

# CALGREEN NON-RESIDENTIAL CHECKLIST – MANDATORY ITEMS

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#### **PURPOSE:**

The non-residential provisions of the 2013 CalGreen Code outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties; establishes the means of conserving water used indoors, outdoors and in wastewater conveyance; outlines means of achieving material conservation and resource efficiency; and outlines means of reducing the quantity of air contaminants.

| Project Name:        |  |
|----------------------|--|
| Project Address:     |  |
| Project Description: |  |

Instructions:

- 1. The Owner or the Owner's agent shall employ a licensed professional experienced with the 2013 California Green Building Standards Codes to verify and assure that all required work described herein is properly planned and implemented in the project.
- The licensed professional, in collaboration with the owner and the design professional shall initial Column 2 of this checklist, sign and date Section 1 - Design Verification at the end of this checklist and have the checklist printed on the approved plans for the project.
- Prior to final inspection by the Building Department, the licensed professional shall complete Column 3 and sign and date Section 2 - Implementation Verification at the end of this checklist and submit the completed form to the Building Inspector.

| MANDATORY FEATURE OR MEASURE   | Column 2<br>Project<br>Requirements | Column 3<br>Verification |
|--|-------------------------------------|--------------------------|
| CHAPTER 5 – NONRESIDENTIAL MANDATORY MEASURES  |                                     |                          |
| General Requirements   |                                     |                          |
| The project meets all the requirements of Divisions 5.101 through 5.508.   |                                     |                          |
| Division 5.1 PLANNING AND DESIGN   |                                     |                          |
| Planning and Design - Site Development   |                                     |                          |
| <b>5.106.1 Storm water pollution prevention.</b> For projects of one acre or less, develop a Storm Water Pollution Prevention Plan (SWPPP) that has been designed, specific to its site, conforming to the State Storm water NPDES Construction Permit or local ordinance, whichever is stricter, as is required for projects over one acre. The plan should cover prevention of soil loss by storm water run-off and/or wind erosion, of sedimentation and/or of dust/particulate matter air pollution. |                                     |                          |

| <b>5.106.4 Bicycle parking.</b> Comply with Sections 5.106.4.1 and 5.106.4.2; or meet local ordinance, whichever is stricter.   |    |   |
|---|----|---|
| <b>5.106.4.1.1 Short-Term bicycle parking.</b> If the qualified project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack. |    |   |
| <b>5.106.4.1.2 Long-Term bicycle parking.</b> For qualified buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of tenant vehicle parking spaces being added, with a minimum of one space.  |    |   |
| <b>5.106.5.2 Designated parking.</b> Provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2.  |    |   |
| <b>5.106.8 Light pollution reduction.</b> Outdoor lighting systems shall be designed and installed to comply with the following:  |    |   |
| 1. The minimum requirements in the <i>California Energy Code</i> for lighting zones 1 – 4 as defined in Chapter 10 of the <i>California Administrative Code</i> ; and   |    |   |
| 2. Backlight, Uplight and Glare (BUG) ratings as defined in IES TM-15-11; and   |    |   |
| 3. Allowable BUG rating not exceeding those shown in Table 5.106.8, or  | п  | П |
| Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.  |    |   |
| <b>5.106.10 Grading and paving.</b> The site shall be planned and developed to keep surface water away from buildings. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows.   |    |   |
| Division 5.2 ENERGY EFFICIENCY  |    |   |
| Performance Requirements  |    |   |
| <b>5.201.1 Scope.</b> The California Energy Commission will continue to adopt mandatory building standards.   |    |   |
| Division 5.3 WATER EFFICIENCY AND CONSERVATION  | ON |   |
| Indoor Water Use  |    |   |
| <b>5.303.1 Meters.</b> Separate meters shall be installed for the uses described in Sections 503.1.1 and 503.1.2.   |    |   |
| <b>5.303.1.1 New building or additions in excess of 50,000 square feet.</b><br>Separate submeters shall be installed as follows:  |    |   |
| <ol> <li>For each individual leased, rented or other tenant space within the<br/>building projected to consume more than 100 gal/day.</li> </ol>  |    |   |
| <ol><li>Where separate submeters are unfeasible, for water supplied to the following systems:</li></ol>   |    |   |
| <ul> <li>a. Makeup water for cooling towers where flow through is greater than 500 gpm.</li> <li>b. Makeup water for evaporative coolers greater than 6 gpm.</li> <li>c. Steam and hot-water boilers with energy input &gt; 500,000 Btu/h.</li> </ul>   |    |   |

