

SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLISTS⁴
 July 1, 2015 SUPPLEMENT
 Effective July 1, 2015

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
Requirements			
Project meets all of the requirements of Divisions 5.1 through 5.5.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planning and Design			
Site Selection			
A5.103.1 Community connectivity. Locate project on a previously developed site within a 1/2-mile radius of at least ten basic services, listed in Section A5.103.1.		<input type="checkbox"/>	<input type="checkbox"/>
A5.103.2 Brownfield or greyfield site redevelopment or infill area development. Select for development a brownfield in accordance with Section A5.103.2.1 or on a greyfield or infill site as defined in Section A5.106.3.2 A5.103.2.1 Brownfield redevelopment. Develop a site documented as contaminated and fully remediated or on a site defined as a brownfield.		<input type="checkbox"/>	<input type="checkbox"/>
Site Preservation			
A5.104.1.1 Local zoning requirement in place. Exceed the zoning's open space requirement for vegetated open space on the site by 25 percent.		<input type="checkbox"/>	<input type="checkbox"/>
A5.104.1.2 No local zoning requirement in place. Provide vegetated open space area adjacent to the building equal to the building footprint area.		<input type="checkbox"/>	<input type="checkbox"/>
A5.104.1.3 No open space required in zoning ordinance. Provide vegetated open space equal to 20 percent of the total project site area.		<input type="checkbox"/>	<input type="checkbox"/>
Deconstruction and Reuse of Existing Structures			
A5.105.1.1 Existing building structure. Maintain at least 75 percent of existing building structure (including structural floor and roof decking) and envelope (exterior skin and framing) based on surface area. Exceptions: 1. Window assemblies and nonstructural roofing material. 2. Hazardous materials that are remediated as a part of the project. 3. A project with an addition of more than two times the square footage of the existing building.		<input type="checkbox"/>	<input type="checkbox"/>
A5.105.1.2 Existing nonstructural elements. Reuse existing interior nonstructural elements (interior walls, doors, floor coverings and ceiling systems) in at least 50 percent of the area of the completed building (including additions). Exception: A project with an addition of more than two times the square footage of the existing building.		<input type="checkbox"/>	<input type="checkbox"/>
A5.105.1.3 Salvage. Salvage additional items in good condition such as light fixtures, plumbing fixtures and doors for reuse on this project in an onsite storage area or for salvage in dedicated collection bins. Document the weight or number of the items salvaged.		<input type="checkbox"/>	<input type="checkbox"/>
Site Development			
5.106.1 Storm water pollution prevention. Newly constructed projects and additions which disturb less than one acre of land shall prevent the pollution of stormwater runoff from the construction activities through local ordinance in Section 5.106.1.1 or Best management practices (BMP) in Section 5.106.1.2.	<input checked="" type="checkbox"/> OR <input checked="" type="checkbox"/>		
A5.106.2 Storm water design. Design storm water runoff rate and quantity in conformance with Section A5.106.2.1 and storm water runoff quality by Section A5.106.2.2 or by local requirements, whichever are stricter. A5.106.2.1 Storm water runoff rate and quantity. Implement a storm water management plan resulting in no net increase in rate and quantity of storm water runoff from existing to developed conditions. Exception: If the site is already greater than 50 percent impervious, implement a storm water management plan resulting in a 25-percent decrease in rate and quantity. A5.106.2.2 Storm water runoff quality. Use post construction treatment control best management practices (BMPs) to mitigate (infiltrate, filter or treat) storm water runoff from the 85th percentile 24-hour runoff event (for volume-based BMPs) or the runoff produced by a rain event equal to two times the 85th percentile hourly intensity (for flow-based BMPs).		<input type="checkbox"/>	<input type="checkbox"/>
A5.106.3 Low impact development (LID). Reduce peak runoff in compliance with Section 5.106.1. Employ at least two of the following methods or other best management practices to allow rainwater to soak into the ground, evaporate into the air or collect in storage receptacles for irrigation or other beneficial uses. LID strategies include, but are not limited to those listed in Section A5.106.3.		<input type="checkbox"/>	<input type="checkbox"/>

