



Community Development Department – Building Division
**2022 CALGREEN MANDATORY MEASURES
 CHECKLIST
 (RESIDENTIAL)**

This checklist applies to newly constructed buildings, and additions or alterations of existing residential buildings where the addition or alteration increases the building’s conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration. (301.1.1)

Parenthetical references are to the noted section of the 2022 California Green Building Code, unless stated otherwise.

Feature or Measure	Required
RESIDENTIAL MANDATORY MEASURES	
Site Development (4.106)	
Projects shall comply with Benicia Municipal Code Chapter 15.73 for erosion and sediment controls.	
Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings.	
Electric vehicle (EV) charging for new construction. New construction shall comply with sec. 4.106.4.1 or 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with <i>California Electrical Code (CEC)</i> , Article 625.	
New one- and two-family dwellings and Townhouses with private garages. Each dwelling unit shall be installed with listed raceways capable of supporting EVSE.	
New multifamily dwellings, hotels, and motels. EV Capable. 10% of the total parking spaces on a building site shall be EV spaces capable of supporting future Level II EVSE.	
EV Ready. 25% of the total parking spaces shall be equipped with low power Level 2 EV charging receptacles.	
20 or more units. 5% of the total parking spaces shall be equipped with Level 2 EVSE.	
ENERGY EFFICIENCY (4.201)	
For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.	
WATER EFFICIENCY AND CONSERVATION	
Indoor Water Use (4.303)	
All noncompliant plumbing fixtures in any single-family and multi-family residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to final inspection. (See also California Civil Code sec. 1101.4 and 1101.5)	
Water closets. The effective flush volume of all water closets shall not exceed 1.28 gpf. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets. Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.	
Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gpf, and other urinals shall not exceed 0.5 gpf.	

Single showerheads. Showerheads shall have a max. flow rate of not more than 1.8 gpm at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.	
Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gpm at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.	
Residential lavatory faucets. The max. flow rate of residential lavatory faucets shall not exceed 1.2 gpm at 60 psi. The min. flow rate of residential lavatory faucets shall not be less than 0.8 gpm at 20 psi.	
Lavatory faucets in common and public use areas. The max. flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gpm at 60 psi.	
Metering faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle.	
Kitchen faucets. The max. flow rate of kitchen faucets shall not exceed 1.8 gpm at 60 psi.	
Outdoor Water Use (4.304)	
Outdoor potable water use in landscape areas. Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.	
Water Reuse Systems (4.305)	
(RESERVED)	
MATERIAL CONSERVATION AND RESOURCE EFFICIENCY	
Enhanced Durability and reduced Maintenance (4.406)	
Rodent proofing. Annular spaces around pipes, electric cables, conduits, or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry, or similar method acceptable to the enforcing agency.	
Construction Waste Reduction, Disposal and Recycling (4.408)	
Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with either sec. 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance.	
Documentation. Documentation shall be provided through Green Halo (https://benicia.wastetracking.com/) which demonstrates compliance prior to final inspection.	
Building Maintenance and Operation (4.410)	
O&M Manual. An operation and maintenance manual shall be available in the building at the time of final inspection.	
Recycling by Occupants. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the depositing, storage, and collection of nonhazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.	
ENVIRONMENTAL QUALITY	
Fireplaces (4.503)	
Bay Area Air Quality Management District. Only gas fireplaces, pellet-fueled devices, or E.P.A. certified wood-burning devices may be installed in new buildings, added to or replace wood-burning devices in existing buildings, or be used when reconstructing or repairing a wood-burning device	
Gas fireplace shall be a direct-vent sealed-combustion type. Woodstove or pellet stove shall comply with US EPA New Source Performance Standards (NSPS) emission limits.	

Pollutant Control (4.504)	
Cover vent openings. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilation equipment, all duct and other related air distribution component openings shall be covered.	
Finish material pollutant control. Adhesives, sealants, and caulks shall be compliant with VOC limits as shown in Table 4.504.1 or 4.504.2, as applicable.	
Aerosol adhesives and smaller unit sizes of adhesives and sealant or caulking compounds (no more than 1 pound in weight no more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements.	
Paints and coatings. Paints, stains, and other coatings shall be compliant with VOC limits as shown in Table 4.504.3.	
Aerosol Paints and Coatings. Shall meet the Product-Weighted MIR limits for ROC and comply with the BAAQMD percent VOC by weight of product limits of Regulation 8, Rule 49.	
Carpet. All carpet and carpet cushion shall meet the requirements of the CDPH “Standard Method for the Testing of Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers”.	
Carpet adhesive. Shall meet the requirements of Table 4.504.1.	
Resilient flooring systems. At least 80% of floor area receiving resilient flooring shall meet the requirements of CDPH “Standard Method for the Testing of Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers”.	
Composite wood products. Hardwood plywood, particleboard, and medium density fiberboard (MDF) used on interior or exterior of the building shall comply with formaldehyde emission limits per Table 4.504.5.	
Documentation. Verification of compliance shall be provided to the City building inspector.	
Interior Moisture Control (4.505)	
Concrete Slab Foundations. Concrete slab foundations required to have a vapor retarder by the California Building Code or the California Residential Code shall have a capillary break installed in compliance with section 4.505.2.1.	
Moisture content of building materials. Building materials with visible signs of water damage shall not be installed.	
Wall and floor framing shall not to exceed 19% moisture content at time of enclosure. Moisture content shall be verified in compliance with section 4.505.3.	
Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure.	
Indoor Air Quality and Exhaust (4.506)	
Bathroom exhaust fans. Each bathroom shall be mechanically ventilated, and exhaust fans shall be ENERGY STAR rated and ducted to terminate outside.	
Unless functioning as a component of a whole house ventilation system, bathroom exhaust fans must be controlled by a humidity control adjustable between a relative humidity range of ≤50% to max. 80%.	
Environmental Comfort (4.507)	
Heating and air-conditioning systems. Shall be sized, designed, and have their equipment selected using the following methods: <ol style="list-style-type: none"> 1. Establish heat loss and heat gain values according to ANSI/ACCA 2 Manual J-2016 (Residential Load Calculation), ASHRAE handbooks or other equivalent design methods. 2. Size duct systems according to ANSI/ACCA 1 Manual D-2016 (Residential Duct Systems) or other equivalent design software or methods. 3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S-2014 or other equivalent design methods. 	

INSTALLER AND SPECIAL INSPECTOR QUALIFICATIONS	
Qualifications (702)	
Installer training. HVAC system installers are trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program.	
Special inspection. Special inspectors employed by the owner or owner’s agent shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection to be performed and shall have a certification or qualifications acceptable to the enforcing agency. Note: Special Inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with CALGreen.	
Verifications (703)	
Documentation. Documentation used to show compliance with CALGreen shall include, but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency, which demonstrate substantial conformance.	