

CITY OF [NAME OF CITY]

Department of [NAME OF DEPARTMENT]
[NAME OF DIVISION OR BUREAU]



ONE- AND TWO-FAMILY DWELLING PLAN REVIEW CHECKLIST

INFORMATION	PLAN CHECK NO.:	EXPIRATION DATE: STATUS:								
	PROJECT ADDRESS:									
	WORK DESCRIPTION:									
	APPLICANT'S NAME:				TEL. NO.:					
	ADDRESS:	EMAIL:								
	USE	OCCUPANCY GROUP	FLOOR AREA	OCCUPANT LOAD	TYPE OF CONSTR.	NO. OF STORIES	FIRE SPRINKLER LOCATION			
NSTRUCTIONS	Your application for a permit, together with plans and specifications, has been examined and you are advised that the issuance of a permit is withheld for the reasons hereinafter set forth. The approval of plans and specifications does not permit the violation of any sections of the Building Code or other local ordinances or state laws.									
	In an effort to streamline the plan review process, please follow the steps outlined below to ensure that there is no delay in processing your application and reviewing your responses to these plan check comments.									
	Comments with circle	ed item numbe	rs apply to this	plan check.						
	• Revised plans and calculations shall incorporate or address all comments marked on the original checked set of plans, calculations, and this plan review checklist. Provide a written response to each comment and show where and how it has been addressed. Identify the sheet number and detail or reference note on the revised plans where the corrections are made. Time spent searching for the corrected items on the revised plans or calculations will delay the review and approval process. Once all comments on the plans, calculations, and this checklist have been addressed, contact the plan check staff to schedule an appointment to review the changes made.									
.SNI	PLAN REVIEWER:				TEL. NO.:					
	ADDRESS:				_					
	EMAIL:									
	Should you have any questions or need clarification pertaining to the comments made on your project, you may contact the plan check staff by telephone from to M T W TH F.									
	 Bring the original checked set of plans and calculations along with this checklist to the meeting. Do not schedule an appointment meeting with the plan check staff until all comments have been addressed. 									
	Incomplete, indefinit	 Incomplete, indefinite or faded drawings or calculations will not be accepted. 								
NOTE	Numbers within the parenthesis () refer to the section of the applicable code. 2007 California Building Code (CBC). Table (T). 2007 California Plumbing Code (CPC). 2007 California Mechanical Code (CMC). 2007 California Fire Code (CFC).									



CHAPTER 1 GENERAL PROVISIONS

A. PERMIT APPLICATION

- Provide a fully dimensioned plot plan to scale, in ink and copy it to the plot plan sheet provided by the department. Include the following information as applicable: project address, type of construction, number of stories, use and occupancy of the building, fire separation distance or setback of building to property lines or other buildings on the lot, lot size and dimensions, street center line, alley, # of parking spaces, location of all other buildings on the lot, legal description, and permit application number.
- Valuation provided or determined during the initial submittal process was not accurate. Valuation is revised to \$______. Pay additional required plan check fee of \$______.
- 3. Provide complete and correct legal description (i.e., Tract, Lot, Block, APN, metes and bounds, etc.).
- 4. Provide complete information for (applicant) (owner) (engineer) (architect) (contractor) (______).
- 5. Separate permit application is required for the following items:
 - a. Retaining walls or block fence walls
 - b. Grading work
 - c. Swimming pools
 - d. Separate structures
 - e. Shoring
 - f. Demolition
 - g. Electrical, Mechanical, and/or Plumbing work
 - h. Fire sprinkler systems
 - i. Signs
 - j. Others
- 6. When all required approvals are obtained, the permit application must be signed by the property owner, licensed contractor, or authorized agent at the time the permit is to be issued:
 - a. For owner-builder permits: Owner's signature can be verified with owner's driver license. Owner's representatives must present owner's approval with a notarized letter from the owner.
 - b. For contractor building permits: Prior to the issuance of a building permit, the contractor shall have the following:
 - Certificate of workers Compensation Insurance made out to the Contractors State License Board.
 - ii. Copy of Contractors State License or pocket ID.

- iii. Copy of city business tax registration certificate or a newly paid receipt for one.
- iv. Notarized letter of authorization for agents.

B. ADMINISTRATION

- 1. Obtain all approvals/clearances from the following department/bureau/agency noted below. It is necessary to apply immediately for the signoff as it can take weeks or months for some departments/bureaus/agencies to review and approve the project. All required approvals/clearances must be secured prior to permit issuance.
 - a. Planning
 - b. Fire
 - c. Public Works
 - d. Health
 - e. Others_____
- 2. The final set of construction documents must be stamped by the following department/bureau/agency:
 - a. Planning
 - b. Fire
 - c. Public Works
 - d. Health
 - . Others_____
- 3. Each sheet of the construction documents must bear the signatures, registration number and expiration date of the registered design professional in responsible charge licensed in the State of California.
- 4. The address of the project and the name/address of the owner are required on the first sheet or title sheet of the construction documents. Include the name/address of the registered design professionals and/or consultants on the construction documents where applicable.
- 5. _____ set(s) of construction documents will be required during permit issuance. Construction documents must be:
 - a. Quality blue or black line drawings with uniform and light background color.
 - b. Max. 36' x 48" size with min. 1/8" lettering size.
 - c. Sticky back details must produce prints without contrasting shades of background color.
- 6. Provide the following type of information with each set of construction documents:
 - a. Topography Survey Map
 - b. Grading
 - c. Floor Plans
 - d. Two Elevations
 - e. Construction Sections
 - f. Foundation Plans