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<p>5.106.8 Light pollution reduction. [N] 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 <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 IESNA TM-15-11; and 3. Allowable BUG ratings not exceeding those shown in Table 5.106.8, or <p>Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.</p> <p>Exceptions: [N]</p> <ol style="list-style-type: none"> 1. Luminaires that qualify as exceptions in Section 140.7 of the <i>California Energy Code</i> 2. Emergency lighting <p>Note: [N] See also <i>California Building Code</i>, Chapter 12, Section 1205.6 for college campus lighting requirements for parking facilities and walkways.</p>	<input checked="" type="checkbox"/> or <input checked="" type="checkbox"/>		
<p>5.106.10 Grading and paving. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include those shown in Items 1–5. See exception for additions or alterations.</p>	<input checked="" type="checkbox"/>		
<p>A5.106.11 Heat island effect. Reduce nonroof heat islands and roof heat islands as follows:</p> <p>A5.106.11.1 Hardscape alternatives. Use one or a combination of strategies 1 through 2 for 50 percent of site hardscape or put 50 percent of parking underground.</p> <ol style="list-style-type: none"> 1. Use light colored materials with an initial solar reflectance value of at least .30 as determined in accordance with ASTM Standards E 1918 or C 1549. 2. Use open-grid pavement system or pervious or permeable pavement system. <p>A5.106.11.2 Cool roof for reduction of heat island effect. Use roofing materials having a minimum aged solar reflectance, thermal emittance complying with Sections A5.106.11.2.2 and A5.106.11.2.3 or a minimum aged or Solar Reflectance Index (SRI)³ equal to or greater than the values shown in:</p> <p>Table A5.106.11.2.2 – Tier 1 or Table A5.106.11.2.3 – Tier 2</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. Roof constructions that have a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25 lb/sf. 2. Roof area covered by building integrated solar photovoltaic and building integrated solar thermal panels. 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>

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APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
Energy Efficiency			
Performance Requirements			
5.201.1 Scope. Building meets or exceeds the requirements of the California Building Energy Efficiency Standards.3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²
A5.203.1 Energy efficiency. Nonresidential, high-rise residential and hotel/motel buildings that include lighting and/or mechanical systems shall comply with Sections A5.203.1.1 and either A5.203.1.2.1 or A5.203.1.2.2. Newly constructed buildings, as well as additions and alterations, are included in the scope of these sections. Buildings permitted without lighting or mechanical systems shall comply with Section A5.203.1.1 but are not required to comply with Sections A5.203.1.1.2 or A5.203.1.2.		<input type="checkbox"/>	<input type="checkbox"/>
A5.203.1.1.1 Outdoor lighting. Newly installed outdoor lighting power is no greater than 90 percent of the Title 24, Part 6 calculated value of allowed outdoor lighting power.		<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²
A5.203.1.1.2 Service water heating in restaurants. Newly constructed restaurants 8,000 square feet or greater and with service water heaters rated 75,000 Btu/h or greater installed a solar water-heating system with a minimum solar savings fraction of 0.15 or meet one of the exceptions.		<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²
A5.203.1.1.3 Functional areas where compliance with residential lighting standards is required. For newly constructed high-rise residential dwelling units and hotel and motel guest rooms, indoor lighting complies with the applicable requirements in Appendix A4 Residential Voluntary Measures, Division A4.2 – Energy Efficiency, Section A4.203.1.1.3. For additions and alterations to high-rise residential dwelling units and hotel and motel guest rooms, indoor lighting complies with the applicable requirements in Appendix A4 Residential Voluntary Measures, Division A4.2 – Energy Efficiency, Section A4.204.1.1.1.		<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²
A5.203.1.2.1 Tier 1. For building projects that include indoor lighting or mechanical systems, but not both, the Energy Budget is no greater than 95 percent of the Title 24, Part 6, Energy Budget for the Proposed Design Building. For building projects that include indoor lighting and mechanical systems, the Energy Budget is no greater than 90 percent of the Title 24, Part 6, Energy Budget for the Proposed Design Building.		<input checked="" type="checkbox"/> ²	
A5.203.1.2.2 Tier 2. For building projects that include indoor lighting or mechanical systems, but not both, the Energy Budget is no greater than 90 percent of the Title 24, Part 6, Energy Budget for the Proposed Design Building. For building projects that include indoor lighting and mechanical systems, the Energy Budget is no greater than 85 percent of the Title 24, Part 6, Energy Budget for the Proposed Design Building.			<input checked="" type="checkbox"/> ²
Renewable Energy			
A5.211.1 On-site renewable energy. Use on-site renewable energy for at least 1 percent of the electrical service overcurrent protection device rating calculated in accordance with the 2013 <i>California Electrical Code</i> or 1KW, whichever is greater, in addition to the electrical demand required to meet 1 percent of natural gas and propane use calculated in accordance with the 2013 <i>California Plumbing Code</i> .		<input type="checkbox"/>	<input type="checkbox"/>
A5.211.1.1 Documentation. Calculate renewable on-site system to meet the requirements of Section A5.211.1. Factor in net-metering, if offered by local utility, on an annual basis.		<input type="checkbox"/>	<input type="checkbox"/>
A5.211.3 Green power. Participate in the local utility’s renewable energy portfolio program that provides a minimum of 50-percent electrical power from renewable sources. Maintain documentation through utility billings.		<input type="checkbox"/>	<input type="checkbox"/>
Elevators, Escalators and Other Equipment			
A5.212.1 Elevators and escalators. In buildings with more than one elevator or two escalators, provide systems and controls to reduce the energy demand of elevators and escalators as follows. Document systems operation and controls in the project specifications and commissioning plan.		<input type="checkbox"/>	<input type="checkbox"/>
A5.212.1.1 Elevators. Traction elevators shall have a regenerative drive system that feeds electrical power back into the building grid when the elevator is in motion.		<input type="checkbox"/>	<input type="checkbox"/>
A5.212.1.1.1 Car lights and fan. A parked elevator shall turn off its car lights and fan automatically until the elevator is called for use.		<input type="checkbox"/>	<input type="checkbox"/>
A5.212.1.2 Escalators. An escalator shall have a variable voltage variable frequency (VVVF) motor drive system that is fully regenerative when the escalator is in motion.		<input type="checkbox"/>	<input type="checkbox"/>
A5.212.1.4 Controls. Controls that reduce energy demand shall meet requirements of CCR, Title 8, Chapter 4, Subchapter 6 and shall not interrupt emergency operations for elevators required in CCR, Title 24, Part 2, <i>California Building Code</i> .		<input type="checkbox"/>	<input type="checkbox"/>