| <b>5.303.1.2 Excess consumption.</b> A separate submeter shall be provided for any tenant within a new building or within an addition that is projected to consume > 1,000 gal/day.  |  |  |
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| <b>5.303.2 Water reduction.</b> Plumbing fixtures shall meet the maximum flow rate values shown in Table 5.303.2.3.  |  |  |
| <b>Exception:</b> Building that demonstrate 20-percent overall water use reduction.  |  |  |
| <b>5.303.2.1 Areas of addition or alteration.</b> For those occupancies within the authority of the California Building Standards Commission, as specified in Section 103, the provisions of Section 5.303.2 and Section 5.303.3 shall apply to new fixtures in additions or areas of alterations to the buildings.      |  |  |
| <b>5.303.4 Wastewater reduction.</b> Each building shall reduce by 20 percent wastewater by one of the following methods:  |  |  |
| 1. The installation of water-conserving fixtures or  |  |  |
| 2. Utilizing non-potable water systems.  |  |  |
| <b>5.303.6 Standards for plumbing fixtures and fittings.</b> Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code (CPC), and shall meet the applicable standards referenced in CPC Table 1401.1 and CalGreen Chapter 6.   |  |  |
| Outdoor Water Use  |  |  |
| <b>5.304.1 Water budget.</b> A water budget shall be developed for landscape irrigation use.   |  |  |
| <b>5.304.2 Outdoor potable water use.</b> For new water service or for addition or alteration requiring upgraded water service for landscaped areas of at least 1,000 sq.ft. but not more than 5,000 sq.ft., separate submeters or metering devices shall be installed for outdoor potable water use.                    |  |  |
| <b>5.304.3 Irrigation design.</b> In new nonresidential construction or building addition or alteration with at least 1,000 but not more than 2,500 sq.ft. of cumulative landscaped area, install irrigation controllers and sensors which include the following criteria, and meet manufacturer's recommendations.      |  |  |
| <b>5.304.3.1 Irrigation controllers.</b> Automatic irrigation system controllers installed at the time of final inspection shall comply with the following:  |  |  |
| 1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.   |  |  |
| 2. Weather-based controllers without integral rain sensors or<br>communication systems that account for local rainfall shall have a<br>separate wired or wireless rain sensor which connects or communicates<br>with the controller(s). Soil moisture-based controllers are not required to<br>have rain sensor input.   |  |  |
| Weather Resistance and Moisture Management   |  |  |
| <b>5.407.1 Weather protection.</b> Provide a weather-resistant exterior wall and foundation envelope as required by <i>California Building Code</i> Section 1403.2 and <i>California Energy Code</i> Section 150, manufacturer's installation instructions or local ordinance, whichever is more stringent. <sup>1</sup> |  |  |

| <b>5.407.2 Moisture control.</b> Employ moisture control measures by the following methods;   |  |
|---|--|
| 5.407.2.1 Sprinklers. Prevent irrigation spray on structures.   |  |
| <b>5.407.2.2 Entries and openings.</b> Design exterior entries and/or openings to prevent water intrusion into buildings.   |  |
| <b>5.407.2.2.1 Exterior door protection.</b> Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbent floor and wall finishes within at least 2 ft around and perpendicular to such openings plus at least one of the following:  |  |
| 1. An installed awning at least 4 ft in depth.  |  |
| 2. The door is protected by a roof overhang at least 4 ft in depth.   |  |
| 3. The door is recessed at least 4 ft.  |  |
| 4. Other methods which provide equivalent protection.   |  |
| <b>5.407.2.2.2 Flashing.</b> Install flashings integrated with a drainage plane.  |  |
| Construction Waste Reduction, Disposal and Recycling  |  |
| <b>5.408.1 Construction waste management.</b> Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition 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.                                |  |
| <b>5.408.1.1 Construction waste management plan.</b> Submit plan per this section to enforcement authority.   |  |
| <b>5.408.1.2 Waste management company.</b> Utilize a waste management company that can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with CalGreen Section 5.408.  |  |
| <b>5.408.1.3 Waste stream reduction alternative.</b> The combined weight of new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 50 percent minimum requirement as approved by the enforcing agency.  |  |
| <b>5.408.1.4 Documentation.</b> Provide documentation of the waste management plan that meets the requirements listed in Section 5.408.1.1 through 5.408.1.3.   |  |
| <b>5.408.3 Excavated soil and land clearing debris.</b> 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled.   |  |
| Building Maintenance and Operation  |  |
| <b>5.410.1 Recycling by occupants.</b> Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling.   |  |
| <b>5.410.2 Commissioning.</b> For new buildings 10,000 square feet and over, building commissioning for all building systems covered by T24, Part 6, process systems and renewable energy systems shall be included in the design and construction processes of the building project. Commissioning requirements shall include items listed in Section 5.410.2. |  |

