

City of Santa Clarita Building & Safety Division

2022 CALGreen Code Residential Mandatory Measures

The residential mandatory measures of the 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGreen) applies to new construction of residential buildings including one- and two-family dwellings, townhomes, multi-family units in low-rise and high-rise residential buildings such as apartments, condominiums, motels and hotels. These provisions also apply to the additions and alterations of existing residential buildings that increase the buildings' conditioned area or volume. Please incorporate these requirements into the plans and construction documents and sign the compliance statement at the end of this document. The information in this document is an outline of Chapter 4 (Residential Mandatory Measures) and Chapter 7 (Installer and Special Inspector Qualifications), as adopted by the Department of Housing and Community Development (HCD). For more detailed requirements and possible exceptions, please refer to the 2022 CALGreen code.

Effective date: January 1, 2023.

Chapter 4

RESIDENTIAL MANDATORY MEASURES

Division 4.1 – Planning & Design

SITE DEVELOPMENT (Section 4.106)

1. **General.** Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas.
2. **Storm water drainage and retention during construction.** Projects which disturb less than one acre of soil and are not part of a larger common development, shall manage storm water drainage during construction. In order to manage storm store water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.
 - a. Retention basins of sufficient size shall be utilized to retain storm water on the site.
 - b. Where storm water is conveyed to a public drainage system or gutter, water shall be filtered by use of a barrier system or wattle approved by the city.
 - c. Compliance with all NPDES and City of Santa Clarita Storm Water Management Ordinance.
3. **Grading and paving.** Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. (Does not apply to additions and alterations not altering the drainage path.)
4. **Electric vehicle (EV) charging for new construction.** New construction shall comply with CalGreen sections 4.106.4.1 or 4.106.4.2 (see items #5 or #6 below) to facilitate the installation and future installation and use of electric vehicle (EV) chargers. Electric vehicle supply equipment (EVSE) when installed, shall be in accordance with the California Electrical Code.
 5. **EV charging for new one- and two-family dwellings and townhouses with attached private garages.**

For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter) that originates at the main service or subpanel and terminates into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. The service panel or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device. The service panel or subpanel shall be permanently labeled to identify the breaker space as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE". Stopped here...
 6. **EV charging for new multi-family dwellings, hotels and motels, and new residential parking facilities.**

When parking is provided, EV charging shall comply with the following requirements to facilitate the installation or future installation of electric vehicle supply equipment (EVSE). The required number of EV spaces shall be rounded up to the nearest whole number and each such space shall count as at least one standard parking space for the purpose of complying with the parking space requirements by the City Planning Division. Plans and electrical load calcs shall clearly show the following:

 - a. **EV Capable.** Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical

panel service capacity and electrical system, including on-site distribution, to have sufficient capacity to simultaneously charge all EV's at all required EV spaces at a minimum of 40 amperes. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

- b. **EV Ready.** Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. No more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.

7. Additional requirements for multifamily projects with 20 or more dwelling units. When 20 or more dwelling units are provided on a project site, the following shall apply in addition to the requirements listed in item number 6 above:

- a. **EV Chargers.** Five (5) percent of the total number of parking spaces shall be equipped with Level 2 EVSE. Where common use parking is provided, at least one EV charger shall be located in the common use parking area and shall be available for use by all residents or guests. When EV charging receptacles are installed beyond the minimum required, an automatic load management system (ALMS) may be used. See CalGreen 4.106.4.2.2 #3 for more info.