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		CALGreen Tier 1	CALGreen Tier 2
<p>5.303.3.4 Faucets and Fountains</p> <p>5.303.3.4.1 Nonresidential Lavatory faucets. Lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi.</p> <p>5.303.3.4.2 Kitchen faucets. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.</p> <p>5.303.3.4.3 Wash fountains. Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 [rim space (inches) at 60 psi].</p> <p>5.303.3.4.4 Metering faucets. Metering faucets shall not deliver more than 0.20 gallons per cycle.</p> <p>5.303.3.4.5 Metering faucets for wash fountains. Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per minute/20 [rim space (inches) at 60 psi].</p> <p>Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.</p>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>		
<p>5.303.4 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 shall apply to new fixtures in additions or areas of alterations to the building.</p>	<input checked="" type="checkbox"/>		
<p>A5.303.5 Dual plumbing. New buildings and facilities shall be dual plumbed for potable and recycled water systems for toilet flushing when recycled water is available as determined by the enforcement authority.</p>		<input type="checkbox"/>	<input type="checkbox"/>
<p>5.303.6 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the <i>California Plumbing Code</i>, and shall meet the applicable standards referenced in Table 1401.1 of the <i>California Plumbing Code</i> and in Chapter 6 of this code.</p>	As applicable <input checked="" type="checkbox"/>		
Outdoor Water Use			
<p>5.304.1 Water budget. A water budget shall be developed for landscape irrigation use.³ Applies to additions or alterations.</p>	<input checked="" type="checkbox"/>		
<p>5.304.2 Outdoor potable water use. For new water service, separate meters or submeters shall be installed for indoor and outdoor potable water use for landscaped areas of at least 1,000 square feet but not more than 5,000 square feet, separate submeters shall be installed for outdoor potable water use. Applies to additions or alterations.</p> <p>A5.304.2.1 Outdoor potable water use. For new water service not subject to the provisions of <i>Water Code</i> Section 535, separate meters or submeters shall be installed for outdoor potable water use for landscaped areas of at least 500 square feet but not more than 1,000 square feet (the level at which Section 5.304.2 applies).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>5.304.3 Irrigation design. In new nonresidential projects with at least 1,000 square feet but not more than 2,500 square feet of landscaped area (the level at which the MLO applies), install irrigation controllers and sensors which include the following criteria and meet manufacturer's recommendations. Applies to additions or alterations.</p> <p>5.304.3.1 Irrigation controllers. Automatic irrigation system controllers installed at the time of final inspection shall comply with the following:</p> <ol style="list-style-type: none"> 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 communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input. 	<input checked="" type="checkbox"/> As applicable <input checked="" type="checkbox"/>		
<p>A5.304.4 Potable water reduction. Provide water-efficient landscape irrigation design that reduces the use of potable water beyond the initial requirements for plant installation and establishment in accordance with Section A5.304.4.1 or A5.304.4.2. Calculations for the reduction shall be based on the water budget developed pursuant to Section 5.304.1.</p> <p>A5.304.4.1 Tier 1 – Reduce the use of potable water to a quantity that does not exceed 60 percent of ETo times the landscape area.</p> <p>A5.304.4.2 Tier 2 – Reduce the use of potable water to a quantity that does not exceed 55 percent of ETo times the landscape area.</p> <p>Note: Methods used to accomplish the requirements of this section shall include, but not be limited to, the items listed in A5.304.4.</p> <p>A5.304.4.3 Verification of compliance. A calculation demonstrating the applicable potable water use reduction required by this section shall be provided.</p>		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
<p>A5.304.5 Potable water elimination. Provide a water efficient landscape irrigation design that eliminates the use of potable water beyond the initial requirements for plant installation and establishment.</p> <p>Methods used to accomplish the requirements of this section shall include, but not be limited to, the items listed in Section A5.304.5.</p>		<input type="checkbox"/>	<input type="checkbox"/>

