

Significant Code Changes in 2023

Below is a list of significant changes to the California Title 24 Building Codes. California’s new 2022 Building Standards Code, established by the California Building Standards Commission (CBSC), also known as Title 24, goes into effect on Jan. 1, 2023. All plans or permit applications submitted on this date or after must comply with the updated codes. Note that this list does not include every change. Please review all current code applicable to your proposed development.

How to read this document.

- Article that has been changed
 - Sub-section that has been changed
 - ❖ Description of changes.

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California Residential Code 2022 | Significant Changes

➤ CRC R301 Design Criteria

- CRC R301.1.4. Intermodal Shipping Containers
 - ❖ Provisions for construction with intermodal shipping containers are added to the California Residential Code (CRC). The CBC requires an engineered design for the use of the containers. This design assumes that the containers meet the requirements of ISO 1496-1 which details testing for the strength capacity of the containers.
- CRC R301.2.2.6(8) Irregular Buildings
 - ❖ Irregular building limitations now include hillside light-frame construction.
- CRC R301.3. Story Height
 - ❖ Maximum story height for wood wall framing is 13 feet 7 inches when the exception requirements are met.

➤ CRC R302 Fire Resistant Construction

- CRC R302.2 Townhouses
 - ❖ Common walls separating townhouses are permitted to terminate at the inside of exterior walls where the prescribed fireblocking is provided. For typical frame cavity walls, the language has been revised to require the common wall to extend to and be tight against the exterior sheathing of the exterior wall to block the passage of fire from one townhouse unit to the next. A new exception allows the fire-resistance-rated wall to terminate against the interior side of the exterior wall provided at least two 2-inch nominal thickness wood studs fill the cavity in the exterior wall.
- CRC R302.3 Two-Family Dwellings
 - ❖ The prescribed fire-resistance-rated separation between two dwelling units in a single building is not affected by the presence of a lot line between the units. Another exception to the 1-hour separation requirement for two-family dwellings has allowed the rating to be reduced to ½ hour if a full NFPA 13 sprinkler system was installed.
- CRC R302.4 Through Penetrations
 - ❖ A clarification that water-filled fire sprinkler piping of any approved material joins the list of metal penetrating items that do not require a firestop system provided the annular space is filled with the prescribed materials.
- CRC R302.5 Dwelling-Garage Opening Protection
 - ❖ A clarification that doors between the garage and residence must be self-latching in addition to self-closing.

➤ CRC R305 Ceiling Height

- CRC R305.1 Ceiling Height

- ❖ The minimum ceiling height is reduced to 6 feet 6 inches under beams spaced at least 36 inches apart.

➤ CRC R308 Glazing

- CRC R308.4.5 Glazing and Wet Surfaces

- ❖ A clarification about the language addressing glazing in walls, enclosures or fences near tubs, showers and swimming pools has replaced the word “facing” with the words “adjacent to” for those elements related to wet surfaces.

➤ CRC R310 Emergency Escape and Rescue Openings

- CRC R310.1 Emergency Escape and Rescue Openings Required

- ❖ While the requirements in CRC R310.1 and CBC 1030.1 were consistent, the exceptions to where operable emergency escape and rescue openings were not. The CRC has added exceptions to 310.1 from CBC 1030.1 such as basements with a ceiling height of less than 80 inches, basements or sleeping rooms with an exit door or exit door access, basements without habitable space and not more than 200 square feet, and also added storm shelters constructed in accordance with ICC 500. The CRC has been modified to include these exceptions. Further, additional language was added to Section R310.1.1 regarding the maximum height of 70 inches for opening control devices and that the device shall be maintained at all times.

- CRC R310.2 Emergency Escape and Rescue Openings

- ❖ Emergency escape openings under decks, porches and cantilevers require a path not less than 36 inches wide. Opening dimensions have been clarified.

➤ CRC R311 Means of Egress

- CRC R311.7 Stairways & 311.8 Ramps

- ❖ The provisions of Sections R311.7 and R311.8 apply only to stairways and ramps within or serving a building, porch or deck. Stairs leading to nonhabitable attics and crawl spaces do not need to comply with this section.