- h. Framing Plans
- i. Structural Details
- j. Others
- 7. Show the building area, occupancy group(s), use(s), type of construction(s), number of story(ies), height, type of fire sprinklers system provided, and the number of parking space(s) on the first sheet or title sheet of the construction documents. Include justification and analysis for increase in area, height, and/or story.
- 8. Show on site plans the natural and finish grade elevations around the perimeter of the building. Show elevations for all floors and top of roof. Survey map signed by a licensed Surveyor or Civil Engineer may be required by the department.
- 9. Remove all plans, details or notes that do not pertain to the project.

USE AND OCCUPANCY

C. GENERAL

- 1. Specify on floor plans uses of all rooms or areas.
- 2. The occupancy group specified for one or more areas within the building is incorrect. See plan check annotation on sheet ______.

SPECIAL DETAILED REQUIREMENTS

D. GARAGE AND CARPORT

- 1. U occupancy garage or carport shall not exceed 1,000 sq. ft. floor area or 1-story in height (except as provided for in Section 406.1.2). (CBC 406.1.1)
- Carport shall be open on at least two sides. (CRC R309.2)
- Garage or carport floor surface shall be provided as follows: (CRC R309.2)
 - a. Shall be of noncombustible or asphalt paving material.
 - b. Shall be sloped to facilitate movement of liquids to a drain or toward the main vehicle entry doorway.
- 4. Attached garage and carport to dwelling shall be separated as follows: (CRC 302.6)
 - a. Min. 1/2" gypsum board required on the garage side separating dwelling and attic area from garage.

- b. Min. 5/8" gypsum board required between garage or carport and all habitable rooms located above garage or carport (including structural members supporting the upper floor, ceiling, post and beam).
- c. Min. 1-3/8" thick solid wood doors or solid or honeycomb core steel door, or min. 20 minute rated fire door assembly.
- d. Doors to be self-closing and self-latching.
- e. Garage shall not open directly into a room used for sleeping purposes.
- f. Min. 26 gage sheet steel with no opening for ducts in walls and ceilings that penetrate into the garage.
- Detached garages within 3' of the dwelling and on the same lot shall be separated by min. 1/2" gypsum board required on the garage side separating dwelling and attic area from garage.(CRC R302.6)

E. OTHER USE AND OCCUPANCY

- The fire-resistance-rated wall or assembly separating townhouses shall be continuous from the foundation to the underside of the roof sheathing, deck or slab. The fire-resistance rating shall extend the full length of the wall or assembly, including wall extensions through and separating attached enclosed accessory structures. (CRC R202,R302.2.4)
- Large family day care homes shall comply with CBC 445:
 - The use of an R-3 occupancy as a large family day care home requires single station residential smoke alarms in the following locations
 - b. Note on plans. "Large family day care home will be provided with at least one (1) 2A10BC fire extinguisher."
 - c. Provide at least one manual fire alarm device.
 - d. Identify the location of all gas fired water heaters and furnaces and provide protection to prevent physical contact by children.

GENERAL BUILDING HEIGHTS AND AREAS

F. HEIGHTS AND AREAS

- 1. On site plan, dimension distances from building(s) to all property lines, street center lines, and adjacent existing or proposed structures on the site.
- 2. Show the size, use, occupancy, and type of construction of all existing buildings on the site.



- 3. Allowable building height for dwellings of Type VB construction is limited to 40' and 3 stories. (CBC 503.1, CRC R101.2)
- 4. Clearly show the max. height of the building as defined in CRC R202, CBC 504.
- 5. Identify "Grade Plane" elevation for this project. Show the grade plane reference datum on all elevation and section drawings.
- 6. Assumed "Grade Plane" elevation is incorrect. Grade plane is determined as the average elevation of the lowest points around the perimeter of the building within the space described in CRC R202. Grade plane is not defined as the average of the highest and lowest points adjacent to the building. Justify the assumed grade plane for this project pursuant to CRC R202.

