



COUNTY OF SONOMA

PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA 95403-2829
 (707) 565-1900 FAX (707) 565-110

NONRESIDENTIAL (EFFECTIVE JULY 1, 2012) 2010 CALGreen+Tier 1 Checklist

(This checklist applies to newly constructed nonresidential buildings without sleeping accommodations. For additions, alterations, and repairs to existing nonresidential structures please use Form BPC-034.)

APPENDIX A5 – A5.7

(Revised per County of Sonoma Requirements - Based on CALGreen + Tier 1)

Project Address: _____

Project Name: _____

Project Description: _____

Instructions:

1. The owner/owner's agent and the design professional as required shall initially complete **Columns 1 and 2** of this checklist, sign and date the **Design Verification** section at the end of this checklist for submission of permit application. PRMD plans examiners shall review checklist for compliance. The approved checklist shall be printed on the project plans as a prerequisite for plan approval.
2. Prior to final inspection by the Building Department, the Building Inspector shall complete **Column 3** and sign or initial, and date the **Implementation Verification** section at the end of this checklist.

| Column 1 Feature or Measure | Column 2 Project Requirements <i>When checked, these items become a part of the approved plans and must be installed or incorporated into the project.</i> | | Column 3 Verification <i>Complete after implementation and prior to final inspection approval</i> |
|--|---|--|--|
| <i>See Chapter 5 and Appendix A5 of the 2010 California Green Building code for complete descriptions of features or measures listed here.</i> | Mandatory Tier 1 Prerequisites | Tier 1 electives <i>Applicant selects required elective measures</i> | Verification by Building Inspector or Special Inspector as noted |
| A5.1 PLANNING AND DESIGN | <i>All checked items are required for the project</i> | <i>Select at least one (1) elective measure from A5.1</i> | <i>Measures verified in the completed project by inspector</i> |
| 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"/> |

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| 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 A5.102. A5.103.3.1 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. 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. 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"/> <input type="checkbox"/> | <input type="checkbox"/> <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: <ol style="list-style-type: none">Window assemblies and non-structural roofing material.Hazardous materials that are remediated as a part of the project.A project with an addition of more than 2 times the square footage of the existing building. A5.105.1.2 Existing non-structural elements. Reuse existing interior non-structural 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 2 times the square footage of the existing building. 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"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

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| <p><i>See Chapter 5 and Appendix A5 of the 2010 California Green Building code for complete descriptions of features or measures listed here.</i></p> | <p align="center">Mandatory Tier 1 Prerequisites</p> | <p align="center">Tier 1 electives <i>Applicant selects required elective measures</i></p> | <p align="center">Verification by Building Inspector or Special Inspector as noted</p> |
| <p>SITE DEVELOPMENT</p> | | | |
| <p>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 or Best management practices (BMP) in Section 5.106.1.2</p> | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |
| <p>A5.106.2 Storm water design. Design storm water runoff rate and quantity in conformance with Section A5.106.3.1 and storm water runoff quality by Section A5.106.3.2, or by local requirements, whichever are stricter.</p> <p>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.</p> <p>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.</p> <p>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).</p> | <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| <p>A5.106.3 Low impact development (LID). Reduce peak runoff in compliance with Section 5.106.3.1. Employ <u>at least two</u> 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 A5.106.4.</p> | | <input type="checkbox"/> | <input type="checkbox"/> |

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| <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 of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.</p> <p>5.106.4.2 Long-term bicycle parking. For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space.</p> <p>5.106.4.3 Changing rooms. For buildings with over 10 tenant-occupants, provide changing/shower facilities in accordance with Table A5.106.4.3 or document arrangements with nearby changing/shower facilities.</p> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>A5.106.5.1 Designated parking for fuel-efficient vehicles. Provide designated parking for any combination of low-emitting, fuel-efficient, and carpool/van pool vehicles as shown in:</p> <p>A5.106.5.1.1. Tier 1, 10% of total spaces per Table A5.106.5.1.1</p> <p>A5.106.5.1.2. Tier 1, 10% of total spaces per Table A5.106.5.1.2</p> <p>A5.106.5.2 Designated parking. Provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table A5.106.6.2</p> | <p align="center"><input checked="" type="checkbox"/></p> | <p align="center"><input checked="" type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> |
| <p>A5.106.5.3.1 Electric vehicle supply wiring. For each space required in Table A406.1.6.2.1, provide panel capacity and dedicated outlet for one 208/240 V 40 amp circuit terminating within 5 feet of the midline of each parking space.</p> | | <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> |
| <p>A5.106.6 Parking capacity. Design parking capacity to meet but not exceed minimum local zoning requirements.</p> <p>A5.106.6.1 Reduce parking capacity. With the approval of the enforcement authority, employ strategies to reduce onsite parking area by</p> <ol style="list-style-type: none"> 1. Use of on street parking or compact spaces, illustrated on the site plan, or 2. Implementation and documentation of programs that encourage occupants to carpool, ride share, or use alternate transportation. | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