- CRC R311.7.7 Stairways & Landing Walking Surfaces

- ❖ A new exception stating “Where the surface of a landing is required elsewhere in the code to drain surface water, the walking surface of the landing shall be sloped not steeper than 1 unit vertical in 20 units horizontal (5-percent slope) in the direction of travel.”

➤ CRC R324 Solar Energy Systems

- CRC R324.3.1 Equipment Listings

- ❖ Photovoltaic panels and modules shall be listed and labeled in accordance with UL 1703 *or with both UL 61730-1 and UL 61730-2*. Inverters shall be listed and labeled in accordance with UL 1741. Systems connected to the utility grid shall use inverters listed for utility interaction. Mounting systems listed and labeled in accordance with UL 2703 shall be installed in accordance with the manufacturer's installation instructions and their listings.

- CRC R324.8 Elevated Photovoltaic (PV) Support Structures

- ❖ A new section was added to address elevated PV support structures. The primary purpose of this section is to establish appropriate fire testing and listing criteria for overhead photovoltaic (PV) support structures that could have people or vehicles in the space beneath them.

- CRC R327 Aging-in-Place Design and Fall Prevention

- CRC R327.1.1 Reinforcement of grab bars

- ❖ Aging-in-place design and fall prevention requirements for newly constructed dwellings have now been added to the code in Section R327. At least one bathroom on the entry level shall be provided with reinforcement installed in accordance with this section.

- CRC R327.1.2 Electrical receptacle outlet, switch and control heights

- ❖ Electrical receptacle outlets, switches and controls (including controls for heating, ventilation and air conditioning) intended to be used by occupants, shall be located no more than 48 inches (1219.2 mm) measured from the top of the outlet box and not less than 15 inches (381 mm) measured from the bottom of the outlet box above the finish floor. Exceptions apply.

- CRC R327.1.3 Interior Doors

- ❖ Effective July 1, 2024, at least one bathroom and one bedroom on the entry level shall provide a doorway with a net clear opening of not less than 32 inches (812.8 mm), measured with the door positioned at an angle of 90 degrees from the closed position; or, in the case of a two- or three-story single family dwelling, on the second or third floor of the dwelling if a bathroom or bedroom is not located on the entry level.

