

LOS ANGELES COUNTY/BUILDING & SAFETY DIVISION
Standard Construction Notes
VERY HIGH FIRE HAZARD SEVERITY ZONE
2023 LA County Residential Code – Section R337
2023 LA County Building Code – Chapter 7A

Notes: **1)** Additional State Fire Marshal approved materials and methods may be found in California Referenced Standards Code, Part 12. **2)** Prior to permitting final approval, the property shall follow the **vegetation management requirements**. **3)** The use of paints, coating, stains or other surface treatments are not an approved method of protection [R337.3.5.3/701A.5, 703A.5.3].

APPLICATION – [R337.1.3/701A]

1. New buildings.
2. Additions, alterations or repairs made to existing buildings within Wildland-Urban Interface (WUI) Fire Area or Fire Hazard Severity Zone
3. Detached Accessory Building Exceptions:
Any structures located at least 50 ft from an applicable building.

ROOFING - [R337.5/705A]:

4. Roofs shall have a roofing assembly installed in accordance with its listing and the manufacturer's installation instructions. Wood shingles and wood shakes are prohibited in any Fire Hazard Severity Zone regardless of classification.
5. **Fire-retardant-treated wood shingles and shakes** shall be approved and listed by the California State Fire Marshal and have passed the weathering test. [R902.2/703A.5.2.2]
6. Roof covering shall be Class A [R902.1.1]:
 - a. The entire roof covering of every existing structure where more than 50% of the total roof area is **replaced** within any one-year period,
 - b. The entire roof covering of every **new structure**, or
 - c. And any roof covering applied in the alteration, repair or replacement of the roof of every **existing** structure.
7. Where the roof profile allows space **between the roof covering** and roof decking: [R337.5.2]
 - a. The spaces shall be constructed to prevent the intrusion of flames and embers,
 - b. Be fire stopped with approved materials, or
 - c. Have one layer of minimum 72-pound mineral-surfaced nonperforated cap sheet complying with ASTM D 3909 installed over the combustible decking.
8. Where **roof valley flashing** is installed [R337.5.3]:

- a. The flashing shall be not less than 0.019-inch No. 26 gage galvanized sheet installed over not less than one layer of minimum 72-pound mineral-surfaced non-perforated cap sheet complying with ASTM D 3909, at least 36-inch-wide running the full length of the valley.

9. **Roof gutters** shall be provided with the means to prevent the accumulation of leaves and debris in the gutter. [R337.5.4]

VENTS – [R337.6/706A]:

General – Sec. R337.6.1/706A.1

Where provided, ventilation openings enclosed attics, gable ends, ridge ends, under eaves and cornices, enclosed eave soffit spaces, enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters, and underfloor ventilation shall be in accordance with CBC Sec. 1202 and R337.6.2.

Requirements R337.6.2/706A.2

10. Ventilation openings shall be fully covered with Wildland Flame and Ember Resistant (WUI) vents approved and listed by the California State Fire Marshal, or WUI vents listed to ASTM E2886.

Off Ridge and Ridge Vents – R337.6.2.1/706A.2.1:

11. Vents that are installed on a sloped roof, such as dormer vents, shall comply with all the following:
 - a. Openings shall be between 1/16th and 1/8th inch.
 - b. The materials shall be noncombustible except vents located under the roof covering, along the ridge, with noncombustible wire mesh.
 - c. The materials shall be corrosion resistant.

EXTERIOR COVERING – Sec. R337.7/707A

Note: The following **exterior covering materials** shall conform to this section: Exterior wall covering or assembly, underside of roof eave overhangs or soffits, underside of exterior porch ceilings, underside of floor projections, and underfloor areas. **The following are exempt:** architectural trim, fascia and gutters; roof or wall corner projections or similar, and deck walking surfaces complying with Section 337.9.

Exterior walls – R337.7.3/707A.3

12. Exterior wall covering or wall assembly shall be one of the following:
 - a. Noncombustible material,

- b. Ignition resistant material.*
- c. Heavy Timber Construction
- d. Log Wall Construction
- e. Complies with ASTM E2707 and SFM Standard 12-7A-1
- f. Exterior fire exposure with a 1-hour fire-resistance rating, rated from the exterior side, as tested in accordance with ASTM E119 or UL 263.
- g. Exterior fire exposure containing one layer of 5/8-inch (15.9 mm) Type X gypsum sheathing applied behind the exterior wall covering or cladding on the exterior side of the framing.
- h. Factory fire-retardant treated wood

Extent of Exterior Wall Coverings - R337.7.3.1/707A.3.1

13. Exterior wall coverings shall extend from the top of the foundation to
- a. the roof and terminate at 2-inch nominal solid wood blocking between rafters at all roof overhangs,
 - b. or in the enclosed eaves, terminate at the enclosure.

