



## Rancho Palos Verdes COMMERCIAL PLAN CHECK LIST 2022 CBC

### GENERAL

1. Show the correct address of the building on application to correspond with plans.
2. All sheets of plans and cover sheet of any calculations must be wet signed and dated by person responsible for their preparation, who is licensed in California.
3. Submit a review letter by soils engineer and incorporate any requirements and recommendations into the plans.
4. A geological report/soil report is required. CBC 1803.2
5. Provide a Building Code Analysis on the title sheet. Include the following code information for each building proposed: Description of use, Occupancy, whether separated or unseparated, number of stories, type of construction, sprinklers, floor area, height, and allowable floor area.
6. The current design codes have changed. Please submit design and plans based on the 2022 CBC, CPC, CMC and CEC.
7. Delete notes and details that do not apply to this project.
8. Grading permit may be / is required. Plans and permit for grading may be processed and issued separately from and prior to this building permit.
9. Identify current code years on plans. 2022 CBC, CMC, CPC, CEC, CGBC along with the 2022 T-24 Energy Standards.
10. Provide an accurate and complete listing of required special inspections pursuant CBC 1704 specific to this project. This should appear in prominent position on the cover sheet of the plan. Alternatively, provide a clear note in a prominent position on the cover sheet which states what sheet of the plans the list of special inspections specific to this project may be found. Please be aware extensive changes in the required special inspections.
11. If this project is required to have structural observation pursuant CBC 1710 provide a prominent note on the cover sheet of the plans stating same. List the stages at which the architect or engineer of record is to perform structural observation, what is to be observed, when structural observation reports are to be submitted to the Building Official, and any other documentation or observation requirements. Alternatively, place a note in a prominent position on the cover sheet which states what sheet of the plans this information may be found.
12. At the time of permit issuance, an additional set of plans including the site plan, floor plans, or other drawings, sufficient to describe the project shall be provided to the Building Department, to be filed with the County Assessor's office.
13. Health Department review and approval is required for (food preparation)(public pools).
14. Fire Department review and approval is required for (A, E, H, I, L, R occupancies)(high rises).

15. Clarify on plans if this project is intended to be an OSHPD licensed clinic per CBC 1226.

## **ARCHITECTURAL**

16. A complete plot plan showing: Lot dimension, yard setbacks, street name(s), north arrow, existing building(s) to remain, distance between buildings and location of private sewage disposal system is required.
17. Indicate detail and section reference as to their appropriate location on plan views.
18. Provide existing and proposed contours, spot elevations to indicate general site slope and drainage pattern.
19. Specify finish floor elevation of first floor.
20. On site plan delineate all projecting elements, and show distance to property line or adjacent structures.
21. On Title Sheet, show justification to exceed the basic allowable floor area listed in Table 503.
22. On Title Sheet, show justification to exceed the number of stories or building height listed in Table 503.
23. The area increases per CBC 506.3 shall not apply for:
  - a. Buildings with a group H-1 and building areas of H-2 or H-3.
  - b. Where fire rating substitution of Table 601, Note e is used.
  - c. Group L occupancies.
24. A building equipped with a non NFPA 13 sprinkler system, ie:13R or 13D, the area increases per CBC 506.3 do not apply.
25. When sprinkler increases are applied for an additional 20 feet in height or for an additional story in accordance with 504.2, sprinklers may not also be used for an area increase in 506.3 for Group A, E, H, I, L, R, Occupancies and high-rises.
26. Specify on Floor Plans uses of all rooms or areas.
27. Provide a note on the plans indicating if any hazardous materials will be stored and/or used within the building, which will exceed the quantities listed in CBC Tables 307.1(1) and 307.1(2).
28. Provide separate Floor Plans identifying hazardous material quantities, types and locations prepared by a qualified person in accordance with 414.1.3 CBC.
29. The percentage of maximum allowable quantities of hazardous materials per control area for each floor and the total number of control areas shall comply with CBC Table 414.2.2.
30. On Site Plan dimension distances from building(s) to all property lines, street center lines, and adjacent existing or proposed structures on the site.
31. Show the size, use, occupancy, and type of construction of all existing buildings on the site.
32. On Site Plan show all interior assumed lot lines, any designated flood plains, open space easements or development restricted areas.
33. On Site Plan, clearly delineate any frontage used to justify allowable area increases per CBC 506.2.

34. Note on plans: "Frontage used for allowable area increases per CBC Section 506.2 shall be permanently maintained".
35. The maximum area of exterior wall openings shall not exceed that allowed in CBC Table 705.8.
36. Exterior walls less than \_\_\_\_\_ ft. to property line or assumed property line shall have a 30" parapet opening per CBC Table 602, 705.11 and Table 705.8.
37. Where protected and unprotected openings occur in the exterior wall in any story the total area shall comply with the unity formula (7-2) in CBC 705.8.4
38. Fire-resistive exterior wall construction shall be maintained through crawl spaces, floor framing, and attic spaces.
39. Fire Barrier continuity must be detailed in accordance with 707.5 CBC.
40. Fire Partition continuity must be detailed in accordance with 709.4 CBC.
41. Projections located where openings are required to be protected shall be non-combustible, heavy timber, or one hour construction. CBC 705.2.3.
42. Projections may not extend into yards more than permitted by CBC 705.2.
43. When two or more buildings are on the same property and they are not analyzed to comply as one building, the building shall have an assumed property line between them for determining wall and opening protection, and roof cover requirements or treated as a single building per CBC 705.3.
44. When a new building is constructed adjacent to an existing building, show the required wall and opening protection requirements for the existing building will be maintained. CBC 503.1.2, Table 508.4, Table 705.8 and 705.3.
45. Structural elements in exterior walls required to be fire-resistive construction shall have fire-resistive protection equal to or greater than that required for an exterior bearing wall. CBC Table 602.
46. Detail firewall to comply with the following requirements:
  - a. Horizontal continuity. CBC 706.5.
  - b. Exterior wall intersection. CBC 706.5.1.
  - c. Horizontal projecting elements. CBC 706.5.2.
  - d. Vertical continuity. CBC 706.6.
  - e. Structural stability. CBC 706.2.
  - f. Opening protection. CBC 706.8 and Table 715.4.
  - g. Stepped buildings. CBC 706.6.1.
47. Type of construction because of \_\_\_\_\_ occupancy at \_\_\_\_\_ floor must conform to CBC Table 503.
48. For buildings with mixed occupancies, the allowable area per story shall be based on the most restrictive provisions for each occupancy when the mixed occupancies are treated according to CBC 508.3. (nonseparated). If treated per CBC 508.4 (separated) the maximum total building area shall be such that the sum of the ratios for each of the actual to allowable are does not exceed 1.

49. Unless considered a separate story, the floor area of a mezzanine shall be considered a part of the story in which it is located. CBC 505.1
50. Clearly show the maximum height of the building as defined in CBC 502.1
51. Clearly show if the lower level is a basement based on the definitions in CBC 502.1.
52. Provide details, notes and specifications for the fire protection of building elements as required for the type of construction. CBC Table 601 and Section 602.
53. Clearly label and identify on plans fire-resistive corridors, exit enclosures, exit passageways, horizontal exits, occupancy separation walls and floors, fire resistive shafts, and fire walls, along with their fire-resistive ratings.
54. Add note on plan CBC 703.6:  
Fire walls, fire barriers, fire partitions, smoke barriers and smoke partitions or any other wall required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling. Such identification shall:
  1. Be located in accessible concealed floor, floor-ceiling or attic spaces.
  2. Be repeated at intervals not exceeding 30 feet (914 mm) measured horizontally along the wall or partition; and
  3. Include lettering not less than 0.5 inch (12.7 mm) in height, incorporating the suggested wording: "FIRE AND/OR SMOKE BARRIER-PROTECT ALL OPENINGS," or other wording.