8. Electric vehicle charging stations. EVCS required by item number 7 above, shall comply with the following:

- a. One in every 25 EV spaces, but not less than one, shall comply with one of the following two options:
 - i. The EV space(s) shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the access aisle.
 - ii. The EV space(s) shall be located on an accessible route to the building, as defined in the California Building Code, Chapter 2.
- b. Dimensions of EV charging spaces shall be 18 feet long by 9 feet wide.
- c. One in every 25 EV spaces, but not less than one, shall also have an 8-foot wide minimum side aisle (a 5-foot wide side aisle is permitted provided the minimum width of the EV space is 12-feet). The surface slope of this EV space and the aisle shall not exceed a 1 unit vertical in 48 units horizontal (2.083 percent) slope in any direction.
- d. **Accessible EV spaces.** In addition to the accessibility requirements listed above, all EVSE shall comply with the accessibility provisions for EV chargers in the CBC, Chapter 11B. EV charging stations serving public housing are required to comply with the CBC, Chapter 11B. EV

Ready spaces and EVCS in multifamily developments shall comply with CBC, Chapter 11A, Section 1109A.

- e. **Single EV space electrical requirements.** Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than nominal 1-inch inside diameter. The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EV spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit over-current protective device.
- f. **Multiple EV spaces electrical requirements.** Construction documents shall indicate the raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculation to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EV's at all required EV spaces at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.
- g. Construction documents shall identify the raceway termination point, receptacle or charger location, as applicable.

Division 4.3 – Water Efficiency & Conservation

- 9. **Indoor water use.** Plumbing fixtures and fittings shall comply with the following and shall be shown on the construction documents:
 - a. **Water closets:** Maximum 1.28 gallons per flush
 - b. **Urinals:** Maximum 0.125 gallons per flush for wall-mounted. Other urinals: 0.5 gallons per flush.
 - c. **Single showerheads:** Maximum flow rate of 1.8 gallons per minute at 80 psi.
 - d. **Multiple showerheads serving one shower:** combined flow rate of all showerheads controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi.
 - e. **Lavatory faucets within dwelling units:** Max flow rate of 1.2 gallons per minute at 60 psi. Minimum flow rate of 0.8 gallon per minute at 20 psi.
 - f. **Lavatory faucets in common and public use areas:** Maximum flow rate of 0.5 gallons per minute at 60 psi.

- g. **Metering faucets:** Maximum 0.2 gallons per cycle.
- h. **Kitchen faucets:** Maximum flow rate of 1.8 gallons per minute at 60 psi.

Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code and shall meet the applicable standards referenced in Table 1701.1 of the California Plumbing Code.

10. Outdoor potable water uses 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.

Division 4.4 – Material Conservation and Resource Efficiency

11. 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 a similar method acceptable to the city building inspector.

12. Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the non-hazardous construction and demolition waste in accordance with the City of Santa Clarita's Construction and Demolition Materials Management Plan (CDMMP) ordinance. A City approved waste management company/hauler shall be used for recycling of construction waste. Documentation of compliance shall be provided to the City's Environmental Services Division.

13. Operation and Maintenance manual. At the time of final inspection, a manual, compact disc, web-based reference or other medium acceptable to the enforcing agency shall be placed in the building which includes all the following information:

- a. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
- b. Operation and maintenance instruction for the following:
 - i. Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment.
 - ii. Roof and yard drainage, including gutters and downspouts.
 - iii. Space conditioning systems, including condensers and air filters.
 - iv. Landscape irrigation systems.
 - v. Water reuse systems.

- c. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
- d. Provide transportation and/or carpool options available in the area.
- e. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
- f. Information about water-conserving landscape and irrigation design and controllers which conserve water.
- g. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
- h. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
- i. Information about state solar energy and incentive programs available.
- j. A copy of all special inspection verifications required by the enforcing agency or the CALGreen Code.
- k. Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures.
- l. Information and/or drawings identifying the location of grab bar reinforcements.

14. Recycling by occupants. Where 5 or more multifamily dwelling units are constructed on a building site, provide a readily accessible area(s) that serves all buildings on the site and is identified for recycling. Contact the City's Environmental Services Division for details of the City's recycling ordinance.

Division 4.5 – Environmental Quality

15. Fireplaces. Any installed gas fireplace shall be direct-vent sealed combustion type. New permanently installed wood burning devices are prohibited per SCAQMD rule 445.