Open (Exposed) Roof Eaves – R337.7.5/707A.5

14. The **exposed roof deck** on the underside of unenclosed roof eaves shall consist of one of the following:
- a. Noncombustible material.
 - b. Ignition-resistant material.*
 - c. Factory fire-retardant treated wood
 - d. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside exterior of the roof deck.
 - e. Exterior portion of a 1-hour fire-resistance-rated exterior assembly applied to the underside of the roof deck designed for fire exposure per Gypsum Association Fire Resistance Design Manual and tested in accordance with ASTM E119 or UL263

Exceptions: Fascia and architectural trim boards.

Enclosed Roof Eaves and Roof Eave Soffits - R337.7.6/707A.6

15. The **exposed underside of enclosed roof eaves** having either a boxed-in roof eave soffit with a horizontal underside, or sloping rafter tails with an exterior covering applied to the underside of the rafter tails, shall be protected by one of the following:
- a. Noncombustible material

- b. Ignition-resistant material*
- c. Factory fire-retardant treated wood
- d. Materials approved for not less than 1-hour fire resistance-rated construction on the exterior side as tested by ASTM E119 or UL 263.
- e. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the rafter tails or soffit.
- f. The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure.
- g. Boxed-in roof eave soffits per Section 337.7.11, when tested in accordance with ASTM E2957.
- h. Boxed-in roof eave soffits per SFM Standard 12-7A-3.

Exceptions: Fascia and other architectural trim boards.

Exterior Porch Ceilings - R337.7.7/707A.7

16. The exposed underside of exterior porch ceilings shall be protected by one of the following:
- a. Noncombustible material.
 - b. Ignition-resistant material.*
 - c. Factory Fire-retardant-treated wood shall be labeled for exterior use and shall meet the requirements of Section 2303.2 of the California Building Code.
 - d. Materials approved for not less than 1-hour fire resistance-rated construction on the exterior side as tested by ASTM E119 or UL 263.
 - e. One layer of 5/8-inch Type X gypsum sheathing applied behind the exterior covering on the underside of the ceiling.
 - f. The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure.
 - g. Porch ceiling assemblies with a horizontal underside that meets Section R337.7.11, when tested in accordance with ASTM E2957.
 - h. Porch ceiling assemblies with a horizontal underside that meets SFM Standard 12-7A-3.

Exception: Architectural trim boards.

Floor Projections - R337.7.8/707A.8

17. The exposed underside of a cantilevered floor projection where a floor assembly extends over an exterior wall shall be protected by one of the following:
- a. Noncombustible construction.

- b. Ignition-resistant material.*
 - c. Factory fire-retardant-treated wood shall be labeled for exterior use and shall meet the requirements of Section 2303.2 of the California Building Code.
 - d. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection.
 - e. The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure.
 - f. The underside of a floor assembly that meets the performance criteria in Section R337.7.11
 - g. The underside of a floor assembly that meets SFM Standard 12-7A-3.
- c. Factory fire-retardant-treated wood shall be labeled for exterior use and shall meet the requirements of Section 2303.2 of the California Building Code.
 - d. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection.
 - e. The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure.
 - f. The underside of an appendage assembly that meets Section R337.7.11.
 - g. The underside of an appendage assembly that meets SFM Standard 12-7A-3.

Exception: Architectural trim boards.

Underfloor Protection - R337.7.9/707A.9

18. The under-floor area of elevated or overhanging buildings shall be enclosed (and fire-protected) to grade or the underside of the exposed under-floor shall be protected by one of the following:
- a. Noncombustible construction.
 - b. Ignition-resistant material.*
 - c. Factory fire-retardant-treated wood shall be labeled for exterior use and shall meet the requirements of Section 2303.2 of the California Building Code.
 - d. Materials approved for not less than 1-hour fire resistance-rated construction on the exterior side as tested in accordance with ASTM E119 or UL 263.
 - e. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection.
 - f. The exterior portion of a 1-hour fire resistive exterior wall assembly designed for exterior fire exposure.
 - g. The underside of a floor projection assembly that meets Section R337.7.11.
 - h. The underside of a floor projection assembly that meets SFM Standard 12-7A-3.

Exception: Heavy Timber Construction

Underside of Appendages - R337.7.10/707A.10

19. The underside of overhanging appendages shall be enclosed to grade in accordance with the requirements similar to the exposed underfloor.
- a. Noncombustible construction.
 - b. Ignition-resistant material*

Exception: Heavy Timber Construction

EXTERIOR WINDOWS AND DOORS – R337.8/708A

Exterior Glazing – R337.8.2/708A.2

The following exterior glazing materials and/or assemblies shall comply with exterior windows, exterior glazed doors, glazed openings within exterior doors, glazed openings within exterior garage doors, exterior structural glass veneer, skylights, and vents.