Exception: Walls in Group R-2 occupancies that do not have a removable decorative ceiling allowing access to the concealed space.
55. On site plan and floor plans, clearly show location of all firewalls as defined in CBC 706.
56. Construct a Firewall (sometimes party wall) at property lines or when separating a building into two or more separate areas per 706.1 CBC.
57. No openings are allowed in the Party Wall per 706.1.1 when a wall is constructed on or near a property line.
58. Firewall/Party Wall ratings must comply with Table 706.4. Future occupancy changes may impact the required rating. Consider future intended use.
59. Party Walls/Firewalls in other than Type V construction must be non-combustible per 706.3.
60. Party Walls/Firewalls must be structurally independent of collapse under fire per 706.1.1 and 706.2.
61. Provide the design and details for a shaft as required by CBC 708.
62. Openings into shaft enclosure shall be protected with smoke and fire dampers per CBC 716.5.3.
63. An Elevator Lobby is required in accordance with 708.14.1 when serving over three floors and for

Group A, E, H, I, L, R-1, R-2 and R-2.1 Occupancies or high-rises serving over two floors.

64. Elevators must open into lobbies that separate the elevator shaft enclosure doors from each floor by fire partitions CBC 708.14.1. Opening protection per 715.4.3 and duct penetrations per 716.5.4.1.
65. Specify the fire rating of 1 or 2 hours for the shaft in accordance with CBC 708.4 and detail envelop continuity as required by CBC 708.5 and 708.7.
66. Detail water heater vents inside fire-resistive wall construction, or within fire resistive shafts.
67. Draft stop floor ceiling assemblies per CBC 717.3.2 for R (other than R-2.1) occupancies and 717.3.3 for all others.
68. In fire resistive walls, detail through penetrations and membrane penetrations per CBC 713.3.
69. In fire resistive floors and ceilings detail fire resistive penetrations per CBC 713.4.
70. A \_\_\_\_\_ hr. fire barrier is required between \_\_\_\_\_ occupancy and the \_\_\_\_\_ occupancy. CBC 508.3.3, Table 508.4 and 707.3.8.
71. Provide a Fire Barrier in accordance with 707 CBC for the:
  - a. Shaft enclosure per 708.4.
  - b. Exit enclosure per 1022.1.
  - c. Exit passageway per 1023.3.
  - d. Horizontal exit per 1025.1.
  - e. Atrium per 404.6.
  - f. Incidental use area at the \_\_\_\_\_ per 508.2 and Table 508.2.5
  - g. Control areas per 414.2.4.
  - h. Occupancy separation per 508.4.
  - i. Fire area separation per 707.3.9.
72. The fire barrier or horizontal assembly, or both, separating a single occupancy into different fire areas shall have a fire resistance rating of not less than that indicated in Table 707.3.9.
73. Provide \_\_\_\_\_ hr. door assemblies in \_\_\_\_\_ hr. fire barrier. CBC 707.6 and Table 715.4.
74. Glazing and openings in fire barriers shall be limited to 25% of the wall area, and no larger than 156 square feet unless meeting exceptions. CBC 707.6.
75. All structural elements supporting a fire barrier must have the same fire resistive ratings as the required occupancy separation. CBC 707.5.1.
76. Provide a Fire Partition in accordance with 709.1 for:
  - a. walls separating dwelling units. 420.2
  - b. walls separating sleeping units as required by 420.2.
  - c. walls between mall tenant spaces. 402.7.2.
  - d. the corridor per 1018.1
  - e. the elevator lobby per 708.14.1.

- f. walls separating tenant spaces as required by 709.1, item 6.
77. Ducts penetrating Fire Partitions shall have fire dampers (with exceptions) per 716.5.4 CBC.
78. Joints must be protected by an approved fire-resistive joints system. CBC 714.
79. A smoke barrier complying with 710 is required in accordance with 407.4 for I-2 and 408.6 for I-3 occupancies.
80. Doors in I-2 occupancy corridors must comply with 710 exceptions 1 and 2.
81. A smoke tight assembly must be provided for I-2 occupancies in accordance with 407.4 CBC and 408.6 for I-3 occupancies..
82. The supporting construction of smoke barriers shall be protected to afford the required fire resistance rating of the wall or floor supported in buildings of other than Type IIB, IIIB or VB construction. 710.4 CBC.
83. Combination smoke and fire dampers shall be required where a fire and smoke barrier or wall is required. CBC 716.5.
84. Address the specific occupancy related provisions for the \_\_\_\_-occupancy areas in accordance with Section 40\_\_ CBC.
85. Provide fire separation for incidental use area in the \_\_\_\_\_ in accordance with 508.2 and Table 508.2.5 CBC.
86. Provide medical gas storage room per 415.2 (Gas Room) and 415.7.2 CBC.
87. A class\_\_\_\_\_ roof covering is required CBC 1505.1 and Table 1505.1.
88. For roof covering specify: CBC 1505.1
- A. Manufacturer and ICC/UL/SFM number.
  - B. Roof slope(s) of all areas on the roof plan.
  - C. Note on Plans: "Installation of roofing shall be in accordance with manufacturer's specifications."
89. Roof slope is not adequate for \_\_\_\_\_ type of roof covering specified. CBC 1507.1
90. Show sizes/locations of the roof/deck drains and overflows. CBC 1503.4 and CPC 1106 or 1108.
91. Specify minimum 1/4 inch per foot roof slope for drainage along flow lines or design to support accumulated water. CBC 1611.3. Roofs with slopes less than 1/4 inch shall be designed per CBC 1611.2.
92. Specify approved weatherproof walking surface material at decks and balconies.
93. Provide specifications for roofing material and application. Chapter 15.

94. Roof drainage shall not flow over public property, or adjacent properties. CPC 1101.1.
95. Provide a minimum 20" x 30" attic access. CBC 1209.2. 22" x 30" min if containing appliances. CMC 904.11.
96. Provide and detail access to equipment on roof per CMC 904.10.
97. Show on plans the required attic ventilation area, and the attic ventilation type, size and location provided. The required ventilating area ratio is 1/300 of attic area with 50% of openings 3' above eave or cornice vents with the balance of required ventilation provided by eave or cornice vents. Openings to have 1/4 inch corrosion resistant metal mesh covering. CBC 1203.2
98. Draft stop attics and mansards per CBC 717.4.
99. This project falls within the Wildland Interface Fire Area, detail compliance on plans per CBC Ch. 7A.
100. Provide smoke and heat venting in F-1 or S-1 occupancies with undivided floor areas greater than 50,000 sq. ft and buildings (of any occupancy) containing high piled combustible stock or rack storage CBC 910.2 with exceptions. Skylights do not meet vent standards unless specifically tested and labeled.
101. Provide detail of skylights to show compliance with CBC Chapter 2606 and Section 2610.1, or show on plans ICC or other approval number.
102. Plastic skylights shall be separated from each other by not less than 4 feet CBC 2610.6. (With exceptions)
103. Where exterior wall openings are required to be protected in accordance with Section 705, a skylight shall not be installed within 6 feet of such exterior wall. CBC 2610.7.
104. Provide fire sprinklers for this project in accordance with 903.2. \_\_\_\_\_ CBC.
105. Additional sprinkler provisions apply for this project based on Table 903.2.11.6 CBC.
106. Fire sprinklers are required for buildings where any story or basement greater than 1,500 sq ft, where there is not provided at least 20 sq ft of opening entirely above grade in each 50 lineal feet or fraction thereof of exterior wall on at least one side or two sides when opposite wall is more than 75 feet from such openings CBC 903.2.10.1.
107. Provide sprinklers at rubbish and linen chutes and terminating rooms. CBC 903.2.11.2
108. Provide sprinklers throughout buildings with a floor level having 30 occupants or more that is located 55 feet above the lowest level of fire department vehicle access. CBC 903.2.11.3
109. Provide a Class \_\_\_\_ Standpipe per CBC 905. Show hose cabinet locations or outlets on each floor plan and roof plan.
110. Provide an alarm system in accordance with 907.2. \_\_\_\_ for the \_\_\_\_ occupancy area.
111. Elevators shall comply to the requirements of CBC Chapter 30 and 1116B. State amendments require a gurney-size elevator for any number of stories.

