California Building Code

Building projections: Increase in minimum projection setback to property line if within 30ft (705.2). Projections allowed to not be fire rated if over 5ft to the property lines (705.2.3)

Mercantile occupancies: Occupant load factor changed to 60 (1'3' code was 30) (T-1004.1.2)

Hotels/motels: Added fall protection requirements for window openings 72” above grade (1015.8)

Electric vehicle charging spaces: Added requirements for EV charging spaces for a percentage to be accessible (signage, size, operation, etc) (11B-228.3.2)

Handrails: Added requirement for a minimum of 1 handrail to be in direction of stair run and not reduce the required stair width (11B-505.2.1)

Toilet compartments: Doors swinging into accessible toilet compartments can encroach into turning spaces (11B-603.2.3)

Safety glazing: Safety glazing required within 60” of stairway bottom treads that is less than 60” in height and within 180 degrees of the tread (2406.4.7)

California Residential Code

Room sizes: Removed requirement for 1 room having a room size of 120sqft (all rooms now 70sqft minimum) (R304.1)

Ceiling heights: Bathroom, laundry and toilet room ceiling heights allowed to be 6’8” minimum (R305.1)

Safety glazing: Glazing within 60” horizontally and vertically of showers, saunas and steam rooms shall have safety glazing (R308.4.5)

Ramps: Allows residential ramps to have a slope of 12.5% maximum if not serving a egress door (R311.8.1)

Footings: Completely changed required footings size table for buildings depending on construction type and snow load (T-R403.1(1))

Anchor bolts: Anchor bolts shall be in the middle 1/3 of the sill plate (R403.1.6)

Deck ledger: Minimum deck ledger size is 2x8 and shall not support beams/girders (R507.2)

Deck lateral ties: Four (4) 750lb rated lateral ties allowed and installed within 24” of each end of a deck (alt. To (2) 1,500lb devices) (R507.2.4)

Deck structural: New tables added for deck joist, girder and post sizes (R507.5.7)

Wall framing: Added table for number of king studs required per opening size (T-R602.7.5)

Straw bale construction: Added Appendix chapter S for design of straw bale construction

New California Codes

The Triennial 2016 California Code of Regulations, Title 24 (California Building Standards Code), published July, 2016, will become effective statewide for all occupancies that apply for permit on or after January 1, 2017.
California Electrical

GFCI: GFCI receptacles required within 6ft of showers/tubs and laundry areas (210.8(A)(9)(10))

Dishwashers: Dwelling unit kitchen dishwasher branch circuits shall be GFCI protected (210.8(D))

AFCI: Arc-fault protection required for 15/20 amp branch circuits in kitchens and laundry areas (210.12(A))

Garage receptacles: Interior garage receptacles shall not serve outlets outside the garage. A minimum of 1 receptacle shall be provided for each car space (210.52(G)(1))

Service equipment: A 15/20 ampere receptacle shall be installed within 50ft of electrical service equipment (210.64)

Feeders: Feeder 83% sizing reduction allowed for 100-400 amp single phases dwelling feeders (310.15(B)(7))

Controlled Receptacles: Automatically controlled receptacles shall be marked (406.3(E))

Hotels/motels: Hotel and motel guest room receptacle outlets are required to be tamper resistant (406.12(B))

Dimmers: Dimmer controlled receptacles shall be listed for the use (406.15)

Equipment: Public tire inflation/vacuum equipment branch circuits shall be GFCI protected. (422.23)

Qualified personnel: Persons installing Photovoltaic equipment, wiring and interconnections to be “Qualified Personnel” as defined by the Electrical Code (690.4(C))

Rapid shutdown: Solar PV rapid shutdown device required for DC circuits of more 5ft inside buildings or 10ft from array (690.12)

Solar disconnects: Utility interactive inverters mounted on roofs or non-readily accessible areas shall have ac and dc disconnects within sight of inverter and have signage installed per 705.10 (690.15(A))

Solar combiners: Roof mounted DC system manually operated load break disconnect required within 6ft of combiner (690.15(C))

Batteries: Disconnects required at energy storage devices where more than 5ft from connecting equipment or where circuit pass through a wall/partition and properly labelled (690.71(H))

Solar sizing: Several options given for sizing supply side solar PV connections at panel locations. Added requirements for feeder, tap and busbar connections clarifying the use of center fed busbar type panels (705.12(D)(2))

Solar AFCI: AFCI protection required for 240V, 30amp or less utility active inverter circuits not installed in conduit (most micro inverters and AC modules)(705.12(D)(6))

Supply side connections: Solar PV supply side connections (utility side) require overcurrent protection within 10ft from the service conductor connection (705.31)

California Mechanical Code

Ladders: Permanent ladder rungs shall be spaced a maximum of 12” and shall support 300lbs (304.3.1.2)

Exhaust Fans: Exhaust openings terminating outdoors shall be covered with a 1/4”-1/2” corrosion resistant mesh (except cloths dryers) (502.1)

Hoods: Hood supports shall be noncombustible and capable of supporting the hood plus an additional 800lbs (508.5)

California Plumbing Code

ABS/PVC: ABS & PVC piping shall not be exposed to direct sunlight unless protected by water based synthetic latex paint or .04” thick wrap. (312.13-14)

HDPE pipe: New requirements for underground thermoplastic (HDPE, etc) sewer pipe trench size, clearance, fill, compaction, etc (314.4.1)

Showers: The adjacent space next to showers without thresholds shall be considered a wet location per the Residential and Building Codes (408.5)