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| <p>5.106.7 Exterior walls. Meet requirements in the current edition of the <i>California Energy Code</i> and comply with either Section A5.106.7.1 or A5.106.7.2 for wall surfaces:</p> <p>A5.106.7.1 Fenestration. Provide vegetative or man-made shading devices for all fenestration on east-, south-, and west-facing walls.</p> <p>A5.106.7.1.1 East and west walls. Shading devices shall have 30 % coverage to a height of 20 feet or to the top of exterior wall, whichever is less.</p> <p>A5.106.7.1.2 South walls. Shading devices shall have 60% coverage to a height of 20 feet or to the top of the exterior wall, whichever is less.</p> <p>A5.106.7.2 Opaque wall areas. Use wall surfacing with SRI 25 (aged), for 75% of opaque wall areas.</p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <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 <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 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 147 of the <i>California Energy Code</i> 2. Emergency lighting | <p>Mandatory as of 7/1/2012</p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center">or</p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> |
| <p>A5.106.9 Building orientation. Locate and orient the building as follows:</p> <ol style="list-style-type: none"> 1. When site and location permit, orient the long axis of the building east and west, with a maximum allowable deviation of 30°. 2. Protect the building from thermal loss, drafts, and degradation of the building envelope caused by wind and wind-driven materials. | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <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.</p> | <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> |

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| <p>A5.106.11 Heat island effect. Reduce non-roof heat islands, and roof heat islands as follows:</p> <p>A5.106.11.1 Hardscape alternatives. Use <u>one</u> or a combination of strategies 1 through 3 for 50 percent of site hardscape <u>or</u> put 50 percent of parking underground.</p> <ol style="list-style-type: none"> 1. Provide shade (mature within 5 years of occupancy). 2. 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. 3. Use open-grid pavement system or pervious or permeable pavement system. <p>A5.106.11.2 Cool Roof. Use roofing materials having a minimum 3-year aged solar reflectance, thermal emittance complying with Sections A5.106.11.2.1 and A5.106.11.2.2 or a minimum aged or Solar Reflectance Index (SRI)³ equal to or greater than the values shown in Table A5.106.11.2.1.</p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p align="center">A5.2 ENERGY EFFICIENCY</p> | <p align="center"><i>All checked items are required for the project</i></p> | <p align="center"><i>No elective measures required from A5.2</i></p> | <p align="center"><i>Measures verified in the completed project by inspector</i></p> |
| | | | |
| <p>A5.201.1 Scope. The California Energy Commission will continue to adopt mandatory building standards.¹</p> | <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> |
| <p>A5.203.1 Energy performance. Using an Alternative Calculation Method approved by the California Energy Commission, calculate each nonresidential building's annual TDV regulated energy use components and compare them to the standard or "budget" building.</p> <p>A5.203.1.1 Tier 1. Exceed the 2010 California Energy Code requirements by 15 percent.</p> | <p align="center"><input checked="" type="checkbox"/></p> | <p align="center"><input checked="" type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>PRESCRIPTIVE MEASURES</p> | | | |
| <p>A5.204.1 ENERGY STAR equipment and appliances. All equipment and appliances provided by the builder shall be ENERGY STAR labeled if ENERGY STAR is applicable to that equipment or appliance.</p> | | <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> |

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| <p>A5.204.2 Energy monitoring. Provide sub-metering or equivalent combinations of sensor measurements and thermodynamic calculations, if appropriate, to record energy use data for each major energy system in the building.</p> <p>A5.201.2.1 Data Storage. The data management's system must be capable of electronically storing energy data and creating user reports showing hourly, daily, monthly and annual energy consumption for each major energy system.</p> <p>A5.204.2.2 Data Access. Hourly energy use data shall be accessible through a central data management system and must be available daily.</p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>A5.204.3 Demand response. HVAC systems with Direct Digital Control Systems and centralized lighting systems shall include pre-programmed demand response strategies that are automated with either a Demand Response Automation Internet Software Client or dry contact relays.</p> <p>A5.204.3.1 HVAC. The pre-programmed demand response strategies should be capable of reducing the peak HVAC demand by cooling temperature set point adjustment.</p> <p>A5.204.3.2 Lighting. The pre-programmed demand response strategies should be capable of reducing the total lighting load by a minimum 30 percent through dimming control or bi-level switching.</p> <p>A5.204.3.3 Software clients. The software clients will be capable of communicating with a DR Automation Server.</p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

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| <p>RENEWABLE ENERGY</p> | | | |
| <p>A5.211.1 On-site renewable energy. Use on-site renewable energy for at least 1 percent of the electrical service over current protection device rating calculated in accordance with the 2007 California Electrical Code, 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 2007 California Plumbing Code.</p> <p>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.</p> <p>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.</p> <p>A5.211.4 Prewiring for future rooftop solar. Size and install conduit from the building roof or eave to a location within the building identified as suitable for future installation of controls and/or storage batteries.</p> <p>A5.214.1 Grid-connected system without storage. Location within the building shall be sufficient dimensions to accommodate an inverter and/or other controls as approved by the utility.</p> <p>A5.211.4.2 System for future energy storage. If battery storage is anticipated, location within the building shall:</p> <ol style="list-style-type: none"> 1. Be stable, weather-proof, insulated against very hot and very cold weather and isolated from occupied spaces. 2. Be able to accommodate batteries, ventilation, an inverter, a charge controller (regulator) and, if grid-connected, other controls as approved by the utility. | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