112. Note on plans or finish schedule: "Wall, floor and ceiling shall not exceed the flame spread classifications in CBC Table 803.9".
113. Indicate interior finish compliance with 803.1 and Table 803.9 flame spread provisions.
114. Detail furred or dropped finishes at fire resistive walls or ceilings as required by CBC 602.1, 603.1 and 805.1.
115. **Suspended Ceiling:** Suspended acoustical ceiling systems shall be installed in accordance with the provisions of ASTM C 635 and ASTM C 636. Sec 1613.1. CBC Show details.
- A. Per ASCE 7-05, Sec 13.5.6.2.2 show or specify the following:
1. Specify heavy duty T-bar grid system shall be used.
  2. Show that the width of the perimeter supporting closure angle shall be not less than 2 in. In each orthogonal horizontal direction, one end of the ceiling grid shall be attached to the closure angle. The other end in each horizontal direction shall have a 0.75 in. clearance from the wall and shall rest upon and be free to slide on a closure angle. Detail compliance on plans.
  3. For ceiling areas exceeding 2,500 s.f., a seismic separation joint or full height partition that breaks the ceiling up into areas not exceeding 2,500 s.f. shall be provided unless structural analyses are performed of the ceiling bracing system for the prescribed seismic forces that demonstrate ceiling system penetrations and closure angles provide sufficient clearance to accommodate the anticipated lateral displacement. Each area shall be provided with closure angles.
  4. Except where rigid braces are used to limit lateral deflections, sprinkler heads and other penetrations, show a 2" oversize ring, sleeve, or adapter through the ceiling tile to allow for free movement of at least 1" in all horizontal directions. Alternatively, a swing joint that can accommodate 1" of ceiling movement in all horizontal directions is permitted to be provided at the top of the sprinkler head extension. Detail compliance on plans.
  5. Lateral bracing for suspended ceiling shall be provided. Where ceiling is not supporting interior partitions, ceiling bracing shall be provided by four No. 12 gauge wires secured to the main runner within 2 inches of the cross runner intersection and splayed 90 degrees from each other at an angle not exceeding 45 degrees from the plane of the ceiling. A strut (adequate to resist the vertical component from lateral loads) fastened to the main runner shall be extended to and fastened to the structural members of the roof or floor above. These horizontal restraint points shall be placed 12 feet o.c. in both directions with the first point within 6 feet of each wall. Attachment of restraint wires to the structure above shall be adequate for the load imposed.
  6. Specify special inspection of its installation. CBC 1705.3.4
116. Provide a section view of all new interior partitions.
- A. Type, size and spacing of studs. Provide gauge and ICC number for metal studs.
- B. Method of attaching top and bottom plates to structure. (NOTE: Top of partition must be secured to roof or floor framing, unless suspended ceiling has been designed for lateral load of



- partition).
  - C. Wall sheathing material and details of attachment (size and spacing of fasteners).
  - D. Height of partition and suspended ceiling and distance from ceiling to structure above.
117. Glazing within 24" of a doorway and less than 60 inches above a walkway shall be safety glazing. CBC 2406.4
  118. Provide damp proofing details for basement or other walls below finish grade in accordance with 1805 CBC.
  119. Fasteners for preservative treated and fire treated wood shall be of hot dipped zinc coated galvanized steel, stainless steel, silicon bronze or copper. The coating weights for zinc coated fasteners shall be in accordance with ASTM A 153. CBC 2304.9.5.
  120. Identify structural design data on plans per CBC 1603.1 such as floor live load, roof live load, roof snow load, wind design data, earthquake design data, geotechnical information, etc.
  121. Show location of project on seismic maps to identify seismic design coefficients to be used. You may also chose to use <http://earthquake.usgs.gov/research/hazmaps/design> and print out the design values and submit a copy with your resubmittal.
  122. Provide structural details and calculations for light pole footings.
  123. Provide structural details and calculations for equipment and components per ASCE 7-Sections 6.5.15.1 and 13.6.
    - a. For seismic/wind connections.
    - b. For gravity support.
  124. Provide 3 x 3 x .229" plate washers. CBC 2308.12.8 for Seismic Design Category D & E.
  125. The soils report requires foundation excavations to be reviewed by soils engineer. Note on the foundation plan "Prior to requesting a Building Department foundation inspection, the soils engineer shall inspect and approve the foundation excavations".
  126. Soil bearing pressure is limited to 1500 lbs/sq ft unless soil is classified per CBC 1806.2, or a soils report recommends otherwise. CBC Table 1806.2
  127. Call out minimum thickness of 3 ½ inch concrete or grade floor slabs, reinforcement and 6 mil polyethylene moisture barrier on foundation plan. CBC 1910
  128. Call out anchor bolt size and spacing on foundation plan. Provide 5/8" diameter imbedded 7" minimum at 6' o.c. maximum spacing. (2308.6 and 2308.12.9). If an engineer's report justifies that it is not in Seismic Design Category E, ½" bolts may be used.
  129. Show 8" min distance from grade to wood sill, framing and sheathing. CBC 2304.11.2.2
  130. Specify size, spacing , ICC number and manufacturer of power driven pins. (Not permitted on perimeter footings.)

131. If required by structural calculations, show size, location and embedment length of hold down anchors on foundation plan.
132. Provide anchor bolt calculations per ACI 318 Appendix D as amended by CBC 1908.1.9.
133. Show continuous reinforcement in footings with #4 T & B or by an exception in accordance with 1908.1.8 CBC.
134. Note on plan that holddown hardware must be secured in place prior to foundation inspection.
135. Detail the shear transfer connections which transfer lateral forces from horizontal diaphragms through intermediate elements and shearwalls to the foundation. CBC 2305.1.
136. Provide complete details and specifications for the installation of glass block. CBC 2110
137. Air moving systems in excess of a combined volume of 2000 cfm are required to be equipped with an automatic shutoff interlocked with a smoke detector located in the supply ducting of air moving system. CMC 203 and 609.
138. Air for combustion, ventilation, and dilution of flue gases for gas utilization equipment installed in buildings shall be obtained by application of one of the methods covered in CMC 701.2 through 701.8.3. Provide calculations to justify compliance.
139. At restrooms, provide hard non-absorbent wall and floor finishes per CBC 1210.1 and 1210.2 and 1115B.3..
140. Provide separate toilet facilities for men and women. CPC 412.3 with exceptions.
141. Toilet rooms may not open directly to food preparation facilities for service to the public in accordance with CBC 1210.5.
142. Provide plumbing fixtures count analysis per CPC Table 4-1.
143. Show elevations of finish floor and nearest upstream manhole. Show that finish floor is above upstream manhole or provide backwater valve per CPC 710. Note that fixtures above such elevation shall not discharge through the backwater valve.
144. Provide and detail grease interceptor as required by CPC 1009.1. Show location per 1009.5 and sizing per 1014 and Table 10-2 and 3.
145. Provide condensate line as required by CMC 309 collected and discharged to an approved plumbing fixture or disposal area.