16. HVAC system Protection. During the construction process and until final startup of the HVAC system, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other method to reduce the amount of water, dust and debris which may enter the system.

17. Finish material pollutant control. Finish materials shall comply with the following:

- a. **Adhesives, sealants and caulks** used on this project shall comply with SCAQMD Rule 1168 for VOC limits and toxic compounds. Aerosol adhesives, sealants and caulks (in packaging units

not more than one pound or 16 fluid ounces) shall comply with statewide VOC standards.

- b. **Paints and coatings** shall comply with VOC limits in CalGreen Table 4.504.3.
- c. **Aerosol paints and coatings** shall comply with statewide requirements and other requirements noted in CalGreen Section 4.504.2.3.
- d. **Carpeting.** Carpet systems installed in the building shall comply with one of the specifications or standards listed in CalGreen Section 4.504.3. Carpet cushion shall meet the requirements of the Carpet and Rug Institute Green Label program. Carpet adhesives shall comply with VOC limits of CalGreen Table 4.504.1.
- e. **Resilient flooring systems.** Where installed, 80% of the floor area receiving resilient flooring shall comply with one or more of the standards listed in CalGreen Section 4.504.4.
- f. **Composite wood products** such as hardwood plywood, particleboard and MDF wood products used on the interior or exterior of the building shall comply with the formaldehyde limits per CalGreen Table 4.504.5.

Verification of compliance with the standards above shall be provided as requested by the enforcing agency.

- 18. **Interior moisture control.** Buildings shall meet or exceed the provisions of the California Building Code.
 - a. **Concrete slab foundations.** Concrete slab foundations shall have a vapor retarder as required by the California Building Code, Chapter 19 or the California Residential Code, Chapter 5. A capillary break shall be installed consisting of a 4-inch-thick base of ½ inch or larger clean aggregate with a vapor retarder in direct contact with concrete. The concrete mix design shall address bleeding, shrinkage, and curling. For additional information, see American Concrete Institute, ACE 302.2R-06.
 - b. **Moisture content of building materials.** Building materials with visible signs of water damage shall not be installed. Wall and floor framing lumber shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified using one of the methods listed in CALGreen section 4.505.3.
 - c. **Insulation products** which are visibly wet or have high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities.
- 19. **Indoor air quality and exhaust.** Each bathroom (a room which contains a bathtub, shower, or tub/shower combination) shall be mechanically ventilated and shall comply with the following:
 - a. Exhaust fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
 - b. Unless functioning as a component of a whole house ventilation system, bathroom exhaust fans must be controlled by a humidity control.

- c. Humidity controls shall be capable of adjustment between 50% to 80% relative humidity. Humidity control may utilize manual or automatic means of adjustment which may be a separate component to the exhaust fan (not required to be built-in).

- 20. **Environmental comfort.** HVAC systems shall be sized, designed and have their equipment selected using the methods listed in CalGreen section 4.507.2.

Chapter 7 INSTALLER AND SPECIAL INSPECTOR QUALIFICATIONS

- 21. **General.** New residential buildings shall comply with the requirements of CALGreen Chapter 7.
- 22. **Installer training.** HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program as outlined in CalGreen section 702.1.
- 23. **Special inspection.** When required by the California Building Code, California Residential Code or the approved plans, the owner or the responsible entity acting as the owner’s agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with the CALGreen Code. Special Inspectors shall be registered with the City of Santa Clarita Building & Safety Division prior to performing any special inspections of any component or system required. Special Inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting.
- 24. **Verifications.** Documentation used to show compliance with this code shall include but is not limited to: construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the City of Santa Clarita which demonstrates substantial conformance.

Compliance Statement

As the design professional or designer of record for this project, I certify that this project will comply with all applicable provisions of the 2022 California Green Building Standards Code (CALGreen).

Signature

Print Name

Date