602.4.2, 406.1.4
85. Provide two layers of $\frac{5}{8}$ " type x gypsum board to the bottom chord of trusses for occupancy separation between dwelling and the garage. Walls supporting such ceiling shall have one layer of $\frac{5}{8}$ " type x gypsum board. CBC Table No. 720.1(3), Item #21
86. Omit the direct opening between garage and bedroom. CBC 406.1.4
87. Design garage/carport floor system to support a concentrated load of 3000 lbs. acting on area $4\frac{1}{2}$ "x $4\frac{1}{2}$ ". CBC Table 1607.1 Item #17 Footnote "a".
88. Garage shall be min. 18 ft. wide and 20 ft. deep, clear and unobstructed to comply with zoning requirements. Show clear dimensions on the plan. VOC Sec. 8108-1.3.1
89. Since the garage is above the first story, provide $\frac{5}{8}$ " type x gypsum board for separations between garage and dwelling. CBC 406.1.4

ROOFS

90. Indicate Class A, B or C roofing/decking materials. Callout ICBO research report # and the materials used in the proposed roofing/ decking assembly, such as, underlayment felt, cap sheet, weight of rock, weight of asphalt per roofing square. CBC 1505.1.1, FPD 26
91. Provide size and location of roof and overflow drains. CBC 1503.4
92. Specify roof pitch for the roofing type shown per CBC 1507
93. Specify thickness and span of roof/floor sheathing. CBC Table Nos. 2304.7(1), 2304.7(3), 2304.7 (4), 2304.7(5)
94. Projections shall not extend 12" into areas where openings are prohibited. CBC 704.2
95. Roof projection toward side property line shall be not more than $\frac{1}{3}$ the distance to the lot line from vertical plane where protected openings are required. CBC 704.2
96. Provide construction detail of skylight to show compliance with CBC 2405; or call out an ICC- approved prefab unit and its report number. VCBC 106
97. Gutters/downspouts are required when recommended by soil engineer or when the soil expansion index exceeds 50. SHOW on site/plot plan piping and/or other approved non-erosive devices to conduct water to a street or other approved watercourse. VCBC 1802

CONSTRUCTION REQUIREMENTS

98. Specify species/grade of framing lumber, grade of structural steel, strength of concrete/mortar/ grout, grade of masonry units, grade of reinforcing steel. VCBC 106
99. Provide a complete cross-section of the framing at the location indicated. VCBC 106
100. Mark the location of full height cross sections on the floor, framing and foundation plans. VCBC 106

101. Draw roof/floor framing plans in 1/4"= 1' scale. Show rafter/floor joist size, spacing and extent, posts and beams, drag struts, connection detail reference, or model # of connectors, shearwalls and their lengths, etc., on the plan. VCBC 106
102. Shade/hatch areas on the roof framing plan where "California Valley" roofing occurs. VCBC 106
103. Cross-reference details on the framing cross sections and on the framing plans. VCBC 106
104. Indicate structural information such as rafter, beams, plywood, detail reference, etc. on all the full height cross sections to justify load path. VCBC 106
105. Delete all notes and details on the drawings that do not apply to this project. VCBC 106
106. Specify the size, spacing, direction, and extent of rafters and floor joists. VCBC 106
107. Callout size of hip and valley rafters. VCBC 106
108. Provide details showing supporting arrangements of hip and valley rafters. VCBC Appendix 106.3
109. Rafters are overspanned at the location(s) indicated on the marked-up set of plans. CBC Table 2308.10.3(1) thru 2308.10.3(6)
110. Design ridge as a beam where roof pitch is less than 3:12. Show location and size of supporting column(s). CBC 2308.10
111. Indicate rafter tie size and spacing or design ridge as a beam. CBC 2308.10.4.1
112. Show rafter ties immediately above ceiling joists and at max. 4 ft. o.c. where joists do not parallel rafters. CBC 2308.10.4.1
113. Roof purlins shall be not smaller in size than the supported rafters. Purlin braces shall be sloped not less than 45° from the horizontal. CBC 2308.10.5
114. Provide nailing schedule for plywood roof and floor sheathing. CBC Table 2306.3.1
115. Specify: Floor joists under and parallel to bearing partitions shall be doubled. CBC 2308.8.4
116. Floor joists are overspanned at location(s) indicated. CBC Table 2308.8(1) thru 2308.8(2)
117. Beam is overspanned at location(s) indicated. CBC 1605.3
118. Specify required header size for all openings in walls. CBC 2308.9.5.1, 2301.2
119. Header is overspanned at location(s) indicated. CBC 2308.9.5.1, 2301.2
120. Foundation cripple walls shall be framed with studs not less than 14 inches in length, or shall be braced with plywood sheathing nailed to the top plate, studs and sill. CBC 2308.9.4
121. Provide shearwalls at under floor cripple walls per CBC 2308.12.4.
122. Stud height shall not exceed the specified height in CBC Table 2308.9.1. You may justify proposed height with structural calculations for axial load plus bending. CBC Table 2308.9.1
123. Provide 2 x 6 at 16" on center or 3 x 4 at 16" on center studs at the first story of three story building. CBC Table 2308.9.1
124. Provide truss layout plans, details, and calculations signed by engineer/architect. Check top and bottom chords for axial load plus bending.
125. Engineer of record shall review and sign truss plans to affirm their correctness and consistency with his structural calculations. VCBC 106
126. Design shear panels for areas circled in red on the floor plan. Specify length of panel, thickness of plywood, nailing schedule, holdowns, anchor bolt size and spacing. CBC 1604.4
127. Irregular structures shall be designed for lateral forces as specified in CBC 1604, CBC 2305
128. Diaphragm dimension ratio shall comply with CBC Table 2305.3.4, 2305.2.3
129. Provide shear transfer details showing how forces are transferred from roof/floor diaphragms to shear walls and foundation, and refer to such details on the cross sections. CBC 2305.1.4. Please download County handout B-40 from our website noted on the front page for guidance.
130. Indicate length and type of shearwalls on framing plans corresponding to calculations.