## **EGRESS**

146. Submit an exit plan that labels and clearly shows compliance with all required egress features such as, but not limited to, common path of travel, required number of exits and separation, occupant load, required width, continuity, travel distance, etc. CBC 1001.1

148. The number of exits shall comply with CBC Table 1019.1.
149. Rooms with a common path of egress travel exceeding that allowed in CBC 1014.3 shall have two separate and distinct means of egress.
150. When two exits are required from a building or area they shall be separated by (one-half/one-third if sprinklered throughout) the diagonal dimension of the building or area served. CBC 1015.2.1
151. Exit width shall be not less than permitted by CBC 1005.1. The net dimension (Clear width) shall be used in determining exit width.
152. In a single story building (of A, B, E, F, M, U, S occupancy) two exits or more are required when occupant load exceeds 49 or, travel distance exceeds 75 feet. CBC 1021.1, CBC 1021.2
153. In a two story building (of B, F, M, S occupancy) two exits or more are required when occupant load exceeds 29 or, travel distance exceeds 75 feet. CBC 1021.1, CBC Table 1021.2.
154. Two exits or more are required when occupant load of a room or, space exceeds 49 or, travel distance exceeds 75 feet. CBC 1021.1, Table 1015.1
155. Travel distance to reach an exit shall not exceed that allowed in CBC 1016.1. Measure paths at right angles unless diagonal unobstructed path is ensured.
156. Two exits or exit access doors of egress shall be provided from boiler, incinerator, or furnace rooms which exceed 500 square feet and any fuel fired equipment exceeding 400,000 BTU input capacity. One exit is permitted to be a fixed ladder or alternating tread device. Exit access doorways shall be separated by a horizontal distance equal to one-half the maximum horizontal dimension of room. CBC 1015.3.
157. Each leaf of door in the means of egress shall provide 32 inches clear opening and a minimum height of 6'-8", but in no case shall any single door leaf exceed 48 inches. CBC 1008.1.1.
158. Provide specifications for the door hardware to comply with disabled access requirements. (Lever type, push-pull, panic, etc) CBC 1133B.2.5.2
159. Doors serving an occupant load of 50 or more or Group H occupancies shall swing in the direction of exit travel CBC 1008.1.2.
160. All exit doors and gates from an \_\_\_ occupancy shall not be provided with a latch or lock, unless it is panic hardware. CBC 1008.1.10.
161. Every assembly area shall have the occupant load posted in a conspicuous place near the main exit of the room. CBC 1004.3
162. Revolving, sliding or overhead doors shall not be used as exit doors. CBC 1008.1.2. See exceptions.
163. Show that power operated doors are capable of being manually opened to permit exit travel in the event of a power failure. CBC 1008.1.4.2
164. When additional doors are provided, they shall conform to the provisions for exit doors. CBC 1008.1

165. Landings or floor level at doors shall not be less than ½ inch below the threshold. Raised thresholds and floor level changes greater than 1/4 inch at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal. CBC 1008.1.7.
166. The bottom 10 inches of all doors except automatic and sliding shall have a smooth, uninterrupted surface. CBC 1133B.2.6
167. Corridor and exit balcony width shall be not less than 44 inches (36 inches). CBC 1018.2 and 1019.1.
168. Doors opening into the path of egress travel shall not reduce the required width to less than one half during the course of swing. When fully open, the door shall not project more than 7" into the required width. CBC 1005.2.
169. Dead end corridors shall not exceed (20/50) ft in length. CBC 1018.4.
170. Provide a complete architectural section of one-hour corridor detailing fire-resistive construction of the walls and ceilings. Detail all duct and other penetrations. CBC 709.4 and 1018.1. (716.1, Table 715.4 and 716.5.4)
171. Doors and their frames opening into a one-hour corridor shall be labeled 20-minute assemblies with tight fitting smoke and draft control assemblies with self or automatic closers. CBC 715.4.3
172. Provide fire/smoke dampers at duct penetrations of 1 hr corridor walls. CBC 716.5.4.
173. Glazed openings into one hour corridors shall be protected per CBC Table 715.4. The total area of such openings shall not exceed 25% of the common wall with any room per CBC 715.5.8.2.
174. Corridor walls may terminate at the ceiling, only if the entire ceiling is an element of one hour floor or roof assembly. CBC 709.4, item 3.
175. One hour corridors and any enclosed ceilings within them shall not be used as an integral part of the duct system. CBC 1018.5.
176. At rooms with exhaust fans adjacent to corridors, show how make up air is provided. Doors opening into corridors cannot be undercut and no louvers provided. CBC 1018.5.
177. Non-rated drop ceilings in rated corridors must be of noncombustible construction. CBC 1018.5.1.
178. In fully sprinklered office buildings, corridors may lead through enclosed elevators lobbies, provided all areas of the building have access to an exit, without passing through on elevator lobby. CBC 1018.6.
179. Stairs shall have a minimum width of 44 (36) inches. CBC 1009.1
180. Stair exits from an area of refuge require a minimum of 48 inches between handrails. CBC 1007.3
181. A minimum of 2 areas of refuge with one at an elevator must be provided in accordance with Section 1007.1, 1007.2.1, 1007.4 and 1007.6 CBC since your project is four or more stories above grade.

182. Provide section and details of interior/exterior stairway showing:
  - A. Maximum rise 7 inches (4" min) and minimum run (tread) of 11 inches. CBC 1009.4.2.
  - B. Minimum head room of 6 feet 8 inches. CBC 1009.2.
  - C. Provide details and notes showing framing (stringer) size, bracing, connections, footings.
  - D. Enclosed usable under stairway requires one-hour construction on enclosed side. CBC 1009.6.3
  - E. Provide visual striping per CBC 1133B.4.4.
183. Provide connection details of guardrail and/or handrail on open side of landings or stairs adequate to support 20 (50) pounds per lineal foot at a right angle to the top rail. CBC 1607.7
184. Design intermediate components of guardrails for a 50 pound normal load. CBC 1607.7.1.2
185. Handrails shall satisfy the following: CBC 1012
  - A. Provide continuous handrail.
  - B. Handrail shall be 34-38 inches above the nosing of treads. CBC 1012.2.
  - C. Intermediate balusters shall be spaced 4 inches o.c. maximum on open side(s).
  - D. The handgrip portion of handrail shall not be less than 1-1/4 inches nor more than 1½ inches in cross-sectional dimension. CBC 1133B.4.2.6
  - E. The handgrip shall extend 12" beyond the top and 12" + tread width beyond bottom tread and return the handrail to newel post or wall. (CBC 1133B.4.2.2.)
186. Provide 42 inch high protective guardrail for decks, porches, balconies and raised floors, (more than 30 inches above grade or floor below) and open side(s) of stair landings. Openings between balusters/rails shall be less than 4 inches. CBC 1013
187. Guards shall be provided where the roof hatch opening or mechanical equipment is located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere. CBC 1013.5
188. Where elevation changes less than 12 inches occur in the means of egress, sloped surfaces shall be used. CBC 1003.5
189. Ramps greater than 1 in 20 or 5 percent with a rise greater than 6" shall have handrails on both sides. CBC 1133B.5.5.
190. Where the ramp surface is not bounded by a wall, guide curbs in compliance with Section 1133B.5.6.1 or wheel guide rails in compliance with Section 1133B.5.6.2 , shall be provided.
191. Door swinging over landing shall not reduce the width by more than seven inches when fully open. When serving 50 or more, the door in any position shall not reduce the required width to less than one-half. CBC 1008.1.6.
192. Provide a barrier from upper stairs, and stairs leading to the basement. CBC 1022.7.
193. Stairs shall be enclosed with fire barriers per CBC 1022.1. Enclosure shall conform to the following:
  - A. 2 hour resistive construction where connecting 4 or more stories and 1 hour if connecting less than 4 stories.
  - B. Only exit doors can open into exit enclosures.