TYPES OF CONSTRUCTION

H. TYPES OF CONSTRUCTION

1. Exterior walls of a garage or carport with a fire separation distance less than 5' shall have a 1-hr fire-resistive rating. (CRC R302.1)

FIRE-RESISTANCE-RATED CONSTRUCTION

G. EXTERIOR WALLS

- 1. Exterior walls with a fire separation distance of 5' or less shall be 1-hr fire-resistance rating for exposure to fire from both sides. (CRC302.1)
- 2. Exterior wall opening criteria is required for the following fire separation distance: (CRC 302.1
 - a. No openings are permitted with a fire separation distance of 3' or less.
 - b. Max. 25% areas of openings are permitted with a fire separation distance greater than 3' to 5'.If the building does not have sprinklers.
 - c. Unlimited with a fire separation distance greater than 3' if the building has sprinklers.
- Cornices, eave overhangs, exterior stairways, exterior balconies and similar projections beyond the exterior wall shall not extend beyond (clearly show on elevations/cross section):
 - a. More than 12" into areas where openings are prohibited. (CRC 302.1)

- 4. Projections located where openings are prohibited are required to have 1-hr construction at the underside. (CRC 302.1)
- Exterior wall with a fire separation distance of 3' or less shall be provided with a parapet not less than 30" height above roof (see 705.11 for exception). (CBC 705.11, T-704.8)
- 6. Fire-resistance-rated exterior wall construction shall be maintained through crawl spaces, floor framing, and attic spaces in accordance with CBC 705.6.

I. INTERIOR WALLS

- Fire partition is required to separate dwelling units in the same building and shall be a min. 1-hr. fireresistance rating (or 1/2-hr with automatic sprinkler system in Type IIB, IIIB, or VB construction) extending from top of foundation to underside of roof sheathing. (CRC R302.3, R302.3.1)
- 2. Each townhouse unit shall be considered a separate building per CRC 302.2 and shall comply with the following:
 - a. Adjacent townhouse units shall each be provided with a 1-hr. fire-resistance-rated wall assembly separating the units. (CRC R302.2)
 - b. Openings are not permitted.
 - c. Penetrations shall comply with CRC 302.2.
- 3. Fire partition continuity must be detailed in accordance with CRC R302.2.1, CBC 709.4.
- 4. Penetrations in fire-resistance-rated walls shall comply with CRC R302.4. Through penetrations shall comply with CRC R302.4.1 as noted below:
 - a. Steel, ferrous or copper pipes may penetrate fireresistance rated walls, provided the opening is protected as follows: (CRC R302.4.1 EX.)
 - I. Item penetrating concrete or masonry walls is a max. 6" nominal diameter and the area of the opening through the wall does not exceed 144 sq. in., concrete, grout or mortar is permitted where it is installed the full thickness of the wall or the thickness required to maintain the fire-resistance rating; or
 - ii. When the annular space is protected with material that meets ASTM E 119.
 - Penetrations shall be fire-stopped by a system installed as tested in accordance with ASTM E 814 or UL 1479, and shall have an F rating of not less than the required fire-resistance-rating of the wall penetrated. (CRC R302.4.1.2)



- c. Membrane penetrations of max. 2-hr. fire-resistance rated walls by steel electrical boxes are permitted, provided that each does not exceed 16 sq. in. in area and the total area of such openings does not exceed 100 sq. in. for any 100 sq. ft. of wall area, and the space between the wall membrane and the box does not exceed 1/8". Additionally, outlet boxes on opposite sides of the wall shall be separated by a horizontal distance of not less than 24". (CRC 302.4.2 EX. 1)
- d. Membrane penetrations by listed electrical boxes of any material are permitted, provided such boxes have been tested for use in fire-resistancerated assemblies, and the space between the wall membrane and the box does not exceed 1/8" unless listed otherwise. Additionally, outlet boxes on opposite sides of the wall shall be separated by a horizontal distance of not less than 24". (CRC 302.4.2 EX. 2)
- e. A fire sprinkler shall be permitted to be unprotected provided such space is covered by a metal escutcheon plate. (CRC CRC 302.4.2 EX. 3)
- f. Where walls are penetrated by other materials or openings larger than those mentioned above, they must be qualified by tests in accordance with CBC 703.2.
- 5. Joints installed in or between fire-resistance-rated walls, floor or floor/ceiling assemblies and roofs or roof/ceiling assemblies shall be protected an approved fire-resistant joint system with a fireresistance rating not less than that of the assembly in which it is installed. Provide details. (CBC 714.1)
- Fireblocking shall be installed in combustible concealed locations in accordance with CRC R302.11 in the following locations: (Provide Details)
 - a. In concealed spaces of stud walls and partitions, including furred spaces and parallel rows of studs or staggered studs, as follows:
 - Vertically at the ceiling and floor levels.
 - ii. Horizontally at intervals not exceeding 10'.
 - b. At all interconnections between concealed vertical stud wall or partition spaces and concealed horizontal spaces created by an assembly of floor joists or trusses, and between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings, cove ceilings and similar locations.
 - c. In concealed spaces between stair stringers at the top and bottom of the run. Enclosed spaces under stairs shall also comply with CRC R302.7.
 - d. Where annular space protection is provided in accordance with CRC R302.4 fire blocking shall

- be installed at openings around vents, pipes, ducts, chimneys and fireplaces with an approved material to resist the free passage of flame and the products of combustion. (CBC 717.2.5, R1003.19)
- 7. Draftstopping shall be installed in combustible concealed locations in accordance with CRC R302.12 at the following locations: (Provide Details)
 - a. In floor-ceiling assembly with an area of 1,000 sq ft or more. (CRC R302.12)
 - b. Show draft-stop construction on the plans. Draftstopping materials shall not be less than 1/2" gypsum board, 3/8" wood structural panel, 3/8" particleboard, 1" nominal lumber, cement fiberboard, batts or blankets of mineral wool or glass fiber, or other approved materials adequately supported. (CRC R302.12.1)

INTERIOR FINISHES

J. INTERIOR FINISHES

1. Note on plans or finish schedule: "Wall, and ceiling shall not exceed the flame spread classifications in CRC R302.9."

FIRE PROTECTION SYSTEMS

K. SMOKE ALARM

- 1. Smoke alarms (i.e., smoke detectors) shall be installed and maintained at all of the following locations: (CRC R314.3)
 - a. In each room used for sleeping purposes.
 - b. On the ceiling or wall outside immediate vicinity of sleeping room.
 - c. In each story, basement or split level within a dwelling unit.
 - d. In enclosed common stairwells of two or more dwelling units.
- 2. A permit for alterations, repairs, or additions, exceeding \$1,000, shall require the installation of smoke detectors. (CRC R314.6.2, HSC 13113.7)
- In new construction, smoke alarms (i.e., smoke detectors) shall receive their primary power source from the building wiring and shall be equipped with battery backup and low battery signal. In existing construction, smoke alarms (i.e., smoke detectors) may be battery operated. (CRC 314.4)



 Where more than one smoke alarm is required to be installed, it shall be interconnected in such a manner so that the activation of one alarm will activate all of the alarms. (CRC R314.5)

K-1 CARBON MONOXIDE ALARMS

- 1. Carbon monoxide alarms shall be installed and maintained at all of the following locations: (CRC R315.3)
 - a. On the wall outside immediate vicinity of sleeping
 - b. In each story, basement or split level within a dwelling unit.
- 2. A permit for alterations, repairs, or additions, exceeding \$1,000, shall require the installation of. carbon monoxide alarms. (CRC R315.2)
- 3. In new construction, carbon monoxide alarms shall receive their primary power source from the building wiring and shall be equipped with battery backup and low battery signal. In existing construction, carbon monoxide alarms may be battery operated. (CRC 315.1.1)
- 4. Where more than one smoke alarm is required to be installed, it shall be interconnected in such a manner so that the activation of one alarm will activate all of the alarms. (CRC R315.1.2)

K-2 FIRE SPRINKLERS

- 1. Note on the plans: new single family and two family dwellings require fire sprinklers. (CRC R313.2).
- Note on the plans: sprinklers are required in new carports with habitable spaces above, and new attached garages. (CRC R309.6)
- 3. Note on the plans: sprinklers are required throughout except for areas exempted per section R313.3.1.1
- 4. Note on the plans: sprinklers shall be new listed residential type sprinklers and shall be installed per the manufacturers specifications. (CRC 313.3.2)

MEANS OF EGRESS

L. DOORS

 For one and two family dwellings and townhouses, means of egress is not allowed to pass through garages. (CRC R311.1)

- 2. Means of egress doors shall be detailed as follows:
 - a. Min. 32" (max. 48") clear opening width of exit doorway. For swinging door, clear width is measured between the face of the door and the stop, with the door open 90 degrees. For non-swinging door, the clear width is to be measured from the face of the doorjamb. (CRC R311.2)
 - b. Min. height of 78. (CRC R311.2)
 - Exterior egress door shall be side-hinged swinging. (CRC R311.2)
 - d. Max.1.5" lower than the top of the threshold height. (CRC R311.3.1)
 - e. Min. width of landing at door shall not be less than width of stairway or door. (CRC R311.3)
 - f. Min. 36" length of landing at door measured in the direction of travel. (CRC R311.3)
 - g. Max. 7.75" below the top of the threshold height of an exterior doorway not part of a required means of egress provided the door, other than storm or screen doors, does not swing over the landing. (CRC R311.3.1)
- 3. Egress doors shall be readily openable from the egress side without the use of a key or special knowledge. (CRC R311.2)
- 4. Any door or window that permits direct access from the residence to the pool area shall be equipped with an exit alarm that make audible, continuous alarm sounds when open or left ajar. Doors shall be selfclosing with exit alarm device located a min. 54" above the floor. (CBC 3109.4.4.2)

L-1 VERTICAL EGRESS

 Egress from habitable levels shall be by means of a stair or ramp. For habitable levels more than 1-story above or below an egress door the maximum travel distance from any occupied point to a stairway or ramp that provides egress from that level shall be 50'. (CRC R311.4)

M. STAIRWAYS

- 1. Straight run stairways shall be detailed as follows:
 - a. Max 7.75" rise height. (CRC R311.7.4.1)
 - b. Min. 10" tread depth. (CRC R311.7.4.1)
 - c. Min. 36" clear width. (CRC R311.7.1)
 - d Min. width below the handrail of 31-1/2" when there is a handrail on one side, and 27" when there is a handrail on both sides. (CRC R311.7.1)
 - e. Min. 6'-8" vertical headroom measured vertically from a line connecting the edge of the nosing. (CRC R311.7.2)
 - f. Provide details and notes showing framing (stringer) size, bracing, connections, footings.



- Submit shop drawings for spiral stairway showing compliance with CRC R311.7.9. Spiral stairways shall be detailed as follows:
 - a. Min. 7.5" clear tread depth at a point 12" from the narrow edge.
 - b. Min. 6'-6" vertical headroom measured vertically from a line connecting the edge of the nosing.
 - c. Max. 9.5" riser height.
 - d. Min. 26" stairway width.
- Stair treads and risers shall be detailed as follows:
 - a. The tolerance between the largest and smallest riser height or tread depth shall not exceed 0.375" in any flight of stair. (CRC R311.7.4.3)
 - b. The radius of curvature at the leading edge of the tread or beveling of nosing shall not exceed 0.5". (CRC R311.7.4.3)
 - c. Risers shall be vertical or sloped a max. 30 degrees from the vertical. (CRC R311.7.4.3)
 - d. Leading edge of tread shall not project more than 1.25" beyond tread below. (CRC R311.7.4.3)
 - e. Opening between treads shall not permit the passage of a 4" diameter sphere. (CRC R311.7.4.3)
- Stairway landings shall be detailed as follows: (CBC 1009.5)
 - a. Landing at stairway shall have a min. length measured in the direction of travel equal to the width of the stairway.
 - Floor or landing shall be at top and bottom of each stairway. (Landing is not required at the top of an interior flight of stair, including stair in an enclosed garage, provided door does not swing over the stair.)
 - c. Doors opening onto a landing shall not reduce the landing to 1/2 the required width.
 - d. Max. 7" projection of fully opened door onto a landing.
- Walls and soffits within enclosed useable space under stairways shall be protected as follows: (CRC R302.7)
 - a. Stairs requires 0.5" gypsum board on the enclosed side.
- The walking surface of treads and landings shall not be sloped steeper than 2% (1:48) in any direction. (CRC R311.7.6)

N. OTHER COMPONENTS

- 1. Handrails shall be detailed as follows:
 - a. Continuous handrail is required when 4 or more treads are provided. (CRC R311.7.7)

- b. Min. 34" to max. 38" high above the stair tread nosing. (CRC R311.7.7.1)
- c. Min. 1.25" to max. 2" circular cross-section for handgrip portion of handrail. (CRC R311.7.7.3)
- d. Min. 4" to max. 6.25" perimeter dimension with max. 2.25" cross-section for non-circular handgrip portion of handrail. (CRC R311.7.7.3)
- e. Min. 0.01" radius for edge of handrail (i.e., no sharp corner). (CRC R311.7.7.3)
- f. Handrail shall be continuous without interruption (except by newel post). (CRC R311.7.7.3)
- g. Min. 1.5" clear space between handrail and wall. (CRC R311.7.7.2).
- h. Max. 4.5" projection from either side into the stairway width. (CRC R311.7.1)
- 2. Guards shall be detailed as follows:
 - a. Guards shall be located along open-sided walking surfaces, mezzanines, stairways, ramps and landings that are more than 30" above the floor or grade below. (CRC R312.1)
 - b. Guard whose top rail does not serve as a handrail shall have a height of 42" high above the leading edge of the tread. (CRC R312.2)
 - c. Guard whose top rail serves as a handrail shall have a height of 34" to 38" high above the leading edge of the tread. (CRC R312.2)
 - d. Open guard shall not permit 4.375" diameter sphere to pass through any opening. (CRC R312.3)
 - e. Triangular opening formed by tread, stair and bottom rail shall not permit 6" diameter sphere to pass through. (CRC R312.3)
- 3. Ramp slopes shall not exceed the following:
 - a. Max. 1' in 12' (8%) . (CRC R311.8.1)
 - b. Max. 1' in 8' if practically infeasible because of constraints. (CRC R311.8.1)
 - c. Max. 1' in 48' (2%) for cross slope. (CBC 1010.3)
- Provide emergency escape and rescue from sleeping rooms. Min. net clear opening dimensions of 24" height, 20" clear width, 5.7 sq. ft. area (5.0 sq. ft. at grade floor) and 44" max to bottom of clear opening is required. (CRC R310.1)
- Provide window wells at emergency escape and rescue opening with sill height located below ground level. Min. area of 9 sq. ft., min. 3' width, and provide fixed ladder for window wells with a max. vertical depth of 44". (CRC R310.2)



INTERIOR ENVIRONMENT

O. INTERIOR ROOM, LIGHT AND VENTILATION

- Provide a door and window schedule. Show type and size of each.
- 2. Show the following dimensions for each room or area:
 - a. At least one room shall have a min. net area of 120 sq. ft. (CRC R304.1)
 - b. Habitable areas shall have a min. net area of 70 sq. ft. Does not include kitchens. (CRC R304.2)
 - Habitable spaces shall not be less than 7' in any plan dimension. Does not include kitchens. (CRC R304.3)
 - e. Occupiable spaces, habitable spaces, hallways & corridors shall have a ceiling height of no less than 7'. (CRC R305.1)
 - f. Bathrooms, toilet rooms, storage rooms, & laundry rooms in basements shall have a ceiling height of no less than 6'-8". (CRC R305.1.1)
- 3. Provide natural ventilation in habitable rooms or bathrooms by means of openable exterior wall openings with an area not less than 4% of the room floor area. This is deficient in ______. Mechanical ventilating systems may be permitted if designed in accordance with the Mechanical Code. (CRC R303.1)
- 4. Provide natural ventilation for adjoining spaces. In order to consider any room as a portion of an adjoining room, opening shall be unobstructed and shall have an area of not less than 1/2 the area of the common wall or 25 sq. ft., whichever is greater. (CRC R303.2)
- 5. Rooms containing bathtubs, showers, spas and similar bathing fixtures shall be mechanically ventilated. Provide an exhaust fan with a min. capacity of 50 CFM. Ductless fans are unacceptable. (CMC T-4-4)
- Provide natural light in habitable rooms by means of exterior glazed openings with an area not less than 8% of the room floor area. This is deficient in ______. Natural light can be omitted if artificial light complying with section R303.1 ex 2 is provided.(CRC R303.1)
- 7. Provide natural light for adjoining spaces. In order to consider any room as a portion of an adjoining room, at least 1/2 of the common wall area shall be open and unobstructed and shall provide an opening of not less than 25 sq. ft., whichever is greater. Show that

the	common	wall	between	and		
complies. (CRC R303.2)						

- 8. Openings required for natural light and ventilation shall be permitted to open into a thermally isolated sunroom or patios provided that:
 - a. For natural light a glazed area of not less than 1/10 of the floor area of the interior room or 20 sq. ft., whichever is greater. (CRC 1205.2.1 EX)
- Where openings below grade provide required natural ventilation, the outside horizontal clear space measure perpendicular to the opening shall be 1-1/2 times the depth of the opening measured from adjoining ground level to the bottom of the opening. (CBC 1203.4.1.2)
- 10. For the purpose of providing natural light or ventilation at exterior openings of buildings, a min. yard of 3' in width for one and two story building is required. For buildings more than two stories, the min. width of the yard shall be increased to 1 foot for each additional story. (CBC 1206.2)
- 11. For the purposed of providing natural light or ventilation at exterior openings on opposite sides shall not be less than 6' in width. Courts bounded on three or more sides by the wall of the buildings shall not be less than 10' in length, unless bounded one end by a public way or yard. For buildings more than two stories in height, the court shall be increased 1 foot in width and 2' in length for each additional story. (CBC 1206.3)
- 12. Porch over required windows at ______ must have a min. clear height of 7' with at least 40% of exterior walls are open and unobstructed. Insect screening only does not count as an obstruction. (CRC R303.7.1)
- Toilet and bathing room floors shall have a smooth, hard, nonabsorbent surface such as Portland cement, ceramic tile or other approved material. (CRC R307.2)
- 14. All shower compartments, regardless of shape, shall have a min. finished interior area of not less than 1,024 sq. in. and shall be capable of encompassing a 30" circle. Shower doors shall swing out. The min. area and dimensions shall be maintained to a point 70" above the shower drain outlet. (CPC 411.7)



- 15. Shower compartments and walls above bathtubs with installed shower heads shall be finished with a smooth and nonabsorbent surface to a height not less than 6' above the floor. Use of water-resistant gypsum backing board shall be per CBC 2509.2.
- 16. Built-in tubs with showers shall have waterproof joints between the tub and adjacent wall. (CBC 1210.4)
- 17. Dimension a min. 15" clearance from center of water closet compartment to any side-wall or obstruction nor 30" clearance from center to center to any similar fixture and a min. 24" clear space in front of water closet for bathroom at ______. (CPC 407.6)
- 18. Provide min. 1 foot-candle of stairway illumination at tread runs. (CRC R303.6)
- Provide light activation for the stairway as per sec. R303.6.1
- 20. Add the following notes to plans:
 - a. Flush volumes for low-consumption and watersaver water closets shall be provided with a max. 1.6 gallons of water per flush. (CPC 402.1, 402.2)
 - Water heater shall be strapped to wall at points within the upper 1/3 and lower 1/3 of its vertical dimensions with the lower a min. 4" above the controls. (CPC 508.2.1)
 - Garage door extension springs shall be fabricated from either hard drawn-spring wire or oil-tempered wire and installed in accordance with the manufacturer's instruction. (CRC R309.3)

P. ATTIC AND UNDERFLOOR VENTILATION

- 1. The ventilating area in enclosed attics and rafter spaces shall be as follows: (CRC R806.2)
 - Show ventilation type, size, and location on the plans.
 - b. The net free ventilating area shall not be less than:
 - 1/150 of the attic space (approximately 10 sq. in. for each 10 sq. ft. of attic area), OR
 - 1/300 provided a vapor retarder is installed with a transmission rate not exceeding 1 perm. meeting ASTM E96.
 - c. 50% of the required ventilation area must be located at least 3' above eave or cornice vents with the balance provided by eave or cornice vents.

- d. Openings shall have corrosion-resistant wire mesh or other approved material with 1/8-in. min. and 1/4" max. opening.
- e. A min. of 1" airspace shall be provided between insulation and roof sheathing.
- An opening not less than 22" x 30" shall be provided to any attic area having a clear height of over 30".
 Min. clear headroom of 30" in the attic space shall be provided at or above the access opening. (CRC R807)
- 3. Under-floor vents shall meet the following requirements: (CRC R408.2)
 - a. Show ventilation type, size, and location on the plans.
 - b. Openings shall be placed so as to provide cross ventilation of the under-floor space
 - c. The net free ventilating area shall not be less than 1/150 of the crawl-space area (approximately 10 sq. in. for each 10 sq. ft. of attic area).
 - d. Openings shall have corrosion-resistant wire mesh or other approved material with 1/8" min. and 1/4" max. opening.
- 4. Show min. 18" x 24" under floor access opening. (CRC R408.4)
- 5. Access to mechanical appliances in under-floor areas, in attic spaces, and on roofs or elevated structures shall be in accordance with the California Mechanical Code. (CRC R408.4)

Q. SOUND TRANSMISSION

- 1. Sound transmission control in duplexes shall be provided as follows:
 - a. Wall and floor-ceiling assemblies separating dwelling units from each other and from public or service areas such as interior corridors shall provide airborne sound insulation for walls and both airborne and impact sound insulation for floor-ceiling assemblies equal to that required to meet a sound transmission class (STC) of 50 (45 if field tested). (CBC 1207.6.1, 1207.7)
 - Entrance doors to residential units from interior corridors shall have a min. STC rating of 26 or may be solid-core wood-slab doors 1-3/8" thick or 18 gauge insulated steel-slab doors with compression seals all around, including threshold. (CBC 1207.7)



- c. Penetrations or openings in acoustically rated wall and floor-ceiling assemblies for piping, electrical devices, recessed cabinets, bathtubs, soffits or heating, ventilating or exhaust ducts shall be sealed, lined, insulated or otherwise treated to maintain the required ratings. (CBC 1207.7)
- 2. Identify all sound rated partitions on the floor plans.
- 3. Provide construction details for the following:
 - a. Sound rated wall assemblies.
 - b. Sound rated floor-ceiling assemblies.

EXTERIOR WALLS

R. EXTERIOR WALLS

- 1. Provide veneer details. Show method of anchorage, size and spacing of anchors. Comply with the applicable requirements in CRC R703.7.
- In R-3 occupancy, window sill of openable windows more than 72" above finished grade or other surface below shall not be less than 24" from finished floor of the room it is located in. (CRC R1405.13.2)

S. ROOF

- The min. roof coverings installed on buildings shall comply with CBC T-1505.1 based on the type of construction of the building. Min. roof covering for shall be class C roof assembly or better. (CRC R902.1)
- Identify on the plans the fire-retardant roof classification, manufacturer's name, and ICC/UL/SFM report number. (CRC R902.1)
- 3. Provide specifications for roofing material and application.
- 4. Specify approved weatherproof walking surface material at decks and balconies.
- Clay and concrete tile attachment shall comply with CRC R905.3. Notes shall be provided on the plans to show compliance.
- 6. Roof slope shown on the plans is not adequate for the type of roof covering specified. The min. roof slope shall be provided as follows:

- a. Min. 2% (0.25:12) for built-up roofs. (CRC R905.9)
- b. Min. 8% (1:12) for mineral-surfaced roll roofing. (CRC R905.5.2)
- c. Min. 17% (2:12) for asphalt shingles. (CRC R905.2.2)
- d. Min. 21% (2.5:12) for clay and concrete tiles. (CRC R905.3.2)
- e. Min. 25% (3:12) for metal or wood shingles. (CRC R905.5.2, R905.7.1)
- f. Min. 33% (4:12) for slate shingles and wood shakes. (CRC R905.10.2, R905.8.2)
- 7. Show roof slope(s), drain(s) and overflow drain(s) or scupper(s) on the roof plan. Provide a detail of the roof drain and overflow system. Roof drainage system shall comply with the following requirements: (CRC R903.4, CPC 1108)
 - a. Size the roof drains and overflow drains in accordance with Chapter 11 of the CPC.
 - b. System shall be sized for min. rain intensity of 3" per hour.
 - The roof drain and overflow drain must maintain independent lines to the yard box.
 - d. Roof drainage is not permitted to flow over public property.
 - e. Secondary roof drains having the same size as the primary roof drains shall be installed with the inlet flow line located a min. 2" above the low point of the roof.
 - f. Scuppers through parapet walls adjacent to the low point of the roof may be used as secondary roof drainage. Scupper openings shall be a min. of 4" high and have a width equal to the circumference of the roof drain required for the area served.
 - g. Overflow scuppers shall be designed in accordance to CPC T-11-1.
- 8. Provide and detail access to equipment on roof per CMC 904.10.3.

CHAPTER 21 MASONRY

T. CHIMNEY

- 1. Chimney shall extend a min. 2' above any portion of the building within 10', but not less than 3' above the roof. (CRC R1003.9)
- 2. Chimneys shall be equipped with an approved spark arrestor. (CRC R1003.9.1)

CHAPTER 24 GLASS AND GLAZING

U. GLASS AND GLAZING



- Each pane of safety glazing installed in hazardous locations shall be identified by a manufacturer's designation specifying who applied the designation, the manufacturer or installer and the safety glazing standard. The following shall be considered specific hazardous locations for the purposed of safety glazing. Glazing in: (CRC R308.4)
 - a. Swing doors.
 - b. Fixed and sliding panels of sliding door assemblies and panels in sliding and bi-fold closet door assemblies.
 - c. Storm doors.
 - d. Unframed swinging doors.
 - e. Doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs, and showers.
 - f. Fixed or operable panels adjacent to a door where the nearest exposed edge of the glazing is within 24" arc of either vertical edge of the door in a closed position and where the bottom exposed edge of the glazing is less than 60" above the walking surface. Read code for exceptions.
 - g. Fixed or operable panel, other than described in items e and f, which meets all of the following conditions (read code for exception with special installation).
 - i. Exposed area of an individual pane greater than 9 sq. ft.
 - ii. Exposed bottom edge less than 18" above the floor.
 - iii. Exposed top edge greater than 36" above the floor.
 - iv. One or more walking surfaces within 36" horizontally of the plane of the glazing.
 - h. Guards and railings regardless of area or height above a walking surface. Included are structural baluster panels and nonstructural in-fill panels.
 - i. Walls and fences enclosing indoor and outdoor swimming pools and spas where all of the following conditions are present:
 - The bottom edge of the glazing is less than 60" above a walking surface on the pool or spa side of the glazing.
 - ii. The glazing is within 60" of a swimming pool or spa water's edge.
 - j. Adjacent to stairways, landings and ramps within 36" horizontally of a walking surface; when the exposed surface of the glass is less than 60" above the plane of the adjacent walking surface(read code for exception with special installation).
 - k. Adjacent to stairways within 60" horizontally of the bottom tread of a stairway in any direction when the exposed surface of the glass is less

than 60" above the nose of the tread (read code for exception with special installation).

- For glass handrails and guards, the panels and their support system shall be designed to withstand the loads specified in Chapter 16. A safety factor of four shall be used. The min. nominal thickness of the glass shall be 1/4". Specify approved report number and manufacturer of glass panel guardrail on plans and/or detail. (CBC 2407)
- Skylights set at an angle of less than 45 degrees from the horizontal plane shall be mounted at least 4" above the plane of the roof on a curb constructed as required for the frame. Glass skylights shall comply with CBC 2405. Plastic skylights shall comply with CBC 2610.

CHAPTER 25 GYPSUM BOARD AND PLASTER

W. GYPSUM BOARD AND PLASTER

- A corrosion resistant weep screed, min. 26 galv. sheet gage, is required below the stucco at the foundation plate line a min. 4" above earth or 2" above paved area with a vertical attachment flange of 3.5". Weep screeds shall be of a type which will allow trapped water to drain to the exterior of the building. Show these dimensions on a foundation detail drawing. (CRC R703.6.2.1)
- 2. Cement, fiber-cement or glass mat gypsum backers in compliance with ASTM C1178, C1288 or C1325 shall be used as a base for wall tile in tub and shower areas and wall and ceiling panels in shower areas. Water-resistance gypsum backing board shall be used as a base for tile in water closet compartment walls when installed in accordance with GA-216 or ASTM C840. Regular gypsum wallboard is permitted under tile or wall panels in other wall and ceiling areas when installed in accordance with GA-216 or ASTM C840. Water-resistant gypsum board shall not be used in the following locations: (CRC R702.3.8)
 - a. Over a vapor retarder.
 - In areas subject to continuous high humidity, such as saunas, steam rooms or gang shower rooms.
 - On ceilings where frame spacing exceeds 12"
 o.c. for 1/2" thick and more than 16" o.c. for 5/8"
 thick.



X. ADDITIONAL WRITTEN COMMENTS

No.	Comment	Code Sec. No.