131. Interior shearwalls shall extend to roof/floor diaphragm. Provide shear transfer detail/reference.
132. Provide chord splice detail for roof/floor diaphragms. CBC 2305.1.2, 1613.1
133. Provide drag strut connection detail/reference. Show location on the framing plans. CBC 2305.1.2
134. Spacing of boundary nailing for floor diaphragm and sill nailing of wall above to 2X perimeter blocking shall be sufficient to avoid splitting the 2X material. Provide a detail showing suitable nailing pattern or use 3X blocking. CBC Tables Nos. 2306.3.1, 2306.3.2, 2306.4.1
135. Show holdowns on the framing plans and provide a detail showing connection of upper and lower story shear walls. CBC 2305.3.7
136. Show location and size of posts which support beam. Specify post-beam connectors. CBC 2304.10.1.1, 2304.9
137. Specify metal connectors between ridge beams, rafters, and supports. Provide construction details. CBC 2304.9.3
138. Specify metal tie straps max. 4 ft. o.c. for connection of roof beams/rafters at ridge. CBC 2304.9.3
139. Show beam to beam, beam to post, and post to foundation connections. Specify approved metal connectors or provide details. CBC 2304.9, 2304.10.1
140. Balconies, decks and landings more than 30 inches above grade shall be provided with a guardrail, min. height 42". Open space between intermediate rails/balusters shall not exceed 4". Provide details. CBC 1013
141. Provide construction details for balcony railings, guard- rails and handrail post-base connections in compliance with the lateral load of 200# in any direction at any point per CBC 1607.7.1.
142. Provide full height structural cross section of fireplace to show compliance with CBC 2111 or attach County handout B-10 to the plans, or callout ICC research report number for factory built fireplaces on the plans. Please download this handout from our website.
143. Glazing within a 24" arc of the doorway/ glazing within 18" of floor/glazing in shower and bathtub doors and enclosures shall be tempered. CBC 2406.3
144. Glazing in doors shall be tempered. CBC 2406.3
145. Glazing in railing regardless of height above a walking surface shall be tempered. CBC 2407
146. Provide structural details and calculations for glass-enclosed greenhouse/solarium. Design for wind, seismic and dead loads per CBC 1609, 2404.
147. Call out size and spacing of veneer ties and joint reinforcement for anchored veneer per CBC 1405.
148. Provide construction detail of glass block masonry. CBC 2110
149. Provide attic ventilation per CBC 1203.2 and under floor ventilation per CBC 1203.3.