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| <p>ELEVATORS, ESCALATORS, AND OTHER EQUIPMENT</p> | | | |
| <p>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.</p> <p>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.</p> <p>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.</p> <p>A5.212.1.2 Escalators. An escalator shall have a VVVF motor drive system that is fully regenerative when the escalator is in motion.</p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>ENERGY EFFICIENT STEEL FRAMING</p> | | | |
| <p>A5.213.1 Steel framing. Design for and employ techniques to avoid thermal bridging.</p> | | <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> |

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| <p>A5.3 WATER EFFICIENCY AND CONSERVATION</p> | | | |
| <p>INDOOR WATER USE</p> | <p align="center"><i>All checked items are required for the project</i></p> | <p align="center"><i>Select at least one (1) elective measure from A5.3</i></p> | <p align="center"><i>Measures verified in the completed project by inspector</i></p> |
| <p>5.303.1 Meters. Separate meters shall be installed for the uses described in Sections 503.1.1 and 503.1.2.</p> <p>5.303.1.1 For buildings in excess of 50,000 square feet. Separate submeters shall be installed as follows:</p> <ol style="list-style-type: none"> 1. For each individual leased, rented, or other tenant space within the building projected to consume more than 100 gal/day. 2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems: <ol style="list-style-type: none"> a. Makeup water for cooling towers where flow through is greater than 500 gpm (30L/s) b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s) c. Steam and hot-water boilers with energy input more than 5000,000 Btu/h (147 kW) <p>5.303.1.2 Excess consumption. Any building or a space within a building that is projected to consume more than 1,000 gal/day (3800 L/day).</p> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>5.303.2 20 percent savings. A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by 20 percent shall be provided. (Calculate savings by Water Use Worksheets)</p> <p>5.303.2.1 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all of the showerheads controlled by a single valve shall not exceed the maximum flow rate at ≥ 20 percent reduction contained in table 5.303.2.3 or the shower shall be designed to only allow one showerhead to be in operation at a time.</p> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

| <p align="center">Column 1 Feature or Measure</p> | <p align="center">Column 2 Project Requirements <i>When checked, these items become a part of the approved plans and must be installed or incorporated into the project.</i></p> | | <p align="center">Column 3 Verification <i>Complete after implementation and prior to final inspection approval</i></p> |
|---|--|---|--|
| <p>See Chapter 5 and Appendix A5 of the 2010 California Green Building code for complete descriptions of features or measures listed here.</p> | <p align="center">Mandatory Tier 1 Prerequisites</p> | <p align="center">Tier 1 electives <i>Applicant selects required elective measures</i></p> | <p align="center">Verification by Building Inspector or Special Inspector as noted</p> |
| <p>A5.303.2.3.1 Tier 1- 30% savings. A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by 30 percent shall be provided.</p> <p>A5.303.2.3.3 40% savings. A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by 40 percent shall be provided. (Calculate savings by Water Use Worksheets)</p> | | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>A5.303.3 Appliances.</p> <ol style="list-style-type: none"> 1. Clothes washers shall have a maximum Water Factor (WF) that will reduce the use of water. 2. Dishwashers shall meet the criteria in A5.303.3(2)(a) and (b). 3. Ice makers shall be air cooled. 4. Food steamers shall be connection-less or boiler-less. 5. The use and installation of water softeners shall be limited or prohibited by local agencies. 6. Combination ovens shall not consume more than 10 gph (38L/h) in the full operational mode. 7. Commercial pre-rinse spray valves manufactured on or after January 1, 2006 shall function at equal to or less than 1.6 gpm (0.10 L/s) at 60 psi (414 kPa) and <ol style="list-style-type: none"> a. Be capable of cleaning 60 plates in an average time of not more than 30 seconds per plate b. Be equipped with an integral automatic shutoff c. Operate at static pressure of at least 30 psi (207 kPa) when designed for a flow rate of 1.3 gpm (0.08 L/s) or less | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>A5.303.4 Wastewater reduction. Each building shall reduce the generation of wastewater by one of the following methods:</p> <ol style="list-style-type: none"> 1. The installation of water-conserving fixtures or 2. Utilizing nonpotable water systems. | <p>As applicable</p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

| <p align="center">Column 1 Feature or Measure</p> | <p align="center">Column 2 Project Requirements <i>When checked, these items become a part of the approved plans and must be installed or incorporated into the project.</i></p> | | <p align="center">Column 3 Verification <i>Complete after implementation and prior to final inspection approval</i></p> |
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| <p align="center"><i>See Chapter 5 and Appendix A5 of the 2010 California Green Building code for complete descriptions of features or measures listed here.</i></p> | <p align="center">Mandatory Tier 1 Prerequisites</p> | <p align="center">Tier 1 electives <i>Applicant selects required elective measures</i></p> | <p align="center">Verification by Building Inspector or Special Inspector as noted</p> |
| <p>5.303.6 Plumbing Fixtures and Fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the requirements listed for each type in Items listed in Table 5.303.6.</p> <ol style="list-style-type: none"> 1. Water closets (toilets) – flushometer type 2. Water closets (toilets) – tank type 3. Urinals 4. Public lavatory faucets 5. Public metering self-closing faucets 6. Residential bathroom lavatory sink faucets 7. Residential kitchen faucets 8. Residential shower heads 9. Single shower fixtures served by more than one showerhead. | <p align="center">As applicable</p> <p align="center"> <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"/> </p> | | <p align="center"><input type="checkbox"/></p> |
| <p>OUTDOOR WATER USE¹</p> | | | |
| <p>5.304.1 Water budget. A water budget shall be developed for landscape irrigation use.¹</p> | <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> |
| <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 at least 1,000 square feet but not more than 5,000 square feet, separate submeters shall be installed for outdoor potable water use.</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 are installed for indoor and outdoor potable water use for landscaped areas between 500 square feet and 1,000 square feet. (the level at which Section 5.304.2 applies).</p> | <p align="center"><input checked="" type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> |