| <b>5.410.2.1 Owner's Project Requirements (OPR).</b> Documented before the design phase of the project begins the OPR shall include items listed in Section 5.410.4.  |  |
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| <b>5.410.2.2 Basis of Design (BOD).</b> A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project and updated periodically to cover the systems listed in Section 5.410.2.2.                             |  |
| <b>5.410.2.3 Commissioning plan.</b> A commissioning plan describing how the project will be commissioned shall be started during the design phase of the building project and shall include items listed in Section 5.410.2.3.   |  |
| <b>5.410.2.4 Functional performance testing.</b> Functional performance testing shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications.                                 |  |
| <b>5.410.2.5 Documentation and training.</b> A Systems manual and systems operations training are required.   |  |
| <b>5.410.2.5.1 Systems manual.</b> The systems manual shall be delivered to the building owner or representative and facilities operator and shall include the items listed in Section 5.410.2.5.1.   |  |
| <b>5.410.2.5.2 Systems operations training.</b> The training of the appropriate maintenance staff for each equipment type and/or system shall include items listed in Section 5.410.2.5.2.  |  |
| <b>5.410.2.6 Commissioning report.</b> A complete report of commissioning process activities undertaken through the design, construction and reporting recommendations for post-construction phases of the building project shall be completed and provided to the owner or representative. |  |
| <b>5.410.4 Testing and adjusting.</b> Testing and adjusting of systems shall be required for buildings less than 10,000 square feet or new systems to serve an addition or alteration subject to Section 303.1.   |  |
| <b>5.410.4.2 Systems.</b> 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 Section 5.410.3.2.  |  |
| <b>5.410.4.3 Procedures.</b> Perform testing and adjusting procedures in accordance with industry best practices and applicable national standards on each system.  |  |
| <b>5.410.4.3.1 HVAC balancing.</b> 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 Section 5.410.3.3.1.                              |  |
| <b>5.410.4.4 Reporting.</b> After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.   |  |
| <b>5.410.4.5 Operation and maintenance manual.</b> Provide the building owner with detailed operating and maintenance instructions and copies of guaranties/warranties for each system prior to final inspection.   |  |
| <b>5.410.4.5.1 Inspections and reports.</b> Include a copy of all inspection verifications and reports required by the enforcing agency.  |  |

| Fireplaces   |  |
|--|--|
| <b>5.503.1</b> Install only a direct-vent sealed-combustion gas or sealed wood-<br>burning fireplace or a sealed woodstove and refer to residential requirements<br>in the <i>California Energy Code</i> , Title 24, Part 6, Subchapter 7, Section 150.  |  |
| <b>5.503.1.1 Woodstoves.</b> Woodstoves shall comply with US EPA Phase II emission limits.   |  |
| Pollutant Control  |  |
| <b>5.504.3 Covering of duct openings and protection of mechanical</b><br><b>equipment during construction.</b> At the time of rough installation or during<br>storage on the construction site and until final startup of the heating and<br>cooling equipment, all duct and other related air distribution component<br>openings shall be covered with tape, plastic, sheet metal or other methods<br>acceptable to the enforcing agency to reduce the amount of dust or debris<br>which may collect in the system. |  |
| <b>5.504.4 Finish material pollutant control.</b> Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.4.   |  |
| <b>5.504.4.1 Adhesives, sealants, caulks.</b> Adhesives and sealants used on the project shall meet the requirements of the following standards.   |  |
| 1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2.   |  |
| 2. Aerosol adhesives and smaller unit sizes of adhesives and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of <i>California Code of Regulations</i> , Title 17, commencing with Section 94507.   |  |
| <b>5.504.4.3 Paints and coatings.</b> Architectural paints and coatings shall comply with Table 5.504.4.3 unless more stringent local limits apply.  |  |
| <b>5.504.4.3.1 Aerosol paints and coatings.</b> Aerosol paints and coatings shall meet the Product-Weighted MIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances (CCR, Title 17, Section 94520 et seq).   |  |
| <b>5.504.4.3.2 Verification.</b> Verification of compliance with this section shall be provided at the request of the enforcing agency.  |  |
| <b>5.504.4.4 Carpet systems.</b> All carpet installed in the building interior shall meet the testing and product requirements of at least one of the standards listed in Section 5.504.4.4.   |  |
| <b>5.504.4.4.1 Carpet cushion.</b> All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute Green Label program.  |  |
| <b>5.504.4.4.2 Carpet adhesive.</b> All carpet adhesive shall meet the requirements of Table 5.504.4.1.  |  |