FOUNDATION

150. Piers are permitted for single floor loads only. Redesign. VCBC Table 1805.4.2
151. Refer to soil report and to VCBC Table 1805.4.2. Redesign foundation to meet requirements associated with the soil expansion index for this site.
152. Design foundation for expansive index range of 91-130 and foundation bearing pressure = 1,000 PSF. Revise.
153. Welded wire mesh is not permitted in the slab on grade. VCBC Sec. 1802 and Table 1805.4.2. Revise.
154. Provide dowels: #3 @ 24" o.c. in exterior footing; bend 3' into slab. VCBC Table 1805.4.2
155. Use $\frac{5}{8}$ " anchorbolts for seismic design category "E" per CBC Sec. 2308.12.9.
156. Soil engineer shall provide recommendations for post tensioning system. Recommendations shall include but not limited to, allowable interior and exterior spans for slab design. Such allowable spans shall be justified according to expansiveness of the soil due to lateral migration of rainwater under the slab.
157. Engineer who prepared the post-tension design calculations shall also provide actual loads at bearing walls and posts.
158. Redesign foundation to comply with recommendations of the soil report. VCBC 1802
159. Design cast-in-place concrete piles, caissons and caps in compliance with CBC 1810

160. Provide pile caps and lateral stability for piles. CBC 1808.2.4, 1808.2.5
161. Show location, size, and reinforcement of column footings. CBC 1801.2
162. Show location (dimensioned) of hold-downs/steel straps/post anchors on the foundation plan. CBC Appendix 106.3
163. Add this note to foundation plans:
- "All holdowns and anchor bolts at shearwall shall be set in place by template prior to foundations inspection."
164. Indicate size and spacing of anchor bolts for shearwalls on the foundation plan. Reference to shear panel schedule is not acceptable.
165. Provide approved water proofing material on the exterior surface of foundation retaining walls. Callout ICC research report number. CBC 1807
166. Specify reinforcement at top and bottom of foundation where hold-downs are located. CBC 1604
167. Add this note to the plans: "Drilled in expansion bolt anchors shall be tested by an independent testing laboratory to a minimum of 1,000 pounds or to twice the allowable design value for the same size bolt, whichever is greater. Frequency of testing shall be: one to five bolts per site - two bolts shall be tested and certified. More than five bolts - 25 percent of such bolts shall be selected at random to be tested and certified. Failing bolts shall be reinstalled and retested to the same criteria." VCBC 1613.7

STRUCTURAL DESIGN REQUIREMENTS

168. Wood frame buildings of unusual shape or size, or of split level construction, shall be designed to resist lateral forces. Provide lateral force calculations and structural details. CBC 1604, 2305
169. The complexity of the proposed structure necessitates design analysis and submittal of structural calculations for horizontal and vertical loads. CBC 1604
170. Design retaining wall for overturning and sliding for a factor of safety of at least 1.5 per CBC 1806.
171. Computer printout for retaining wall calculations as received is difficult to follow. Revise the printout to indicate the following:
- a. Fluid pressure.
 - b. Any building axial load, surcharge due to building setback and/or surcharge due to vehicle parking.
 - c. Actual bearing pressure at heel and toe.
 - d. Minimum factor of safety = 1.5 for overturning and sliding.
 - e. Value of n (E_s/E_m) used in the calculations.
 - f. Actual flexural stresses in masonry and steel.
 - g. Actual bond stress.
 - h. Special inspection "yes" or "no".
172. Submit structural design and details for retaining walls over 3 feet high or with surcharge. VCBC 105.2
173. Check basement retaining walls for axial plus bending stresses.
174. Separate permit is required for detached retaining walls. (Contact permit processing staff.)
175. Provide concrete/masonry wall anchorage connection detail between roof/floor and the wall per CBC 1604.8.2. Such anchorage connection shall provide a direct and positive connection to resist horizontal forces.
176. Submit structural design and details for fences or garden walls over 6' in height. VCBC 105.2
177. Design uninhabitable residential attic storage use area for 20# per square foot per CBC Table 1607.1.
178. Wood frame construction as shown on the plans deviates significantly from the conventional construction standards of CBC 2308. Provide structural calculations and details. Plans must be prepared by a licensed architect or registered engineer. Sec. 6737.1(b), California Business and Professions Code.
179. Plans and calculations for residential buildings over two stories in height shall be prepared by a licensed architect or registered engineer. Sec. 6737.1(b), California Business and Professions Code.