Drinking fountains: Bottle filling stations are allowed for 50% of required drinking fountains (415.2)

Water heaters: Water heater catch pans shall be 1.5” in depth (507.5)

Water manifolds: Parallel water manifolds in not readily accessible locations shall have shutoff valves ahead of each plumbing fixture (606.5)

Potable water tanks: Tanks shall be vented & covered with #24 mesh, 16sq inch overflow covered with #24 mesh, a PTR valve if pressurized and shall have a vacuum relief valve if located above plumbing fixtures served (607.0)

Water lines: Hot water lines shall be insulated. Insulation thickness is the size of the pipe diameter (609.11)

Cleanouts: Underfloor cleanouts shall be installed within 5ft (old code was 20ft) from an underfloor access or access opening (707.9)

Circuit venting: Added requirements for “circuit venting” (vent that serves multiple fixtures on a horizontal branch) (911.0)

CSST pipe: CSST pipe with pressures over 14 inches of water column shall be tested at 30psi for 30 minutes (1213.3)
California Green Building Standards Code

Urinals: Wall mount urinals shall have a max flush volume of .125gpf (4.303.1.2)

Sinks: Residential lavatory faucets reduced to max 1.2gpm at 60psi (4.303.1.4.1)

Water use: State Model Water Efficient Landscape Ordinance (MWEO) regulates outdoor landscaping irrigation, type of plants, controllers, etc for landscapes over 500sqft in size (4.304)

Construction recycling: 65% of construction debris shall be recycled/diverted for new construction, additions and alterations (4.408.1)

California Energy Code (Residential)

Roof/ceiling insulation: Mandatory measure for minimum R-22 roof/ceiling insulation (150.0 (a)1)

Duct testing: Allowed duct leakage reduced to 5% maximum (150.0(m)11)

W/H isolation valves: Isolation valves shall be installed on both hot and cold water lines for instantaneous water heater 6.8kBtu/hr and above. (110.3(c)7)

Lighting: ALL luminaires installed must qualify as high efficacy (150.0(k)1A)

Screw based luminaire: Recessed downlight luminaires with screw based sockets are no longer permitted to be installed (150.0(k)1G)

Vacancy sensors: Vacancy sensors shall be installed to control at least 1 light fixture in bathrooms, garages, utility rooms and laundry rooms (150.0(k)2J)

JA8 lights: Allows certified lamps (bulbs) to be considered high efficacy if meeting applicable testing/listing criteria. All JA8 lights shall be controlled by a vacancy sensor or dimmer (Joint Appendix 8, 150.0(k)2K)

Duct Insulation: Mandatory duct insulation in conditioned space is R-4.2 and now insulation values depend on duct locations (150.0(m)1)

Electric vehicles: The number of electric vehicle charging spaces was increased in the 2016 code (infrastructure only) for commercial occupancies (Table 5.106.3.3)

Universal waste: Added requirements for “Universal Waste” (fluorescent lamps, ballasts, batteries, etc) for commercial additions and alterations requiring a material list on the construction documents (5.408.2)

Fixture schedule: Contractors shall provide homeowners with a luminaire schedule giving lamps used in lights installed (10-103(b))

Blank boxes: The maximum number of blank electrical boxes installed above 5ft is limited to 1 per bedroom and shall be controlled by a vacancy sensor or dimmer (150.0(k)1B)

Exterior lights: Exterior lights shall be high efficacy, manually controlled and controlled by a photo control with motion sensor, photo control with automatic time switch control or astronomical time clock (150.0 (k)1A, 3A)

Additions: Additions less than 700sqft shall have roof/ceiling insulation with a minimum of R-22 unless existing construction only allows R-19. Additions over 700sqft shall comply with prescriptive or performance measures (150.0(a))
The California Building, Residential, Electrical, Mechanical, Plumbing, Green Building Standards & Energy Codes are updated on a three year cycle. The codes are updated to implement new standards in result of new technology, improved safety and improved construction practices. The 2016 Standards will become effective on January 1, 2017.

The codes are viewable online at:

http://codes.iccsafe.org/California.html#2016

Who Needs Building Codes?

We all do—whether in our homes, offices, schools, stores, factories, or places of entertainment. We rely on the safety of structures that surround us in our everyday living. The public need for protection from disaster due to fire, structural collapse, and general deterioration underscores the need for modern codes and their administration. Resilient construction has the potential to substantially reduce property damage and loss of life resulting from all forms of natural disasters.

HOW RELIABLE ARE THEY? Most aspects of building construction—electrical wiring, heating, sanitary facilities—represent a potential hazard to building occupants and users. Building codes provide safeguards. Although no code can eliminate all risks, reducing risks to an acceptable level helps.

WHAT IS A BUILDING CODE? Practically, it is the government’s official statement on building safety. Technically, it is a compendium of minimum safety standards arranged in a systematic manner (codified) for easy reference. It embraces all aspects of building construction—fire, structural, plumbing, electrical, and mechanical.

WHAT IF I WANT TO DO A BUILDING PROJECT MYSELF? Building departments have pamphlets and brochures explaining, in detail, how to obtain permits and design and construct a safe building.

WHY SHOULD CODES APPLY TO MY OWN HOUSE? For several reasons: • For your personal safety, and that of your family, and the guests invited into your home. • To ensure the economic well-being of the community by reducing potential spread of fire and disease. • For the conservation of energy. • To protect future home purchasers who deserve reasonable assurance that the home they buy will be safe.