Chapter 10-28

CALIFORNIA BUILDING CODE*

Sections:
10-28.010 Adoption of the California Building Code.

* Prior ordinance history: Ords. 02-4 and 02-6.

10-28.010 Adoption of the California Building Code.

The California Building Code, 2016 Edition, based on the 2015 Edition of the International Building Code as published by the International Code Council, together with the amendments provided in this chapter, is hereby adopted and incorporated by reference, as if set forth at length herein, as the building code of the city of Laguna Hills, regulating the construction, alteration, movement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures in the city. Not less than one copy of said code has been filed in the office of the City Clerk and shall be made available for public inspection. (Ord. 2016-7 § 2 (part): Ord. 2013-3 § 2 (part): Ord. 2010-3 § 2 (part): Ord. 09-1 § 2, 2009: Ord. 07-3 § 2 (part), 2007)


Chapter 2, Definitions.

Section 202, Definitions, is hereby revised by adding “Spark Arrester” as follows:

SPARK ARRESTER. A listed device constructed of noncombustible material specifically for the purpose of meeting one of the following conditions:

1. Removing and retaining carbon and other flammable particles/debris from the exhaust flow of an internal combustion engine in accordance with California Vehicle Code Section 38366.

2. Fireplaces that burn solid fuel in accordance with California Building Code Chapter 28.

Chapter 7A, Materials and Construction Methods for Exterior Wildfire Exposure.

Section 701A.3, Application, is hereby revised to read as follows:

701A.3 Application. New buildings located in any Fire Hazard Severity Zone or any Wildland-Urban Interface Fire Area designated by the enforcing agency constructed after the application date, and additions to and remodel of buildings constructed before 2012 located in areas currently designated as such, shall comply with the provisions of this chapter. The provisions shall also apply to additions, remodels, and accessory structures located within 100 feet of a fuel modification zone, vegetation management area, or similar area containing hazardous combustible vegetation, regardless of whether the property is currently located in a designated Fire Hazard Severity Zone or Wildland-Urban Interface Fire Area, when materials and/or construction methods for exterior wildfire exposure were previously required at the property by the Building or Fire Code Official at the time of construction.

Exceptions:

1. Buildings of an accessory character classified as a Group U occupancy and not exceeding 120 square feet in floor area, when located at least 30 feet from the applicable building.

2. Buildings of an accessory character classified as a Group U occupancy of any size located least 50 feet from an applicable building.

3. Buildings classified as a Group U Agricultural Building, as defined in Section 202 of this code (see also Appendix C – Group U Agricultural Buildings), when located at least 50 feet from an applicable building.

Section 710A.3.2 is hereby revised to read as follows:

710A.3.2 Detached accessory structures within 50 feet of an applicable building shall comply with the requirements of this section.
Section 710A.4, Requirements, is hereby revised to read as follows:

**710A.4 Requirements.** Accessory structures shall be constructed of non-combustible or ignition-resistant materials.

**Chapter 9 Fire Protection Systems.**

Section 903.2, Where required, is hereby revised to read as follows:

**903.2 Where required.** Approved automatic sprinkler systems in buildings and structures shall be provided when one of the following conditions exists:

1. **New buildings:** Notwithstanding any applicable provisions of Sections 903.2.1 through 903.2.19, an automatic fire-extinguishing system shall also be installed in all occupancies when the total building area exceeds 5,000 square feet as defined in Section 202, regardless of fire areas or allowable area, or is more than two stories in height.

   **Exception:** Subject to approval by the Fire Code Official, open parking garages in accordance with Section 406.5 of the California Building Code.

2. **Existing Buildings:** Notwithstanding any applicable provisions of this code, an automatic sprinkler system shall be provided in an existing building when an addition occurs and one of the following conditions exists:

   a. When an addition is 33% or more of the existing building area, and the resulting building area exceeds 5,000 square feet

   b. When an addition exceeds 2,000 square feet and the resulting building area exceeds 5,000 square feet.

   c. An additional story is added above the second floor regardless of fire areas or allowable area.

   **Exception:** Additions to Group R-3 occupancies shall comply with Section 903.2.8 (2).
4. Pursuant to Health and Safety Code, Section 13143.6, occupancies licensed for protective social care which house ambulatory clients only, none of whom is a child (under the age of 18 years), or who is elderly (65 years of age or over).

When not used in accordance with Section 504.2 or 506.3 of the California Building Code, an automatic sprinkler system installed in accordance with Section 903.3.1.2 shall be allowed in Group R-2.1 occupancies.

An automatic sprinkler system designed in accordance with Section 903.3.1.3 shall not be utilized in Group R-2.1 or R-4 occupancies.

Section 903.3.5.3, Hydraulically calculated systems, is hereby added as follows:

**903.3.5.3 Hydraulically calculated systems.** The design of hydraulically calculated fire sprinkler systems shall not exceed 90% of the water supply capacity.

**Exception:** When static pressure exceeds 100 psi, and when required by the fire code official, the fire sprinkler system shall not exceed the water supply capacity specified by Table 903.3.5.3.

**Chapter 35 Referenced Standards.**

NFPA 13, 2016 Edition, Standard for the Installation of Sprinkler Systems, is hereby amended as follows:

Section 6.7.3 is hereby revised to read as follows:

**6.7.3 Fire department connections (FDC) shall be of an approved type.** The location shall be approved and be no more than 150 feet from a public hydrant. The FDC may be located within 150 feet of a private fire hydrant when approved by the fire code official. The size of piping and the number of 2-1/2" inlets shall be approved by the fire code official. If acceptable to the water authority, it may be installed on the backflow assembly. Fire department inlet connections shall be painted OSHA safety red or as approved. When the fire sprinkler density design requires more than 500 gpm (including inside hose stream demand), or a standpipe system is included, four 2-1/2" inlets shall be provided.