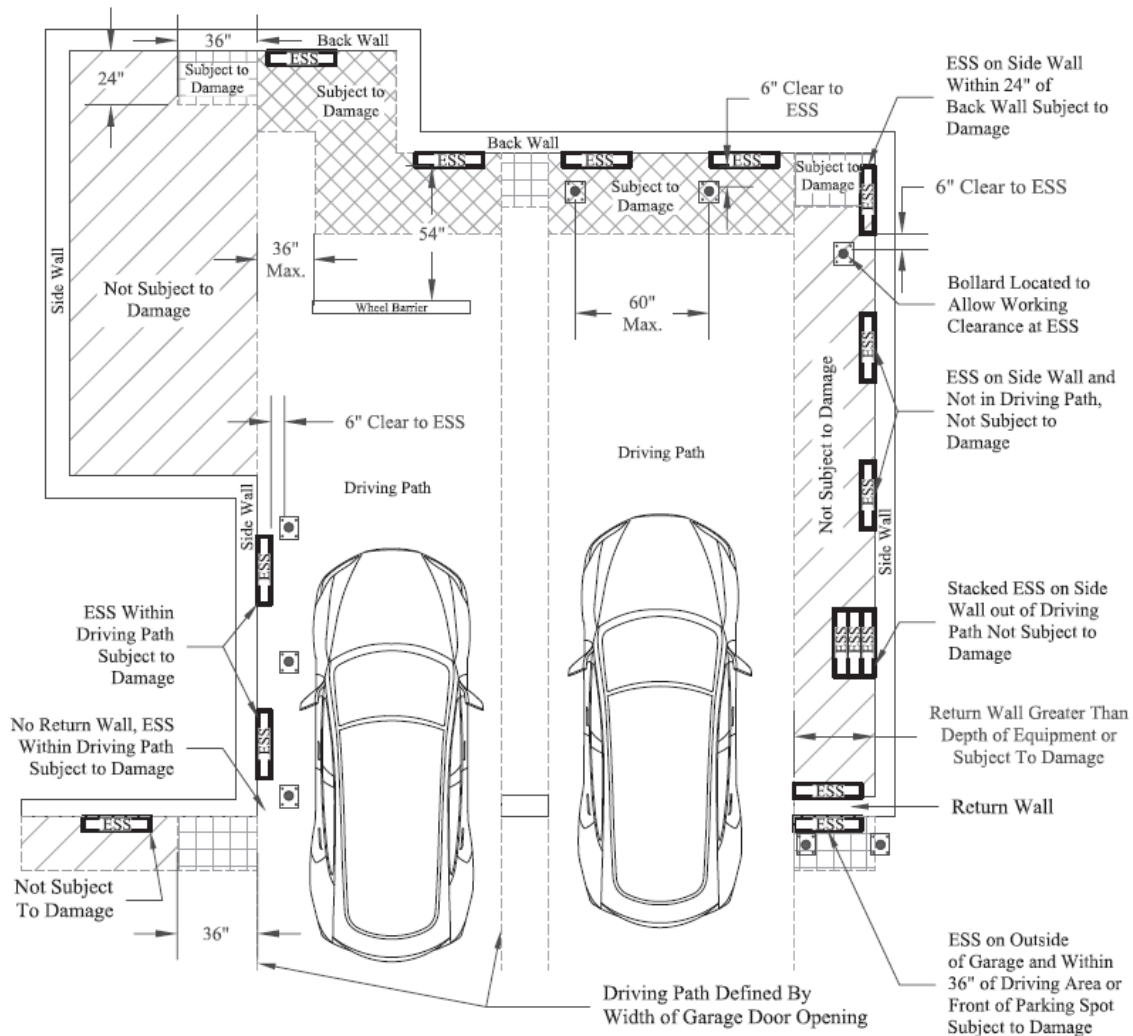
- CRC R327.1.4 Doorbell buttons

- ❖ Doorbell buttons or controls, when installed, shall not exceed 48 inches (1219.2 mm) above exterior floor or landing, measured from the top of the doorbell button assembly. Where doorbell buttons integrated with other features are required to be installed above 48 inches (1219.2 mm) measured from the exterior floor or landing, a standard doorbell button or control shall also be provided at a height not exceeding 48 inches (1219.2 mm) above exterior floor or landing, measured from the top of the doorbell button or control.

- CRC R328 Energy Storage Systems

- CRC R328.8.1 Garages

- ❖ Existing code sections for protection from impact have been amended and new code sections have been added to the CRC to provide specific requirements for vehicle impact protection for Energy Storage Systems (ESS) and protection options within a garage. See figure on next page.



➤ CRC R337 Materials and Construction Methods for Exterior Wildfire Exposure

▪ CRC R337.2 Fire-Resistant Vegetation

- ❖ A definition of fire-resistant vegetation has been added that provides clarification of a term that was previously referenced but not defined. The definition of Fire-Resistant Vegetation is “Plants, shrubs, trees and other vegetation which exhibit properties, such as high moisture content, little accumulation of dead vegetation, and low sap or resin content, that make them less likely to ignite or contribute heat or spread flame in a fire than native vegetation typically found in the region.”

▪ CRC R327.10.4 Fire Ratings of Accessory Buildings’ Roofs

- ❖ Section R337.10.4 was added to clarify that roofs of accessory buildings that are required to be built from noncombustible materials shall comply with Section R337 and Chapter 9, and the roof must meet a Class A fire rating.

➤ CRC R506 Concrete Floors (On Ground)

▪ CRC R506.2.3 Vapor Retarders Under Concrete Slabs

- ❖ Thicker vapor retarders are now required below slabs-on-grade. A minimum 10-mil vapor retarder conforming to ASTM E1745 Class A requirements with joints lapped not less than 6 inches (152 mm)

shall be placed between the concrete floor slab and the base course or the prepared subgrade where a base course does not exist.