¹ Refer to SCC 7-D3 “Water Efficient Landscape” for other residential requirements, http://www.sonoma-county.org/prmd/docs/landscape_ord/index.htm

| <p align="center">Column 1 Feature or Measure</p> | <p align="center">Column 2 Project Requirements <i>When checked, these items become a part of the approved plans and must be installed or incorporated into the project.</i></p> | | <p align="center">Column 3 Verification <i>Complete after implementation and prior to final inspection approval</i></p> |
|---|--|---|---|
| <p>See Chapter 5 and Appendix A5 of the 2010 California Green Building code for complete descriptions of features or measures listed here.</p> | <p align="center">Mandatory Tier 1 Prerequisites</p> | <p align="center">Tier 1 electives <i>Applicant selects required elective measures</i></p> | <p align="center">Verification by Building Inspector or Special Inspector as noted</p> |
| <p>5.304.3 Irrigation design. In new nonresidential projects install irrigation controllers and sensors which include the following criteria, and meet manufacturer's recommendations.</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. | <p align="center"> <input checked="" type="checkbox"/> As applicable <input checked="" type="checkbox"/> </p> | | <p align="center"> <input type="checkbox"/> <input type="checkbox"/> </p> |
| <p>A5.304.4 Potable water reduction. Provide water efficient landscape irrigation design that reduces the use of potable water.</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>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> | | <p align="center"> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> </p> | <p align="center"> <input type="checkbox"/> <input type="checkbox"/> </p> |
| <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 A5.304.4.</p> | | <p align="center"> <input type="checkbox"/> </p> | <p align="center"> <input type="checkbox"/> </p> |
| <p>A5.304.6 Restoration of areas disturbed by construction. Restore all areas disturbed during construction by planting with local native and/or non-invasive vegetation.</p> | | <p align="center"> <input type="checkbox"/> </p> | <p align="center"> <input type="checkbox"/> </p> |
| <p>A5.104.7 Previously developed sites. On previously developed or graded sites, restore or protect at least 50percent of the site area with native and/or non-invasive vegetation.</p> | | <p align="center"> <input type="checkbox"/> </p> | <p align="center"> <input type="checkbox"/> </p> |

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| <p><i>See Chapter 5 and Appendix A5 of the 2010 California Green Building code for complete descriptions of features or measures listed here.</i></p> | <p align="center">Mandatory Tier 1 Prerequisites</p> | <p align="center">Tier 1 electives <i>Applicant selects required elective measures</i></p> | <p align="center">Verification by Building Inspector or Special Inspector as noted</p> |
| <p>A5.304.8 Graywater irrigation system. Install graywater collection system for onsite subsurface irrigation using graywater.</p> | | <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> |
| <p align="center">A5.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY</p> | | | |
| <p align="center">EFFICIENT FRAMING SYSTEMS</p> | <p align="center"><i>All checked items are required for the project</i></p> | <p align="center"><i>Select at least one (1) elective measure from A5.4</i></p> | <p align="center"><i>Measures verified in the completed project by inspector</i></p> |
| <p>A5.404.1 Wood framing. Employ advanced wood framing techniques, or OVE, as permitted by the enforcing agency.</p> | | <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> |
| <p align="center">MATERIAL SOURCES</p> | | | |
| <p>A5.405.1 Regional materials. Select building materials or products for permanent installation on the project that have been harvested or manufactured in California or within 500 miles of the project site, meeting the criteria listed in A5.405.1.</p> | | <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> |
| <p>A5.405.2 Bio-based materials. Select bio-based building materials per Section A5.405.2.1 or A5.405.2.2.</p> <p>A5.405.2.1 Use certified wood products. Certified wood is an important component of green building strategies and the California Building Standards Commission will continue to develop a standard through the next code cycle.</p> <p>A5.405.2.2 Rapidly renewable materials. Use materials made from plants harvested within a ten-year cycle for at least 2.5 percent of total materials value, based on estimated cost.</p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>A5.405.3 Reused materials. Use salvaged, refurbished, refinished, or reused materials for at least 5 percent of the total value, based on estimated cost of materials on the project.</p> | | <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> |
| <p>A5.405.4 Recycled content. Use materials, equivalent in performance to virgin materials, with a total (combined) recycled content value (RCV) of:</p> <p>Tier 1. The RCV shall not be less than 10 percent of the total material cost of the project.</p> <p>Note. Use the equations in the subsections for calculating total materials cost, recycled content, RCV of materials and assemblies, and total RCV.</p> | | <p align="center"><input checked="" type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> |