| <b>5.504.4.5 Composite wood products.</b> Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in Table 5.504.4.5.  |  |
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| <b>5.504.4.5.3 Documentation.</b> Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following standards listed in Section 5.504.5.3.   |  |
| <b>5.504.4.6 Resilient flooring systems.</b> For 80 percent of floor area receiving resilient flooring, installed resilient flooring shall meet at least one of the following standards listed in Section 5.504.4.6.  |  |
| <b>5.504.5.3 Filters.</b> In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air prior to occupancy that provides at least a MERV of 8.  |  |
| <b>5.504.7 Environmental tobacco smoke (ETS) control.</b> Prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows where outdoor areas are provided for smoking and in buildings; 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. |  |
| Indoor Moisture and Radon Control   |  |
| <b>5.505.1 Indoor moisture control.</b> Buildings shall meet or exceed the provisions of <i>California Building Code</i> , CCR, Title 24, Part 2, Sections 1203 and Chapter 14.1.   |  |
| Air Quality and Exhaust   |  |
| <b>5.506.1 Outside air delivery.</b> For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 121 of the <i>California Energy Code</i> , CCR, Title 24, Part 6 and Chapter 4 of CCR, Title 8 or the applicable local code, whichever is more stringent. <sup>1</sup>  |  |
| <b>5.506.2 Carbon dioxide (CO2) monitoring.</b> For buildings equipped with demand control ventilation, CO2 sensors and ventilation controls shall be specified and installed in accordance with the requirements of the latest edition of the <i>California Energy Code</i> , CCR, Title 24, Part 6, Section 121(c). <sup>1</sup>  |  |
| Environmental Comfort   |  |
| <b>5.507.4 Acoustical control.</b> Employ building assemblies and components with STC values determined in accordance with ASTM E 90 and ASTM E 413.  |  |
| <b>5.507.4.1 Exterior noise transmission.</b> Wall and floor-ceiling assemblies making up the building envelope shall have an STC of at least 50 and exterior windows shall have a minimum STC of 30 for any of the building locations listed in Items 1 through 3 in Section 5.507.5.1.  |  |
|   |  |

| Outdoor Air Quality   |  |
|---|--|
| <b>5.508.1 Ozone depletion and greenhouse gas reductions.</b> Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2. |  |
| <b>5.508.1.1 Chlorofluorocarbons (CFCs).</b> Install HVAC and refrigeration equipment that does not contain CFCs.   |  |
| <b>5.508.1.2 Halons.</b> Install fire suppression equipment that does not contain Halons.   |  |

### CALGREEN SIGNATURE DECLARATIONS

Project Name:

Project Address:

Project Description:

## **SECTION 1 – DESIGN VERIFICATION**

Complete all lines of Section 1 – "Design Verification" and submit the completed checklist (Columns 1 and 2) with the plans and building permit application to the Building Department.

The owner and design professional responsible for compliance with CalGreen Standards have revised the plans and certify that the items checked above are hereby incorporated into the project plans and will be implemented into the project in accordance with the requirements set forth in the 2013 California Green Building Standards Code as adopted by the City of Cupertino.

| Owner's Signature   | Date  |
|---|-------|
|   |       |
| Owner's Name (Please Print)   |       |
|   |       |
| Design Professional's Signature   | Date  |
|   |       |
| Design Professional's Name (Please Print)                                       |       |
|   |       |
| Signature of License Professional responsible for CalGreen compliance           | Date  |
|   |       |
| Name of License Professional responsible for CalGreen compliance (Please Print) | Phone |
|   |       |
| Email Address for License Professional responsible for CalGreen compliance      |       |

## **SECTION 2 – IMPLEMENTATION VERIFICATION**

Complete, sign and submit the competed checklist, including column 3, together with all original signatures on Section 2 to the Building Department prior to Building Department final inspection.

I have inspected the work and have received sufficient documentation to verify and certify that the project identified above was constructed in accordance with this Green Building Checklist and in accordance with the requirements of the 2013 California Green Building Standards Code as adopted by the City of Cupertino.

Signature of License Professional responsible for CalGreen compliance

Date

Phone

Name of License Professional responsible for CalGreen compliance (Please Print)

Email Address for License Professional responsible for CalGreen compliance