➤ CRC R507 Exterior Decks

▪ CRC R507.10 Exterior Guards

- ❖ Specific requirements for deck guards have been added. Exterior deck guards must continue to meet Section R312 requirements, and the loads listed in Table R301.5. The new provisions reinforce the need for a load path from the guard and rail into the deck joists, beams or blocking to which a guard is connected.

➤ CRC R602 Wood Wall Framing

▪ CRC Table R602.3(1) Fastening Schedule

- ❖ The roof section of this fastening schedule has been modified to require 6” nailing at intermediate supports (field nailing) when using 3/8” – 1/2” wood structural panels. When using 19/32” minimum wood structural panels or greater 12” field nailing is still allowed.
- ❖ The wall section of this fastening schedule added fastening options for adjacent full-height stud to end of header.
- ❖ Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing has been modified to require 6” nailing at intermediate supports (field nailing) when using 3/8” – 1/2” wood structural panels. When using 19/32” minimum wood structural panels or greater 12” field nailing is still allowed depending on the fasteners used.

▪ CRC R602.10.1.2 Location of Braced Wall Lines

- ❖ This modification limits the placement of a braced wall line. At least one-third of all braced wall panels shall be either on a braced wall line or on the opposite side of the braced wall line from the other braced wall panels. Braced wall panels continue to be required to be within 4 feet of the braced wall line. For the case where a single wall forms the entire braced wall line, all braced wall panels must be on the braced wall line. In other words, the braced wall line must be drawn at the physical wall.

➤ CRC R806 Roof Ventilation

▪ CRC R806.1.1 Vents in the Wildland-Urban Interface (WUI)

- ❖ Section R806.1.1 has been added to ensure that vents in the Wildland-Urban Area adequately protect enclosed attics, soffits, rafter spaces and other spaces from the intrusion of burning embers and flame.

California Building Code 2022 | Significant Changes

➤ CBC 602 Construction Classification

▪ CBC 602.4 Type IV

- ❖ New construction types (Types IV-A, IV-B and IV-C) are defined based upon the varying percentages of mass timber surfaces that are permitted to be unprotected. The three established levels of protection include complete noncombustible protection of the mass timber members (Type IV-A), partial protection of such members (Type IV-B), and no required noncombustible protection of the mass timber (Type IV-C).
- CBC 707 Fire Barriers
 - CBC 707.5 Enclosure of Exit Passageways
 - ❖ Fire barriers creating an exit passageway may now terminate at a fire-resistance-rated top (lid) instead of continuing to the underside of the roof slab above.
- CBC 708 Fire Partitions
 - CBC 708.1 Supporting Construction for Fire Partitions
 - ❖ A more complete list of wall assemblies required to be constructed as fire partitions has been provided, and additional locations have been identified where fire partitions are permitted to be supported by non-rated construction.
- CBC 716 Opening Protectives
 - CBC 716.4 Fire-Protective Curtain Assemblies
 - ❖ Labeling and performance requirements for fabric fire-protective curtain assemblies have been established.
- CBC 722 Calculated Fire Resistance
 - CBC 722 Fire-Resistance Rating for Mass Timber
 - ❖ A prescriptive approach has been provided to achieve the required fire-resistance ratings for new mass timber construction type members and assemblies.
- CBC 907 Fire Alarm and Detection Systems
 - CBC 907.2.11.8 Specific Location Requirements
 - ❖ Section 907.2.11 requires that single- or multiple- station smoke alarms shall be installed and maintained in Groups R-2, R-2.1, R-2.2, R-3, R-3.1 and R-4 regardless of occupant load at the specific locations contained within Section 907.2.11.8. The language contained within the section is an extract from NFPA 72 that was amended by the State Fire Marshal. The language was amended to include additional language and options for smoke alarm and smoke detector locations near fixed cooking appliances based upon the type of alarm and its listing.
- CBC 1008 Means of Egress Illumination
 - CBC 1008.2.1 Stairway Illumination
 - ❖ The minimum illumination level for both exit and exit access stairways has been increased from 1 foot-candle to 10 foot-candles.
- CBC 1010 Doors, Gates, and Turnstiles