180. Provide a layout of rafters, joists, beams, posts, and shear resistive elements. Label the structural elements shown on the layout corresponding to calculations.
181. Distribute lateral loads per CBC 1613.
182. Check the rigid frame for load combination using allowable stress design per CBC 1605.
183. Design rigid frame moment connection for the seismic design category per CBC 2205.2.2. You may design any pre-qualified connection details per Table 2-2 of FEMA Publication 350.
184. Computer printout for rigid frame as received is difficult to follow. Revise the printout to indicate the following:
- Loading diagrams for each load combination.
 - Bending, shear and deflection diagrams, each load combination.
 - Vertical and horizontal reaction for each combination.
 - Actual stresses in each structural element.
 - Axial plus bending (unity check) for column.
185. Computer printout for structural elements as received is difficult to follow. Revise the printout to indicate the following:
- Loading diagrams for each load combination.
 - Bending, shear and deflection diagrams, each load combination.
 - Vertical and horizontal reaction for each combination.
 - Actual stresses in each structural element.
 - Axial plus bending (unity check) for column.
186. Design base bearing plate for steel column based on bearing strength of the concrete. CBC 2205
187. Design column baseplate anchors per CBC 1911.
188. Design steel column and footing in compliance with CBC 1613, 1805.4.2, 2205.1
189. Design underfloor cripple walls as shearwalls per CBC 1604, 2308.12.4
190. Use exposure "C" for wind design criteria per CBC 1609.4.
191. Shearwalls sheathed with other than wood structural panels' materials are not permitted. VCBC 2306.4.5
192. Where special inspection is not provided due to fastener spacing of 4" or less, allowable shear value for shearwalls and horizontal diaphragm is 75% of CBC Table 2306.3.1 and 2306.4.1 per Ventura County Ordinance. Revise calculations and plans.
193. Include redundancy factor in each shearwall design at each story per CBC 1613.
194. Design cantilever column for resisting seismic forces per CBC 1613.1. Revise calculations.
195. Since the upper story shearwalls are not continuous to the lower story, design lateral resistive elements for special seismic load combination as specified in CBC 1613.1. Where beams or columns occur under the shearwalls, they shall be designed for compression with " Ω " factor.
196. Provide 3x sill plate since shear force/LFT has exceeded 350/LFT.
197. In lieu of cut washers, provide square washers. Add this table to the plans.

MINIMUM SIZE FOR SQUARE PLATE WASHERS	
BOLT SIZE	PLATE SIZE
1/2"	3/16" x 2" x 2"
5/8"	1/4" x 2 1/2" x 2 1/2"

3/4"	5/16" x 2 3/4" x 2 3/4"
7/8"	5/16" x 3" x 3"
1"	3/8" x 3 1/2" x 3 1/2"

198. Sill plate size and anchorage in seismic design category D, E shall have 3"x3"x0.229" washers. CBC 2305.3.11, 2308.12.8

199. The architect/engineer who prepared the calculations shall review and sign the plans to affirm their correctness and consistency with the calculations. CBC Appendix 106.3

ENERGY CONSERVATION REQUIREMENTS (24 CAC) - RESIDENTIAL

200. Show on the PLANS the following to facilitate review for compliance with energy conservation standards:

- a. True north angle with respect to exterior walls.
- b. On the cross sections, show insulation envelope, call out R-values of insulation for wall, roof, and floor (slab or raised floor) assemblies corresponding to the energy calculations.
- c. Provide details of radiant barrier installation. 24 CAC(f)B.2
- d. On the floor plans, identify thermal mass materials, thickness and square footage corresponding to energy calculations.
- e. For package C, submit completed thermal mass worksheet "for slab floor construction"/"for raised floor construction" to justify compliance with thermal mass requirements.
- f. Add mandatory energy conservation features and devices notes or MF-1R with applicable boxes check marked (___) to the plans.
- g. Form CF-1R, Certificate of Compliance for Residential, shall be completely filled out including the required signatures and shall be added to the drawing sheets. Loose sheet CF-1R is not acceptable. 24 CAC, Sec. 10-103

201. Provide energy calculation showing compliance with prescriptive or performance method per Title 24 requirements.

202. Glazing area is not consistent with the energy calculations, verify and revise schedule.

203. Show high efficiency luminaires in the kitchen, bathroom, garages, laundry room and utility room. 24 CAC. 150(k)

NON-RESIDENTIAL CONSERVATION REQUIREMENTS (24CAC)

204. Show on the plans the following to facilitate review for compliance with energy conservation standards:

- a. True north angle with respect to exterior walls.
- b. On the cross sections, show insulation envelope, callout R-values of insulation for walls, roof and raised floor assemblies corresponding to energy calculations.
- c. Add completely filled-out certificate of compliance forms to the plans (ENV1-C, ENV2-C, ENV4-C and others) required to support the method of compliance.
- d. Add mandatory requirements for doors, windows, and fenestration products, joints and openings, insulations and cool roofs per 24 CAC Sec. 110.