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NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLISTS—continued⁴

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CAL Green Tier 1	CAL Green Tier 2
<p>A5.405.5.3.2 Concrete. The following measures may be used in the manufacture of concrete,</p> <p>A5.405.5.3.2.1 Alternative energy. Renewable or alternative energy meeting the requirements of Section A5.211.</p> <p>A5.405.5.3.2.2 Recycled aggregates. Concrete made with one or more of the materials listed in Section A5.405.5.3.2.2.</p> <p>A5.405.5.3.2.3 Mixing water. Water recycled by the local water purveyor or water reclaimed from manufacturing processes and conforming to ASTM C 1602.</p> <p>A5.405.5.3.2.4 High strength concrete. Concrete elements designed to reduce their total size compared to standard 3,000 psi concrete, as approved by the Engineer of Record.</p>		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Enhanced Durability and Reduced Maintenance			
<p>A5.406.1.1 Service life. Select materials for longevity and minimal deterioration under conditions of use.</p> <p>A5.406.1.2 Reduced maintenance. Select materials that require little, if any, finishing.</p> <p>A5.406.1.3 Recyclability. Select materials that can be re-used or recycled at the end of their service life.</p>		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Weather Resistance and Moisture Management			
<p>5.407.1 Weather protection. 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.³</p>	<input checked="" type="checkbox"/>		
<p>5.407.2 Moisture control. Employ moisture control measures by the following methods;</p> <p>5.407.2.1 Sprinklers. Design and maintain landscape irrigation systems to prevent irrigation spray on structures.</p> <p>5.407.2.2 Entries and openings. Design exterior entries and openings to prevent water intrusion into buildings as follows.</p> <p>5.407.2.2.1 Exterior door protection. Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following:</p> <ol style="list-style-type: none"> 1. An installed awning at least 4 feet in depth. 2. The door is protected by a roof overhang at least 4 feet in depth. 3. The door is recessed at least 4 feet. 4. Other methods which provide equivalent protection. <p>5.407.2.2.2 Flashing. Install flashings integrated with a drainage plane.</p>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>		
Construction Waste Reduction, Disposal and Recycling			
<p>5.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 50% 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>5.408.1.3 Waste stream reduction alternative. 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.</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>	<input checked="" type="checkbox"/> or <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>		

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APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
<p>A5.408.3.1 Enhanced construction waste reduction—Tier 1 [BSC]. Divert to recycle or salvage at least 65% of nonhazardous construction and demolition waste generated at the site.</p> <p>A5.408.3.1.1 Enhanced construction waste reduction—Tier 2 [BSC]. Divert to recycle or salvage at least 80% of nonhazardous construction waste generated at the site.</p> <p>A5.408.3.1.2 Verification of compliance. A copy of the completed waste management report or documentation of certification of the waste management company utilized shall be provided.</p> <p>Exceptions:</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. 		<input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>
Life Cycle Assessment			
<p>A5.409.1 General. Life cycle assessment shall be ISO 14044 compliant. The service life of the building and materials assemblies shall not be less than 60 years.</p> <p>A5.409.2 Whole building life cycle assessment. Conduct a whole building life assessment, including operating energy, showing that the building project achieves at least a 10-percent improvement for at least three of the impacts listed in Section A5.409.2.2, one of which shall be climate change, compared to a reference building.</p> <p>A5.409.3 Materials and system assemblies. If whole building analysis of the project is not elected, select a minimum of 50% of materials or assemblies based on life cycle assessment of at least three for the impacts listed in Section A5.409.2.2, one of which shall be climate change.</p> <p>A5.409.4 Substitution for prescriptive standards. Performance of a life cycle assessment completed in accordance with Section A5.409.2 may be substituted for other prescriptive provisions of Division A5.4, including those made mandatory through local adoption of Tier 1 or Tier 2 in Division A5.6.</p> <p>A5.409.5 Verification of compliance. Documentation of compliance shall be provided as follows:</p> <ol style="list-style-type: none"> 1. The assessment is performed in accordance with ISO 14044. 2. The project meets the requirements of other parts of Title 24. 3. A copy of the analysis shall be made available to the enforcement authority. 4. A copy of the analysis and any maintenance or training recommendations shall be included in the operation and maintenance manual. <p>See notes for available tools.</p>		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Building Maintenance and Operation			
<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 nonhazardous materials for recycling.³</p> <p>5.410.1.1 Additions. [A] 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-percent increase in the tenant space floor area.</p>	<input checked="" type="checkbox"/>		
<p>5.410.2 Commissioning. [N] For new buildings 10,000 square feet and over, building commissioning for all building systems covered by Title 24, 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.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. Unconditioned warehouses of any size 2. Areas less than 10,000 square feet used for offices or other conditioned accessory spaces within unconditioned warehouses 3. Tenant improvements less than 10,000 square feet as described in Section 303.1.1. 4. Commissioning requirements for energy systems covered by the <i>California Energy Code</i>. 5. Open parking garages of any size, or open parking garage areas of any size, within a structure. <p>5.410.2.1 Owner’s Project Requirements (OPR). [N] Documented before the design phase of the project begins the OPR shall include items listed in Section 5.410.2.1.</p>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<p>5.410.2.2 Basis of Design (BOD). [N] 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 to cover the systems listed in Section 5.410.2.2.</p> <p>5.410.2.3 Commissioning plan. [N] A commissioning plan describing how the project will be commissioned shall include items listed in Section 5.410.2.3.</p> <p>5.410.2.4 [N] 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.</p> <p>5.410.2.5 Documentation and training. [N] A Systems manual and systems operations training are required.</p> <p>5.410.2.5.1 Systems manual. [N] 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.</p> <p>5.410.2.5.2 Systems operations training. [N] A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and shall include items listed in Section 5.410.2.5.2.</p> <p>5.410.2.6 Commissioning report. [N] A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or representative.</p>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	