- CBC 1010.1.1 Size of Doors
 - ❖ The maximum width for a swinging door is no longer regulated and a consolidated exception now allows for reduced door sizes where serving single-user showers, saunas and toilet compartments, as well as dressing, fitting and changing rooms.
- CBC 1010.1.3 Forces to Unlatch and Open Doors
 - ❖ The requirements for releasing the latching hardware and the force to open the door have been divided into separate subsections to provide coordination with the 2017 edition of the ICC A117.1. As divided, one provision now addresses the operating force to release the door latching hardware and the second addresses the force needed to move the door leaf to an open position.
- CBC 1202 Ventilation
 - CBC 1202.3 Insulation of Unvented Attics
 - ❖ A new option is available for the regulation of unvented attics with air-permeable insulation and vapor diffusion ports in warmer climates. Blown cellulose, fiberglass batts and blown fiberglass have been added as options for insulating unvented attic assemblies. This new assembly is limited to warmer areas, specifically Climate Zones 1, 2 and 3, and requires a vapor diffusion port. Humboldt County is primarily Climate Zone 1.
- CBC 1208 Interior Space Dimensions
 - CBC 1208.4 Efficiency Dwelling Units
 - ❖ The minimum required floor area of an efficiency dwelling unit has been reduced to 190 square feet, and a definition of an efficiency dwelling unit has been added. An “efficiency dwelling unit” is a dwelling unit where all permanent provisions for living, sleeping, eating and cooking are contained in a single room.
- CBC 1606 Dead Loads
 - CBC 1606.3 Weight of Fixed Service Equipment
 - ❖ Dead loads at the roof level have been clarified as well as fixed service equipment concentrated loads. In determining dead loads for purposes of design, the weight of fixed service equipment, including the maximum weight of the contents of fixed service equipment, shall be included.
- CBC 1612 Flood Loads
 - CBC 1612 Flood Hazard Documentation
 - ❖ The design of hydrostatic loads on breakaway walls is required when the walls do not meet the requirements of ASCE 24. For dry floodproofed nonresidential buildings, construction documents shall include a statement that the dry floodproofing is designed in accordance with ASCE 24 and shall include the flood emergency plan specified in Chapter 6 of ASCE 24.
- CBC 2303.4 Trusses
 - CBC 2303.4.1.1 Permanent Individual Truss Member Restraint (PITMR) and Permanent Individual Truss Member Diagonal Bracing (PITMDB)
 - ❖ Specific requirements have been added to address wood truss member diagonal bracing and restraint.

California Electric Code 2022 | Significant Changes

➤ CEC 225 Outside Branch Circuit and Feeders

▪ CEC 225.30(B) Common Supply Requirements

- ❖ Where feeder conductors originate in the same panelboard, switchboard, or other distribution equipment, and each feeder terminates in a single disconnecting means, *not more than six feeders shall be permitted*. Where more than one feeder is installed in accordance with this section, all feeder disconnects supplying the building or structure shall be grouped in the same location, and the requirements of 225.33 shall not apply. Each disconnect shall be marked to indicate the load served.

➤ CEC 230 Services (service panel replacements shall comply with Article 230)

▪ CEC 230.62(C) Barriers

- ❖ Barriers shall be placed in service equipment such that no uninsulated, ungrounded service busbar or service terminal is exposed to inadvertent contact by persons or maintenance equipment while servicing load terminations.

▪ CEC 230.67(A) Surge-Protective Device

- ❖ All services supplying dwelling units shall be provided with a *surge-protective device (SPD)*.

▪ CEC 230.85 Emergency Disconnects

- ❖ For one- and two-family dwelling units, all service conductors shall terminate in disconnecting means having a short-circuit current rating equal to or greater than the available fault current, installed in a *readily accessible outdoor location*. If more than one disconnects is provided, they shall be grouped. This section continues to describe new labeling requirements.

➤ CEC 408 Switchboards, Switchgear, and Panelboards

▪ CEC 408.6 Short Circuit Current Rating

- ❖ Switchboards, switchgear, and panelboards shall have a short-circuit current rating not less than the available fault current. Contact utility provider for available fault current. In other than one- and two-family dwelling units, the available fault current and the date the calculation was performed shall be field marked on the enclosure at the point of supply.