- C. Doors opening into exit enclosures shall be protected per CBC 715.
  - D. Exit enclosures shall include a corridor of the same fire-resistive construction as the enclosure leading to the outside of the building, including openings.
  - E. Useable space is not allowed under the stairs.
  - F. Exterior stairs shall be separated from the interior of the building with the same rating required for interior stairs. CBC 1026.6
194. In buildings 4 or more stories:
- A. One stair must extend to the roof. CBC 1009.13
  - B. Where a stairway is provided to a roof, access to the roof shall be provided through a penthouse complying with Section 1509.2.
  - C.
    - 1. In buildings without an occupied roof, access to the roof shall be permitted to be a roof hatch or trap door not less than 16 square feet (1.5 m<sup>2</sup>) in area and having a minimum dimension of 2 feet (610 mm).
    - 1. Where the roof hatch opening providing the required access is located within 10 feet (3049 mm) of the roof edge, such roof access or roof edge shall be protected by guards installed in accordance with the provisions of Section 1013.
195. Where an egress court serving a building or portion thereof is less than 10 feet (3048 mm) in width, the egress court walls shall have not less than 1-hour-fire-resistance-rated construction for a distance of 10 feet (3048 mm) above the floor of the court. Openings within such walls shall be protected by opening protectives having a fire protection rating of not less than 3/4 hour. CBC 1027.5.2 with exceptions
196. Exterior balconies, stairways and ramps shall be located at least 10 feet (3048 mm) from adjacent lot lines and from other buildings on the same lot unless the adjacent building exterior walls and openings are protected in accordance with Section 704 based on fire separation distance. CBC 1027.3
197. Balconies used for egress purposes shall conform to the same requirements as corridors for width, headroom, dead ends and projections. CBC 1019.1
198. Exterior egress balconies shall be separated from the interior of the building by walls and opening protection as required by corridors. CBC 1019.2 with exceptions
199. Stairs in buildings over 75 (55 feet due to local ordinance which may apply) feet in height or have occupiable floors more than 30 feet below the finished floor of the lowest level of exit discharge shall be in a "Pressurized Enclosure" per CBC 403, 405, 909.20 and 1022.9.
200. Exitways shall be illuminated with at least one foot candle at the floor level. CBC 1006.2
201. Provide a separate source of power for exit illumination. CBC 1006.3
202. Exit signs are required when 2 or more exits are required. Show location of all exit signs. CBC 1011.1
203. Show conformance for low level exit signs and exit path marking in A, I, R-2.1 and all interior rated exit corridors of hotels in R-1 occupancies per CBC 1011.6 and 7 as enforced by the State Fire Marshall.
204. Show two sources of power for exit signs. CBC 1011.5.3

205. Add note to plans: Electrically powered, self-luminous and photo luminescent exit signs shall be listed and labeled in accordance with UL 924 and shall be installed in accordance with the manufacturer's instructions and Chapter 27. Exit signs shall illuminated at all times. CBC 1011.4.

## **DISABLED ACCESS**

206. Design site to provide complying access from property line to all facilities; and entrances and exterior ground floor exits of all facilities. Accessible paths of travel shall be the most practical direct route feasible and may incorporate pedestrian ramps, curbs ramps, etc... All paths of travel shall comply unless there is an approved exception §1127B.1.
206. Place a sign at every public entrance and at every major junction along or leading to an accessible path of travel displaying the international symbol of accessibility CBC 1127B.3. Signs shall indicate the direction to accessible facility entrances and comply with CBC 1117B.5.1.
207. Provide accessible parking per §1129B in each lot or parking structure where parking is provided for the public or employees 1129B.1. Paint "NO PARKING" on the ground within each access aisle. Use 12" (154 mm) minimum high white letters that are visible to traffic enforcement officials. See Fig 11B-18B C.B.C. 1129B.3.
208. Parking spaces must be located so that the disabled are not compelled to walk or wheel behind parked cars other than their own. CBC Section 1129B.3, Item 3.
209. In buildings with multiple accessible entrances with adjacent parking, accessible parking spaces shall be dispersed and located closest to the accessible entrances. CBC Section 1129B.1.
210. Revise the drawings to show disabled accessible parking spaces loading/unloading aisle on the passenger side. CBC Section 1129B.3.
211. **Provide parking space identification in accordance with CBC Section 1129B.5 including:**
- A. Each parking space reserved for persons with physical disabilities shall be identified by a reflectorized sign permanently posted immediately adjacent to and visible from each stall or space, consisting of a profile view of a wheelchair with occupant in white on dark, blue background. The sign shall not be smaller than 70 square inches in area and, when in path of travel, shall be posted at a minimum height of 80 inches for the bottom of the sign to the parking space finished grade and shall be unobscured by a parked vehicle. Signs may also be centered on the wall at the interior end of the parking space at a minimum height of 36 inches from the parking space finished grade, ground or sidewalk. Spaces complying with CBC Section 1129B.3, Item 2 shall have an additional sign stating "Van Accessible" mounted below the symbol of accessibility. An additional sign or additional language below the symbol of accessibility shall state "Minimum Fine \$250."
  - B. An additional sign shall also be posted in a conspicuous place at each entrance to off-street parking facilities, or immediately adjacent to and visible from each stall or space. The sign shall not be less than 17 inches by 22 inches in size with lettering not less than one inch in height, with clearly and conspicuously states the following:

"Unauthorized vehicles parked in designated accessible spaces not displaying distinguishing placards or

license plates issued for persons with disabilities may be towed away at owner's expense. Towed Vehicles may be reclaimed by telephoning the \_\_\_\_\_”.

- C. In addition to the above requirements, the surface of each accessible parking space or stall shall have a surface identification duplicating either of the following schemes:
  - 2. By outlining or painting the stall or space in blue and outlining on the ground in the stall or space in white or suitable contrasting color a profile view depicting a wheelchair with occupant; or
  - 3. By outlining a profile view of a wheelchair with occupant in white on blue background. The profile view shall be located so that it is visible to a traffic enforcement officer when a vehicle is properly parked in the space and shall be 36 inches high by 36 inches wide. See CBC Figures 11B-18A through 11B-18C.
- 212. Detail accessible drinking fountain. A hi-lo fountain is required. CBC 1117B.1.
- 213. Detail accessible ATM machine per CBC 1117B.7.
- 214. Detail accessible vending machines and other equipment per CBC 1126B.
- 215. For accessible restrooms, detail per CBC 1115B.3:
  - A. A clear space measured from the floor to a height of 27 inches (686 mm) above the floor, within the sanitary facility room, of sufficient size to inscribe a circle with a diameter not less than 60 inches (1524 mm) in size. Other than the door to the accessible water closet compartment, a door, in any position, may encroach into this space by not more than 12 inches (305 mm).
  - B. Doors shall not swing into the clear floor space required for any fixture except as permitted by Fig 11B-1E.
  - C. Accessible water closet compartments shall comply with the following:
    - i. The compartment shall be a minimum of 60 inches (1524 mm) wide.
    - ii. If the compartment has a side-opening door, a minimum 60-inches-wide (1524 mm) and 60 inches-deep (1524 mm) clear floor space shall be provided in front of the water closet.
    - iii. If the compartment has an end-opening door (facing the water closet), a minimum 60-inches-wide (1524 mm) and 48-inches-deep (1219 mm) clear floor space shall be provided in front of the water closet. The door shall be located in front of the clear floor space and diagonal to the water closet, with a maximum stile width of 4 inches (102 mm).
    - iv. The water closet compartment shall be equipped with a door that has an automatic-closing device, and shall have a clear, unobstructed opening width of 32 inches (813 mm) when located at the end and 34 inches (864 mm) when located at the end and 34 inches (864 mm) when located at the side with the door positioned at an angle of 90 degrees from its closed position.
    - v. Maneuvering space at the compartment door shall comply with Sections 1133B.2.4.2 and 1133B.2.4.3, except that the space immediately in front of a water closet compartment shall not be less than 48 inches (1219 mm) as measured at right angles to the compartment door in its closed position.
    - vi. Compartments with inward swinging doors shall be sized per Figure 11B-1B and 11B-1E
- D. Where six or more compartments are provided within a multiple-accommodations toilet room, at least one compartment shall comply with CBC 1115B.3, Items 3 and 4 and at least one additional ambulatory accessible compartment shall be 36 inches (914 mm) wide with an outward swinging