| <p align="center">Column 1 Feature or Measure</p> | <p align="center">Column 2 Project Requirements <i>When checked, these items become a part of the approved plans and must be installed or incorporated into the project.</i></p> | | <p align="center">Column 3 Verification <i>Complete after implementation and prior to final inspection approval</i></p> |
|--|--|--|---|
| <p><i>See Chapter 5 and Appendix A5 of the 2010 California Green Building code for complete descriptions of features or measures listed here.</i></p> | <p align="center">Mandatory Tier 1 Prerequisites</p> | <p align="center">Tier 1 electives <i>Applicant selects required elective measures</i></p> | <p align="center">Verification by Building Inspector or Special Inspector as noted</p> |
| <p>ENHANCED DURABILITY AND REDUCED MAINTENANCE</p> | | | |
| <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> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>WEATHER RESISTANCE AND MOISTURE MANAGEMENT</p> | | | |
| <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.¹</p> | <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> |
| <p>5.407.2 Moisture control. Employ moisture control measures by the following methods;</p> <p>5.407.2.1 Sprinklers. 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.</p> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING</p> | | | |

| <p align="center">Column 1 Feature or Measure</p> | <p align="center">Column 2 Project Requirements <i>When checked, these items become a part of the approved plans and must be installed or incorporated into the project.</i></p> | | <p align="center">Column 3 Verification <i>Complete after implementation and prior to final inspection approval</i></p> |
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| <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.</p> <p>5.408.1.1 Construction waste management plan. 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 5.408.1.21 through 5.408.1.3, and the plan is accessible to the enforcement authority.</p> <p>5.408.2. Isolated jobsites. The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.</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> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center">or</p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

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| <p><i>See Chapter 5 and Appendix A5 of the 2010 California Green Building code for complete descriptions of features or measures listed here.</i></p> | <p align="center">Mandatory Tier 1 Prerequisites</p> | <p align="center">Tier 1 electives <i>Applicant selects required elective measures</i></p> | <p align="center">Verification by Building Inspector or Special Inspector as noted</p> |
| <p>A5.408.3.1 Enhanced construction waste reduction – Tier 1. Divert to recycle or salvage at least 65% of non-hazardous construction and demolition debris 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. | | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>LIFE CYCLE ASSESSMENT</p> | | | |

| <p align="center">Column 1 Feature or Measure</p> | <p align="center">Column 2 Project Requirements <i>When checked, these items become a part of the approved plans and must be installed or incorporated into the project.</i></p> | | <p align="center">Column 3 Verification <i>Complete after implementation and prior to final inspection approval</i></p> |
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| <p align="center"><i>See Chapter 5 and Appendix A5 of the 2010 California Green Building code for complete descriptions of features or measures listed here.</i></p> | <p align="center">Mandatory Tier 1 Prerequisites</p> | <p align="center">Tier 1 electives <i>Applicant selects required elective measures</i></p> | <p align="center">Verification by Building Inspector or Special Inspector as noted</p> |
| <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% 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>A5.409.1 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 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> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>BUILDING MAINTENANCE AND OPERATION</p> | | | |
| <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 for recycling.¹</p> | <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> |

| <p align="center">Column 1 Feature or Measure</p> | <p align="center">Column 2 Project Requirements <i>When checked, these items become a part of the approved plans and must be installed or incorporated into the project.</i></p> | | <p align="center">Column 3 Verification <i>Complete after implementation and prior to final inspection approval</i></p> |
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| <p><i>See Chapter 5 and Appendix A5 of the 2010 California Green Building code for complete descriptions of features or measures listed here.</i></p> | <p align="center">Mandatory Tier 1 Prerequisites</p> | <p align="center">Tier 1 electives <i>Applicant selects required elective measures</i></p> | <p align="center">Verification by Building Inspector or Special Inspector as noted</p> |
| <p>5.410.2 Commissioning. 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 as a minimum items listed in 5.410.2.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. Dry storage warehouses of any size 2. Areas under 10,000 square feet used for offices or other conditioned accessory spaces within dry storage warehouses 3. Tenant improvements under 10,000 square feet as described in Section 303.1.1 <p>5.410.2.1 Owner's Project Requirements (OPR). Documented before the design phase of the project begins the OPR shall include items listed in A5.410.4.</p> <p>5.410.2.2 Basis of Design (BOD). 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 5.410.2.2.</p> <p>5.410.2.3 Commissioning plan. A commissioning plan describing how the project will be commissioned shall be started during the design phase of the building project and shall include as a minimum items listed in 5.410.2.3.</p> <p>5.410.2.4 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. A Systems Manual and Systems Operations Training are required.</p> <p>5.410.2.5.1 Systems manual. The Systems Manual shall be delivered to the building owner or representative and the facilities operator and shall include the items listed in 5.410.2.5.1.</p> <p>5.410.2.5.2 Systems operations training. The 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. 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> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

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| <p>5.410.4 Testing, adjusting and balancing. Testing and adjusting of systems shall be required for buildings less than 10,000 square feet.</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> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p align="center">ENVIRONMENTAL QUALITY</p> | | | |
| <p>FIREPLACES</p> | | | |
| <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 California <i>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 certified emission limits.</p> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center">As applicable</p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