Section 8.3.3.1 is hereby revised to read as follows:

**8.3.3.1 When fire sprinkler systems are installed in shell buildings of undetermined use (Spec Buildings) other than warehouses (S occupancies), fire sprinklers of the quick-response type shall be used.** Use is considered undetermined if a specific tenant/occupant is not identified at the time the fire sprinkler plan is submitted. Sprinklers in light hazard occupancies shall be one of the following:

1. Quick-response type as defined in 3.6.4.8
2. Residential sprinklers in accordance with the requirements of 8.4.5
3. Quick response CMSA sprinklers
4. ESFR sprinklers
5. Standard-response sprinklers used for modifications or additions to existing light hazard systems equipped with standard-response sprinklers
6. Standard-response sprinklers used where individual standard-response sprinklers are replaced in existing light hazard systems
Section 11.1.1.1 is hereby added as follows:

**11.1.1.1** When fire sprinkler systems are required in buildings of undetermined use other than warehouses, they shall be designed and installed to have a fire sprinkler density of not less than that required for an Ordinary Hazard Group 2 use, with no reduction(s) in density or design area. Warehouse fire sprinkler systems shall be designed to Figure 16.2.1.3.2 (d) curve “G”. Use is considered undetermined if a specific tenant/occupant is not identified at the time the sprinkler plan is submitted. Where a subsequent use or occupancy requires a system with greater capability, it shall be the responsibility of the occupant to upgrade the system to the required density for the new use or occupancy.

Section 11.2.3.1.1.1 is hereby added as follows:

**11.2.3.1.1.1** The available water supply for fire sprinkler system design shall be determined by one of the following methods, as approved by the fire code official:

1. Subtract the project site elevation from the low water level for the appropriate pressure zone and multiply the result by 0.433;

2. Use a maximum of 40 psi, if available;

3. Utilize the OCFA water-flow test form/directions to document a flow test conducted by the local water agency or an approved third party licensed in the State of California.

NFPA 13D, 2016 Edition, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes, is hereby amended as follows:

Section 7.1.2 is hereby revised to read as follows:

**7.1.2** The sprinkler system piping shall not have separate control valves installed unless supervised by a central station, proprietary, or remote station alarm service.

NFPA 14, 2013 Edition, Installation of Standpipe and Hose Systems, is hereby amended as follows:

Section 7.3.1.1 is hereby revised to read as follows:

**7.3.1.1** Class I and III Standpipe hose connections shall be unobstructed and shall be located not less than 18 inches or more than 24 inches above the finished floor. Class II Standpipe hose connections shall be unobstructed and shall be located not less than 3 feet or more than 5 feet above the finished floor.

NFPA 24, 2016 Edition, Standard for the Installation of Private Fire Service Mains and Their Appurtenances, is hereby amended as follows:

Section 6.2.8.1 is hereby added as follows:

**6.2.8.1** All indicating valves controlling fire suppression water supplies shall be painted OSHA red.

Exceptions:

1. Brass or bronze valves on sprinkler risers mounted to the exterior of the building may be left unpainted.

2. Where OS&Y valves on the detector check assembly are the only control valves, at least one OS&Y valve shall be painted red.

Section 6.2.9 is hereby revised to read as follows:

All connections to private fire service mains for fire protection systems shall be arranged in accordance with one of the following so that they can be isolated:

1. A post indicator valve installed not less than 40 ft (12 m) from the building

(a) For buildings less than 40 ft (12 m) in height, a post indicator valve shall be permitted to be installed closer than 40 ft (12 m) but at least as far from the building as the height of the wall facing the post indicator valve.

2. A wall post indicator valve

3. An indicating valve in a pit, installed in accordance with Section 6.4

4. A backflow preventer with at least one indicating valve not less than 40 ft (12 m) from the building
(a) For buildings less than 40 ft (12 m) in height, a backflow preventer with at least one indicating valve shall be permitted to be installed closer than 40 ft (12 m) but at least as far from the building as the height of the wall facing the backflow preventer.

(5) Control valves installed in a fire-rated room accessible from the exterior

(6) Control valves in a fire-rated stair enclosure accessible from the exterior

Section 10.1.5 is hereby added as follows:

10.1.5 All ferrous pipe and joints shall be polyethylene encased per AWWA C150, Method A, B, or C. All fittings shall be protected with a loose 8-mil polyethylene tube or sheet. The ends of the tube or sheet shall extend past the joint by a minimum of 12 inches and be sealed with 2 inch wide tape approved for underground use. Galvanizing does not meet the requirements of this section.

Exception: 304 or 316 Stainless Steel pipe and fittings.

Section 10.4.1.1 is hereby revised to read as follows:

10.4.1.1 All bolted joint accessories shall be cleaned and thoroughly coated with asphalt or other corrosion-retarding material after installation.

Exception: Bolted joint accessories made from 304 or 316 stainless steel.

Section 10.4.1.1.1 is hereby added as follows:

10.4.1.1.1 All bolts used in pipe-joint assembly shall be 316 stainless steel.

Section 10.4.3.2 is hereby revised to read as follows:

10.4.3.2 Where fire service mains enter the building adjacent to the foundation, the pipe may run under a building to a maximum of 24 inches, as measured from the interior face of the exterior wall to the center of the vertical pipe. The pipe under the building or building foundation shall be 304 or 316 stainless steel and shall not contain mechanical joints or it shall comply with 10.4.3.2.1 through 10.4.3.2.4.

(Ord. 2016-7 § 2 (part); Ord. 2013-3 § 2 (part); Ord. 2010-3 § 2 (part); Ord. 07-3 § 2 (part), 2007)