REQUIREMENTS BY OTHER AGENCIES

205. Obtain a grading permit from the Public Works Development Services Division. CBC Chapter Appendix J

206. The soil report has been sent to the Public Works Development Services Division for review. Comments or additional requirements, if any, will follow separately. VCBC 106

207. Change drawings to comply with Public Works Development Services Division requirements. Refer to comments attached to this letter.

208. Change drawings to show compliance with Public Works Flood Plain Ordinance requirements. Refer to comments attached to this letter. VCBC 106

209. Show compliance with requirements of the High Fire Hazard Area/Fire Hazard Severity Zones on the plans. Refer to handout B-60. VCBC Chapter 7A FDP 26

210. Provide two-hour area separation wall per CBC Table 705.4 without openings, to separate building into areas of 5,000 sq. ft. or less; or provide automatic fire extinguishing system throughout. FPD 26

211. Add the following notes to the plans. FDP 26

ADDRESS:

- a. The address shall be visible and legible from the street or frontage road.
- b. The address numbers shall be of minimum of four inches (4") in height.
- c. The address numbers shall be of contrasting color to their background. Brass or gold numbers shall not be posted. (Address numbers on curbs are not acceptable).
- d. Permanent address numbers shall be provided on the mailbox or on a permanent sign or post adjacent to the driveway entrance of a flag lot.

212. Add the following notes to the plans. FDP 26

FIRE EXTINGUISHERS:

- a. The minimum size (1A-10B:C) multipurpose dry chemical type extinguisher(s) shall be provided.
- b. All extinguishers bear a tag showing the State Fire Marshal seal. The tag shall indicate the date, month, and year in which the extinguisher was serviced.
- c. Extinguishers shall be mounted on the wall so that the top of the extinguisher does not exceed 42" or 48" from floor level (depending on ADA requirements).
- d. The maximum travel distance to any fire extinguisher shall not exceed 75' from any location in the building.

213. Add this note to the plans: "Provide automatic fire extinguishing system throughout." FPD 26

214. Refer to attached special structural requirements for structural elements resisting seismic/wind forces and submit revised plans and calculations in compliance with this document.

FIRE ALARM SYSTEM

215. Since the valuation of addition, alteration or repair has exceeded \$1,000, provide smoke detectors in accordance with CBC 907.2.10.2.

216. Provide smoke detectors in sleeping room, corridor, basement and each floor level. CBC 907.2.10.1.2

HANDICAP REQUIREMENTS (24 CAC)

217. Locate the required parking spaces for the handicapped on the site plan close to primary entrance and provide dimensioned details. 24 CAC, 1129B

218. Provide one in every eight accessible spaces, but not less than one van accessible parking space. 24 CAC, 1129B .3, Item # 2

219. Show path of travel from the handicapped parking space to the primary entrance of the building by ramp/walkway. 24 CAC, 1114B.1.2. 1127B

220. Door hardware shall be operable with a single effort, such as lever type, panic bars, push-pull, toggle type, or other hardware designed and approved for the handicapped. Add a note to the plans. 24 CAC, 1133B.2.5

221. All sanitary facilities shall be made accessible to and usable by the handicapped. Provide complete dimensions and details, including interior elevations. 24 CAC, 1115B

222. Revise restroom details as marked to show compliance with Title 24, Sec. 1115B.3

223. Provide two required handicapped signs to the sanitary facilities. 24 CAC, 1115B.6, 117B.5.1, Item # 1

224. Show handicap accessibility to existing buildings from handicap parking space to primary entrance, path of travel to specific area of alteration, structural repair or addition, and sanitary facilities, drinking fountains and public telephones serving the area. If existing building does comply with the current handicap regulations, add a note for our "Building Inspector" to verify in the field. 24 CAC, 1134B.2.1