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| <p>POLLUTANT CONTROL</p> | | | |
| <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 A5.504.1.2.</p> <p>A5.504.1.2 Additional IAQ measures. Employ additional measures as listed in Items 1 through 5 in A5.504.1.3.</p> <p>A5.504.1.3 Temporary ventilation. If the HVAC system is used during construction, use return 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.</p> | <p align="center">☒</p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>A5.504.2 IAQ post-construction. Flush out the building per Section 5.504.2 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 States 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 (\$-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> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center">As applicable</p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center">As applicable</p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

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| <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, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of dust or debris which may collect in the system.</p> | <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> |

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| <p>5.504.4 Finish material pollutant control. Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.4.</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 as requested by 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 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 804.4.1.</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.</p> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

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| <p>A5.504.4.5.1 Early compliance with formaldehyde limits, Tier 1. Meet the requirements contained in Table 5.504.4.5 before the compliance dates.</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"> Product certifications and specifications. Chain of custody certifications. Product labeled and invoiced as meeting Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.) Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZA 2269 or European 636.3S standards. Other methods acceptable to the enforcing agency. | <p align="center">As applicable</p> <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> | <p align="center">☒</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> | <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> |
| <p>A5.504.4.6 Resilient flooring systems. Comply with the VOC-emission limits defined in the 2009 CHPS criteria and listed on its High Performance Products Database; products compliant with CHPS criteria certified under the Greenguard Children & Schools program; certified under the FloorScore program of the Resilient Floor covering Institute; or meet California Department of Public Health 2010 Specification 01350.</p> <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. For 80 percent of floor area receiving resilient flooring, install resilient flooring complying with the VOC-emission limits defined in the 2009 CHPS criteria and listed on its High Performance Products Database; products compliant with CHPS criteria certified under the Greenguard Children & Schools program; certified under the FloorScore program of the Resilient Floor covering Institute; or meet California Department of Public Health 2010 Specification 01350.</p> <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. Comply with the standards listed in Items 1 through 3.</p> <p>A5.504.4.8.2 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.</p> | <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> | <p align="center">☐</p> <p align="center">☐</p> <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> | <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> |

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| <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>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 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 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>Exception: A MERV-1 filter shall be allowed for return air only or return with prefiltered outside air, if the filter is of a re-usable, nondisposable type, and the fan energy use of that air delivery system is 0.4W/cfm or less at design airflow.</p> <p>A5.504.5.3.1 Filters. 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 align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <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> | <p align="center"><input type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> |

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| <p>INDOOR MOISTURE AND RADON CONTROL</p> | | | |
| <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.</p> | <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> |
| <p>AIR QUALITY AND EXHAUST</p> | | | |
| <p>5.506.1 Outside air delivery. For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 121 of the <i>California Energy Code</i>, and Chapter 4 of CCR, Title 8, or the applicable local code, whichever is more stringent.¹</p> | <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> |
| <p>5.506.2 Carbon dioxide (CO2) monitoring. For buildings 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, Title 24, Section 121(c).¹</p> | <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> |
| <p>ENVIRONMENTAL COMFORT</p> | | | |
| <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 2010 California Energy Code 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 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> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>A5.507.2 Daylight. Provide daylit spaces as required for toplighting and sidelighting in the 2010 California Energy Code. In constructing a design, consider Items 1 through 4 in A5.507.3.</p> | | <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> |

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| <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 75percent 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> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>5.507.4 Acoustical control. Employ building assemblies and components with STC values determined in accordance with ASTM E90 and ASTM E413 or OITC determined in accordance with ASTM E1332, 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 Items 1 and 2.</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}-1 Hr 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),</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}-1 Hr) of 50dBA in occupied areas during any hour of operation.</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.</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> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/> or</p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

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| <p>OUTDOOR AIR QUALITY</p> | | | |
| <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.¹</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. | <p>As applicable</p> <p align="center">☒</p> <p align="center">☒</p> | <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> | <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> |
| <p align="center">Additions and Alterations to Existing Nonresidential Buildings</p> | | | |
| <p>Planning and Design</p> | <p align="center"><i>All checked items are required for the project</i></p> | <p align="center"><i>Select at least one (1) elective measure from A5.1</i></p> | <p align="center"><i>Measures verified in the completed project by inspector</i></p> |
| <p>5.710.6 Site development</p> <p>5.710.6.1 Storm water pollution prevention. Additions that disturb less than one acre of land shall prevent the pollution of stormwater runoff from the construction activities through local ordinance in Section 5.710.6.1.1 or Best management practices (BMP) in Section 5.710.6.1.2</p> | <p align="center">☒</p> <p align="center">or</p> <p align="center">☒</p> | | <p align="center">☐</p> <p align="center">☐</p> |

