



CALGREEN COMMERCIAL MANDATORY CHECKLIST

THESE REQUIREMENTS APPLY TO BUILDING PERMITS SUBMITTED ON OR AFTER JANUARY 1, 2020

Following is a standardized checklist of the 2019 California Green Building Standards Code (CalGreen) requirements that may be used to demonstrate compliance with the CalGreen Mandatory Measures (Chapter 5). This checklist is required for all new buildings, additions of 1,000 square feet or more, and alterations with a permit valuation of \$200,000 and more. Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.

CALGreen Reference	Description	Designer's Comments with Plan Sheet Reference	City Field Inspection Verification
5.1 Planning and Design	5.106.1 Storm water pollution prevention. Newly constructed projects which disturb less than one acre of land shall prevent the pollution of storm water runoff from the construction activities through local ordinance in Section 5.106.1.1 <i>or</i> Best management practices (BMP) in Section 5.106.1.2.	Sheet:	Initials and Date:
5.1 Planning and Design	<p>5.106.4 Bicycle parking. Comply with Sections 5.106.4.1 and 5.106.4.2; or meet local ordinance, whichever is stricter.</p> <p>5.106.4.1 Short-term bicycle parking. If the project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet <i>of</i> the visitors' entrance, readily visible to passers-by, for 5% of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.</p> <p>Exception: Additions or alterations which add nine or less visitor vehicular parking spaces.</p> <p>5.106.4.2 Long-term bicycle parking. For new buildings with 10 or more tenant-occupants or for additions or alterations that add 10 or more tenant vehicular parking space, provide secure bicycle parking for 5% of the tenant vehicular parking spaces being added, with a minimum of one space. Acceptable parking facilities shall be convenient from the street and shall meet one of the following:</p> <ol style="list-style-type: none"> 1. Covered, lockable enclosures with permanently anchored racks for bicycles; 2. Lockable bicycle rooms with permanently anchored racks; <p>or</p> <p>Lockable, permanently anchored bicycle lockers.</p>	Sheet:	Initials and Date:

5.1 Planning and Design	<p>5.106.5.3 Electric vehicle (EV) charging. New Construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation of electric vehicle supply equipment (EVSE).</p> <p>5.106.5.3.1 Single charging space requirements. When only a single charging space is required per Table 5.106.5.3.3, a raceway is required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code.</p> <p>5.106.5.3.2 Multiple charging spaces requirements. When multiple charging spaces are required per Table 5.106.5.3.3 raceway(s) is/are required to be installed at the time of construction and shall be installed in accordance with the California Electrical Code.</p> <p>5.106.5.3.3 EV charging space calculation. [N] per Table 5.106.5.3.3 below:</p>	Sheet:	Initials and Date:
5.1 Planning and Design	<p>5.106.5.3.4 [N]Identification. The service panel or subpanel(s) circuit directory shall identify the reserved overcurrent protective device space(s) for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE."</p> <p>5.106.5.3.5 [N] EV spaces count as designated parking.</p>	Sheet:	Initials and Date:
5.1 Planning and Design	<p>5.106.8 Light pollution reduction. Outdoor lighting systems shall be designed and installed to comply with the following:</p> <ol style="list-style-type: none"> 1. The minimum requirements in the California Energy Code for Lighting Zones 1-4 as defined in Chapter 10 of the California Administrative Code; and 2. Backlight, Uptight and Glare (BUG) ratings as defined in IESNA TM-15- 11; and 3. Allowable BUG ratings not exceeding those shown in Table 5.106.8, OR comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent. <p>Exceptions:</p> <ol style="list-style-type: none"> 1. Luminaires that qualify as exceptions in Section 140.7 of the California Energy Code Emergency lighting 	Sheet:	Initials and Date:
5.1 Planning and Design	<p>5.106.12 Shade Trees. Shade trees shall be planted. Percentages shown shall be measured at noon on the summer solstice</p> <p>5.106.12.1 Surface parking areas. Shade tree plantings, minimum #10 container size or equal, shall be installed to provide shade over 50% of the parking area within 15 years</p> <p>5.106.12.2 Landscape areas. Shade tree plantings, minimum #10 container size shall be installed to provide 20% shade within 15 years.</p> <p>5.106.12.3 Hardscape areas. Shade tree plantings, minimum #10 container size shall be installed to provide shade of 20% of the hardscape area within 15 years.</p>	Sheet:	Initials and Date:
5.2 Energy	5.201.1 Scope Compliance with the California Energy Commission mandatory standards.	Sheet:	Initials and Date:

