



Building Code Requirements

CITY OF HEMET BUILDING DIVISION
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WEATHER PROTECTION

All weather-exposed surfaces shall have a weather resistive barrier to protect the interior wall coverings. A minimum of one layer of No 15 asphalt felt, complying the ASTM D 226 for Type 1 felt or other approved materials, shall be attached to the studs or sheathing, with flashing as described in section 1405.3, in such a manner as to provide a continuous water-resistive barrier behind the exterior wall veneer. Grade D felt shall be applied horizontally, with the upper layer lapped over the lower layer not less than 2 inches horizontally. Where vertical joints occur, felt paper shall be lapped not less than 6 inches. When felt or paper is applied over wood base sheathing, such as shear panels, a minimum of two layers of grade D paper is required. Balconies, landings, exterior stairways, occupied roofs and similar surfaces exposed to the weather and sealed underneath shall be waterproofed and sloped a minimum of ¼ unit vertical in 12 units horizontal for drainage.

EXTERIOR WALL COVERINGS

A variety of exterior finishes that may be attached to exterior wood studs are available. Of these materials, the most generally used are masonry veneer, wood siding and cement stucco. For all other exterior finishes refer to 2007 CBC section 1405.

INTERIOR WALL COVERINGS

Interior finishes on wood stud walls vary depending on what your requirements are. In residential design, interior lath and plaster, drywall, and wood paneling or siding are most commonly used. When drywall is used as a base for tile or wall panels for tub, shower or water closed compartment walls, water-resistant drywall backing board (green board) shall be used. Water-resistant drywall may be installed on ceilings where the framing members do not exceed 12 inches on center.

SAFETY GLASS

Glazing subject to human impact or installed in hazardous locations shall be safety glazing. Each light of safety glazing material installed in hazardous locations shall be identified by a permanent label which specifies that safety glazing material have been used. Hazardous locations are defined as follows:

1. Glazing in ingress and egress doors except jalousies.

2. Glazing in fixed and sliding panels of sliding door assemblies and panels in swinging doors.

3. Glazing in storm doors.

4. Glazing in unframed swinging doors.

5. Glazing in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers. Glazing enclosing these compartments shall be safety glazing where the bottom exposed edge of the glazing is less than sixty (60) inches above a standing surface and drain inlet.

6. Glazing in fixed or operable panels adjacent to a vertical door jamb where the nearest exposed edge of the glazing is within a 24 inch arc and where the bottom edge is less than 60 inches above the walking surface.

7. Glazing in individual fixed or operable panels where the following four conditions exist:

A. Exposed area of an individual pane greater than 9 square feet.

B. Exposed bottom edge less than 18 inches above the floor.

C. Exposed top edge greater than 36 inches above the floor.

D. One or more walking surfaces within.

8. Glazing in railings regardless of height.

9. Glazing in walls and fences used as a barrier for swimming pools and spas where the glazing is less than 60 inches above the pool deck and within 5 feet of the pool side.

10. Glazing in walls enclosing stairway landings or within 5 feet of the bottom and top of stairways where the bottom edge of the glass is less than 60 inches above a walking surface.

SKYLIGHTS

When approved plastic skylights are installed, follow the manufacturers installation instructions provided with the assembly. When glass skylights are installed, annealed, high-strengthened or tempered glass skylights shall be equipped with screens substantially supported below the skylight. Screens shall be of non-combustible materials, shall have a mesh not larger than 1 inch by 1 inch, and shall be constructed of not lighter than 12 B & S gauge material.

WINDOWS

Light: All rooms within a dwelling unit shall be provided with natural light by means of exterior glazed openings with an area not less than 1/10 of the floor area of such rooms with a minimum of 10 square feet. The exceptions to this requirement are kitchens and bathrooms which may be provided with artificial light.

Ventilation: All rooms within a dwelling unit shall be provided with natural ventilation by means of openable exterior openings with an area of not less than 1/20 of the floor area of the room with a minimum of 5 square feet. Bathroom and toilet rooms shall have an aggregate window area of not less than one-twentieth of the floor area served, and with not less than 1-1/2 square feet of openable window area, or be provided with artificial light and mechanical ventilation.

Emergency Egress Windows and Doors: Every sleeping room below the fourth floor shall have at least one openable window or door to the outside to permit emergency exit or rescue. The emergency door or window shall be openable from the inside to provide a full, clear opening without the use of separate tools. Windows shall have a sill height of not more than 44 inches above the floor. Windows shall comply with all the following three conditions:

1. Provide not less than 5.7 square feet of clear openable area.
2. Provide a net clear opening width of not less than 20" and;
3. Provide a net clear height of not less than 24".

Security Bars: Security bars may be installed on emergency escape and rescue windows provided the security bars are equipped with approved release mechanisms which are openable from the inside without the use of a key or special knowledge or effort.

SIZE OF ROOMS

Every dwelling unit shall have at least one room which shall have not less than 120 square feet of floor area. Other habitable rooms within the structure used for living, sleeping, or eating, except kitchens, shall have an area of not less than 70 square feet with no dimension less than 7 feet in any direction. No habitable room except kitchens shall be less than 7 feet in any dimension. A toilet space shall not be less than 30 inches in width and shall have a clear space in front of toilet of at least 24 inches.

CEILING HEIGHT

Habitable space shall have a ceiling height of not less than 7 feet 6 inches. Kitchens, halls, bathrooms and toilet compartments may have a ceiling height of not less than 7 feet. In rooms with sloping ceilings, the required ceiling height shall be provided in at least 1/2 of the room and no portion of any room having a ceiling height of less than 5 feet shall be considered as contributing to the minimum area required.

ATTIC ACCESS OPENINGS

Attic access openings shall be provided to attics when the minimum vertical height of the attic is 30 inches or greater. The opening shall not be less than 22 inches by 30 inches. An attic in which a warm-air furnace is installed shall be accessible by an opening and passageway as large as the largest piece of equipment but not smaller than 30 inches by 30 inches.

ROOFING

Roof coverings shall be secured or fastened to the supporting roof construction and shall provide weather protection for the building at the roof. Choose a type and grade of roofing suitable for the building. Entering into the choice are such elements as the occupancy of the building, the slope of the roof, local weather conditions, and its design, style and size.

ROOF FLASHING

All penetrations through a roof structure shall be properly flashed with roof jacks or other approved flashing in such a manner as to make them weatherproof. Such projections through the roof are plumbing vents, heating vents, skylights, electrical service risers, fireplace chimney and other similar penetrations.

All wall to roof intersections shall have 1" x 4" backing installed for "Z" Bar flashing. Step counter flashing shall be installed where the "Z" Bar flashing slopes with the roof. "L" metal counter flashing shall be installed where the roof slopes away from the "Z" Bar flashing.

ATTACHED GARAGE

A private garage attached to a dwelling shall have materials as approved for one-hour-fire-resistive construction on the garage side of any common wall and extending to the roof. Any doorway into the house shall have a self-closing, tight fitting solid wood door of not less than 1-3/8 inches in thickness. Such a door cannot open into a sleeping room. Garage floor surfaces shall be of non-combustible materials or asphaltic paving materials. The walls and ceilings of a private garage that has rooms above shall be of one-hour fire-resistive construction. The pilot, burner and flame of all heating and

cooling equipment in the garage must be elevated 18 inches above the floor.

STAIRWAYS

Width: Private residential stairways shall not be less than 36 inches in width.

Rise and Run: The rise of steps for private residential stairways shall not be less than 4 inches or greater than 8 inches. The run of steps shall not be less than 9 inches. The largest tread run or riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch.

Winding Stairways: In private stairways, tread winders may be used if the required width of the run is provided at a point not more than 12 inches from the side of the stairway where the treads are narrower, but in no case shall any width of run be less than 6 inches at any point.

Landings: Every landing shall have a dimension measured in the direction of travel not less than the width of the stairway or 36 inches in private stairways. Stair runs may not be more than 12 feet vertically between landings or floors

Handrails: Stairways shall have a handrail on at least one side when the stairway is less than 44 inches in width and serving one individual dwelling. The top of handrails shall be located at least 34" inches and not more than 38" inches above the nosing of the tread and landings. The handgrip portion of handrails shall not be less than 1-1/4 inches nor more than 2 inches. The handrail may project not more than 3-1/2 inches into the required width of the stairway. Handrail ends shall return to a wall or newel post.

Openings: Open handrails and guardrails shall have intermediate rails or an ornamental pattern such that a sphere 4 inches in diameter cannot pass through.

Headroom Clearance: Every stairway shall have a headroom clearance of not less than 6 feet 8 inches. Such clearances shall be established by measuring vertically from a plane parallel and tangent to the stairway tread nosing to the soffit above at all points.

STEPS AT DOORS

When a door swings out, a landing shall be provided on each side of the doorway with the threshold elevation change not exceeding 1" inch. For doors serving the physically disabled, the maximum threshold elevation charge shall be 1/2 inch. Landings shall have a dimension measured in the direction of travel equal to the width of the stairway. A door may open at the top step of an interior flight of stairs, provided the door

does not swing over the top step. A door may open at a landing that is not more than 8 inches lower than the floor level provided the door does not swing over the landing.

SMOKE DETECTORS

Every new dwelling shall be provided with smoke detectors. The detector shall be mounted on the ceiling or wall at a point centrally located in the corridor or area giving access to rooms used for sleeping purposes, and in every sleeping room. The detectors shall receive their primary power from the building wiring and be interconnected so when a detector is activated it shall cause all the detectors to sound their alarms. Interior alterations, repairs, or additions requiring a permit and having a valuation in excess of \$1,000, or when one or more sleeping rooms are added or created, the entire dwelling shall be provided with detectors located as required for a new dwelling. The detectors may be battery operated when installed in existing buildings, and are not required to be interconnected.