➤ CEC 690 Solar Photovoltaic (PV) Systems

▪ CEC 690.13(A) Location

- ❖ Where PV disconnecting means (above 30 volts) are readily accessible to unqualified persons, any enclosure door or hinged cover that exposes live parts when open is *now required to be locked* or require a tool to open.

▪ CEC 690.56(C) Buildings with Rapid Shutdown

- ❖ Buildings with PV systems shall have a permanent label *located at each service equipment location* to which the PV systems are connected *or at an approved readily visible location* and shall indicate the location of rapid shutdown initiation devices.

➤ CEC 706 Energy Storage Systems (ESS)

▪ CEC 706.1 Scope

- ❖ This article applies to all energy storage systems (ESS) having a capacity greater than 3.6 MJ (1 kWh) that may be stand-alone or interactive with other electric power production sources.

- CEC 706.4 System Requirements
 - ❖ Each ESS shall be provided with a nameplate plainly visible after installation and marked with the following; manufacturer's name, trademark, or other descriptive marking by which the organization responsible for supplying the ESS can be identified, rated frequency, number of phases if AC, rating (kW or KVA), available fault current derived by the ESS at the output terminals, maximum output and input current of the ESS at the output terminals, maximum output and input voltage of the ESS at the output terminals, and utility-interactive capability
- CEC 706.15(A) ESS Disconnecting Means
 - ❖ For one-family and two-family dwellings, a disconnecting means, or its remote control (for ESS's) shall be located at a readily accessible location outside the building.

California Energy Code 2022 | Significant Changes

➤ CEC 100 All Occupancies – General Provisions

- CEC 100.0 Scope
 - ❖ Multifamily building standards are moved from the subchapters on low-rise residential buildings to new subchapters devoted to multifamily buildings. The group of buildings that was previously called low-rise residential is now called single-family and includes duplexes, townhomes, and accessory dwelling units (ADUs), in addition to single-family homes.
- CEC 100.1 Definitions and Rules of Construction
 - ❖ *Residential Building* - Any of the following: a residential building of Occupancy Group R-3 with two or less dwelling units, a building of Occupancy Group R-3, other than a multifamily building or hotel/motel building, a townhouse, a building of Occupancy Group R-3.1, or a building of Occupancy Group U when located on a residential site.
 - ❖ *Dwelling Unit, Junior Accessory (JADU)* - is a dwelling unit that is no more than 500 square feet in size and contained entirely within an existing single-family building. A JADU includes a kitchen, a separate entrance from the main entrance to the building, and an interior entry to the main living area. A JADU may include separate sanitation facilities or may share sanitation facilities with the existing single-family building.

➤ CEC 150.0 Single-Family Residential – Mandatory Features

- CEC 150.0(k)1A Residential Lighting – Luminaire Requirements
 - ❖ Certain luminaires, such as LED's, are considered “high luminous efficacy” and do not need JA8 certification.
- CEC 150.0(n) Water Heating System
 - ❖ New requirements are added when gas water heaters are installed to support future heat pump water heater installation.
- CEC 150.0(s) Energy Storage System Ready
 - ❖ Energy Storage Systems (ESS) Ready: In all single-family residences that include one or two dwelling units, all electrical components must be installed in accordance with the California Electrical Code and must meet the following requirements:
 - i. At least one of the following must be provided:

1. ESS-ready interconnection equipment with a minimum backed up capacity of 60 amps and a minimum of four ESS-supplied branch circuits OR
 2. A dedicated raceway from the main service to a panelboard (subpanel) that supplies the branch circuits in §150.0(s) All branch circuits are permitted to be supplied by the main service panel prior to the installation of an ESS. The trade size of the raceway must be not less than one inch. The panelboard that supplies the branch circuits (subpanel) must be labeled “Subpanel shall include all backed-up load circuits.” AND
- ii. A minimum of four branch circuits must be identified and have their source of supply collocated at a single panelboard suitable to be supplied by the ESS. At least one circuit must supply the refrigerator, one must supply the lighting circuit near the primary egress, and at least one circuit must supply a sleeping room receptacle outlet; AND
 - iii. The main panelboard must have a minimum busbar rating of 225 amp; AND
 - iv. Sufficient space must be reserved to allow future installation of a system isolation equipment or transfer switch within 3 ft of the main panelboard. Raceways must be installed between the panelboard and the system isolation equipment or transfer switch location to allow the connection of backup power source.
- CEC 150.0(t) Heat Pump Space Heater Ready
 - ❖ If a natural or propane gas furnace is installed
 - i. A dedicated, 240-volt branch circuit rated at 30 amps minimum must be installed within 3 ft of the installed furnace, accessible to the furnace with no obstructions and labeled “240V ready” AND
 - ii. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker that is permanently labeled “For Future 240V use.”
 - CEC 150.0(u) Electric Cooktop Ready
 - ❖ Systems using a gas or propane cooktop to serve individual dwelling units must include the following:
 - i. Dedicated, 240-volt branch circuit wiring must be installed within 3 ft from the cooktop and accessible to the cooktop with no obstructions. The branch circuit conductors must be rated at 50 amps minimum. The blank cover must be labeled “240V ready.” All electrical components must be installed in accordance with the California Electrical Code; AND
 - ii. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future electric cooktop installation. The reserved space must be permanently labeled “For Future 240V use.”
 - CEC 150.0(v) Electric Clothes Dryer Ready
 - ❖ Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include the following:
 - i. Dedicated, 240-volt branch circuit wiring must be installed within 3 ft from the clothes dryer location and accessible to the clothes dryer location with no obstructions. The branch circuit conductors must be rated at 30 amps minimum. The blank cover must be labeled “240V ready.” All electrical components must be installed in accordance with the California Electrical Code; AND
 - ii. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future electric clothes dryer installation. The reserved space must be permanently labeled “For Future 240V use.”

➤ CEC 150.2 Single-Family Residential – Additions and Alterations

- CEC 150.2(b)1D Altered Duct Systems: Duct Sealing
 - ❖ New ceiling insulation requirements (§150.2(b)1J) apply when altering ducts if air handler or ducts are in a vented attic.
- CEC 150.2(b)1J Vented Attics
 - ❖ Recessed can lights must be covered with same depth of insulation as the rest of the ceiling. If they are not insulation contact (IC) rated, they must be replaced with IC-rated cans or retrofitted with fire-proof covers allowing for insulation coverage. The exception to this requirement are dwelling units with at least R-19 existing insulation installed at the ceiling level with third-party verification of existing conditions.

California Plumbing Code 2022 | Significant Changes

➤ CPC 408.0 Showers

- CPC 408.3 Individual Shower and Tub-Shower Combination Control Valves
 - ❖ Provides additional methods of achieving compliance with the temperature limiting requirement (120 degrees Fahrenheit max).

➤ CPC 508.0 Appliances on Roofs

- CPC 508.2.1.1 Guards and Rails
 - ❖ In specific circumstances guards or rails are required for appliances installed on roofs.

➤ CPC 509.0 Venting of Appliances

- CPC 509.4.2 Plastic Piping
 - ❖ The plastic pipe venting materials shall be labeled in accordance with the product standards specified by the appliance manufacturer *or shall be listed and labeled in accordance with UL 1738.* [NFPA 54:12.5.2]

➤ CPC 603.0 Cross-Connection Control

- CPC 603.2 Approval of Devices or Assemblies
 - ❖ Added approved backflow prevention devices for potable water connections to boilers and laboratory faucets.

➤ CPC 606.0 Valves

- CPC 606.9 Check Valve Required
 - ❖ A new section that states all systems that circulate water by means of a pump or other mechanical device or method shall have a check valve(s) or equal device(s) installed so as to ensure the direction of flow.

- CPC 606.10 Leak Detection Devices

- ❖ A new section that states where leak detection devices for water supply and distribution are installed, they shall comply with IAPMO IGC 115 or IAPMO IGC 349.