- self-closing door and parallel grab bars complying with Section 1115B.4.1, Item 3.
- E. In other than dwelling units, toilet room floors shall have a smooth, hard, nonabsorbent surface such as portland cement, concrete, ceramic tile or other approved material which extend upward onto the walls at least 6 inches (127 mm). walls within water closet compartments and walls within 24 inches (610 mm) of the front and sides of urinals shall be similarly finished to a height of 48 inches (1219 mm) and, except for structural elements, the materials used in such walls shall be type which is not adversely affected by moisture.
  - F. Provide one accessible lavatory in compliance with Section 1115B.4.3.
  - G. The centerline of the water closet fixture shall be 18 inches (457 mm) from the side wall or partition. On the other side of the water closet, provide a minimum of 28 inches (711 mm) wide clear floor space if the water closet is adjacent to a fixture or a minimum of 32 inches (813 mm) wide clear floor space if the water closet is adjacent to a wall or partition. This clear floor space shall extend from the rear wall to the front of the water closet. CBC 1115B.4.1, item 1.
  - H. A minimum 60 inches (1524 mm) wide and 48 inches (1219 mm) deep clear floor space shall be provided in front of the water closet. The clearances from Fig 11B-1E must also be shown.
  - VI. The height of accessible water closets shall be a minimum of 17 (432 mm) and a maximum of 19 inches (483 mm) measured to the top of a maximum 2-inch (51 mm) high toilet seat.
  - J. Grab bars shall extend 24" in front of water closet. CBC 1115B.4.1, item 3.
  - K. Lavatory tailpipe and hot water lines shall be insulated or coved per CBC 1115B.4.3.
  - L. Detail 1.5" clearance at grab bars where a dispenser is installed behind. CBC 1115B.7
216. **Accessible Sink in Breakroom / Kitchen:** Provide detailing to show that the sink in the Breakroom / Kitchen is wheelchair accessible. CBC 1105B.3 and 1117B.9
- A. Show clear floor space at least 30" x 48" in front of the sink to allow forward approach.
  - B. Show a max. height of 34".
  - C. Show knee clearance under the sink that is at least 27" high, 30" wide and 19" deep.
  - D. Specify lever handle for faucet control.
  - E. See Figure 11B-1D, CBC.
217. Affix an international accessibility symbol on all accessible entrances 1117B.5.1.
218. Provide a level landing on each side of a door extending 60" on direction of door swing and 48" in opposite direction of door swing, measured with door closed. 1133B.2.4.2 Fig 11B-26A, B and C.
219. A landing shall extend 24" past strike side of exterior doors on pull side and 18" minimum past strike edge of interior doors. Provide 12" on push side, if the door has both a latch and a closer. If a door required to comply per 1133B.1.1.1 is in a recess or alcove where distance from face of the wall to face of the door exceeds 8". Provide strike side clearances per 1133B.2.4.3. See Fig 11B-26A, B and C.
220. Where fixed or built-in seating, tables, or counters are provided for the public and/or in general employees areas, 5%, but never less than one must be accessible, as required in CBC 1122B.1. Accessible seating is required regardless of seating type (ie moveable) in amount specified in CBC 1104B.5.4.
221. Provide seats/spaces for people using wheelchairs equaling 5% of total seating, with at least one seat per each functional area and integrated with general seating CBC 1104B.5.4.
222. Counters for pass-thru windows and transaction stations shall be 28" to 34" high and 36" minimum wide (60" in width at restaurant bar areas). CBC 1122B.4, 1104B.5.

223. Where fitting or dressing rooms are provided for male or female customers, patients, employees, or the general public, 5% but never less than one, of dressing rooms for each type of use in each cluster of dressing rooms shall be accessible by providing the following: CBC 1117B.8
- M. Entry doors conforming to 1133B.2 and aisles leading to such doors per 1133B.6.1 and 1133B.6.2.
  - N. Full-length mirrors at least 18" wide by 54" high the bottom of which is no higher than 20" from the floor, and mounted in a position affording a view to a person on the bench as well as to a person in a standing position.
  - O. Clothing hooks located no higher than 48" from the floor.
  - P. A 24" by 48" bench mounted on the wall, 17" to 19" above the floor with a 30" by 48" clear space alongside the bench permitting a person using a wheelchair to make parallel transfer into the bench. The structural strength of the bench and attachments shall comply with 1115B.8.
  - Q. A 60" by 60" minimum clear space within the room not encroached by a door.
224. Detail accessible check stand and show required number per CBC 1110B.1.3.
225. Accessible check stands shall always be open to customers with disabilities and shall be identified by a sign clearly visible to those in wheelchairs. The sign shall display the International Symbol of Accessibility complying with CBC 1117B.5.8. CBC 1110B.1.3.
226. At exits and elevators serving a required accessible space but not providing an approved accessible means of egress, signage shall be installed indicating the location of accessible means of egress. Signs shall comply with Chapter 11A or Chapter 11B, Section 1117B.5.1, Items 2 and 3, as applicable. CBC 1007.10.
227. Provide and detail tactile exit signage per CBC 1011.3 and 1117B.5.1. Identify wording that will occur at each location. Please note on plans that characters shall be Sans Serif uppercase accompanied by Grade 2 Braille and sized per CBC 1117B.5.5 and 1117B.5.6.
228. Signage complying with CBC 1117B.5.1, items 2 and 3, and tactile signage complying with 1117B.5.1, item 1 shall be placed at:
- a. Each door providing access to an area of refuge from an adjacent floor area shall be identified by a sign stating: AREA FOR REFUGE.
  - b. Each door providing access to an exterior area for assisted rescue shall be identified by a sign stating: EXTERIOR AREA FOR ASSISTED RESCUE.
229. If a walk crosses or adjoins a vehicular way, and the walking surfaces are not separated by curbs, railings or other elements between the pedestrian areas and vehicular areas; the boundary between the areas shall be defined by a continuous detectable warning which is 36 inches wide, complying the CBC Section 1133B.8.5. Detail per Figure 11B-23A.

**Detectable Warning Product Approval.** Only approved Division of the State Architect, Access Compliance (DS/AC) approved detectable warning products and directional surfaces shall be installed in accordance with CBC Section 1133B.8.5. The exception for ramps steeper than 1:15 no longer applies.