FOUNDATION REQUIRED

Exterior walls and interior bearing walls shall be supported on continuous masonry or concrete walls or footings. Foundations supporting wood shall extend at least 6 inches above the adjacent finish grade. Interior bearing walls in one-story buildings may be supported on piers, 14 inches by 14 inches, shall extend at least 8 inches into the natural ground and project not less than 8 inches above finish grade. Where expansive (adobe) soils, filled ground or steep hillsides exist, consult the Building and Safety Division for special foundation requirements.

FOUNDATION PLATES - MUDSILLS

Foundation plates shall be foundation grade redwood or approved pressure-treated wood, marked or branded by an approved agency. The minimum size shall be 2 inches in thickness by the full width of the studs. Sills must be placed under all walls or partitions that rest on concrete or masonry. Foundation plates or sills shall be bolted to the foundation wall with not less than five-eighths inch diameter bolts embedded 7 inches into the masonry or concrete and spaced not more than 6 feet apart, nor more than 12 inches from an end of the sill or corner. A properly sized nut and square washer shall be tightened on each bolt to the plate. There shall be a minimum of two bolts per piece of mudsill or foundation plate.

CLEARANCE OF BUILDINGS ABOVE GROUND AND VENTILATION

Minimum clearance between the bottom of floor joists or bottom of floors without joists and the ground below shall be 18 inches. Minimum clearance under girders shall be 12

inches. The space between the bottom of floor joists and the ground of any building shall be provided with a sufficient number of ventilation openings through foundation walls or exterior walls to ensure ample ventilation, and such openings shall be covered with a corrosion-resistant wire mesh having one-quarter inch openings. Openings shall be arranged to provide cross ventilation, and shall have a net area of not less than 1 square foot for each 150 square feet of underfloor area. See "Ventilation Guide".

JOISTS

All joists shall have a minimum bearing of 1-1/2 inches on wood or metal and 3 inches on masonry. Joists shall be supported laterally at the ends and each support by solid blocking except where the ends of joists are nailed to a header, band or rim joist or to an adjoining stud or by other approved means. Solid blocking shall be 2-inch nominal thickness and the full depth of the joist. All joists under and parallel to bearing partitions shall be doubled and well spiked. Trimmer and header joists shall be doubled when the span of the header exceeds 4 feet. The ends of header joists over 6 feet long, and tail joists over 12 feet long, shall be hung in joist or beam hangers. Trimmers and header joists more than 4 feet long shall be doubled. Joists, beams, and wood framing shall not be placed closer than 2 inches of fireplaces, smoke chambers, or chimneys.

STUD WALLS AND PARTITIONS

Studs shall be placed with their wide dimension perpendicular to the wall. Not less than 3 studs shall be installed at each corner of each exterior wall. Bearing partitions and exterior walls shall be constructed of not less than 2 x 4 inch studding not more than 16 inches on center. Bearing and exterior wall studs shall be capped with double top plates installed to provide overlapping at corners and at intersections with other partitions. End joints in double top plates shall be offset at least 48 inches.

All openings 4 feet wide or less in bearing walls shall be provided with headers equivalent to double headers not less than 2 inches thick, placed on edge, securely fastened together. All openings more than 4 feet wide shall be provided with headers of sufficient size to support the load. Such headers shall have not less than 1-1/2 inches solid bearing at each end to the floor or bottom plate.

Where plumbing, heating, or other pipes are placed in a partition necessitating the cutting of the plates, a metal tie of not less than 1/8 inch thick and 1-1/2 inches wide shall be fastened to the plate across to each side of the opening with not less than six 16d nails. All walls shall be fire-stopped with

2-inch material the full width of the studs at the floor, ceilings, and between floor and ceiling at intervals not to exceed 10 feet vertically. Spaces around vents, pipes, ducts, chimneys, fireplaces, and similar openings which afford a passage for fire shall be fire-stopped with non-combustible materials.

ROOF CONSTRUCTION

There shall be ridge board at least one inch nominal thickness at all ridges and not less in depth than the cut end of the rafter. At all valleys and hips there shall be a valley or hip rafter not less than two inches thick and not less in depth than the cut end of the rafter. Rafters shall be framed directly opposite each other at the ridge and shall be nailed to adjacent ceiling joists at the plate line to form a continuous tie between exterior walls. Where the ceiling joists run other than parallel to the rafters, rafters shall be tied back to the roof framework by means of cross ties spaced not more than 48 inches on center. Such ties shall be not less than 1 by 4 inches. Purlins to support roof loads may be installed to reduce the span of rafters within allowable limitations and shall be supported by struts to bearing walls. The purlin shall not be smaller than the supported rafter. The maximum span of 2 by 4 inch purlins shall be 4 feet. The maximum span of 2 by 6 inch purlins shall be 6 feet. Struts shall be not smaller than 2 by 4 inches. The unbraced length of struts shall not exceed 8 feet and the slope of the struts shall be not less than 45 degrees from the horizontal.