Exterior Windows and Exterior Glazed Door Assembly Requirements – R337.8.2.1/708A.2.1

20. Exterior windows and exterior glazed door assemblies shall comply with one of the following:
- a. Multi-pane glazing with a minimum of one tempered pane meeting the Safety Glazing requirements of CBC Sec. 2406 and R308.
 - b. Glass block units.
 - c. 20-minute fire-resistance rating.
 - d. Meet SFM Standard 12-7A-2

Operable Skylights

21. Protected by a noncombustible mesh screen where the dimensions of the openings in the screen do not exceed 1/8 inch

Structural Glass Veneer – R337.8.2.3/708A.2.3

22. The wall assembly behind the structural glass veneer shall comply with the wall requirement of Sec. R337.7.3/707A.3.

Exterior Doors – R337.8.3/708A.3

23. Exterior doors shall comply with the following:
- a. The exterior surface or cladding shall be of noncombustible or ignition-resistant material, or
 - b. Constructed of solid core wood that complies with the following:
 - i. Stiles and rails shall not be less than 1-3/8 inches thick.

- ii. Raised panels shall not be less than 1-1/4 inch thick, except for perimeter of the raised panel that may taper to a tongue not less than 3/8-inch thick.
- c. Fire-resistance rating of not less than 20 minutes.
- d. The exterior surface or cladding shall be tested to meet the performance requirements to Section 707.A.3.1 when tested in accordance with ASTM E2707.
- e. Meet SFM Standard 12-7A-1.

Exterior Door Glazing – R337.8.3.1/708A.3.1

- 24. Shall meet the requirements of R337.8.2.1/708A.2.1 above.

Garage Door Perimeter Gap

- 25. Exterior garage doors shall resist the intrusion of embers from entering by preventing gaps between doors and door openings, at the bottom, sides and tops of doors, from exceeding 1/8 inch. Gaps between doors and door openings shall be controlled by one of the following methods:
 - a. Weather stripping hazards
 - b. Door overlaps onto jambs and headers
 - c. Garage door jambs and headers covered with metal flashing

DECKING – R337.9/709A

- 26. The **walking surface material** of decks, porches, balconies and stairs when any portion of such surface is within 10 ft of the building shall comply with the following:
 - a. Material that complies with conditions of acceptance in Sections R337.9.4 when tested in accordance with both ASTM E2632 and ASTM E2726.
 - b. Ignition-resistant material shall comply with performance requirements of Section R337.9.4.
 - c. Material that complies with the performance requirements of both SFM Standard 12-7A-4 and Section R337.4.3.

Exception: Wall material shall be permitted to be of any material that otherwise complies with this chapter when the decking surface complies with ASTM E84 with Class B flame spread index.

- d. Any material that complies with Section R337.9.5 when tested with ASTM E2635 and when the attached exterior wall covering is also composed of only noncombustible or

ignition-resistant materials.

Exception: Wall material shall be permitted to be of any material that otherwise complies with this chapter when the decking surface complies with ASTM E84 with Class B flame spread index.

ACCESSORY STRUCTURES – R337.10/710A

- 27. Group U occupancy accessory buildings and miscellaneous structures that have potential to pose a significant exterior fire exposure hazard during wildfires shall be constructed with ignition resistance.

Note: Applicable to accessory dwellings on the same lot including attached and detached miscellaneous structures that require permit such as trellises, arbors, patio covers, gazebos, and similar structures.

- 28. Miscellaneous structures and accessory dwellings separated from applicable buildings on the same lot by less than 3 feet but less 50 feet shall be constructed or noncombustible or ignition resistant materials.
- 29. Roofs of accessory buildings required to be noncombustible, or ignition resistant materials shall be Class A rating and comply with ASTM E108 and UL790 following roofing requirements of Section 337 and Chapter 9.

* Ignition-resistant material shall be labeled for exterior use and shall meet the requirements of Section R337.4.2, following requirements of R337.4.3 or alternative methods of R337.4.4. Materials shall comply with conditions Items 1 and 2 below or with the conditions of acceptance of ASTM E2768.

- 1. The material shall exhibit a listed frame spread index of not exceeding 25 when tested in accordance with ASTM E84 or UL 723.
- 2. ASTM E or UL723 testing shall be continued for an additional 20-minute-period, and the material shall exhibit a flame front that does not progress more than 10 ½ feet (3200 mm) beyond the centerline of the burner at any time during the test period.