225. You may apply on a prescribed form for “unreasonable hardship” when costs of providing an accessible entrance, path or travel, sanitary facilities, public phones and drinking fountains is disproportionate to cost of project that is, when it exceeds 20 percent of the cost of the project without these features. CAC 24, 1134B.2.1 Exc. 1
226. Accessible showers for handicapped shall comply with 24 CAC, 115B.4.4. Provide plan view and interior elevations.
227. Stairway handrail’s shape, height, extension, including treads, nosing and solid risers shall be per 24 CAC, 1133B.4.2.2.
228. Where door does not swing over the landing, landing depth shall be 58 inches measured at right angles to the plane of the door in its closed position. 24 CAC, 1133B.2.4.2
229. Where the door swings over the landing, landing depth shall be 60 inches measured at right angles to the plane of the door in its closed position and the width of level area shall extend at least 24" past the strike edge of the exterior door and 18" past the strike edge of the interior door. 24 CAC, 1133B.2.4.2, 1133B.2.4.3

ADDITIONAL CORRECTIONS

230. Proposed floor area of the building has exceeded the allowable limits specified in CBC Table 503. Provide area justification.
231. Add mixed occupancy analysis in compliance with CBC 506.4.1.
232. Add the shell building notes to the plans. “This permit includes the construction of shell building only. Separate building permits are required for each tenant improvement. Tenant improvements plans shall comply with all the requirements not included in the shell building such as plumbing, mechanical, energy and electrical code requirements.”
233. Provide building analysis in a format shown by stamp impression on the plans.
234. Since the corridor is serving an occupant load greater than what is specified in Table 1017.1, provide full height cross section showing one hour fire resistive construction. CBC 1017.1
235. Door openings in the rated corridor shall have fire protection per Table 715.4.
236. Justify existing framing members for proposed mechanical equipment loads. Provide revised roof framing plan. Show exact locations and operating weight of mechanical equipment.
237. Provide detail of lateral bracing including compression strut for suspended ceiling systems. CBC 1613
238. Dead-end corridors shall not exceed 20 feet in length. Revise. CBC 1017.3
239. Provide detail of interior partitions showing anchorage at the floor and bracing at the top to the supporting structural members. CBC 1607.13
240. Immediately above the Engineer/Architect stamp and signature, make this statement, “Plans are prepared under my direct supervision.”
241. Exit doors shall swing in the direction of egress travel when serving an occupant load of 50 or more. Revise. CBC 1008.1.2
242. Provide panic hardware to exit doors marked “PH.” CBC 1008.1.9
243. Exit corridors shall not be interrupted by intervening room(s). Revise. CBC 1017.5
244. Show location of occupant load sign capacity. CBC 1004.3
245. Provide detail showing reinforcement around door/window opening(s) in masonry wall in accordance with CBC 2106 and 2107. An alternate equivalent design may be submitted for review.
246. Provide detail showing reinforcement around door/window opening(s) in concrete wall in accordance with CBC 1901.2. An alternate equivalent design may be submitted for review.
247. Provide concrete/masonry wall anchorage connection detail between roof/floor and the wall per CBC 1604.8.2. Such anchorage connection shall provide a direct and positive connection to resist horizontal forces.
248. Provide smoke damper per CBC 716.2.
249. Provide fire damper per CBC 716.2.

ADDITIONAL COMMENTS AND CORRECTIONS:

ADDITIONAL COMMENTS AND CORRECTIONS CONT'D.

No extension may be granted until a new zone clearance is obtained for the project and (if applicable), a reapproval of the private sewage disposal system has been obtained from the Environmental Health Division.

Plans Checked By _____ Date _____
(First Review)

Plans Checked By _____ Date _____
(Second Review)

Plans Checked By _____ Date _____
(Third Review)

Plans Checked By _____ Date _____
(Final)

DIVISION OF BUILDING AND SAFETY OFFICES

Ventura County Government Center
800 So. Victoria Avenue, Ventura, CA 93009
Plan Review Information
Plan Check Staff

(805) 654-2771
Mon. - Fri.
7:30 - 4:00
7:30 - 12:00

East County
3855-F Alamo Street, Room #2019A
Simi Valley, CA 93065
Plan Review Information
Plan Check Staff

(805) 582-8064
Mon. - Fri.
7:30 - 4:00
7:30 - 12:00