## ENERGY

230. T-24 energy calculations used must be by one of the Energy Commission approved computer programs. Please see- [www.energy.ca.gov/title24/2008standards/](http://www.energy.ca.gov/title24/2008standards/) for current versions.
231. Cool Roofs. Prescriptive approach required a “cool roof” in all non residential low-slope applications. Cool roofs have high reflectance, high emittance surfaces, or exceptionally high reflectance and low emittance surfaces. Applies to new roofs and some re-roofing installations [§10-113, 118(I), 143(a)iA, 149(b)1B]. Cool roofs must be tested and labeled by the CRRC.
232. T-bar ceilings. Placing insulation directly over suspended (T-bar) ceilings is not allowed, except for limited applications. Insulation must be placed at the roof or on hard ceilings. [§118(e)].
233. Thermal Breaks for Metal Building Roofs. Prescriptive standards for continuous insulation or thermal breaks between metal roofs and metal framing [§143(a)].
234. Skylights for Daylighting in large enclosed spaces. Prescriptive requirement for skylights with daylighting controls. Applies to top story of spaces larger than 8,000 square feet with ceilings higher than 15 feet [§143(c)]. Provide calculations demonstrating compliance.
235. Demand Control Ventilation. Mandatory requirement to include sensors that measure CO<sub>2</sub> levels and adjust ventilation rates in spaces with varying occupancy such as conference rooms, dining rooms, lounges and gyms [§121(c)].
  - A. Sensors must be provided in all rooms served by the system that has a design occupancy of 40ft<sup>2</sup>/person or less.
  - B. Show sensor locations on plans. They must be located between 3 and 6 feet above floor.
  - C. The ventilation must be maintained that will result in a concentration of CO<sub>2</sub> at or below 600 ppm above ambient level.
  - D. The CO<sub>2</sub> sensors must be factory certified to have an accuracy of no less than 75 ppm at a 600 and 1000 ppm concentration when measured at sea level and 25EC, over a five-year period without calibration in the field.
236. Duct efficiency. In unconditioned or indirectly conditioned space, mandatory requirement for R-8 duct insulation [§124(a)]. Prescriptive approach requires duct sealing with field verification in new buildings and in existing buildings when space conditioning equipment is to be installed or replaced [§144(k)].
237. Efficient Space Conditioning Systems. Prescriptive requirements to improve HVAC system efficiency, including variable speed drives, electronically commutated motors, better controls, and efficient cooling towers. For large systems (greater than or equal to 300 tons in installed capacity), there are limitations on the use of air-cooled chillers. [§144].
238. Indoor Lighting. Mandatory requirement lowers the lighting power limits for interior lighting to encourage use of new efficient lighting technology [§130(c)]
239. Identify the run codes on the T-24 calcs in compliance with Section 10-103(a)3.

240. New Mandatory and prescriptive requirements apply to general site illumination and specific outdoor lighting applications of nonresidential buildings [§132, 147]. Applies to areas such as parking lots, pedestrian areas, building entrances, vehicle service stations, areas under canopies, and ornamental lighting.
- A. Lighting Power Limits. Establishes outdoor lighting power limits that vary by Lighting Zone or ambient lighting levels. See Standards Table 147-A and B or NCM Table 6-3.
  - B. Shielding. Lamps larger than 175W must have cutoff luminaires to reduce glare. Luminaires with lamps larger than 60 W must be high efficacy or have motion sensor controls.
  - C. Bi-Level Controls. Requirements for outdoor lighting controls in some areas, including the capability to reduce lighting levels by 50 percent when not needed.
241. West facing glazing is now limited to no more than 40% of the west wall area. Demonstrate compliance on plans.
242. Demising walls, separating conditioned space from enclosed unconditioned space, must be insulated with a minimum of R-13 insulation.
243. Variable air volume change over systems must be designed to ensure that no zone is shut off for more than 5 minutes per hour and that ventilation rates are increased during the remaining time to compensate.
244. Provide method of manual override for space conditioning system. §122(e)
245. Show building orientation with respect to North direction on compass.
246. When taking compliance credit in the energy calculations for \_\_\_\_\_, please detail and document compliance on plans.
247. Provide an automatic time switch, occupant sensors or other method of manual override of lighting. §119.
248. When skylights are installed provide automatic controls to reduce electric lighting when sufficient daylight is available. When area is over 2500 sf multi level controls must be used.
249. Show compliance with bi-level switching requirements. §131(b)
250. Lighting requirements for exterior signs:
- A. Internally illuminated signs may have 12 W/sf (only one side of 2 sided sign).
  - B. Externally illuminated may have 2.3W/sf of sign.
251. If an alteration involves replacing 50% or more of lighting fixtures or wattage th3n all lighting must comply as new.
252. Provide copies of required compliance forms such as LTG, MECH, ENV, OLTG, etc... on plans.

## **GREEN BUILDING REQUIREMENTS**

253. Because of special conditions, the City is requiring the construction documents to be prepared by a licensed design professional. CGBC 102.1
254. The construction documents shall provide sufficient clarify to indicate the location, nature, and scope of the proposed green building features. CGBC 102.2
255. Plans shall indicate method of verification of compliance with all CALGreen requirements. Third party or other methods shall demonstrate satisfactory conformance with mandatory measures. CGBC 102.3.  
**Include City's Mandatory Measures Checklist copies onto plans.**
256. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.
257. Each phase of a project shall comply with those code measures relevant to the building components and systems
  - a. CGBC 303.1.1 Tenant Improvements shall apply only to the initial tenant or occupant improvement to the project.
258. Storm Water Pollution Prevention Plan
  - a. Develop and submit to the city a Storm Water Pollution Prevention Plan for newly constructed projects of less than one acre.
  - b. The SWPPP shall be designed conforming to the State Storm Water NPDES Construction Permit and be specific to the site. CGBC 5.106.1
  - c. The SWPPP shall be approved by the city.
259. Bicycle Parking and Changing Rooms
  - a. For bicycle parking and changing rooms, meet the most restrictive of the requirements of CGBC 5.106.4.1 and 5.106.4.2, or local ordinance or the University of California Policy on Sustainable Practices. CGBSC requirements include:
  - b. Short-Term bicycle parking in anchored racks within 100 feet of the visitor's entrance, for 5% of visitor motorized vehicle parking, 2 spaces minimum. CGBC 5.106.4.1
  - c. Long-Term bicycle parking when tenant-occupants are greater than 10, for 5% of motorized vehicle parking, 1 space minimum. Lockable enclosures, lockable rooms, or lockable lockers are considered acceptable long-term parking facilities.
260. Designated parking, provide designated parking for low-emitting, fuel-efficient and carpool/van pool vehicles per CGBCTable 5.106.5.2, and mark "CLEAN AIR VEHICLE". CGBC 5.106.5.2, 5.106.5.2.1
261. Design interior and exterior lighting such that zero direct-beam illumination leaves the building site. CGBC 5.106.8
262. Grading and paving

- a. Surface drainage shall not enter buildings. Indicate how site grading and drainage will manage all surface water flows. CGBC 5.106.10
  - b. Submit grading and paving plans to either the building department or other departments as directed by the building official.
263. Provide documentation to indicate the project meets the requirements of State mandatory energy efficiency standards. Enhanced performance criteria is contained in the Appendix Chapters. CGBC 5.201
264. Provide separate water meters for:
- a. Buildings > 50,000 square feet with individually leased, rented or other tenant space/spaces projected to consume more than 100 gal day CGBC 5.303.1.1
  - b. Buildings > 50,000 square feet with spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop projected to consume more than 100 gal/day CGBC 5.3203.1.1
  - c. Any building within a project or space within a building that is projected to consume more than 1,000 gal/day CGBC 5.303.1.2
265. Reduce potable water use by at least 20 percent. CGBC 5.303.2
- a. Indicate method of compliance, prescriptive or performance.
  - b. Provide 20% Reduction Water Use document (WS-2)
  - c. Both WS-1 and WS-2 shall be submitted as part of the plan check approval process.
  - d. Indicate method of showing field verification either by installer or third party.
  - e. Plumbing fixtures and fittings shall meet the standards referenced in Table 4.303.3
266. Reduce wastewater in each building by at least 20 percent by:
- a. Installing water-conserving water fixtures meeting with criteria established in CGBC 5.303.2 or 5.303.3.
  - b. Utilizing nonpotable water systems captured rainwater, gray water, and municipally treated wastewater complying with the California Plumbing Code and local amendments. CGBC 5.303.4
267. A water budget shall be developed for landscape irrigation that conforms to the local water efficient landscape ordinance or to the California Department of Water Resources Model Water Efficient Landscape Ordinance. CGBC 5.304.1
268. Water service for landscape areas between 1000 and 5000 square feet. Separate meters or submeters shall be installed for indoor and outdoor potable water use CGBC 5.304.2