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APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
<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>5.410.4.2 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 Section 5.410.4.2.</p> <p>5.410.4.3 Procedures. Perform testing and adjusting procedures in accordance with applicable standards on each system as determined by the enforcing agency.</p> <p>5.410.4.3.1 HVAC balancing. Before a new space-conditioning system serving a building or space is operated for normal use, balance in accordance with the procedures defined by national standards listed in Section 5.410.4.3.1 or as approved by the enforcing agency.</p> <p>5.410.4.4 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>5.410.4.5 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>5.410.4.5.1 Inspections and reports. Include a copy of all inspection verifications and reports required by the enforcing agency.</p>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>		
Environmental Quality			
Fireplaces			
<p>5.503.1 Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace or a sealed woodstove and refer to residential requirements in the <i>California Energy Code</i>, Title 24, Part 6, Subchapter 7, Section 150.</p> <p>5.503.1.1 Woodstoves. Woodstoves shall comply with US EPA Phase II emission limits, where applicable.</p>	<input checked="" type="checkbox"/> As applicable <input checked="" type="checkbox"/>		
Pollutant Control			
<p>A5.504.1 Indoor air quality (IAQ) during construction. Maintain IAQ as provided in Sections A5.504.1.1 and A5.504.1.2.</p> <p>A5.504.1.1 Temporary ventilation. Provide temporary ventilation during construction in accordance with Section 121 of the <i>California Energy Code</i>, CCR, Title 24, Part 6 and Chapter 4 of CCR, Title 8 and as listed in Items 1 and 2 in Section A5.504.1.1.</p> <p>A5.504.1.2 Additional IAQ measures. Employ additional measures as listed in Items 1 through 5 in Section A5.504.1.2.</p> <p>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 52.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy. Applies to additions or alterations.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
<p>A5.504.2 IAQ postconstruction. Flush out the building per Section A5.504.2 prior to occupancy or if the building is occupied.</p> <p>A5.504.2.1 IAQ Testing. A testing alternative may be employed after all interior finishes have been installed, using testing protocols recognized by the United State Environmental Protection Agency (U.S. EPA) and in accordance with Section A5.504.2.1.2. Retest as required in Section A5.504.2.1.3.</p> <p>A5.504.2.1.1 Maximum levels of contaminants. Allowable levels of contaminant concentrations measured by testing shall not exceed the following:</p> <ol style="list-style-type: none"> 1. Carbon Monoxide (CO): 9 parts per million, not to exceed outdoor levels by 2 parts per million; 2. Formaldehyde: 27 parts per billion; 3. Particulates (PM10): 50 micrograms per cubic meter; 4. 4-Phenylcyclohexene (4-PCH): 6.5 micrograms per cubic meter; and 5. Total Volatile Organic Compounds (TVOC): 300 micrograms per cubic meter. <p>A5.504.2.1.2 Test protocols. Testing of indoor air quality should include the elements listed in Items 1 through 4.</p> <p>A5.504.2.1.3 Noncomplying building areas. For each sampling area of the building exceeding the maximum concentrations specified in Section A5.504.2.1.1, flush out with outside air and retest samples taken from the same area. Repeat the procedures until testing demonstrates compliance.</p>		<input type="checkbox"/> <input type="checkbox"/> As applicable <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> As applicable <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p>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, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system.</p>	<input checked="" type="checkbox"/>		

SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLISTS—continued⁴

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
<p>5.504.4 Finish material pollutant control. Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.6.</p> <p>5.504.4.1 Adhesives, sealants, caulks. Adhesives and sealants used on the project shall meet the requirements of the following standards.</p> <p>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.</p> <p>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.</p> <p>5.504.4.3 Paints and coatings. Architectural paints and coatings shall comply with Table 5.504.4.3 unless more stringent local limits apply.</p> <p>5.504.4.3.1 Aerosol paints and coatings. 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.).</p> <p>5.504.4.3.2 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency.</p> <p>5.504.4.4 Carpet systems. All carpet installed in the building interior shall meet the testing and product requirements of one of the standards listed in Section 5.504.4.4.</p> <p>5.504.4.4.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.</p> <p>5.504.4.4.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1.</p> <p>5.504.4.5 Composite wood products. 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.</p> <p>A5.504.4.5.1 No added formaldehyde, Tier 1. Use composite wood products approved by the ARB as no-added formaldehyde (NAF) based resins or ultra-low emitting formaldehyde (ULEF) resins.</p> <p>5.504.4.5.3 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:</p> <ol style="list-style-type: none"> 1. Product certifications and specifications. 2. Chain of custody certifications. 3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.). 4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards. 5. Other methods acceptable to the enforcing agency. 	<p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p>As applicable</p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>	
<p>5.504.4.6 Resilient flooring systems. For 80 percent of floor area receiving resilient flooring, install resilient flooring which meets 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 & Schools Program). <p>A5.504.4.6.1 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.</p> <p>A5.504.4.7 Resilient flooring systems, Tier 1 [BSC]. For 90 percent 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 & Schools Program). 	<p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>	

SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLISTS—continued⁴

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
<p>A5.504.4.7.1 Resilient flooring systems, Tier 2 [BSC]. For 100 percent of floor area receiving resilient flooring, install resilient flooring that meets 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 & Schools Program). <p>A5.504.4.7.2 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.</p> <p>A5.504.4.8 Thermal insulation, Tier 1 [BSC]. Comply with the standards listed in Items 1 through 3.</p> <p>A5.504.4.8.1 Thermal insulation, Tier 2 [BSC] Thermal insulation, No-added Formaldehyde. Install thermal insulation which complies with Tier 1 plus does not contain any added formaldehyde.</p> <p>A5.504.4.8.2 Verification of compliance. Documentation shall be provided verifying that thermal insulation materials meet the pollutant emission limits.</p> <p>A5.504.4.9 Acoustical ceilings and wall panels. Comply with Chapter 8 in Title 24, Part 2 and with the VOC-emission limits defined in the 2009 CHPS criteria and listed on its High Performance Products Database.</p> <p>A5.504.4.9.1 Verification of compliance. Documentation shall be provided verifying that acoustical finish materials meet the pollutant emission limits.</p> <p>Note: Products compliant with CHPS criteria certified under the Greenguard Children & Schools program may also be used.</p> <p>A5.504.5 Hazardous particulates and chemical pollutants. Minimize and control pollutant entry into buildings and cross-contamination of regularly occupied areas.</p> <p>A5.504.5.1 Entryway systems. Install permanent entryway systems measuring at least six feet in the primary direction of travel to capture dirt and particulates at entryways directly connected to the outdoors as listed in Items 1 through 3 in Section A5.504.5.1.</p> <p>A5.504.5.2 Isolation of pollutant sources. In rooms where activities produce hazardous fumes or chemicals, exhaust them and isolate them from their adjacent rooms as listed in Items 1 through 3 in Section A5.504.5.2.</p> <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 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>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<p>A5.504.5.3.1 Filters, Tier 1. 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 11.</p> <p>A5.504.5.3.1.1 Filters, Tier 2. 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 Minimum Efficiency Reporting Value (MERV) of 13.</p>		<input type="checkbox"/>	<input type="checkbox"/>
<p>5.504.7 Environmental tobacco smoke (ETS) control. Prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows where outdoor areas are provided for smoking 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.</p>	<input checked="" type="checkbox"/>		
Indoor Moisture and Radon Control			
<p>5.505.1 Indoor moisture control. Buildings shall meet or exceed the provisions of <i>California Building Code</i>, CCR, Title 24, Part 2, Sections 1203 and Chapter 14.1.³</p>	<input checked="" type="checkbox"/>		
Air Quality and Exhaust			
<p>5.506.1 Outside air delivery. For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 120.1 of the <i>California Energy Code</i> and Chapter 4 of CCR, Title 8 or the applicable local code, whichever is more stringent.³</p>	<input checked="" type="checkbox"/>		
<p>5.506.2 Carbon dioxide (CO₂) monitoring. For buildings or additions equipped with demand control ventilation, CO₂ sensors and ventilation controls shall be specified and installed in accordance with the requirements of the <i>California Energy Code</i>, CCR, Section 120(c)(4).³</p>	<input checked="" type="checkbox"/>		

**SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLISTS—continued⁴**

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
Environmental Comfort			
<p>A5.507.1 Lighting and thermal comfort controls. Provide controls in the workplace as described in Sections A5.507.1.1 and A5.507.1.2.</p> <p>A5.507.1.1 Single-occupant spaces. Provide individual controls that meet energy use requirements in the <i>California Energy Code</i> by Sections A5.507.1.1.1 and A5.507.1.1.2.</p> <p>A5.507.1.1.1 Lighting. Provide individual task lighting and/or daylighting controls for at least 90 percent of the building occupants.</p> <p>A5.507.1.1.2 Thermal comfort. Provide individual thermal comfort controls for at least 50 percent of the building occupants by Items 1 and 2 in Section A5.507.1.1.2.</p> <p>A5.507.1.2 Multi-occupant spaces. Provide lighting and thermal comfort system controls for all shared multi-occupant spaces.</p>		<input type="checkbox"/>	<input type="checkbox"/>
<p>A5.507.2 Daylight. Provide daylight spaces as required for toplighting and sidelighting in the <i>California Energy Code</i>. In constructing a design, consider Items 1 through 4 in Section A5.507.3.</p>		<input type="checkbox"/>	<input type="checkbox"/>
<p>A5.507.3 Views. Achieve direct line of sight to the outdoor environment via vision glazing between 2'6" and 7'6" above finish floor for building occupants in 90 percent of all regularly occupied areas.</p> <p>A5.507.3.1 Interior office spaces. Entire areas of interior office spaces may be included in the calculation if at least 75 percent of each area has direct line of sight to perimeter vision glazing.</p> <p>A5.507.3.2 Multi-occupant spaces. Include in the calculation the square footage with direct line of sight to perimeter vision glazing.</p>		<input type="checkbox"/>	<input type="checkbox"/>
<p>5.507.4 Acoustical control. Employ building assemblies and components with STC values determined in accordance with ASTM E 90 and ASTM E 413 or OITC determined in accordance with ASTM E 1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.</p> <p>5.507.4.1 Exterior noise transmission, prescriptive method. Wall and floor-ceiling assemblies exposed to the noise source making up the building envelope shall have exterior wall and roof ceiling assemblies meeting a composite STC rating of at least 50 or a composite OITC rating of no less than 40 with exterior windows of a minimum STC of 40 or OITC of 30 in the locations described in Items 1 and 2. Also applies to addition envelope or altered envelope.</p> <p>5.507.4.1.1 Noise exposure where noise contours are not readily available. Buildings exposed to a noise level of 65 dB L_{eq}-1Hr during any hour of operation shall have exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30). Also applies to addition or alteration exterior wall.</p> <p>5.507.4.2 Performance method. For buildings located as defined in Sections A5.507.4.1 or A5.507.4.1.1, wall and roof-ceiling assemblies making up the building envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (L_{eq}-1Hr) of 50 dBA in occupied areas during any hour of operation. Also applies to addition envelope or altered envelope.</p> <p>5.507.4.2.1 Site features. Exterior features such as sound walls or earth berms may be utilized as appropriate to the project to mitigate sound migration to the interior. Also applies to addition envelope or altered envelope.</p> <p>5.507.4.2.1 Documentation of compliance. An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.</p> <p>5.507.4.3 Interior sound transmission. Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.</p>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> or <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>		
Outdoor Air Quality			
<p>5.508.1 Ozone depletion and global warming reductions. Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2.</p> <p>5.508.1.1 CFCs. Install HVAC and refrigeration equipment that does not contain CFCs.³</p> <p>5.508.1.2 Halons. Install fire suppression equipment that does not contain Halons.¹</p> <p>A5.508.1.3 Hydrochlorofluorocarbons (HCFCs). Install HVAC and refrigeration equipment that does not contain HCFCs.</p> <p>A5.508.1.4 Hydrofluorocarbons (HFCs). Install HVAC complying with either of the following:</p> <ol style="list-style-type: none"> 1. Install HVAC, refrigeration and fire suppression equipment that do not contain HFCs or that do not contain HFCs with a global warming potential greater than 150. 2. Install HVAC and refrigeration equipment that limit the use of HFC refrigerant through the use of a secondary heat transfer fluid with a global warming potential no greater than 1. 	<input checked="" type="checkbox"/> As applicable <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<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>	<input checked="" type="checkbox"/> As applicable		

SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLISTS—continued⁴

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
<p>5.508.2.1 Refrigerant piping. Piping compliant with the <i>California Mechanical Code</i> shall be installed to be accessible for leak protection and repairs. Piping runs using threaded pipe, copper tubing with an outside diameter (OD) less than 1/4 inch, flared tubing connections and short radius elbows shall not be used in refrigerant systems except as noted below.</p> <p>5.508.2.1.1 Threaded pipe. Threaded connections are permitted at the compressor rack.</p> <p>5.508.2.1.2 Copper pipe. Copper tubing with an OD less than 1/4 inch may be used in systems with a refrigerant charge of 5 pounds or less.</p> <p>5.508.2.1.2.1 Anchorage. 1/4 inch OD tubing shall be securely clamped to a rigid base to keep vibration levels below 8 mils.</p> <p>5.508.2.1.3 Flared tubing connections. Double-flared tubing connections may be used for pressure controls, valve pilot lines and oil.</p> <p>Exception: Single-flared tubing connections may be used with a multiring seal coated with industrial sealant suitable for use with refrigerants and tightened in accordance with manufacturer's recommendations.</p> <p>5.508.2.1.4 Elbows. Short radius elbows are only permitted where space limitations prohibit use of long radius elbows.</p> <p>5.508.2.2 Valves. Valves and fittings shall comply with the <i>California Mechanical Code</i> and as follows.</p> <p>5.508.2.2.1 Pressure relief valves. For vessels containing high-GWP refrigerant, a rupture disc shall be installed between the outlet of the vessel and the inlet of the pressure relief valve.</p> <p>5.508.2.2.1.1 Pressure detection. A pressure gauge, pressure transducer or other device shall be installed in the space between the rupture disc and the relief valve inlet to indicate a disc rupture or discharge of the relief valve.</p> <p>5.508.2.2.2 Access valves. Only Schrader access valves with a brass or steel body are permitted for use.</p> <p>5.508.2.2.2.1 Valve caps. For systems with a refrigerant charge of 5 pounds or more, valve caps shall be brass or steel and not plastic.</p> <p>5.508.2.2.2.2 Seal caps. If designed for it, the cap shall have a neoprene O-ring in place.</p> <p>5.508.2.2.2.2.1 Chain tethers. Chain tethers to fit over the stem are required for valves designed to have seal caps.</p> <p>Exception: Valves with seal caps that are not removed from the valve during stem operation.</p> <p>5.508.2.3 Refrigerated service cases. Refrigerated service cases holding food products containing vinegar and salt shall have evaporator coils of corrosion-resistant material, such as stainless steel; or be coated to prevent corrosion from these substances.</p> <p>5.508.2.3.1. Coil coating. Consideration shall be given the heat transfer efficiency of coil coating to maximize energy efficiency.</p> <p>5.508.2.4 Refrigerant receivers. Refrigerant receivers with capacities greater than 200 pounds shall be fitted with a device that indicates the level of refrigerant in the receiver.</p> <p>5.508.2.5 Pressure testing. The system shall be pressure tested during installation prior to evacuation and charging.</p> <p>5.508.2.5.1 Minimum pressure. The system shall be charged with regulated dry nitrogen and appropriate tracer gas to bring system pressure up to 300 psig minimum.</p> <p>5.508.2.5.2 Leaks. Check the system for leaks, repair any leaks, and retest for pressure using the same gauge.</p> <p>5.508.2.5.3 Allowable pressure change. The system shall stand, unaltered, for 24 hours with no more than a +/- one pound pressure change from 300 psig, measured with the same gauge.</p> <p>5.508.2.6 Evacuation. The system shall be evacuated after pressure testing and prior to charging.</p> <p>5.508.2.6.1 First vacuum. Pull a system vacuum down to at least 1000 microns (+/- 50 microns), and hold for 30 minutes.</p> <p>5.508.2.6.2 Second vacuum. Pull a second system vacuum to a minimum of 500 microns and hold for 30 minutes.</p> <p>5.508.2.6.3 Third vacuum. Pull a third vacuum down to a minimum of 300 microns, and hold for 24 hours with a maximum drift of 100 microns over a 24-hour period.</p>	<input checked="" type="checkbox"/> As applicable Continued		

1. Green building measures in this table may be mandatory if adopted by a city, county, or city and county as specified in Section 101.7.
2. Required prerequisite for this Tier.
3. These measures are currently required elsewhere in statute or in regulation.
4. This application checklist is non-regulatory, intended only as an aid to the user and may not contain complete code language. Refer to Chapter 5 and Appendix Chapter A5 for complete code provisions.