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| <p>5.710.6.2 Bicycle parking. Comply with Sections 5.710.6.2.1 and 5.710.6.2.2; or meet the applicable local ordinance, whichever is stricter.</p> <p>5.710.6.2.1 Short-term bicycle parking. If the project is anticipated to generate visitor traffic and adds 10 or more vehicular parking spaces, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of the additional visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.</p> <p>5.710.6.2.2 Long-term bicycle parking. For buildings with over 10 tenant-occupants that add 10 or more vehicular parking spaces, provide secure bicycle parking for 5% of additional motorized vehicle parking capacity, with a minimum of one space.</p> | <p align="center"> <input checked="" type="checkbox"/> or <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> </p> | | <p align="center"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </p> |
| <p>5.710.6.3 Designated parking. For that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient, and carpool/van pool vehicles as shown in Table 5.106.2.2 of Division 5.1 based on the number of additional spaces.</p> | <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> |
| <p>5.710.6.10 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.</p> | <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> |

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| <p>Water Efficiency and Conservation</p> | | | |
| <p>5.712.3 Indoor water use.</p> <p>5.712.3.1 Meters. Separate submeters or metering device shall be installed for the used described in Sections 5.712.3.1.1 and 5.713.3.1.2.</p> <p>5.712.3.1.1 Additions to existing buildings in excess of 50,000 square feet. Separate submeters shall be installed as follows:</p> <ol style="list-style-type: none"> 1. For each individual leased, rented, or other tenant space within the building projected to consume more than 100 gal/day. 2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems: <ol style="list-style-type: none"> a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s) b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s) c. Steam and hot-water boilers with energy input more than 500,000 Btu/h (147 k-W) <p>5.712.3.1.2 Excess consumption. Any addition or added space within an addition that is projected to consume more than 1,000 gal/day (3800 L/day).</p> <p>5.712.3.2 20% Savings. A schedule of newly installed plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the addition or area of alteration to the building by 20 % shall be provided. (Calculate savings by Water Use Worksheets)</p> <p>5.712.3.3 Multiple showerheads serving one shower. When a shower is served by more than one newly installed showerhead, the combined flow rate of all the showerheads controlled by a single valve shall not exceed the maximum flow rate at ≥ 20 percent reduction contained in Table 5.303.2.2 or the shower shall be designed to only allow one showerhead to be in operation at a time.</p> <p>5.712.3.5 Plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall meet the standards referenced in Table 5.503.6 of Division 5.3.</p> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/> Or</p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

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| <p>5.712.4 Outdoor water use.</p> <p>5.712.4.1 Water budget. A water budget shall be developed for landscape irrigation use installed in conjunction with addition or alteration.</p> <p>5.712.4.2 Outdoor potable water use. For building addition or alteration requiring upgraded water service for landscaped areas of at least 1,000 square feet but not more than 5,000 square feet (the level at which Water Code 535 applies), separate submeters or metering devices shall be installed for outdoor potable water use.</p> <p>5.712.4.3 Irrigation design. In building addition or alteration with at least 1,000 square feet but not more than 2500 square feet of cumulative landscaped area (the level at which the MLO applies), install irrigation controllers and sensors which include the following criteria, and meet manufacturer's recommendations.</p> <p>5.712.4.3.1 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 communicated with the controller(s). Soil moisture-based controllers are not required to have rain sensor input. | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center">As applicable</p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>Material Conservation and Resource Efficiency</p> | | | |
| <p>5.713.7 Water resistance and moisture management.</p> <p>5.713.7.1 Weather protection. Provide a weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1403.2 (Weather Protection) and California Building Code Section 150, (Mandatory Features and Device), manufacturer's installation instructions, or local ordinance, whichever is more stringent.</p> <p>5.713.7.2 Moisture control. Employ moisture control measures by the following methods.</p> <p>5.713.7.2.1 Sprinklers. Design and maintain landscape irrigation systems to prevent spray on structures.</p> <p>5.713.7.2.2 Entries and openings. Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings.</p> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

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| <p>5.713.8 Construction waste reduction, disposal and recycling.</p> <p>5.713.8.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 50% of the nonhazardous construction waste in accordance with Section 5.713.8.1.1; or meet a local construction and demolition waste management ordinance, whichever is more stringent.</p> <p>5.713.8.1.1 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>5.713.8.1.2 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 5.713.8.1.1 and 5.713.8.1.2:</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, where demolition of an existing structure(s) is necessary for the new construction <p>5.713.8.1.3 Documentation. Documentation shall be provided to the enforcing agency which demonstrated compliance with Section 5.713.8.1.1, Items through 4. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.</p> <p>5.713.8.2 Isolated jobsites. The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.</p> <p>5.713.8.3 Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.</p> <p>Exception: Reuse, either on-or off site, of vegetation or soil contaminated by disease or pest infestation.</p> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center">or</p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

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| <p>5.713.10 Building maintenance and operation.</p> <p>5.713.10.1 Recycling by occupants. If not provided on the existing site and where site conditions permit, provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of nonhazardous materials for recycling in accordance with one of the items listed in 1 through 3.</p> <p>5.713.10.4 Testing and adjusting. Testing and adjusting of new systems installed to serve an addition or alteration subject to Section 5.701.1 shall be required.</p> <p>5.713.10.4.2 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 5.713.10.4.2</p> <p>5.713.10.4.3 Procedures. Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system.</p> <p>5.713.10.4.3.1 HVAC balancing. In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, balance the system in accordance with the procedures defined by national standards listed in Section 5.713.10.4.3.1 or as approved by the enforcing agency.</p> <p>5.713.10.4.4 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>5.713.10.4.5 Operation and maintenance manual. Provide the building owner or representative with detailed operating and maintenance instructions and copies of warranties/warranties for each system prior to final inspection.</p> <p>5.713.10.4.5.1 Inspection and reports. Include a copy of all inspection verifications and reports required by the enforcing agency.</p> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |
| <p>Environmental Quality</p> | | | |
| <p>5.714.3 Fireplaces.</p> <p>5.714.3.1 General (Fireplaces). Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the 2010 <i>California Energy Code</i>, Subchapter 7, Section 150.</p> <p>5.714.3.1.1 Woodstoves. Woodstoves and pellet stoves shall comply with US EPA Phase II emission limits.</p> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center">As applicable</p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

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| <p>5.714.4 Pollutant control.</p> <p>5.714.4.1 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.</p> <p>5.714.4.3 Covering of duct openings of mechanical equipment during construction. At the time of rough installation and during storage on the construction site 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> <p>5.714.4.4 Finish material pollutant control. Finish materials shall comply with Sections 5.714.4.4.1 through 5.714.4.4.4.</p> <p>5.714.4.4.1 Adhesives, sealants, and caulks. Adhesives, sealants and caulks used on the project shall meet the requirements of the following standards.</p> <ol style="list-style-type: none"> 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 in Division 5.5. 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>5.714.4.4.3 Paints and coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measure, as shown in 5.504.4.3 in Division 5.5, unless more stringent local limits apply.</p> <p>5.714.4.4.3.1 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>5.714.4.4.3.2 Verification. Verification of compliance with this section shall be provided as requested by the enforcing agency.</p> | <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> | | <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> |

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| <p>5.714.4.4.4 Carpet systems. All carpet installed in the building interior shall meet the testing and product requirements of one of the standards listed in 5.714.4.4.4</p> <p>5.714.4.4.4.1 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>5.714.4.4.4.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1 in Division 5.5.</p> <p>5.504.4.4.5 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 in Division 5.</p> <p>5.504.4.4.5.2 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 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/NZA 2269 or European 636.3S standards. 5. Other methods acceptable to the enforcing agency. <p>5.714.4.4.6 Resilient flooring systems. For 50% of floor area receiving resilient flooring, install resilient flooring complying with the VOC-emission limits defined in the 2009 CHPS criteria and listed on its High Performance Products Database; products compliant with CHPS criteria certified under the Greenguard Children & Schools program; certified under the FloorScore program of the Resilient Floor covering Institute (RFCI) FloorScore program; or meet California Department of Public Health 2010 Specification 01350.</p> <p>A5.504.4.4.6.1 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.</p> | <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center">As applicable</p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> <p align="center"><input checked="" type="checkbox"/></p> | | <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> |

| <p align="center">Column 1 Feature or Measure</p> | <p align="center">Column 2 Project Requirements <i>When checked, these items become a part of the approved plans and must be installed or incorporated into the project.</i></p> | | <p align="center">Column 3 Verification <i>Complete after implementation and prior to final inspection approval</i></p> |
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| <p><i>See Chapter 5 and Appendix A5 of the 2010 California Green Building code for complete descriptions of features or measures listed here.</i></p> | <p align="center">Mandatory Tier 1 Prerequisites</p> | <p align="center">Tier 1 electives <i>Applicant selects required elective measures</i></p> | <p align="center">Verification by Building Inspector or Special Inspector as noted</p> |
| <p>5.714.7 Environmental comfort</p> <p>5.714.7.1 Acoustical control. Employ building assemblies and components with STC values determined in accordance with ASTM E90 and ASTM E413 or OITC determined in accordance with ASTM E1332, using either the prescriptive or performance method in Section 5.714.7.1 or 5.714.7.1.2.</p> <p>5.714.7.1.1 Exterior noise transmission, prescriptive method. Wall and floor-ceiling assemblies exposed to the noise source making up the building addition or altered 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 Items 1 and 2.</p> <p>5.714.7.1.1.1 Noise exposure where noise contours are not readily available. Buildings exposed to a noise level of 65 dB L_{eq-1} Hr during any hour of operation shall have building addition or alteration 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).</p> <p>5.714.7.1.2 Performance method. For buildings located as defined in Sections A5.507.4.1 or A5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building addition or altered 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-1} Hr) of 50dBA in occupied areas during any hour of operation.</p> <p>5.714.7.1.2.1 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>5.714.7.1.3 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> | <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒ or</p> <p align="center">☒</p> <p align="center">☒</p> <p align="center">☒</p> | | <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> <p align="center">☐</p> |
| <p>5.714.8 Outdoor air quality</p> <p>5.714.8.1 Ozone depletion and global warming reductions. Installations of HVAC, refrigeration, and fire suppression equipment shall comply with Sections 5.714.8.1.1 and 5.714.8.1.2.</p> <p>5.714.8.1.1 Chlorofluorocarbons CFCs. Install HVAC and refrigeration equipment that does not contain CFCs.</p> <p>5.714.8.1.2 Halons. Install HVAC and refrigeration equipment that does not contain Halons.</p> | <p align="center">☒</p> <p align="center">☒</p> | | <p align="center">☐</p> <p align="center">☐</p> |

1. These measures are currently required elsewhere in statute or in regulation.