- CPC 608.0 Pressure Relief Valves

- CPC 608.5 Discharge Piping

- ❖ The discharge termination point for pressure relief valves shall be readily observable.

- CPC 707.0 Cleanouts

- CPC Table 707.2 Cleanout Materials for Drain, Waste, and Vent

- ❖ A table was added which describes approved cleanout materials and standards.

- CPC 911.0 Circuit Venting

- CPC 911.1 Circuit Venting Required

- ❖ Types of fixtures allowed for circuit venting are specified. These are floor-outlet water closets, showers, bathtubs, and floor drains. Additional changes were made to this section.

- CPC 1208 Gas Piping System Design, Materials, and Components

- CPC 1208.6.10 Metallic Piping Joints and Fittings

- ❖ Requirements specific to copper and stainless-steel tubing were added. Procedures for field drilled/tapped pipe fittings were added.

- CPC 1208.10 Overpressure Protection Devices

- ❖ Approved overpressure protection devices and their installation methods are now specified.

- CPC 1215.2 Sizing of Gas Piping Systems

- ❖ Calculations and tables specific to sizing natural gas and propane gas piping were added.

California Mechanical Code 2022 | Significant Changes

- CMC 303.8 Appliances on Roofs

- CMC 303.8.4.1 Guards and Rails

- ❖ In specific circumstances guards or rails are required for appliances installed on roofs.

- CMC 405.0 Indoor Air Quality for Residential Occupancies

- CMC 405.1 General
 - ❖ Rooms or occupied spaces within residential occupancies, where the occupants are non-transient, shall be designed to have mechanical ventilation and exhaust air in accordance with Section 405.2 through Section 405.5. A mechanical exhaust directly to the outdoors shall be provided in each room containing a bathtub, shower, or tub/shower combination. A mechanical exhaust directly to the outdoors shall be provided in each kitchen.

- CMC 502.0 Exhaust Systems Terminations
 - CMC 502.2.1 Environmental Air Ducts
 - ❖ Environmental air ducts shall not terminate less than 10ft from a public walkway.

- CMC 603.0 Installation of Ducts
 - CMC 603.1 General
 - ❖ Additional duct installation requirements were added. Air ducts, other than plastic ducts, shall be installed with not less than 4 inches (102 mm) of separation from earth. Ducts listed and labeled to UL 181 shall not penetrate a fire-resistance-rated assembly or construction.

- CMC 802.0 Venting of Appliances
 - CMC Table 802.8.2 Direct Vent Appliance
 - ❖ A table was added showing termination clearances for through the wall direct vents. The values did not change.

- CMC 1201.0 General Hydronics
 - CMC Table 1203.2
 - ❖ The table was altered to specify that the standard CSA Z21.10.1 only applies to storage water tanks under 75K Btu/h or less and not to instantaneous water heaters.

- CMC 1205.0 Hydronics - Installation, Testing, and Inspection
 - CMC 1205.2 Pressure Testing
 - ❖ An exception was added to allow copper tubing to be air tested at not less than 80 psi.

- CMC 1217.0 Radiant Heating and Cooling
 - CMC 1217.5.3 Types of Tube Fasteners
 - ❖ Materials and methods were added for fastening tubes within slabs meant for radiant floor heating.

- CMC 1308.0 Gas Piping System Design, Materials, and Components
 - CMC 1308.5.3.1 Stainless Steel Tubing

- ❖ Stainless steel is now an acceptable material to be used for gas piping and must comply with ASTM A268 and ASTM A269.

- CMC 1308.5.7.3 Stainless Steel Tubing Joints

- ❖ Methods of joining stainless steel tubing were added

- CMC 1308.5.7.5(9) Metallic Pipe Fittings

- ❖ Operations were added for pipe fittings that are drilled and tapped in the field.

- CMC 1308.10 Overpressure Protection Devices

- ❖ Allowed overpressure protection devices and their installation are defined.

- CMC 1311.0 Electrical Bonding and Grounding

- CMC 1311.3 Arc-Resistant Jacketed CSST

- ❖ Arc-Resistant CSST shall be electrically continuous and bonded to an effective ground fault current path.