5.3 Water Efficiency and Conservation	<p>5.303.3 Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:</p> <p>5.303.3.1 Water closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type Toilets.</p> <p>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.</p> <p>5.303.3.2 Urinals.</p> <p>5.303.3.2.1 Wall-mounted urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush.</p> <p>5.303.3.2.2 Floor-mounted urinals. The effective flush volume of floor-mounted urinals shall not exceed 0.5 gallons per flush.</p> <p>5.303.3.3 Showerheads.</p> <p>5.303.3.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 2.0 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.</p> <p>5.303.3.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 2.0 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.</p> <p>Note: A hand-held shower shall be considered a showerhead.</p>	Sheet:	Initials and Date:
5.3 Water Efficiency and Conservation	<p>5.303.4 Commercial kitchen equipment.</p> <p>5.303.4.1 Food waste disposers. Disposers shall either modulate the use of water to no more than 1 gpm when the disposer is not in use (not actively grinding food waste/no-load) or shall automatically shut off after no more than 10 minutes or inactivity. Disposers shall use no more than 8 gpm of water.</p> <p>Note: This code section does not affect local jurisdiction authority to prohibit or require disposer installation</p>	Sheet:	Initials and Date:
5.3 Water Efficiency and Conservation	<p>5.303.5 Areas of additions or alteration. For those occupancies within the authority of the California Building Standards Commission as specified in Section 103, the provisions of Section 5.303.3 and 5.303.4 shall apply to new fixtures in additions or areas of alterations to the building.</p>	Sheet:	Initials and Date:
5.3 Water Efficiency and Conservation	<p>5.303.6 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1401.1 of the California Plumbing Code and in Chapter 6 of this code.</p>	Sheet:	Initials and Date:

5.3 Water Efficiency and	5.304.1 Outdoor Water Use Scope. The provisions of Section 5.304 Outdoor Water Use reference the mandatory Model Water Efficiency Landscape Ordinance (MWELO) contained with Chapter 2.7, Division 2, Title 23, California Code of Regulations.	Sheet:	Initials and Date:
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5.4 Material Conservation and Resource Efficiency	<p>5.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the non-hazardous construction waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.</p> <p>5.408.1.1 Construction waste management plan. Where a local jurisdiction does not have a construction and demolition waste management ordinance that is more stringent, submit a construction waste management plan that complies with Items 1 through 4 of this section.</p> <p>5.408.1.2 Waste management company. Utilize a waste management company that can provide verifiable documentation that the percentage of construction waste material diverted from the landfill complies with this section.</p> <p>Exceptions to Sections 5.408.1.1 and 5.408.1.2:</p> <ol style="list-style-type: none"> 1. Excavated soil and land-clearing debris 2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist. 3. Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets. <p>5.408.1.4 Documentation. Provide documentation of the waste management plan that meets the requirements listed in Sections 5.408.1.1 through 5.408.1.3, and the plan is accessible to the enforcement authority.</p> <p>5.408.2 Universal Waste. Additions and alterations to a building or tenant space that meet the scoping provisions in Section 301.3 for nonresidential additions and alterations, shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials are disposed of properly and are diverted from landfills. A list of prohibited Universal Waste materials shall be included in the construction documents.</p> <p>5.408.3 Excavated soil and land clearing debris. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled.</p> <p>Exception: Reuse, either on-or off-site, of vegetation or soil contaminated by disease or pest infestation.</p>	Sheet:	Initials and Date:
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5.4 Material Conservation and Resource Efficiency	<p>5.410.1 Recycling by occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials including organic waste for recycling.</p> <p>5.410.1.1 Additions. All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30 percent or more in floor area, shall provide recycling areas on site.</p> <p>Exception: Additions within a tenant space resulting in less than a 30% increase in the tenant space floor area.</p>	Sheet:	Initials and Date:
5.4 Material Conservation and Resource Efficiency	<p>5.410.4 Testing and adjusting. Testing and adjusting of systems shall be required for buildings less than 10,000 square feet. Applies to new systems serving additions or alterations.</p> <p>5.410.3.2 Systems. Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include, as applicable to the project, the systems listed in 5.410.4.2.</p> <p>5.410.3.3 Procedures. Perform testing and adjusting procedures in accordance with applicable standards on each system as determined by enforcing agency.</p> <p>5.410.3.3.1 HVAC balancing. Before a new space conditioning system serving a building or space is operated for normal use, the system should be balanced in accordance with the procedures defined by national standards listed in 5.410.3.3.1.</p> <p>5.410.3.4 Reporting. After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.</p> <p>5.410.3.5 Operation and maintenance manual. Provide the building owner with detailed operating and maintenance instructions and copies of guaranties/warranties for each system prior to final inspection.</p> <p>Inspections and reports. Include a copy of all inspection verifications and reports required by the enforcing agency.</p>	Sheet:	Initials and Date:
5.4 Material Conservation and Resource Efficiency	<p>5.503.1 Fireplaces. Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove, and refer to residential requirements in the California Energy Code, Title 24, Part 6, Subchapter 7, Section 150.</p> <p>Woodstoves. Woodstoves shall comply with US EPA New Source Performance Standards (NSPS) emissions limits, where applicable, and shall have a permanent label indicating they are certified to meet the emission limit.</p>	Sheet:	Initials and Date:

5.4 Material Conservation and Resource	5.504.1.3 Temporary ventilation. If the HVAC system is used during construction, use return air filters with a MERV of 8, based on ASHRAE S2.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy. Applies to additions or alterations.	Sheet:	Initials and Date:
5.4 Material Conservation and Resource Efficiency	5.504.3 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation and during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet-metal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system.	Sheet:	Initials and Date:
5.4 Material Conservation and Resource Efficiency	5.504.4 Finish material pollutant control. Adhesives, sealants and caulks. Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits. Paints and coatings. Paints, stains and other coatings shall be compliant with voe limits. Aerosol paints and coatings. Aerosol paints and coatings shall be compliant with product weighted MIR limits for ROC and other toxic compounds. Verification. Documentation shall be provided to verify that compliant VOC limit finish materials have been used.		
5.4 Material Conservation and Resource Efficiency	5.504.4.4 Carpet systems. All carpet installed in the building interior shall meet the testing and product requirements of one of the following: 1. Carpet and Rug Institute's Green Label Plus Program. 2. California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350.) 3. NSF/ ANSI 140 at the Gold level. 4. Scientific Certifications Systems Indoor Advantage™ Gold. Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program. Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1.		

5.4 Material Conservation and Resource Efficiency	<p>5.504.4.6 Resilient flooring systems. For 80% of floor area receiving resilient flooring, installed resilient flooring shall meet at least one of the following:</p> <ol style="list-style-type: none"> 1. Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program; 2. Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health's 2010 Standard Method for the Testing and Evaluation Chambers, Version 1.1, February 2010; 3. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria Interpretation for EQ 7.0 and 7.1 (formerly EQ. 2.2) dated July 2012 and listed in the CHPS High Performance Product Database; or 4. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children's for Schools Program). <p>5.504.4.6.1 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.</p>	Sheet:	Initials and Date:
5.4 Material Conservation and Resource Efficiency	<p>5.504.5.3 Filters. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 8. MERV 8 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. An ASHRAE 10-percent to 15-percent efficiency filter shall be permitted for an HVAC unit meeting the 2013 <i>California Energy Code</i> having 60,000 Btu/h or less capacity per fan coil, if the energy use of the air delivery system is 0.4 W /cfm or less at design air flow. 2. Existing mechanical equipment. <p>5.504.5.3.1 Labeling. Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating.</p>	Sheet:	Initials and Date:
5.4 Material Conservation and Resource Efficiency	<p>5.504.7 Environmental tobacco smoke (ETS) control. Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of any city, county, city and county, California Community College, campus of the California State University, or campus of the University of California, whichever are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions.</p>	Sheet:	Initials and Date:
5.5 Environmental	<p>5.505.1 Indoor moisture control. Buildings shall meet or exceed the provisions of California Building Code, CCR. Title 24. Part 2. Sections 1203 and Chapter 14.1.</p>	Sheet:	Initials and Date:

5.5 Environmental Quality	<p>5.508.2 Supermarket refrigerant leak reduction. New commercial refrigeration systems shall comply with the provisions of this section when installed in retail food stores 8,000 square feet or more conditioned area, and that utilize either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units. The leak reduction measures apply to refrigeration systems containing high- global-warming potential (high-GWP) refrigerants with a GWP of 150 or greater. New refrigeration systems include both new facilities and the replacement of existing refrigeration systems in existing facilities.</p> <p>Exception: Refrigeration systems containing low-global warming potential (low-GWP) refrigerant with a GWP value less than 150 are not subject to this section. Low-GWP refrigerants are nonozone-depleting refrigerants that include ammonia, carbon dioxide (CO₂), and potentially other refrigerants.</p>	Sheet:	Initials and Date:
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