269. Automatic irrigation controllers that are weather- or soil moisture-based shall be installed at the time of final inspection. CGBC 5.304.3.1
270. Provide a weather-resistant exterior wall and foundation envelope per CBC Section 1403.2, CEC Section 150, and manufacturer's installation instructions or local ordinances.
271. Sprinklers shall be designed to prevent spray on structures CGBC 5.407.1
272. Exterior entries and openings shall be designed to prevent water intrusion into buildings. CGBC 5.407.2
273. Reduce construction waste by recycling or salvaging for re-use a minimum of 50 percent of the nonhazardous construction and demolition debris, or meet the local construction and demolition waste management ordinance, whichever is more stringent. CGBC 5.408.3
274. Provide a construction waste management plan and documentation demonstrating compliance with the plan shall be submitted that:
  - a. Identifies the materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale.
  - b. Determines if materials will be sorted on-site or mixed for transportation to a diversion facility.
  - c. Identifies the diversion facility where the material collection will be taken.
  - d. Specifies that the amount of materials diverted shall be calculated by weight or volume, but not by both. CGBC 5.408.2, 5.408.2.1
275. 100 % of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. CGBC 5.408.4
276. Readily accessible areas for recycling paper, corrugated cardboard, glass, plastics and metals shall be provided to serve the entire building CGBC 5.410.1
277. Commissioning shall be included in the design and construction process for new buildings 10,000 square feet and over CGBC 5.410.2. Commissioning requirements include:
  - a. Owner's or Owner representative's project requirements. CGBC 5.410.2.1
  - b. Basis of Design. CGBC 5.410.2.2
  - c. Commissioning measures shown in the construction documents.
  - d. Commissioning plan, demonstrate compliance at plan intake with a completed commissioning plan document prior to permit issuance. CGBC 5.410.2.3
  - e. Functional performance testing. CGBC 5.410.2.4
  - f. Documentation and training CGBC 5.410.2.5 including a systems manual CGBC 5.410.2.5.1 and systems operation training CGBC 5.410.2.5.2.
  - g. Commissioning report, CGBC 5.410.2.6

- h. Detailed requirements are listed within the reference code sections. The scope of required commissioning shall include all building systems and components covered by Title 24, Part 6 (CEC), as well as process equipment and controls, and renewable energy systems. CGBC 5.410.2

Note: Reference the BSC commissioning guide dated 10/18/2010 available at <http://www.bsc.ca.gov/CALGreen/default.htm>

- 278. For buildings less than 10,000 square feet, testing and adjusting of the following systems in accordance with industry best practices and applicable standards is required: CGBC 5.410.4
- 279. Develop a written plan of procedures for testing and adjusting systems CGBC 5.410.4.2
  - a. HVAC systems and controls.
  - b. Indoor and outdoor lighting and controls.
  - c. Water Heating systems.
  - d. Renewable energy systems.
  - e. Landscape irrigation systems.
  - f. Water rescue systems.
- 280. The HVAC system shall be balanced in accordance with approved National Standards. CGBC 5.410.4.3.1
- 281. A final report signed by the individual responsible for providing services shall be provided after completion of testing.
- 282. Note on the drawings that an Operation and Maintenance Manual with content per 5.410.4.5 and in a format acceptable to the enforcing agency shall be placed in the building at the time of final inspection. CGBC 5.410.4.5
- 283. Gas fireplaces to be direct-vent sealed-combustion type. Woodstoves and pellet stoves shall be sealed and comply with U.S. EPA Phase II emissions. CGB 5.503.1, 5.503.1.1
  - a. Comply with SCAQMD Rule 445 when applicable
- 284. All duct openings and other air distribution component openings shall be protected during storage on the construction site until final start-up with tape, plastic, sheet metal, or other acceptable methods to reduce the amount of dust and debris which may collect in the system. CGBC 5.504.3
- 285. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits and prohibition on the use of certain toxic chemicals, except per subsection 2. CGBC 5.504.4.1, subsection 1



286. Note on the plans that aerosol adhesives, smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packing, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on the use of certain toxic compounds, of CCR, Title 17, commencing with Section 94507. CGBC 5.504.4.1, subsection 2
287. VOC Content Limits for Architectural Coatings (Architectural Paints) shall comply with CGBC Table 5.504.4.3, unless more stringent local limits apply. CGBC 5.504.4.3
288. Aerosol paints and coatings shall meet the requirements of Sections 94522(a)(3), 94522(c)(2), and (d)(2) of California Code of Regulations, Title 17 commencing with Section 94520. CGBC 5.504.4.3.1)
289. Carpets shall meet one of the following: 1. Carpet and Rug Institute's Green Label Plus Program, 2. California Department of Public Health Standard Practice for the testing of VOCs (Specification 01350), 3. NSF/ANSI 140 at the Gold Level. 4. Scientific Certifications Systems Indoor Advantage™ Gold. CGBC 5.504.4.4
290. Carpet cushion shall meet the requirements of the Carpet and Rug Institute Green Label Program, carpet adhesive shall meet the requirements of Table 5.504.4.1 CGBC 5.504.4.4.1, 5.504.4.4.2
291. Hardwood plywood, particleboard, and medium density fiberboard composite wood products shall meet the requirements for Formaldehyde Limits in Table 5.504.4.5. CGBC 5.504.4.5
292. For resilient flooring, at least 50 percent of the floor area shall comply with VOC emission limits defined in the 2009 Collaborative for High Performance Schools (CHPS) Low-emitting Materials List or certified under the Resilient Floor Covering Institute (RFCI) FloorScore program. CGBC 5.504.4.6
293. Note on the plans that pollutant control documentation shall be provided to indicate compliance with Section 5.504 and shall include at least one of the following: Product certifications and specifications, chain of custody certifications, or other methods acceptable to the enforcing agency. CGBC 5.504.4.5.2
294. Provide filters with a Minimum Efficiency Reporting Value (MERV) of at least 8 for outside and return air in regularly occupied areas of mechanically ventilated buildings. CGBC 5.504.5.3
295. Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes, and operable windows and in buildings. Meet additional and more stringent requirements in applicable ordinances, regulations, and policies. CGBC 5.504.7
296. For indoor moisture control, buildings shall comply with CBC Section 1203 (Ventilation) and Chapter 14 (Exterior Walls). CGBC 5.505 Also refer to the requirements of CGBC 5.407 that reference CBC Section 1403.2 (Weather Protection), CEC section 150 (Mandatory Features and Devices), and text indicating the proper design of sprinklers and building openings shall help assure water remains outside the building. CGBC 5.505.1
297. For indoor air quality, meet the requirements of the CEC for outside air delivery and carbon dioxide monitoring. CGBC 5.506
298. A Sound Transmission Coefficient(STC) of at least 50 for the building envelope, and 30 for windows shall be provided where the project is:
  - a. Within 1000 ft of freeways

- b. Within 5 miles of airports serving 10,000 commercial jets per year
  - c. Within areas where the sound levels at the property line regularly exceed 65 dB. CGBC 5.507.4.1
299. A STC of 40 is required for wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places. CGBC 5.507.4.2
300. HVAC, refrigeration, and fire-suppression equipment shall not contain CFCs or Halon. CGBC 5.508
301. Special inspection is required for all CALGreen design features and Mandatory Measures. Submit the name and qualifications of the person or persons anticipated to perform the inspections.  
( ) The following credentials are required \_\_\_\_\_  
( ) An Oral ( ) and written exam is required to obtain the special inspection credential.
302. Submit the following forms/worksheets
- a. WS-1, Baseline Water Use
  - b. WS-2, 20 Percent Reduction Water Use
  - c. Construction Waste Management Plan
  - d. Construction Waste Management Worksheet
  - e. Construction Waste Management Acknowledgment
303. Have changes been made to the plans that are not as a result of corrections on this correction list? Please check: \_\_\_\_\_ Yes \_\_\_\_\_ No.  
If so, provide a brief description and note where on plans the changes occur: