MICHAEL N. FEUER
CITY ATTORNEY

REPORT NO. R13-0360

DEC 12 2013

REPORT RE:

DRAFT OF ORDINANCE AMENDING ARTICLE 9, CHAPTER IX OF THE LOS ANGELES MUNICIPAL CODE TO MAKE VARIOUS TECHNICAL CHANGES AND INCORPORATE PORTIONS OF THE 2013 CALIFORNIA GREEN BUILDING STANDARDS CODE

The Honorable City Council
of the City of Los Angeles
Room 395, City Hall
200 North Spring Street
Los Angeles, California 90012

Council File No.13-1214

Honorable Members:

Pursuant to the request of City Council, this Office has prepared and now transmits for your consideration the enclosed draft ordinance, approved as to form and legality. The draft ordinance amends the Los Angeles Municipal Code (LAMC) to make various technical changes and incorporate portions of the 2013 Edition of the California Green Building Standards Code.

Summary of Ordinance Provisions

On October 29, 2013, the Planning and Land Use Management (PLUM) Committee considered reports from the Mayor and the Department of Building and Safety (DBS) relative to proposed ordinances to amend various sections of the LAMC including the Green Code. At the meeting, the PLUM Committee requested that the

City Attorney prepare and present ordinances to amend the various sections of the LAMC as outlined in the reports.

This draft ordinance makes various technical changes to the existing regulations in the Green Code. It also eliminates obsolete code sections, clarifies code sections and updates code year references.

CEQA Determination

Under California Environment Quality Act (CEQA) Section 21065 and State CEQA Guidelines Section 15378(b)(2) and (b)(5), continuing administrative activities and organizational activities that will not result in direct or indirect physical changes in the environment are not CEQA projects. The draft ordinance makes various technical changes to the existing regulations, eliminates obsolete code sections, and clarifies code sections. These changes will not result in any direct or indirect physical change to the environment. Therefore, the ordinance is not subject to CEQA.

Council Rule 38 Referral

The draft ordinance was sent, pursuant to Council Rule 38, to the Department of Building and Safety.

If you have any questions regarding this matter, please contact Deputy City Attorney Kim Rodgers Westhoff at (213) 978-8242. She or another member of this Office will be present when you consider this matter to answer any questions you may have.

Very truly yours,

MICHAEL N. FEUER, City Attorney

By

DAVID MICHAELSON
Chief Assistant City Attorney

DM/KRW:zra
Transmittal

ORDINANCE NO. _____

An ordinance amending certain provisions of Article 9, Chapter IX of the Los Angeles Municipal Code to reflect local administrative changes and incorporate by reference portions of the 2013 Edition of the California Green Building Standards Code (CALGreen Code).

THE PEOPLE OF THE CITY OF LOS ANGELES DO ORDAIN AS FOLLOWS:

Section 1. Subsection 99.01.101.3.1 of the Los Angeles Municipal Code is added to read as follows:

99.01.101.3.1. The provisions of this Code shall also apply to residential alterations that increase the building's conditioned volume. Conditioned space is defined as an enclosed space provided with mechanical heating that has a capacity exceeding 10 Btu/hr-ft^2, or is provided with mechanical cooling that has a capacity exceeding 5 Btu/hr-ft^2.

Sec. 2. Section 99.02.200 of the Los Angeles Municipal Code is added to read as follows:

SEC. 99.02.200. BASIC PROVISIONS.

Chapter 2 of the 2013 California Green Building Standards Code is adopted by reference except as amended herein.

Sec. 3. Subsection 99.02.201.1 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 4. Subsection 99.02.201.2 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 5. Subsection 99.02.201.3 of the Los Angeles Municipal Code is amended to read as follows:

99.02.201.3. Terms Defined in Other Documents. Where terms are not defined in this Code and are defined in the Los Angeles Building Code or other referenced document, such terms shall have the meanings ascribed to them as in those publications.

Sec. 6. Subsection 99.02.201.4 of the Los Angeles Municipal Code is amended to read as follows:

99.02.201.4. Terms Not Defined. Where terms are not defined as prescribed in this section, such terms shall have ordinarily accepted meanings such as context applies.

The definitions in Webster's Third New International Dictionary of the English Language, Unabridged shall be considered as providing ordinarily accepted meanings.

Section 202 of the CALGreen Code is adopted by reference with the following amendments:

The following CALGreen Code definitions are not adopted:

CALIFORNIA BUILDING CODE

CALIFORNIA ELECTRICAL CODE

CALIFORNIA MECHANICAL CODE

CALIFORNIA PLUMBING CODE

CALIFORNIA RESIDENTIAL CODE

The following definitions are added:

DEPARTMENT. The Department of Building and Safety of the City of Los Angeles.

LOS ANGELES BUILDING CODE. The current version of the Los Angeles Building Code, Articles 1 and 8 of Chapter IX of the Los Angeles Municipal Code.

LOS ANGELES BUILDING STANDARDS CODE. Articles 1 thru 9 of Chapter IX of the Los Angeles Municipal Code.

LOS ANGELES ELECTRICAL CODE. The current version of the Los Angeles Electrical Code, Article 3 of Chapter IX of the Los Angeles Municipal Code.

LOS ANGELES MECHANICAL CODE. The current version of the Los Angeles Mechanical Code, Article 5 of Chapter IX of the Los Angeles Municipal Code.

LOS ANGELES PLUMBING CODE. The current version of the Los Angeles Plumbing Code, Article 4, Chapter IX of the Los Angeles Municipal Code.

LOS ANGELES RESIDENTIAL CODE. The current version of the Los Angeles Residential, Article 1.5, Chapter IX of the Los Angeles Municipal Code.

The following terms are modified as follows:

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For purposes of the Los Angeles Electrical Code, off-road, self-propelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats, and the like, are not included.

POTABLE WATER. Water that is drinkable and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards. See definition in the Los Angeles Plumbing Code.

Sec. 7. A new Section 99.03.300 is added to the Los Angeles Municipal Code to read as follows:

SEC. 99.03.300. BASIC PROVISIONS.

Chapter 3 of the 2013 California Green Building Standards Code is adopted by reference except as amended herein.

Sec. 8. Subsection 99.03.301.1 of the Los Angeles Municipal Code is amended to read as follows:

99.03.301.1. Scope. Buildings shall be designed to include the green building measures specified as mandatory in this Code. Voluntary green building measures are also included in this Code and may be included in the design and construction of structures covered by this Code, but are not required unless they are part of Tier 1 or Tier 2. The checklists in Table A4.602 and Table A5.602 are for reference only.

Sec. 9. A new Subsection 99.03.301.1.1 is added to the Los Angeles Municipal Code to read as follows:

99.03.301.1.1. Additions and Alterations (HCD). The mandatory provisions of Division 4 shall be applied to additions or alterations of existing residential buildings as specified in Section 99.01.101.3.

EXCEPTION: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local

building Department. See Civil Code Section 1101.1, *et seq.* for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

Sec. 10. Subsection 99.03.301.3 of the Los Angeles Municipal Code is added to read as follows:

99.03.301.3. Nonresidential Additions and Alterations (BSC). The provisions of individual sections of Chapter 5 apply to newly constructed buildings, building additions, and/or building alterations as specified in Section 99.01.101.3. Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work. A code section will be designated by a banner to indicate where the code section only applies to newly constructed buildings **[N]** or to additions and alterations **[AA]**. When the code section applies to both, no banner will be used.

Sec. 11. Subsection 99.03.303.1 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 12. Subsection 99.03.303.1.1 of the Los Angeles Municipal Code is amended to read as follows:

99.03.303.1.1. Tenant Improvements. The provisions of this Code shall apply to the initial tenant or occupant improvements to a project and to any future alteration that falls under the scope of 99.01.101.3.

Sec. 13. The second unnumbered paragraph of Subsection 99.03.304.1.1 of the Los Angeles Municipal Code is amended to read as follows:

[BSC & HCD] Where there are practical difficulties involved in complying with the threshold levels of a tier, the Department may grant modifications for individual cases. The Department shall first find that a special individual reason makes the strict letter of the tier impractical and that modification is in conformance with the intent and purpose of the measure. The details of any action granting modification shall be recorded and entered in the files of the Department.

Sec. 14. The Title of Division 4 of Article 9 of Chapter IX of the Los Angeles Municipal Code is amended to read as follows:

ARTICLE 9, DIVISION 4

RESIDENTIAL MANDATORY MEASURES

Sec. 15. A new Section 99.04.100 is added to the Los Angeles Municipal Code to read as follows:

SEC. 99.04.100. BASIC PROVISIONS.

Chapter 4 of the 2013 California Green Building Standards Code is adopted by reference except as amended herein.

Sec. 16. The first unnumbered paragraph of Subsection 99.04.106.2 of the Los Angeles Municipal Code is amended to read as follows:

99.04.106.2. Storm Water Drainage and Retention During Construction. Projects which disturb soil shall manage storm water drainage during construction. In order to manage storm water drainage during construction one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site:

Sec. 17. A new Subsection 99.04.106.4 is added to the Los Angeles Municipal Code to read as follows:

99.04.106.4. Electric Vehicle (EV) charging for new construction. New construction shall comply with Section 99.04.106.4.1 and 99.04.106.4.2 to facilitate future installation of electric vehicle supply equipment (EVSE). EVSE and all devices related to EV charging shall be installed in accordance with *California Electrical Code,* Article 625.

Notes:

1. Due to logistics related to EV charging, this section may apply to non-residential occupancies, e.g., garages, which either are accessory to or support residential (R) occupancies.

2. The Society of Automotive Engineers (SAE) International Surface Vehicle Recommended Practice, J1772, "SAE Electric Vehicle and Plug in Hybrid Electric Vehicle Conductive Charge Coupler," Table 5.2 AC Charging Electrical Ratings (North America), October 2012, references the AC Level 2 charge method as 208 to 240-volt AC, single phase, and up to 80 amperes.

99.04.106.4.1. One- and Two-Family Dwellings and Townhouses with Attached Private Garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240 volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or a subpanel and shall terminate in close proximity to the proposed location of the charging system into a listed cabinet, box or other enclosure. Raceways are required to be continuous at enclosed or concealed areas and spaces. A raceway may terminate in an attic or other approved location when it can be demonstrated that the area is accessible and no removal of materials is necessary to complete the final installation. The panel or subpanel shall have sufficient capacity to support at least Level 2 EVSE.

EXCEPTION: Equivalent installation methods approved by the Department.

99.04.106.4.1.1. Labeling Requirement. A label stating "EV CAPABLE" shall be posted in a conspicuous place at the service panel or subpanel and next to the raceway termination point.

99.04.106.4.2. Multifamily Dwellings. At least five (5)% of the total parking spaces provided for all types of parking facilities, but in no case less than one location, shall be capable of supporting future EVSE.

99.04.106.4.2.1. Single Charging Location Required. When only a single charging location is required, install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate in close proximity to the proposed location of the charging system into a listed cabinet, box or enclosure. The panel or subpanel shall have sufficient capacity to support at least Level 2 EVSE.

EXCEPTION: Equivalent installation methods approved by the Department.

99.04.106.4.2.2. Multiple Charging Locations Required. When multiple charging locations are required, plans shall indicate the proposed type and location of EVSE and also include raceway method(s), wiring schematics and electrical calculations to verify that the electrical system has sufficient capacity to simultaneously charge all electric vehicles at all designated EV charging locations at their full rated amperage. Plan design shall be based upon Level 2 or greater EVSE at its maximum operating ampacity. Only underground raceways and related underground components are required to be installed at the time of construction.

99.04.106.4.2.3. Labeling Requirement. A label stating "EV CAPABLE" shall be posted in a conspicuous place at the service panel or subpanel and next to the raceway termination point.

Notes:

1. The California Department of Transportation adopts and publishes the California Manual on Uniform Traffic Control Devices (California MUTCD) to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives under number 13-01. Website: www.dot.ca.gov/hq/traffops/signtech/signdel/policy.htm

2. See California Vehicle Code Section 22511 for EV charging space signage in off-street parking facilities and for use of EV charging spaces.

3. The Governor's Office of Planning and Research published a Zero-Emission Vehicle Community Readiness Guidebook, which provides helpful information for local governments, residents and businesses. Website: http://opr.ca.gov/docs/ZEV_Guidebook.pdf

4. The Governor's Office of Planning and Research (OPR) has developed draft guidelines, "Plug-In Electric Vehicles: Universal Charging Access Guidelines and Best Practices," addressing physical accessibility standards and design guidelines for EVs. Website: http://opr.ca.gov/docs/PEV_Access_Guidelines.

Sec. 18. A new Subsection 99.04.106.5 is added to the Los Angeles Municipal Code to read as follows:

99.04.106.5. Cool Roof for Reduction of Heat Island Effect. Roofing material shall comply with the following:

99.04.106.5.1. Solar Reflectance. Roofing material shall have a minimum 3-year aged solar reflectance equal to or greater than the values specified in Table 4.106.5.

99.04.106.5.2. Thermal Emittance. Roofing materials shall have a Cool Roof Rating Council (CRRC) initial or aged thermal emittance equal to or greater than those specified in Table 4.106.5.

Solar reflectance values shall be based on the aged reflectance value of the roofing product or the equation in Section A4.106.5.1 if the CRRC certified aged solar reflectance are not available.

EXCEPTIONS:

1. Roof repair;

2. Roof replacement when the roof area being replaced is equal to or less than 50% of the total roof area; or

3. Building-integrated photovoltaics (BIPV).

TABLE 4.106.5

ROOF SLOPE	MINIMUM 3-YEAR AGED SOLAR REFLECTANCE	THERMAL EMITTANCE
≤ 2 : 12	0.63	0.75
> 2 : 12	0.20	0.75

Sec. 19. Subsection 99.04.106.6 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 20. A new Subsection 99.04.106.7 is added to the Los Angeles Municipal Code to read as follows:

99.04.106.7. Reduction of Heat Island Effect for Nonroof Areas [N]. Reduce nonroof heat islands for 25% of pathways, patios, driveways or other paved areas by using one or more of the methods listed.

1. Use trees or other plantings to provide shade and that mature within 5 years of planting. Trees shall be suitable in mature size and environmental requirements for the site. Tree selection and placement shall consider location and size of areas to be shaded, location of utilities, views from the structure, distance to sidewalks and foundations, overhangs onto adjacent properties and streets; other infrastructure and adjacent to landscaping. In addition, shading shall not cast a shadow, as specified, on any neighboring solar collectors pursuant to *Public Resources Code* Section 25981, *et seq.* (Solar Shade Control Act);

2. Use high albedo materials with an initial solar reflectance value of at least .30 as determined in accordance with American Society for Testing and Materials (ASTM) Standards E1918 or C1549;

3. Use open grid pavement system or pervious or permeable pavement system;

4. Use solar panel arrays to create a canopy shade system; or

5. Other methods of reducing heat island effects acceptable to the Department.

Sec. 21. Section 99.04.202 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 22. Section 99.04.203 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 23. Section 99.04.204 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 24. Section 99.04.205 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 25. Section 99.04.206 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 26. Section 99.04.207 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 27. Section 99.04.208 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 28. Section 99.04.209 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 29. Section 99.04.210 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 30. Section 99.04.211 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 99.04.211. RENEWABLE ENERGY.

99.04.211.4. Solar Ready Buildings [N]. Buildings for which plans were submitted to the Department for plan check and the plan check fee was paid after the effective date of the 2013 California Energy Code (Title 24, Part 6) shall comply with the following:

1. All one- and two-family dwellings, shall comply with Section 110.10(b)1A, 110.10(b)2, 110.10(b)3, 110.10(b)4, 110.10(c), 110.10(d) and 110.10(e) of the California Energy Code (Title 24, Part 6).

2. All buildings, other than one- and two-family dwellings, shall comply with Section 110.10(b) through 110.10(d) of the California Energy Code (Title 24, Part 6).

99.04.211.5. Space for Future Electrical Solar System Installation [N]. Buildings for which plans were submitted to the Department for plan check and the plan check fee was paid prior to the effective date of the 2013 California Energy Code (Title 24, Part 6), shall provide a minimum of 250 square feet of contiguous unobstructed roof area for the installation of future solar photovoltaic or other electrical solar panels. The location shall be suitable for installing future solar panels as determined by the designer.

EXCEPTION:

1. For roofs with an area of less than 1,000 square feet, the unobstructed area may be reduced to 25% of the total roof.

2. Buildings designed and constructed with a solar photovoltaic system or an alternate system with means of generating electricity at the time of final inspection.

3. Where it is not feasible to provide one contiguous area due to roofing configuration, two unobstructed areas with a minimum combined area of 250 square feet may be provided.

4. Buildings designed with a green roof making it unfeasible to provide this area.

Sec. 31. Subsection 99.04.303.1 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 32. Table 4.303.1 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 33. A new Subsection 99.04.303.1.2 is added to the Los Angeles Municipal Code to read as follows:

99.04.303.1.2. Urinals. The effective flush volume of urinals shall not exceed 0.125 gallons per flush.

Sec. 34. Subsection 99.04.303.2 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 35. Table 4.303.2 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 36. Subsection 99.04.304.1.1 of the Los Angeles Municipal Code is amended to read as follows:

99.04.304.1.1. Irrigation Design [N]. Buildings on sites with over 2,500 square feet of cumulative irrigated landscaped areas shall have irrigation controllers, which meet the criteria in Section 99.4.304.1.

Sec. 37. Section 99.04.406 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 99.04.406. ENHANCED DURABILITY AND REDUCED MAINTENANCE.

99.04.406.1. Rodent Proofing. Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the Department.

Sec. 38. Items 1 and 10 of Subsection 99.04.410.1 of the Los Angeles Municipal Code are amended to read as follows:

1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.

10. A copy of all special inspection verifications required by the Department or this Code.

Sec. 39. Section 99.04.504 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 99.04.504. POLLUTANT CONTROL.

99.04.504.1. Covering of Duct Openings and Protection of Mechanical Equipment During Construction. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the Department to reduce the amount of water, dust and debris, which may enter the system.

99.04.504.2.4. Verification. Verification of compliance with this section shall be provided at the request of the Department. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification.

2. Field verification of on-site product containers.

99.04.504.5.1. Documentation. Verification of compliance with this section shall be provided as requested by the Department. Documentation shall include at least one of the following:

1. Product certifications and specifications;

2. Chain of custody certifications;

3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, *et seq.*);

4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards; or

5. Other methods acceptable to the Department.

Sec. 40. Section 99.04.505 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 99.04.505. INTERIOR MOISTURE CONTROL.

99.04.505.1. General. Buildings shall meet or exceed the provisions of the Los Angeles Municipal Code.

99.04.505.2. Concrete Slab Foundations. Concrete slab foundations required to have a vapor retarder by the Los Angeles Building Code, Chapter 19 or concrete slab-on-ground floors required to have a vapor retarder by the Los Angeles Residential Code, Chapter 5, shall also comply with this section.

99.04.505.2.1. Capillary break. A capillary break shall be installed in compliance with at least one of the following:

1. A 4-inch (101.6 mm) thick base of ½ inch (12.7 mm) or larger clean aggregate shall be provided with a vapor retarder in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06;

2. Other equivalent methods approved by the Department; or

3. A slab design specified by a licensed design professional.

99.04.505.3. Moisture Content of Building Materials. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed until it is inspected and found to be satisfactory by the building inspector. Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.

Sec. 41. The Title of Division 5 of Article 9 of Chapter IX of the Los Angeles Municipal Code is amended to read as follows:

ARTICLE 9, DIVISION 5
NONRESIDENTIAL MANDATORY MEASURES

Sec. 42. A new Section 99.05.100 is added to the Los Angeles Municipal Code to read as follows:

SEC. 99.05.100. BASIC PROVISIONS.

Chapter 5 of the 2013 California Green Building Standards Code is adopted by reference except as provided in this Article.

Sec. 43. Subsection 99.05.106.1 of the Los Angeles Municipal Code is amended to read as follows:

99.05.106.1. Storm Water Pollution Prevention. Newly constructed projects which disturb soil shall prevent the pollution of stormwater runoff from the construction activities through one or more of the following measures:

99.05.106.1.1. Local Ordinance. Comply with a lawfully enacted stormwater management and/or erosion control ordinance.

99.05.106.1.2. Best Management Practices (BMP). Prevent the loss of soil through wind or water erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMP.

1. Soil loss BMP that should be considered for implementation as appropriate for each project include, but are not limited to, the following:

a. Scheduling construction activity;

b. Preservation of natural features, vegetation and soil;

c. Drainage swales or lined ditches to control stormwater flow;

d. Mulching or hydroseeding to stabilize disturbed soils;

e. Erosion control to protect slopes;

f. Protection of storm drain inlets (gravel bags or catch basin inserts);

g. Perimeter sediment control (perimeter silt fence, fiber rolls);

h. Sediment trap or sediment basin to retain sediment on site;

i. Stabilized construction exits;

j. Wind erosion control;

k. Other soil loss BMP acceptable to the Department.

2. Good housekeeping BMP to manage construction equipment, materials and wastes that should be considered for implementation as appropriate for each project include, but are not limited to, the following:

a. Material handling and waste management;

b. Building materials stockpile management;

c. Management of washout areas (concrete, paints, stucco, etc.);

d. Control of vehicle/equipment fueling to contractor's staging area;

e. Vehicle and equipment cleaning performed off site;

f. Spill prevention and control;

g. Other housekeeping BMP acceptable to the Department.

Sec. 44. Subsection 99.05.106.4 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 45. Subsection 99.05.106.4.1 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 46. Subsection 99.05.106.4.2 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 47. Subsection 99.05.106.5.2 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 48. Table 5.106.5.2 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 49. A new Subsection 99.05.106.5.3 is added to the Los Angeles Municipal Code to read as follows:

99.05.106.5.3. Electric Vehicle (EV) Charging. [N] Provide infrastructure to facilitate future installation of electric vehicle supply equipment (EVSE). EVSE and all devices related to EV charging shall be installed in compliance with the California Building Code Section 406.9, the California Electrical Code Article 625, and as follows:

99.05.106.5.3.1. Charging Locations. [N] Parking facilities shall have five (5) percent of the total parking spaces, but not less than one (1), capable of supporting future EVSE charging locations.

Notes: The Society of Automotive Engineers (SAE) Standard J1772, "Electrical Conductive Charge Couple," released January 2010, defines, in part, AC Level EVSE as 240-volt, single phase, up to 80 amps.

99.05.106.5.3.2. EVSE Infrastructure. [N] Only raceways re required to be installed at the time of construction. The construction plans and specifications shall indicate the proposed type and locations(s) of the EVSE, raceway method(s), wiring schematics and electrical calculations for the electrical charging system. The electrical system shall have sufficient capacity to simultaneously charge all electrical vehicles at their full rated amperage. Plan design shall be based upon Level 2 ESVE or greater at its maximum operating ampacity. The raceway shall not be less than the trade size 1. The raceway shall terminate in close proximity to the proposed location of the charging system into a listed cabinet, box or an enclosure.

EXCEPTION: [N] Other pre-installation methods approved by the Department that provide sufficient conductor sizing and service capacity to install Level 2 EVSE or greater.

99.05.106.5.3.3. [N] Labeling Requirement. A label stating "EV CAPABLE" shall be posted in a conspicuous place at the service panel or subpanel and next to the raceway termination point.

99.05.106.5.3.4. Future charging locations qualify as designated parking as described in Section 99.05.106.5.2.

Notes:

1. The California Department of Transportation adopts and publishes the California Manual on Uniform Traffic Control Devices (California MUTCD) to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives number 13-01. www.dot.ca.gov/hq/traffops/signtech/signdel/policy.htm

2. See Vehicle code Section 22511 for EV charging spaces signage in off-street parking facilities and for use for EV charging spaces.

3. The Governor's Office of Planning and Research published a Zero-Emission Vehicle Community Readiness Guidebook which provides helpful information for local governments, residents and business. http://opr.ca.gov/docs/ZEV_Guidebook.pdf

Sec. 50. Subsection 99.05.106.8 of the Los Angeles Municipal Code is amended to read as follows:

99.05.106.8. Light Pollution Reduction [N]. Outdoor lighting systems shall be designed and installed to comply with the following:

1. The minimum requirements in the California Energy Code for Lighting Zones 1-4 as defined in Chapter 10 of the California Administrative Code; and

2. Backlight, Uplight and Glare (BUG) ratings as defined in IESTM-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.

EXCEPTIONS [N]:

1. Luminaires that qualify as exceptions in Section 147 of the *California Energy Code*;

2. Emergency lighting.

Note [N]: See also Los Angeles Building Code, Division 12, Subsection 91.1205.6 for college campus lighting requirements for parking facilities and walkways.

Sec. 51. Table 5.106.8[N] of the Los Angeles Municipal Code is added to read as follows:

TABLE 5.106.8 [N]

MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS[1,2]

ALLOWABLE RATING	LIGHTING ZONE 1	LIGHTING ZONE 2	LIGHTING ZONE 3	LIGHTING ZONE 4
Maximum Allowable Backlight Rating [3]				
Luminaire greater than 2 mounting heights (MH) from property line	No limit	No limit	No limit	No limit
Luminaire back hemisphere is 1 -2 MH from property line	B2	B3	B4	B4
Luminaire back hemisphere is 0.5 – 1 MH from property line	B1	B2	B3	B3

Luminaire back hemisphere is less than 0/5 MH from property line	B0	B0	B1	B2
Maximum Allowable Uplight Rating				
For area lighting [4]	U0	U0	U0	U0
For all other outdoor lighting, including decorative luminaries	U1	U2	U3	U4
Maximum Allowable Glare Rating [5]				
Luminaire greater than 2 MH from property line	G1	G2	G3	G4
Luminaire front hemisphere is 1 – 2 MH from property line	G0	G1	G1	G2
Luminaire front hemisphere is 0.5 – 1 MH from property line	G0	G0	G1	G1
Luminaire back hemisphere is less than 0.5 MH from property line	G0	G0	G0	G1

1. IESNA Lighting Zones 0 and 5 are not applicable; refer to Lighting Zones as defined in *the* California Energy Code and Chapter 10 of the California Administrative Code.
2. For property lines that abut public walkways, bikeways, plazas and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or public transit corridor for the purpose of determining compliance with this section.
3. If the nearest property line is less than or equal to two mounting heights from the back hemisphere of the luminaire distribution, the applicable reduced Backlight rating shall be met.
4. General lighting luminaires in areas such as outdoor parking, sales or storage lots shall meet these reduced ratings. Decorative luminaires located in this area shall meet *U*-value limits for "all other outdoor lighting".
5. If the nearest property line is less than or equal to two mounting heights from the front hemisphere of the luminaire distribution, the applicable reduced Glare rating shall be met.

Sec. 52. Subsection 99.05.106.10 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 53. A new Subsection 99.05.106.11 is added to the Los Angeles Municipal Code to read as follows:

99.05.106.11. Hardscape Alternatives [N]. Use one or a combination of strategies below for 25% of site hardscape.

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 American Society for Testing and Materials (ASTM) Standards E 1918 or C 1549;

3. Use open-grid pavement system or pervious or permeable pavement system; or

4. Use solar panel arrays to create a canopy shade system.

Sec. 54. Section 99.05.202 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 55. Section 99.05.203 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 56. Section 99.05.204 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 57. Section 99.05.210 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 58. A new Subsection 99.05.211.1 is added to the Los Angeles Municipal Code to read as follows:

99.05.211.1. Solar Ready Buildings [N]. Comply with Section 110.10 of the California Energy Code.

EXCEPTION: Buildings for which building plans were submitted to the Department for plan check and the plan check fee was paid prior to the effective date of the 2013 California Energy Code (Title 24, Part 6).

Sec. 59. Subsection 99.05.211.4 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 60. Subsection 99.05.211.4.1 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 61. Subsection 99.05.302 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 62. Subsection 99.05.303.1 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 63. Subsection 99.05.303.2 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 64. Subsection 99.05.303.2.1 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 65. Table 5.303.2.2 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 66. Table 5.303.2.3 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 67. A new Subsection 99.05.303.3.2 is added to the Los Angeles Municipal Code to read as follows:

99.05.303.3.2. Urinals. The effective flush volume of urinals shall not exceed 0.125 gallons per flush.

Sec. 68. Subsection 99.05.303.4 of the Los Angeles Municipal Code is amended to read as follows:

99.05.303.4. Wastewater Reduction [N]. Each building shall reduce by 20% wastewater by one of the following methods:

1. [BSC, DSA-SS] The installation of water-conserving fixtures (water closets, urinals) meeting the criteria established in Section 5.303.2 or 5.303.3.

2. [BSC] Utilizing nonpotable water systems [captured rainwater, graywater, and municipally treated wastewater (recycled water) complying with the current edition of the Los Angeles Plumbing Code or other methods described in Section A5.304.8].

Sec. 69. Subsection 99.05.303.6 of the Los Angeles Municipal Code is added to read as follows:

99.05.303.6. Standards for Plumbing Fixtures and Fittings. Plumbing fixtures and fittings shall be installed in accordance with the Los Angeles Plumbing Code, and shall meet the applicable standards referenced in Table 1401.1 of the Los Angeles Plumbing Code and in Chapter 6 of this Code.

Sec. 70. Section 99.05.304 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 99.05.304. OUTDOOR WATER USE.

99.05.304.2. Outdoor Potable Water Use. For new water service or for addition or alteration requiring upgraded water service for landscaped areas of at least 1,000 square, separate submeters or metering devices shall be installed for outdoor potable water use.

99.05.304.3. Irrigation Design. In new nonresidential construction or building addition or alteration with at least 1,000 square feet of cumulative landscaped area, install irrigation controllers and sensors which include the following criteria, and meet manufacturer's recommendations.

99.05.304.3.1. Irrigation Controllers. Automatic irrigation system controllers installed at the time of final inspection shall comply with the following:

1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.

2. Weather-based controllers without integral rain sensors or 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.

Note: More information regarding irrigation controller function and specifications is available from the Irrigation Association.

Sec. 71. A new Subsection 99.05.408.3 is added to the Los Angeles Municipal Code to read as follows:

99.05.408.3. Excavated Soil And Land Clearing Debris [BSC]. 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.

EXCEPTION: Reuse, either on-or off-site, of vegetation or soil contaminated by disease or pest infestation.

Notes:

1. If contamination by disease or pest infestation is suspected, contact the County Agricultural Commissioner and follow its direction for recycling or disposal of the material.
www.cdfa.ca.gov/exec/ county/county_contacts.html

2. For a map of known pest and/or disease quarantine zones, consult with the California Department of Food and Agriculture.
www.cdfa.ca.gov

3. Contaminated soil shall not be reused and shall be disposed of or remediated in accordance with relevant regulations.

Sec. 72. Subsection 99.05.408.4 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 73. Subsection 99.05.410.1 of the Los Angeles Municipal Code is amended to read as follows:

99.05.410.1. 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, including (at a minimum) paper, corrugated cardboard, glass, plastics and metals or meet a lawfully enacted local recycling ordinance, if more restrictive.

EXCEPTIONS:

1. Additions within a tenant space resulting in less than a 30% increase in the tenant space floor area, or

2. Alterations.

Sec. 74. Subsection 99.05.410.2.5 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 75. The first unnumbered Paragraph of Subsection 99.05.410.2.5.1 of the Los Angeles Municipal Code is amended to read as follows:

99.05.410.2.5.1. Systems Manual [N]. Documentation of the operational aspects of the building shall be completed within the systems manual and delivered to the building owner or representative. The systems manual shall include the following:

Sec. 76. Subsection 99.05.410.4.5 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 77. Subsection 99.05.504.3 of the Los Angeles Municipal Code is amended to read as follows:

99.05.504.3. Covering of Duct Openings and Protection of Mechanical Equipment during Construction. At the time of rough installation and during storage on the construction site 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 Department to reduce the amount of dust, water and debris which may enter the system.

Sec. 78. Subsection 99.05.504.4.3.2 of the Los Angeles Municipal Code is amended to read as follows:

99.05.504.4.3.2. Verification. Verification of compliance with this section shall be provided at the request of the Department. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification; or

2. Field verification of on-site product containers.

Sec. 79. Subsection 99.05.504.4.5.2 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 80. A new Subsection 99.05.504.4.5.3 is added to the Los Angeles Municipal Code to read as follows:

99.05.504.4.5.3. Documentation. Verification of compliance with this section shall be provided as requested by the Department. Documentation shall include at least one of the following:

1. Product certifications and specifications;

2. Chain of custody certifications;

3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, *et seq.*);

4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards; or

5. Other methods acceptable to the Department.

Sec. 81. Subsection 99.05.504.4.6 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 82. Subsection 99.05.504.7 of the Los Angeles Municipal Code is amended to read as follows:

99.05.504.7. Environmental Tobacco Smoke (ETS) Control. Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of the City, whichever are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions.

Sec. 83. Section 99.05.505 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 84. Section 99.05.507 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 85. A new Section 99.05.508 is added to the Los Angeles Municipal Code to read as follows:

SEC. 99.05.508.
99.05.508.2.1. Refrigerant Piping. Piping compliant with the Los Angeles Mechanical Code shall be installed to be accessible for leak protection and repairs. Piping runs using threaded pipe, copper tubing with an outside diameter (OD) less than ¼", flared tubing connections and short radius elbows shall not be used in refrigerant systems except as noted below.

99.05.508.2.2. Valves. Valves and fittings shall comply with the Los Angeles Mechanical Code and as follows.

Sec. 86. Subsection 99.06.601.1 of the Los Angeles Municipal Code is amended to read as follows:

99.06.601.1. General. Chapter 6 of the 2013 California Green Building Standards Code is adopted in its entirety.

Sec. 87. A new Section 99.07.100 is added to the Los Angeles Municipal Code to read as follows:

SEC. 99.07.100. BASIC PROVISIONS.

Chapter 7 of the 2013 California Green Building Standards Code is adopted by reference except as amended herein.

Sec. 88. A new Section 99.07.101 is added to the Los Angeles Municipal Code to read as follows:

SEC. 99.07.101.

99.07.101.1. General. Chapter 7 of the 2013 California Green Building Standards Code is adopted by reference with the following exceptions: Sections 702.1, 702.2 and 702.3, and in lieu, Subsections 99.07.702.1, 99.07.702.2 and 99.07.702.3 are added as provided in this Article.

Sec. 89. The first unnumbered Paragraph of Subsection 99.07.702.2 of the Los Angeles Municipal Code is amended to read as follows:

99.07.702.2. Special Inspection for Residential Buildings. When required by the Department, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or

qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the Department when evaluating the qualifications of a special inspector:

Sec. 90. The first unnumbered Paragraph of Subsection 99.07.702.3 of the Los Angeles Municipal Code is amended to read as follows:

99.07.702.3. Special Inspections for Non-Residential Buildings. When required by the Department, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the Department for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the Department. The area of certification shall be closely related to the primary job function, as determined by the Department.

Sec. 91. Section 99.07.703 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 99.07.703. VERIFICATION.

99.07.703.1. Documentation. Documentation used to show compliance with this Code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the Department which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified in the application checklist.

Sec. 92. Division 9 of Article 9 of Chapter IX of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 93. Division 10 of Article 9 of Chapter IX of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 94. The Title of Division 11 of Article 9 of Chapter IX of the Los Angeles Municipal Code is amended to read as follows:

ARTICLE 9, DIVISION 11
APPENDIX A4
RESIDENTIAL VOLUNTARY MEASURES

Sec. 95. Section 99.11.101 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 99.11.101. SCOPE.

Appendix A4 of the 2013 California Green Building Standards Code is adopted by reference with the following exceptions: Sections A4.105.2, A4.106.2.3, A4.106.5.3, A4.106.7, A4.106.8, A4.106.8.1, A4.106.8.1.1, A4.106.8.2, A4.106.8.2.1, A4.106.8.2.2, A4.106.8.2.3, A4.303.2, A4.303.4, A4.304.2, A4.305.1, A4.305.2, A4.403.1, A4.404.1, A4.404.3, A4.405.1, A4.405.2, A4.405.4, A4.407.1, A4.407.3, A4.407.4, A4.407.5, A4.407.6, A4.407.7, A4.408.1, and, in lieu, Sections 99.11.102.A4.105.2, 99.11.102.A4.106.2.3, 99.11.102.A4.106.7, 99.11.102.A4.106.8, 99.11.102.A4.106.8.2, 99.11.102. A4.106.8.2.1, 99.11.102.A4.106.8.2.2, 99.11.102.A4.106.8.2.3, 99.11.102.A4.303.2, 99.11.102.A4.303.4, 99.11.102.A4.304.2, 99.11.102.A4.305.1, 99.11.102.A4.305.2, 99.11.102.A4.404.3, 99.11.102.A4.405.1, 99.11.102.A4.405.2, 99.11.102.A4.405.4, 99.11.102.A4.407.1, 99.11.102.A4.407.5, 99.11.102.A4.407.6, 99.11.102.A4.407.7, and 99.11.102.A4.408.1 and Tables A4.106.5.1(1), A4.106.5.1(2), A4.106.5.1(3) and A4.106.5.1(4) are added as provided in this Article.

Sec. 96. Section 99.11.102 of the Los Angeles Municipal Code is added to read as follows:

SEC. 99.11.102. GENERAL.

This section shall set forth the Residential Voluntary Measures.

A4.105.2. Reuse of Materials. Use salvaged, refurbished or reused materials for a minimum of 2.5% of the total value, based on estimated cost of materials on the project. Materials which can be easily reused include but are not limited to the following:

1. Light fixtures;
2. Plumbing fixtures;
3. Doors and trim;
4. Masonry (reused masonry may only be used for flatwork);
5. Electrical devices;
6. Appliances;
7. Foundations or portions of foundations.

Note: Reused material must be in compliance with the appropriate Title 24 requirements.

A4.106.2.3. Topsoil Protection. Topsoil shall be protected or saved for reuse as specified in this section.

Tier 1. Displaced topsoil shall be stockpiled for reuse in a designated area and covered or protected from erosion.

Note: Protection from erosion includes covering with tarps, straw, mulch, chipped wood, vegetative cover, or other means acceptable to the Department to protect the topsoil for later use.

Tier 2. The construction area shall be identified and delineated by fencing or flagging to limit construction activity to the construction area. Heavy equipment or vehicle traffic and material storage outside the construction area shall be limited to areas that are planned to be paved.

TABLE A4.106.5.1 (1)
TIER 1-LOW RISE RESIDENTIAL

ROOF SLOPE	MINIMUM 3-YEAR AGED SOLAR REFLECTANCE	THERMAL EMITTANCE
≤ 2 : 12	0.68	0.85
> 2 : 12	0.28	0.85

TABLE A4.106.5.1 (2)
TIER 2-LOW-RISE RESIDENTIAL

ROOF SLOPE	MINIMUM 3-YEAR AGED SOLAR REFLECTANCE	THERMAL EMITTANCE
≤ 2 : 12	0.70	0.85
> 2 : 12	0.34	0.85

TABLE A4.106.5.1(3)
TIER 1 - HIGH-RISE RESIDENTIAL BUILDINGS, HOTELS, AND MOTELS

ROOF SLOPE	MINIMUM 3-YEAR AGED SOLAR REFLECTANCE	THERMAL EMITTANCE
≤ 2 : 12	0.68	0.85
>2 : 12	0.28	0.85

TABLE A4.106.5.1(4)
TIER 2 - HIGH-RISE RESIDENTIAL BUILDINGS, HOTELS, AND MOTELS

ROOF SLOPE	MINIMUM 3-YEAR AGED SOLAR REFLECTANCE	THERMAL EMITTANCE
≤ 2 : 12	0.70	0.85
>2 : 12	0.34	0.85

A4.106.7. Reduction of Heat Island Effect for Nonroof Areas. Reduce nonroof heat islands for 50% of sidewalks, patios, driveways or other paved areas by using one or more of the methods listed.

1. Trees or other plantings to provide shade and that mature within 15 years of planting. Trees shall be suitable in mature size and environmental requirements for the site. Tree selection and placement should consider location and size of areas to be shaded; location of utilities; views from the structure; distance to sidewalks and foundations; overhangs onto adjacent properties and streets; other infrastructure and proximity to landscaping. In addition, shading shall not cast a shadow, as specified, on any neighboring solar collectors pursuant to Public Resources Code Section 25981, *et seq.* (Solar Shade Control Act);

2. Use high albedo materials with an initial solar reflectance value of at least .30 as determined in accordance with American Society for Testing and Materials (ASTM) Standards E1918 or C1549;

3. Use open grid pavement system or pervious or permeable pavement system;

4. Use solar panel arrays to create a canopy shade system; or

5. Other methods of reducing heat island effects acceptable to the Department.

A4.106.8. Electric Vehicle (EV) Charging. Dwellings shall comply with the following requirements for the future installation of electric vehicle supply equipment (EVSE).

A4.106.8.2. Multifamily Dwellings. At least 10% of the total parking spaces, but not less than one, shall be capable of supporting future electric vehicle supply equipment (EVSE).

A4.106.8.2.1. Single Charging Space Required. When only a single charging space is required, install a listed raceway capable of accommodating a dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall be securely fastened at the main service or subpanel and shall terminate in close proximity to the proposed location of the charging system into a listed cabinet, box or enclosure. Sufficient conductor sizing and service capacity to install Level 2 EVSE shall be provided.

A4.106.8.2.2. Multiple Charging Spaces Required. When multiple charging spaces are required, plans shall include the location(s) and type of the EVSE, raceway method(s), wiring schematics and electrical calculations to verify that the electrical system has sufficient capacity to simultaneously charge all the electrical vehicles at all designated EV charging spaces at their full rated amperage. Plan design shall be based upon Level 2 EVSE at its maximum operating ampacity. Only underground raceways and related underground equipment are required to be installed at the time of construction.

A4.106.8.2.3. Labeling Requirement. A label stating "EV CAPABLE" shall be posted in a conspicuous place at the service panel or subpanel and the EV charging space.

A4.303.2. Alternate Water Sources for Nonpotable Applications. Alternate nonpotable water sources are used for indoor potable water reduction. Alternate nonpotable water sources shall be installed in accordance with the Los Angeles Plumbing Code.

A4.303.4. Nonwater Supplied Urinals and Waterless Toilets. Nonwater supplied urinals or composting toilets are installed throughout.

A4.304.1. Low-water Consumption Irrigation System. Install a low-water consumption irrigation system which minimizes the use of spray type heads. Spray type irrigation may only be used at turf areas. The remaining irrigation systems shall use only the following types of low-volume irrigation systems:

1. Drip irrigation;
2. Bubblers;
3. Drip emitters;
4. Soaker hose;

5. Stream-rotator spray heads;

6. Other systems acceptable to the Department.

A4.304.2. Rainwater Catchment Systems. An approved rainwater catchment system is designed and installed to use rainwater generated by at least 65% of the available roof area. Rainwater catchment systems shall be designed and installed in accordance with the Los Angeles Plumbing Code.

A4.305.1. Graywater. Alternative plumbing piping is installed to permit the discharge from the clothes washer or other fixtures to be used for an irrigation system in compliance with the Los Angeles Plumbing Code.

A4.305.2. Recycled Water Piping. Based on projected availability, dual water piping is installed for future use of recycled water at the following locations:

1. Interior piping for the use of recycled water is installed to serve all water closets, urinals and floor drains.

2. Exterior piping is installed to transport recycled water from the point of connection to the structure. Recycled water systems shall be designed and installed in accordance with the Los Angeles Plumbing Code.

A4.403.2. Reduction In Cement Use. As allowed by the Los Angeles Building Code, cement used in foundation mix design shall be reduced as follows:

Tier 1. Not less than a 20% reduction in cement use.

Tier 2. Not less than a 25% reduction in cement use.

Note: Products commonly used to replace cement in concrete mix designs include, but are not limited to:

1. Fly ash;

2. Slag;

3. Silica fume;

4. Rice hull ash.

A4.404.2. Building dimensions and layouts are designed to minimize waste by one or more of the following measures in at least 80% of the structure;

1. Building design dimensions in 2 foot increments are used;

2. Windows and doors are located at regular 16" or 24" stud positions;

3. Other methods acceptable to the Department.

A4.404.3. Building Systems. Use premanufactured building systems to eliminate solid sawn lumber whenever possible. One or more of the following premanufactured building systems is used throughout:

1. Composite floor joist or premanufactured floor framing system;

2. Composite roof rafters or premanufactured roof framing system;

3. Panelized (SIPS, ICF or similar) wall framing system;

4. Other methods approved by the Department.

A4.405.1. Prefinished Building Materials. Utilize prefinished building materials which do not require additional painting or staining. One or more of the following building materials that do not require additional resources for finishing are used:

1. Exterior trim not requiring paint or stain;

2. Windows not requiring paint or stain; or

3. Siding or exterior wall coverings which do not require paint or stain.

A4.405.2. Concrete Floors. 75% of all slab-on-grade and structural concrete slab floors that do not require additional coverings are used including but not limited to stained, natural or stamped concrete floors.

> **Note:** Uncovered floors must still remain durable and maintain any acoustical insulation required elsewhere by the Los Angeles Municipal Code.

A4.405.4. Use of Building Materials from Rapidly Renewable Sources. One or more of the following materials manufactured from rapidly renewable sources or agricultural by-products is used for a minimum of 2.5% of the total value, based on estimated cost of materials on the project:

1. Insulation;

2. Bamboo or cork;

3. Engineered products;

4. Agricultural based products;

5. Other products acceptable to the enforcing Department.

Note: The intent of this section is to utilize building materials and products which are typically harvested within a 10-year or shorter cycle.

A4.407.1. Drainage Around Foundations. Where not required by code or ordinance, install foundation and landscape drains which discharge to a dry well, sump, bioswale or other approved on-site location.

A4.407.6. Door Protection. Exterior doors to the dwelling are covered to prevent water intrusion by one or more of the following:

1. A non-retractable awning at least 4 feet in depth is installed;

2. The door is protected by a roof overhang at least 4 feet in depth;
3. The door is recessed at least 4 feet;

4. Other methods which provide equivalent protection.

A4.407.7. Roof Overhangs. When permitted by the Los Angeles Municipal Code, a permanent overhang or non-retractable awning at least 2 feet in depth is provided at all exterior walls.

A4.408.1. Enhanced Construction Waste Reduction. Nonhazardous construction and demolition debris generated at the site is diverted to recycle or salvage in compliance with one of the following:

Tier 1. At least a 65% reduction.

Tier 2. At least a 75% reduction.

Sec. 97. Section 99.11.602 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 99.11.602.

TABLE A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST

FEATURE OR MEASURE	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD		
		Prerequisites and electives[1]		Enforcing Agency	Installer or Designer	Third party
	Mandatory	Tier 1	Tier 2	☐ All	☐ All	☐ All
PLANNING AND DESIGN						
Site Selection						
A4.103.1 A site which complies with at least one of the following characteristics is selected:						
1. An infill site is selected.		☐	☐	☐	☐	☐
2. A greyfield site is selected.		☐	☐	☐	☐	☐
3. An EPA-recognized Brownfield site is selected.		☐	☐	☐	☐	☐
A4.103.2 Facilitate community connectivity by one of the following methods:						
1. Locate project within a ¼-mile true walking distance of at least 4 basic services;		☐	☐	☐	☐	☐
2. Locate project within ½-mile true walking distance of at least 7 basic services;		☐	☐	☐	☐	☐
3. Other methods increasing access to additional resources.		☐	☐	☐	☐	☐
Site Preservation						
A4.104.1 An individual with oversight responsibility for the project has participated in an educational program promoting environmentally friendly design or development and has provided training or instruction to appropriate entities.		☐	☐	☐	☐	☐
Deconstruction and Reuse of Existing Materials						

A4.105.2 Existing buildings are disassembled for reuse or recycling of building materials. The proposed structure utilizes at least one of the following materials which can be easily reused for a minimum of 2.5 percent of the total value, based on estimated cost of materials on the project: 1. Light fixtures 2. Plumbing fixtures 3. Doors and trim 4. Masonry (reused for flatwork) 5. Electrical devices 6. Appliances 7. Foundations or portions of foundations		☐	☐	☐	☐	☐
Site Development						
4.106.2 A plan is developed and implemented to manage storm water drainage during construction.	☒					
4.106.3 Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings.	☒					
4.106.5 Roofing materials shall have a minimum 3-year aged solar reflectance and thermal emittance equal to or greater than the values specified in Table 4.106.5	☒			☐	☐	☐
4.106.7 Reduce nonroof heat islands for 25 percent of pathways, patios, driveways or other paved areas.	☒			☐	☐	☐
4.106.8 Provide capability for the installation of electrical vehicle supply equipment in single-family and multifamily structures.	☒			☐	☐	☐
A4.106.1 Reserved.			☐	☐	☐	☐
A4.106.2.1 Soil analysis is performed by a licensed design professional and the findings utilized in the structural design of the building.			☐	☐	☐	☐

A4.106.2.2 Soil disturbance and erosion are minimized by at least one of the following: 1. Natural drainage patterns are evaluated and erosion controls are implemented to minimize erosion during construction and after occupancy. 2. Site access is accomplished by minimizing the amount of cut and fill needed to install access roads and driveways. 3. Underground construction activities are coordinated to utilize the same trench, minimize the amount of time the disturbed soil is exposed and the soil is replaced using accepted compaction methods.		☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
A4.106.2.3 Topsoil shall be protected or saved for reuse as specified in this section. Tier 1. Displaced topsoil shall be stockpiled for reuse in a designated area and covered or protected from erosion. Tier 2. The construction area shall be identified and delineated by fencing or flagging to limit construction activity to the construction area.		☒[2]	☒[2] ☒[2]	☐	☐	☐

A4.106.3 Postconstruction landscape designs accomplish one or more of the following:						
1. Areas disrupted during construction are restored to be consistent with native vegetation species and patterns.		☐	☐	☐	☐	☐
2. Limit turf areas to the greatest extent possible.						
a. Not more than 50 percent for Tier 1.		☐		☐	☐	☐
b. Not more than 25 percent for Tier 2.			☐	☐	☐	☐
3. Utilize at least 75 percent native California or drought tolerant plant and tree species appropriate for the climate zone region.		☐	☐	☐	☐	☐
4. Hydrozoning irrigation techniques are incorporated into the landscape design.		☐	☐	☐	☐	☐
A4.106.4 Permeable paving is utilized for the parking, walking or patio surfaces in compliance with the following:						
Tier 1. Not less than 20 percent of the total parking, walking or patio surfaces shall be permeable.		☒[2]		☐	☐	☐
Tier 2. Not less than 30 percent of the total parking, walking or patio surfaces shall be permeable.			☒[2]	☐	☐	☐

A4.106.5 Roofing materials shall have a minimum 3-year aged solar reflectance and thermal emittance equal to or greater than the values specified in Tables A4.106.5.1(1) and A4.106.5.1(2) for low-rise residential buildings and Tables A4.106.5.1(3) and A4.106.5.1(4) for high rise residential buildings. **Low-rise Residential** **Tier 1** roof covering shall meet or exceed the values contained in Table A4.106.5.1(1). **Tier 2** roof covering shall meet or exceed the values contained in Table A4.106.5.1(2). **High-rise Residential, Hotels and Motels** Tier 1 roof covering shall meet or exceed the values contained in Table A4.106.5.1(3). Tier 2 roof covering shall meet or exceed the values contained in Table A4.106.5.1(4).		☒[2] ☒[2]	☒[2] ☒[2]			
A4.106.6 Install a vegetated roof for at least 50 percent of the roof area. Vegetated roofs shall comply with requirements for roof gardens and landscaped roofs in the *California Building Code*, Chapters 15 and 16.		☐	☐	☐	☐	☐
A4.106.7 Reduce nonroof heat islands for 50 percent of sidewalks, patios, driveways or other paved areas by using one or more of the methods listed.		☐	☐	☐	☐	☐
A4.106.8.2 At least 10 percent of the total parking spaces provided for a multi-family dwelling, shall be capable of supporting EVSE.		☐	☐	☐	☐	☐

A4.106.9 Provide bicycle parking facilities as noted below or meet a local ordinance, whichever is more stringent. Number of bicycle parking spaces may be reduced, as approved by the enforcing agency, due to building site characteristics, including but not limited to, isolation from other development. 1. Provide short-term bicycle parking, per Section A4.106.9.1. 2. Provide long-term bicycle parking for multifamly buildings, per Section A4.106.9.2. 3. Provide long-term bicycle parking for hotel and motel buildings, per Section A4.106.9.3.		☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
A4.106.10 [HR] Outdoor lighting systems shall be designed and installed to comply with: 1. The minimum requirements in the *California Energy Code* for Lighting Zones 1-4; and 2. Backlight, Uplight and Glare (BUG) ratings as defined in IES TM-15-11; and 3. Allowable BUG ratings not exceeding those shown in Table A4.106.10; or Comply with a lawfully enacted local ordinance, whichever is more stringent.		☐ ☐	☐ ☐	☐ ☐	☐ ☐	☐ ☐
Innovative Concepts and Local Environmental Conditions						
A4.107.1 Items in this section are necessary to address innovative concepts or local environmental conditions.						
Item 1		☐	☐	☐	☐	☐
Item 2		☐	☐	☐	☐	☐
Item 3		☐	☐	☐	☐	☐
Energy Efficiency						
General						
4.201.1 Building meets or exceeds the requirements of the *California Building Energy Efficiency Standards*[3].	☒	☒[2]	☒[2]	☐	☐	☐
Performance Approach for Newly Constructed Buildings						

A4.203.1.1.1 An Energy Design Rating for the Proposed Design Building is included in the Certificate of Compliance documentation.		☒[2]	☒[2]	☐	☐	☐
A4.203.1.1.2 QII procedures specified in the Building Energy Efficiency Standards Reference Residential Appendix RA3.5 are completed.		☒[2]	☒[2]	☐	☐	☐
A4.203.1.1.3 All permanently installed lighting is high efficiency and has required controls.		☒[2]	☒[2]	☐	☐	☐
A4.203.1.2.1 The Energy Budget is no greater than 85 percent of the Title 24, Part 6, Energy Budget for the Proposed Design Building.		☒[2]		☐	☐	☐
A4.203.1.2.2 The Energy Budget is no greater than 70 percent of the Title 24, Part 6, Energy Budget for the Proposed Design Building.			☒[2]	☐	☐	☐
Performance Approach for Additions and Alterations						
A4.204.1.1.1 All newly installed, permanently installed lighting is high efficacy and has required controls.		☒[2]	☒[2]	☐	☐	☐
A4.204.1.2.1 When one and only one mechanical system is added or modified, the Energy Budget is no greater than 95 percent of the Title 24, Part 6, Energy Budget for the Proposed Design Building. When two or more mechanical systems are added or modified, the Energy Budget is no greater than 90 percent of the Title 24, Part 6, Energy Budget for the Proposed Design Building.		☒[2]		☐	☐	☐

A4.204.1.2.2 When one and only one mechanical system is added or modified, the Energy Budget is no greater than 90 percent of the Title 24, Part 6, Energy Budget for the Proposed Design Building. When two or more mechanical systems are added or modified, the Energy Budget is no greater than 85 percent of the Title 24, Part 6, Energy Budget for the Proposed Design Building.			☒[2]	☐	☐	☐
RENEWABLE ENERGY						
4.211.4 Comply with Section 110.10 of the California Energy Code.	☒			☐	☐	☐
4.211.4.1 Provide an electrical conduit at a suitable location for future connection to a solar system.	☒			☐	☐	☐
WATER EFFICIENCY AND CONSERVATION						
Indoor Water Use						
4.303.1 Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) installed in residential buildings shall comply with the prescriptive requirements of Sections 4.303.1.1 through 4.303.1.4.4.	☒			☐	☐	☐

4.303.2 Plumbing fixtures and fittings required in Section 4.303.1 shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable referenced standards.	☒			☐	☐	☐
A4.303.1 Kitchen faucets. The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.5 gallons per minute at 60 psi. **Note:** Where complying faucets are available, aerators or other means may be used to achieve reduction.		☐	☐	☐	☐	☐
A4.303.2 Alternate water source for nonpotable applications. Alternate nonpotable water sources are used for indoor potable water reduction. Alternate nonpotable water sources shall be installed in accordance with the *Los Angeles Plumbing Code*.		☐	☐	☐	☐	☐
A4.303.3 Appliances. Dishwashers and clothes washers in residential buildings shall comply with the following: Install at least one qualified ENERGY STAR appliance with maximum water use as follows: 1. Standard Dishwashers - 4.25 gallons per cycle. 2. Compact Dishwashers - 3.5 gallons per cycle. 3. Clothes Washers - water factor of 6 gallons per cubic feet of drum capacity.		☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
A4.303.4 Nonwater supplied urinals or waterless toilets are installed.		☐	☐	☐	☐	☐
Outdoor Water Use						

4.304.1 Automatic irrigation systems controllers installed at the time of final inspection shall be weather or soil moisture-based.	☒			☐	☐	☐
4.304.1.1 Buildings on sites with over 2,500 sqft of landscape area shall have irrigation controllers that are either weather or soil moisture-based.	☒			☐	☐	☐

A4.304.1 Install a low-water consumption irrigation system which minimizes the use of spray type heads.		☐	☐	☐	☐	☐
A4.304.2 A rainwater capture, storage and re-use system is designed and installed.		☐	☐	☐	☐	☐
A4.304.3 A water budget shall be developed for landscape irrigation.		☒[2]	☒[2]	☐	☐	☐
A4.304.4 Provide water efficient landscape irrigation design that reduces the use of potable water. Tier 1. Does not exceed 65 percent of *ETo* times the landscape area. Tier 2. Does not exceed 60 percent of *ETo* times the landscape area.		☒[2]	☒[2]	☐	☐	☐
A4.304.5 A landscape design is installed which does not utilize potable water.		☐	☐	☐	☐	☐
A4.304.6 For new water service connections, landscaped irrigated areas more than 2,500 square feet shall be provided with separate submeters or metering devices for outdoor potable water use.		☐	☐	☐	☐	☐
WATER REUSE SYSTEMS						
A4.305.1 Piping is installed to permit future use of a graywater irrigation system served by the clothes washer or other fixtures.		☐	☐	☐	☐	☐
A4.305.2 Recycled water piping is installed.		☐	☐	☐	☐	☐
A4.305.3 Recycled water is used for landscape irrigation.		☐	☐	☐	☐	☐
Innovative Concepts and Local Environmental Conditions						

A4.306.1 Items in this section are necessary to address innovative concepts or local environmental conditions.						
Item 1		☐	☐	☐	☐	☐
Item 2		☐	☐	☐	☐	☐
Item 3		☐	☐	☐	☐	☐
MATERIAL CONSERVATION AND RESOURCE EFFICIENCY						
Foundation Systems						
A4.403.2 Cement use in foundation mix design is reduced. Tier 1. Not less than a 20 percent reduction in cement use. Tier 2. Not less than a 25 percent reduction in cement use.		☒[2]	☒[2]	☐	☐	☐
Efficient Framing Techniques						
A4.404.2 Building dimensions and layouts are designed to minimize waste.		☐	☐	☐	☐	☐
A4.404.3 Use premanufactured building systems to eliminate solid sawn lumber whenever possible.		☐	☐	☐	☐	☐
A4.404.4 Material lists are included in the plans which specify material quantity and provide direction for on-site cuts.		☐	☐	☐	☐	☐
Material Sources						
A4.405.1 One or more of the following building materials, that do not require additional resources for finishing are used at all applicable locations throughout the building: 1. Exterior trim not requiring paint or stain 2. Windows not requiring paint or stain 3. Siding or exterior wall coverings which do not require paint or stain		☐	☐	☐	☐	☐
A4.405.2 75% of all slab-on-grade and structural concrete floors that do not require additional coverings are used including but not limited to stained, natural or stamped concrete floors.		☐	☐	☐	☐	☐

A4.405.3 Postconsumer or preconsumer recycled content value (RCV) materials are used on the project. Tier 1. Not less than a 10-percent recycled content value. Tier 2. Not less than a 15-percent recycled content value.		☒[2]	☒[2]	☐	☐	☐
A4.405.4 Renewable source building products are used.		☐	☐	☐	☐	☐
Enhanced Durability and Reduced Maintenance						
4.406.1 Annular spaces around pipes, electric cables, conduits or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the department.	☒			☐	☐	☐
Water Resistance and Moisture Management						
4.407.3 Provide flashing details on the building plans and comply with accepted industry standards or manufacturer's instructions.	☒			☐	☐	☐
4.407.4 Protect building materials delivered to the construction site from rain and other sources of moisture.	☒			☐	☐	☐
A4.407.1 Where not required by code or ordinance, install foundation and landscape drains.		☐	☐	☐	☐	☐
A4.407.2 Install gutter and downspout systems to route water at least 5 feet away from the foundation or connect to landscape drains which discharge to a dry well, sump, bioswale, rainwater capture system or other approved on-site location.		☐	☐	☐	☐	☐

A4.407.6 Exterior doors to the dwelling are protected to prevent water intrusion.		☐	☐	☐	☐	☐
A4.407.7 When permitted by the Los Angeles Municipal Code, a permanent overhang or non-retractable awning at least 2 feet in depth is provided.		☐	☐	☐	☐	☐
Construction Waste Reduction, Disposal and Recycling						
4.408.1 Comply with Section 66.32 *et seq.* of the Los Angeles Municipal Code.	☒			☐	☐	☐
A4.408.1 Construction waste generated at the site is diverted to recycle or salvage in compliance with one of the following: 1. Tier 1 at least a 65 percent reduction. 2. Tier 2 at least a 75 percent reduction. **Exception:** Equivalent waste reduction methods are developed by working with local agencies.		☒[2]	☒[2]	☐ ☐	☐ ☐	☐ ☐
Building Maintenance and Operation						
4.410.1 An operation and maintenance manual shall be provided to the building occupant or owner.	☒			☐	☐	☐
Innovative Concepts and Local Environmental						
A4.411.1 Items in this section are necessary to address innovative concepts or local environmental conditions.						
Item 1		☐	☐	☐	☐	☐
Item 2		☐	☐	☐	☐	☐
Item 3		☐	☐	☐	☐	☐
ENVIRONMENTAL QUALITY						
Fireplaces						

4.503.1 Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with US EPA Phase II emission limits where applicable. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.	☒			☐	☐	☐
Pollutant Control						
4.504.1 Duct openings and other related air distribution component openings shall be covered during construction.	☒			☐	☐	☐
4.504.2.1 Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits.	☒			☐	☐	☐
4.504.2.2 Paints, stains and other coatings shall be compliant with VOC limits.	☒			☐	☐	☐
4.504.2.3 Aerosol paints and coatings shall be compliant with product weighted MIR limits for ROC and other toxic compounds.	☒			☐	☐	☐
4.504.2.4 Documentation shall be provided to verify that compliant VOC limit finish materials have been used.	☒			☐	☐	☐
4.504.3 Carpet and carpet systems shall be compliant with VOC limits.	☒			☐	☐	☐

4.504.4 80 percent of floor area receiving resilient flooring shall comply with the VOC-emission limits defined in the Collaborative for High Performance Schools (CHPS) High Performance Products Database or be certified under the Resilient Floor Covering Institute (RFCI) FloorScore program; or meet California Dept. of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers", Version 1.1, February 2010 (also known as Specification 01350.)	☒					
4.504.5 Particleboard, medium density fiberboard (MDF) and hardwood plywood used in interior finish systems shall comply with low formaldehyde emission standards.	☒			☐	☐	☐
A4.504.1 Use composite wood products made with either California Air Resources Board approved no-added formaldehyde (NAF) resins or ultra-low emitting formaldehyde (ULEF) resins.		☐	☐	☐	☐	☐
A4.504.2 Install VOC compliant resilient flooring systems. Tier 1. At least 90 percent of the resilient flooring installed shall comply. Tier 2. At least 100 percent of the resilient flooring installed shall comply.		☒[2]	☒[2]	☐	☐	☐

A4.504.3 Thermal insulation installed in the building shall meet the following requirements: Tier 1. Install thermal insulation in compliance with the VOC-emission limits defined in Collaborative for High Performance Schools (CHPS) Low-emitting Materials List. Tier 2. Install insulation which contains No-Added Formaldehyde (NAF) and is in compliance with the VOC-emission limits defined in Collaborative for High Performance Schools (CHPS) Low-emitting Materials List.		☒[2]	☒[2]	☐	☐	☐
Interior Moisture Control						
4.505.2 Vapor retarder and capillary break is installed at slab-on-grade foundations.	☒			☐	☐	☐
4.505.3 Moisture content of building materials used in wall and floor framing is checked before enclosure.	☒			☐	☐	☐
Indoor Air Quality and Exhaust						
4.506.1 Return air filters with a value greater than MERV 6 shall be installed on HVAC systems. Pressure drop across the filter shall not exceed 0.1 inches water column.		☐	☐	☐	☐	☐
A4.506.2 [HR] Provide filters on return air openings rated MERV 6 or higher during construction when it is necessary to use HVAC equipment.		☐	☐	☐	☐	☐
A4.506.3 Direct-vent appliances shall be used when equipment is located in conditioned space; or the equipment must be installed in an isolated mechanical room.		☐	☐	☐	☐	☐
Environmental Comfort						
4.507.1 Reserved.						

4.507.2. Duct systems are sized, designed, and equipment is selected using the following methods: 1. Establish heat loss and heat gain values according to ANSI/ACCA 2 Manual J-2004 or equivalent. 2. Size duct systems according to ANSI/ACCA 1 Manual D-2009 or equivalent. 3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S-2004 or equivalent.	☒			☐	☐	☐
Outdoor Air Quality Reserved						
Innovative Concepts and Local Environmental Conditions						
A4.509.1 Items in this section are necessary to address innovative concepts or local environmental conditions.						
Item 1		☐	☐	☐	☐	☐
Item 2		☐	☐	☐	☐	☐
Item 3		☐	☐	☐	☐	☐
Installer and Special Inspector Qualifications						
702.1 HVAC system installers are trained and certified in the proper installation of HVAC systems.	☒			☐	☐	☐
702.2 Special inspectors employed by the enforcing agency must be qualified and able to demonstrate competence in the discipline they are inspecting.	☒			☐	☐	☐
Verifications						
703.1 Verification of compliance with this code may include construction documents, plans, specifications builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which show substantial conformance.	☒			☐	☐	☐

1. Green building measures listed in this table may be mandatory if adopted by a city, county, or city and county as specified in Section 101.7.
2. Required prerequisite for this Tier.
3. These measures are currently required elsewhere in statute or in regulation.

Sec. 98. The Title of Division 12 of Article 9 of Chapter IX of the Los Angeles Municipal Code is amended to read as follows:

ARTICLE 9, DIVISION 12
APPENDIX A5
NONRESIDENTIAL VOLUNTARY MEASURES

Sec. 99. Section 99.12.101 of the Los Angeles Municipal Code is amended to read as follows:

SEC. 99.12.101. SCOPE.

Appendix A5 of the 2013 California Green Building Standards Code is adopted by reference with the following exceptions: Sections A5.105.1.1, A5.105.1.2, A5.106.4.3, A5.106.5.3.3, A5.106.5.3.4, A5.106.6.1, A5.106.11.2, A5.211.1, A5.303.2.3.4, A5.304.2.1, A5.304.4.2, A5.304.8, A5.305.1, A5.404.1, A5.404.1.1, A5.405.3, A5.405.5.2, A5.405.5.2.1, A5.406.1, A5.406.1.1, A5.406.1.3, A5.410.3, A5.504.4.9, A5.602 and, in lieu, Sections 99.12.102.A5.105.1.1, 99.12.102.A5.105.1.2, 99.12.102.A5.106.4.3, 99.12.102.A5.106.5.3.3, 99.12.102.A5.106.5.3.4, 99.12.102.A5.106.6.1, 99.12.102.A5.106.11.2, 99.12.102.A5.211.1, 99.12.102.A5.303.2.3.4, 99.12.102.A5.304.2.1, 99.12.102.A5.304.4.2, 99.12.102.A5.304.8, 99.12.102.A5.305.1, 99.12.102.A5.404.1, 99.12.102.A5.404.1.1, 99.12.102.A5.405.3, 99.12.102.A5.405.5.2, 99.12.102.A5.405.5.2.1, 99.12.102.A5.406.1, 99.12.102.A5.410.3, 99.12.102.A5.504.4.9, 99.12.102.A5.602 and Tables A5.106.4.3, A5.106.5.1.1, A5.106.5.1.2, A5.106.11.2.2, A5106.11.2.3, A5.601 and A5.602 are added as provided in this Article.

Sec. 100. Subsection A5.105.1.2 of Section 99.12.101 of the Los Angeles Municipal Code is amended to read as follows:

A5.105.1.2. Existing Non-Structural Elements. Reuse existing interior nonstructural elements (interior walls, doors, floor coverings and ceiling systems) in at least 50% of the area of the completed building (including additions).

Sec. 101. Subsection A5.106.2 of Section 99.12.101 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 102. Subsection A5.106.2.1 of Section 99.12.101 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 103. Subsection A5.106.2.2 of Section 99.12.101 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 104. Subsection A5.106.4.3 of Section 99.12.101 of the Los Angeles Municipal Code is amended to read as follows:

A5.106.4.3. Changing Rooms. Provide changing/shower facilities for tenant-occupants only in accordance with Table A5.106.4.3 or document arrangements with nearby changing/shower facilities.

TABLE A5.106.4.3

NUMBER OF TENANT-OCCUPANT	SHOWER/CHANGING FACILITIES REQUIRED	2-TIER (12" X 15" X 72") PERSONAL EFFECTS LOCKERSREQUIRED
1–10	1 unisex shower	1
11–50	1 unisex shower	2
51–100	1 unisex shower	3
101–200	1 shower stall per gender	4
Over 200	1 shower stall per gender for each 200 additional tenant-occupants	One 2-tier locker for each 50 additional tenant-occupants

Note: Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates

Sec. 105. Subsection A5.106.5.1.1 of Section 99.12.101 of the Los Angeles Municipal Code is added to read as follows:

A5.106.5.1.1. Tier 1. Designated parking spaces [BSC]. Provide designated parking spaces for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as follows:

TABLE A5.106.5.1.1

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
0–9	1
10–25	2
26–50	4
51–75	6
76–100	9
101–150	11
151–200	18
201 and over	At least 10 percent of total

Sec. 106. Subsection A5.106.5.1.2 of Section 99.12.101 of the Los Angeles Municipal Code is added to read as follows:

A5.106.5.1.2. Tier 2. Designated parking spaces. Provide designated parking spaces for any combination of low-emitting, fuel-efficient, and carpool/van pool vehicles as follows:

TABLE A5.106.5.1.2

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
0–9	1
10–25	2
26–50	5
51–75	7
76–100	9
101–150	13
151–200	19
201 and over	At least 12 percent of total

Sec. 107. Subsection A5.106.5.3.2 of section 99.12.101 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 108. A new Subsection A5.106.5.3.3 is added to Section 99.12.101 of the Los Angeles Municipal Code to read as follows:

A5.106.5.3.3. Tier 1. At least 7% of the total parking spaces, but not less than one, shall be capable of supporting installation of future electric vehicle supply equipment (EVSE).

Sec. 109. A new Subsection A5.106.5.3.4 is added to Section 99.12.101 of the Los Angeles Municipal Code to read as follows:

A5.106.5.3.4. Tier 2. At least 10% of the total parking spaces, but not less than two, shall be capable of supporting installation of future EVSE.

Sec. 110. Subsection A5.106.6.1 of Section 99.12.101 of the Los Angeles Municipal Code is amended to read as follows:

A5.106.6.1. Reduce Parking Capacity. With the approval of the enforcement authority, employ strategies to reduce on-site parking area by 20%.

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.

Note: Strategies for programs may be obtained from local TMAs.

Sec. 111. Subsection A5.106.9 of Section 9.12.101 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 112. A new Subsection A5.106.11.1.1 is added to Section 99.12.101 of the Los Angeles Municipal Code is to read as follows:

A5.106.11.1.1. Hardscape Alternatives. Use one or a combination of strategies 1 through 3 below for 75% of site hardscape.

1. Use light colored materials with an initial solar reflectance value of at least .30 as determined in accordance with American Society for Testing and Materials (ASTM) Standards E 1918 or C 1549.

2. Use open-grid pavement system or pervious or permeable pavement system.

3. Use solar panel arrays to create a canopy shade system.

Sec. 113. A new Subsection A5.106.11.2 is added to Section 99.12.101 of the Los Angeles Municipal Code to read as follows:

A5.106.11.2. Cool Roof for Reduction of Heat Island Effect. Use roofing materials having a minimum aged solar reflectance and thermal emittance complying with Sections A5.106.11.2.1 and A5.106.11.2.2.

EXCEPTIONS:

1. Roof constructions that have thermal mass over the roof membrane, including areas of vegetative (green) roofs, weighing at least 25 pounds per square foot.

2. Roof area covered by building integrated solar photovoltaic and building integrated solar thermal panels.

TABLE A5.106.11.2.2 [BSC]
TIER 1

ROOF SLOPE	MINIMUM 3-YEAR AGED SOLAR REFLECTANCE	THERMAL EMITTANCE
≤ 2 : 12	0.68	0.85
>2 : 12	0.28	0.85

TABLE A5.106.11.2.3
TIER 2

ROOF SLOPE	MINIMUM 3-YEAR AGED SOLAR REFLECTANCE	THERMAL EMITTANCE
≤ 2 : 12	0.70	0.85
>2 : 12	0.34	0.85

Sec. 114. Subsection A5.303.2.3.1 of Section 99.12.101 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 115. A new Subsection A5.303.2.3.4 is added to Section 99.12.101 of the Los Angeles Municipal Code to read as follows:

A5.303.2.3.4. Nonpotable Water Systems for Indoor Water Use. Utilizing nonpotable water systems (such as captured rainwater, treated graywater, and recycled water) intended to supply water closets, urinals, and other allowed uses, may be used in the calculations demonstrating the 30-, 35-, or 40% reduction. The nonpotable water system shall comply with the current edition of the Los Angeles Plumbing Code.

Sec. 116. Subsection A5.304.4.2 of Section 99.12.101 of the Los Angeles Municipal Code is amended to read as follows:

A5.304.4.2. Tier 2. Reduce the use of potable water to a quantity that does not exceed 55% of ETo times the landscape area.

Note: Methods used to accomplish the requirements of this section must be designed to the requirements of the Los Angeles Municipal Code and shall include, but not be limited to, the following:

1. Plant coefficient;

2. Irrigation efficiency and distribution uniformity;

3. Use of captured rainwater;

4. Use of recycled water;

5. Water treated for irrigation purposes and conveyed by a water district or public entity; or

6. Use of graywater.

Sec. 117. Subsection A5.303.4.4.4 of Section 99.12.101 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 118. Subsection A5.304.8 of Section 99.12.101 of the Los Angeles Municipal Code is amended to read as follows:

A5.304.8. Graywater Irrigation System. Install a graywater collection system for onsite subsurface irrigation using graywater collected from bathtubs, showers, bathroom wash basins and laundry water. See Los Angeles Plumbing Code.

Sec. 119. A new Subsection A5.305.1 is added to Section 99.12.101 of the Los Angeles Municipal Code is to read as follows:

A5.305.1. Nonpotable Water Systems. Nonpotable water systems for indoor and outdoor use shall comply with the current edition of the Los Angeles Plumbing Code.

Sec. 120. Subsection A5.405.3 of Section 99.12.101 of the Los Angeles Municipal Code is amended to read as follows:

A5.405.3. Reused Materials. Use salvaged, refurbished, refinished or reused materials for a minimum of 5% of the total value, based on estimated cost of materials on the project. Provide documentation as to the respective values. All materials shall comply with the Los Angeles Municipal Code.

Note: Sources of some reused materials can be found at CalRecycle. See also Appendix A5, Division A5.1, Section A5.105.1 for on-site materials reuse.

Sec. 121. Subsection A5.405.4 of Section 99.12.101 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 122. Subsection A5.405.5.2 of Section 99.12.101 of the Los Angeles Municipal Code is amended to read as follows:

A5.405.5.2. Concrete. Unless otherwise directed by the Engineer of Record, use concrete manufactured with cementitious materials in accordance with Sections A5.405.5.2.1 and A5.405.5.2.1.1, as approved by the Department.

Sec. 123. Subsection A5.405.5.2.1 of Section 99.12.101 of the Los Angeles Municipal Code is amended to read as follows:

A5.405.5.2.1. Supplementary Cementitious Materials (SCM). Use concrete made with one or more supplementary cementitious materials (SCM) conforming to the following standards:

1. Fly ash conforming to ASTM C 618, Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete;

2. Slag cement (GGBFS) conforming to ASTM C 989, Specification for Use in Concrete and Mortars;

3. Silica fume conforming to ASTM C 1240, Specification for Silica Fume Used in Cementitious Mixtures;

4. Natural pozzolan conforming to ASTM C 618, Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete;

5. Blended supplementary cementitious materials conforming to ASTM C 1697, Standard Specification for Blended Supplementary Cementitious Materials. The amount of each SCM in the blend will be used separately in calculating Equation A5.4-1. If Class C fly ash is used in the blend, it will be considered to be "SL" for the purposes of satisfying the equation;

6. Ultra-fine fly ash (UFFA) conforming to ASTM C 618, Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete and the following chemical and physical requirements:

Chemical Requirements	**Percent**
Sulfur Trioxide (SO_3)	1.5 max.
Loss on ignition	1.2 max.
Available Alkalies (as Na_2O) equivalent	1.5 max.
Physical Requirements	**Percent**
Particle size distribution Less than 3.5 microns Less than 9.0 microns	 50 90
Strength Activity Index with portland cement 7 days 28 days	 95 (minimum % of control) 110 (minimum
Expansion at 16 days when testing job materials in conformance with ASTM C 1567*	0.10 max.

* In the test mix, cement shall be replaced with at least 12 % UFFA by weight.

7. Metakaolin conforming to ASTM C 618, Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete, the following chemical and physical requirements:

Chemical Requirements	**Percent**
Silicon Dioxide (SiO_2) + Aluminum Oxide (Al_2O_3)	92.0 min.
Calcium Oxide (CaO)	1.0 max.

Sulfur Trioxide (SO_3)	1.0 max.
Loss on ignition	1.2 max.
Available Alkalies (as Na_2O) equivalent	1.0 max.
Physical Requirements	**Percent**
Particle size distribution Less than 45 microns	95
Strength Activity Index with portland cement 7 days 28 days	100 (minimum percent of control) 100 (minimum percent of control)

8. Other materials with comparable or superior environmental benefits, as approved by the Engineer of Record and Department.

Sec. 124. Subsection A5.408.3.1 of Section 99.12.101 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 125. A new Subsection A5.410.3 is added to Section 99.12.101 of the Los Angeles Municipal Code to read as follows:

A5.410.3. Commissioning. For new buildings under 10,000 square feet, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel with experience on projects of comparable size and complexity. Commissioning requirements shall include:

1. Owner's or owner representative's project requirements;

2. Basis of design;

3. Commissioning measures shown in the construction documents;
4. Commissioning plan;

5. Functional performance testing;

6. Documentation and training;

7. Commissioning report.

All building operating systems covered by Title 24, Part 6, as well as process equipment and controls and renewable energy systems shall be included in the scope of the commissioning requirements.

Sec. 126. Subsection A5.504.4.8 of Section 99.12.101 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 127. Subsection A5.504.4.9 of Section 99.12.101 of the Los Angeles Municipal Code is amended to read as follows:

A5.504.4.9. Acoustical Ceilings and Wall Panels. Comply with Chapter 8 in Title 24, Part 2, the Los Angeles Building Code and with the VOC-emission limits defined in the 2009 CHPS criteria and listed on its High Performance Products Database.

Sec. 128. Subsection A5.504.4.9.1 of Section 99.12.101 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 129. Subsection A5.507.2 of Section 99.12.101 of the Los Angeles Municipal Code is deleted in its entirety.

Sec. 130. A new Table A5.601 is added to Section 99.12.101 of the Los Angeles Municipal Code to read as follows:

TABLE A5.601 NONRESIDENTIAL BUILDINGS:
Green Building Standards Code Tiers 1 and Tier 2 Reference Table
Note: This table is intended only as an aid in illustrating the nonresidential tier structure

CATEGORY	ENVIRONMENTAL PERFORMANCE GOAL	TIER 1	TIER 2
All	Minimum Mandatory	Meet all of the provisions of Chapter 5	Meet all of the provisions of Chapter 5
Planning and Design	Designated Parking for Fuel Efficient Vehicles	Meet Table A5.106.5.1.1	Meet Table A5.106.5.1.2
	Cool Roof to Reduce Heat Island Effect	Meet Table A5.106.11.2.2	Meet Table A5.106.11.2.3
		1 additional Elective from Division A5.1	3 additional Electives from Division A5.1
Energy Efficiency	Energy Performance[2,3]	Outdoor lighting power 90% of Part 6 allowance	Outdoor lighting power 90% of Part 6 allowance
		If applicable, solar water-heating system with minimum solar savings	If applicable, solar water-heating system with minimum solar savings
		If applicable, certain functional areas comply with residential indoor lighting	If applicable, certain functional areas comply with residential indoor lighting
		Energy Budget 95% or 90% of Part 6 allowance	Energy Budget 90% or 85% of Part 6 allowance

Water Efficiency and Conservation	Indoor Water Use	30% Savings	35% Savings
	Outdoor Water Use	Not exceed 60% of ETo times the landscape area	Not exceed 55% of ETo times the landscape area
		1 additional Elective from Division A5.3	3 additional Electives from Division A5.3
Material Conservation and Resource Efficiency[4]	Construction Waste Reduction	At least 65% reduction	At least 80% reduction
	Recycled Content	Utilize recycled content materials for 10% of total material cost	Utilize recycled content materials for 15% of total material cost
		1 additional Elective from Division A5.4	3 additional Electives from Division A5.4
Environmental Quality	Low-VOC Resilient Flooring	90% of flooring meets VOC limits	100% of flooring meets VOC limits[1]
	Low-VOC Thermal Insulation	Comply with VOC limits	Install no-added formaldehyde insulation and comply VOC limits
		1 additional Elective from Division A5.5	3 additional Electives from Division A5.5
Additional Measures	Added measures shall be achieved across at least 3 categories	1 Additional Elective	3 Additional Electives
Approximate Total Measures		14	24

1. Exception: Allowance may be permitted in Tier 2 for up to 5% specialty purpose flooring.

Exceptions for solar water-heating requirement:

2. Buildings with a natural gas service water heater with a minimum of 95% thermal efficiency.

3. Buildings where greater than 75% of the total roof area has annual solar access that is less than 70%. Solar access is the ratio of solar insolation including shade to the solar insolation without shade. Shading from obstructions located on the roof or any other part of the building shall not be included in the determination of annual solar access.

4. Life cycle assessment compliant with Section A5.409.4 in this code may be substituted for prescriptive measures from Division A5.4.

Sec. 131. Section 99.12.508 of the Los Angeles Municipal Code is amended to read as follows:

TABLE A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLISTS
(For reference only. Refer to Chapter 5 or Appendix A5 for requirement)

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
Requirements			
Project meets all of the requirements of Divisions 5.1 through 5.5.	☒	☐	☐
Planning and Design			
Site Selection			
A5.103.1 Community connectivity. Locate project on a previously developed site within a ½ mile radius of at least ten basic services, listed in Section A5.103.1.		☐	☐
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.		☐	☐
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%.		☐	☐
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% of the total project site area.		☐	☐
Deconstruction and Reuse of Existing Structures			

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
A5.105.1.1 Existing building structure. Maintain at least 75% of existing building structure (including structural floor and roof decking) and envelope (exterior skin and framing) based on surface area. **Exceptions:** 1. Window assemblies and nonstructural roofing material. 2. Hazardous materials that are remediated as a part of the project. 3. A project with an addition of more than two times the square footage of the existing building.		☐	☐
A5.105.1.2 Existing nonstructural elements. Reuse existing interior nonstructural elements (interior walls, doors, floor coverings and ceiling systems) in at least 50% of the area of the completed building (including additions).		☐	☐
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.		☐	☐
Site Development			
5.106.1 Storm water pollution prevention. Newly constructed projects which disturb land shall prevent the pollution of stormwater runoff from the construction activities through best management practices (BMP) in Section 5.106.1.2	☒		
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.			
A5.106.2.1 Storm water runoff rate and quantity. Implement a storm water management plan resulting in no net increase in rate and quantity of storm water runoff from existing to developed conditions. **Exception:** If the site is already greater than 50% impervious, implement a storm water management plan resulting in a 25% decrease in rate and quantity.		☐	☐
A5.106.2.2 Storm water runoff quality. Use post construction treatment control best management practices (BMPs) to mitigate (infiltrate, filter or treat) storm water runoff from the 85th percentile 24-hour runoff event (for volume-based BMPs) or the runoff produced by a rain event equal to two times the 85th percentile hourly intensity (for flow-based BMPs).		☐	☐
A5.106.3 Low impact development (LID). Reduce peak runoff in compliance with Section 5.106.3.1. Employ at least two of the following methods or other best management practices to allow rainwater to soak into the ground, evaporate into the air or collect in storage receptacles for irrigation or other beneficial uses. LID strategies include, but are not limited to those listed in Section A5.106.4.		☐	☐

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
5.106.4 Bicycle parking. Comply with Sections 5.106.4.1 and 5.106.4.2; or meet local ordinance, whichever is stricter.	☒		
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% of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.	☒		
5.106.4.2 Long-Term bicycle parking. For buildings with over tenant-occupants, provide secure bicycle parking for 5% of tenant-occupied motorized vehicle parking capacity, with a minimum of one space.	☒		
A5.106.4.3 Changing rooms. Provide changing/shower facilities in accordance with Table A5.106.4.3 or document arrangements with nearby changing/shower facilities.		☐	☐
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:			
A5.106.5.1.1. Tier 1 spaces per Table A5.106.5.1.1		☒	
A5.106.5.1.2. Tier 2 spaces per Table A5.106.5.1.2			☒
5.106.5.2 Designated parking. Provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.6.2.	☒		

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
5.106.5.3.1 Single charging space requirements. When only a single charging space is required, install a listed raceway capable of accommodating a dedicated branch circuit. The raceway shall not be less than trade size 1. The raceway shall be securely fastened at the main service or subpanel and shall terminate in close proximity to the proposed location of the charging system into a listed cabinet, box, or enclosure. Sufficient conductor sixing and service capacity to install Level 2 EVSE shall be provided	☒		
5.106.5.3.2 Multiple charging spaces required. When multiple charging spaces are required, plans shall include the location(s) and type of the EVSE, raceway method(s), wiring schematics and electrical calculations to verify that the electrical system has sufficient capacity to charge simultaneously all the electrical vehicles at all designated EV charging spaces at their full rated amperage. Plan design shall be based upon Level 2 EVSE at its maximum operating ampacity. Provide raceways from the electrical service panel to the designated parking areas that are required to be installed at the time of construction.	☒		
A5.106.5.3.3 Tier 1. At least 7% of the total parking spaces, but not less than one, shall be capable of supporting installation of future EVSE.			
A5.106.5.3.5 Tier 2. At least 10% of the total parking spaces, but not less than two, shall be capable of supporting installation of future EVSE.		☐	
5.106.5.3.5 Labeling requirement. A label stating "EV CHARGE CAPABLE" shall be posted in a conspicuous place at the service panel or subpanel and the EV charging space.			☐
	☒		
A5.106.6 Parking capacity. Design parking capacity to meet but not exceed minimum local zoning requirements.			
A5.106.6.1 Reduce parking capacity. With the approval of the enforcement authority, employ strategies to reduce on-site parking area by 20%			
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.		☐	☐

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
A5.106.7 Exterior walls. Meet requirements in the current edition of the *California Energy Code* and comply with either Section A5.106.7.1 or A5.106.7.2 for wall surfaces: **A5.106.7.1 Fenestration.** Provide vegetative or man-made shading devices for all fenestration on east-, south- and west-facing walls. **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 the exterior wall, whichever is less. **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. **A5.106.7.2 Opaque wall areas.** Use wall surfacing with SRI 25 (aged), for 75% of opaque wall areas.		☐ ☐ ☐	☐ ☐ ☐
5.106.8 Light pollution reduction. [N] Outdoor lighting systems shall be designed and installed to comply with the following: 1. The minimum requirements in the California Energy Code for Lighting Zones 1–4 as defined in Chapter 10 of the California Administrative Code; and 2. Backlight, Uplight and Glare (BUG) ratings as defined in IES 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. **Exceptions: [N]** 1. Luminaires that qualify as exceptions in Section 147 of the California Energy Code 2. Emergency lighting	☒ or ☒		
5.106.10 Grading and paving. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include those shown in Items 1–5. See exception for additions or alterations.	☒		

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
5.106.11 Heat island effect. Reduce nonroof heat islands and roof heat islands as follows:			
5.106.11.1 Hardscape alternatives. Use one or a combination of strategies 1 through 4 for 25% of site hardscape.	☒		
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.			
4. Use solar panel arrays to create a canopy shade system.			
A5.106.11.1.1 Hardscape alternatives. Use one or a combination of strategies 1 through 3 for 75% of site hardscape.		☐	☐
1. Use light colored materials with an initial solar reflectance value of at least .30 as determined in accordance with ASTM Standards E 1918 or C 1549.		☐	☐
2. Use open-grid pavement system or pervious or permeable pavement system.		☐	☐
3. Use solar panel arrays to create a canopy shade system.		☐	☐
A5.106.11.2 Cool roof. Use roofing materials having a minimum 3-year aged solar reflectance and thermal emittance complying with Sections A5.106.11.2.1 and A5.106.11.2.2:			
Table A5.106.11.2.2 – Tier 1 or			
Table A5.106.11.2.3 – Tier 2			
Exceptions:		☒	
1. Roof constructions that have a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25lbs/sf.			☒
2. Roof area covered by building integrated solar photovoltaic and building integrated solar thermal panels.			
Energy Efficiency			
Performance Requirements			
5.201.1 Scope. Building meets or exceeds the requirements of the California Building Energy Efficiency Standards.[3]	☒	☒[2]	☒[2]
A5.203.1 Energy Efficiency. Nonresidential, high-rise residential and hotel/motel buildings that include lighting and/or mechanical systems shall comply with Sections A5.203.1.1 and either A5.203.1.2.1 or A5.203.1.2.2. Newly constructed buildings as well as additions and alterations are included in the scope of these sections. Buildings permitted without lighting or mechanical systems shall comply with Section A5.203.1.1 but are not required to comply with Sections A5.203.1.1.2 or A5.203.1.2.		☐	☐
A5.203.1.1.1 Outdoor Lighting. Newly installed outdoor lighting power is no greater than 90% of the Title 24, Part 6 calculated value of allowed outdoor lighting power.		☒[2]	☒[2]
A5.203.1.1.2 Service Water Heating in Restaurants. Newly constructed restaurants 8,000 square feet or greater and with service water heaters rated 75,000 Btu/h or greater installed a solar water-heating system with a minimum solar savings fraction of 0.15 or meet one of the exceptions.		☒[2]	☒[2]

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
A5.203.1.1.3 Functional Areas where Compliance with Residential Lighting Standards is required. For newly constructed high-rise residential dwelling units and hotel and motel guest rooms, indoor lighting complies with the applicable requirements in Appendix A4 Residential Voluntary Measures, Division A4.2 – Energy Efficiency, Section A4.203.1.1.3. For additions and alterations to high-rise residential dwelling units and hotel and motel guest rooms, indoor lighting complies with the applicable requirements in Appendix A4 Residential Voluntary Measures, Division A4.2 – Energy Efficiency, Section A4.204.1.1.1.		☒[2]	☒[2]
A5.203.1.2.1 Tier 1. For building projects that include indoor lighting or mechanical systems, but not both, the Energy Budget is no greater than 95% of the Title 24, Part 6 Energy Budget for the Proposed Design Building. For building projects that include indoor lighting and mechanical systems, the Energy Budget is no greater than 90% of the Title 24, Part 6 Energy Budget for the Proposed Design Building.		☒[2]	
A5.203.1.2.2 Tier 2. For building projects that include indoor lighting or mechanical systems, but not both, the Energy Budget is no greater than 90% of the Title 24, Part 6 Energy Budget for the Proposed Design Building. For building projects that include indoor lighting and mechanical systems, the Energy Budget is no greater than 85% of the Title 24, Part 6 Energy Budget for the Proposed Design Building.			☒[2]
Renewable Energy			
A5.211.1 On-site renewable energy. Use on-site renewable energy for at least 1% of the electrical service overcurrent protection device rating calculated in accordance with the 2013 Los Angeles Electrical Code or 1KW, whichever is greater, in addition to the electrical demand required to meet 1% of natural gas and propane use calculated in accordance with the 2013 Los Angeles Plumbing Code. **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. **A5.211.3 Green power.** Participate in the local utility's renewable energy portfolio program that provides a minimum of 50% electrical power from renewable sources. Maintain documentation through utility billings. **5.211.1 Space for Future Electrical Solar System Installation [N].** Comply with Section 110.10 of the California Energy Code. **5.211.1.1 Prewiring for Future Electrical Solar System [N]**. Install conduit from the building roof, eave, or other locations approved by the Department to the electrical service equipment. The conduit shall be labeled as per the Los Angeles Fire Department requirements. **Exception:** Buildings not required to provide a solar zone per Section 110.10 of the California Energy Code.	☒ ☒	☐	☐
Elevators, Escalators and Other Equipment			

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
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.			
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.		☐	☐
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.		☐	☐
A5.212.1.2 Escalators. An escalator shall have a VVVF motor drive system that is fully regenerative when the escalator is in motion.		☐	☐
Energy Efficient Steel Framing			
A5.213.1 Steel framing. Design for and employ techniques to avoid thermal bridging.		☐	☐
Water Efficiency and Conservation			
Indoor Water Use			
5.303.1 Meters. Separate meters shall be installed for the uses described in Sections 5.303.1.1 and 5.303.1.2.			
5.303.1.1 New buildings or additions in excess of 50,000 square feet. Separate submeters shall be installed as follows:			
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:			
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 kW)	☒		
5.303.1.2 Excess consumption. A separate submeter or metering device shall be provided within a new building or within an addition that is projected to consume more than 1,000 gal/day (3800 L/day).	☒		
5.303.2 Water Reduction. Plumbing fixtures shall meet the maximum flow rate values shown in Table 5.303.2.3	☒		
Exception: Buildings that demonstrate 20% overall water use reduction. In this case, a calculation demonstrating a 20% reduction in the building "water use baseline," as established in Table 5.303.2.2 shall be provided.			
5.303.2.1 Areas of additions or alterations. For those occupancies within the authority of the California Building Standards Commission as specified in Section 103, the provisions of Section 5.303.2 and Section 5.303.3 shall apply to new fixtures in additions or areas of alterations to the building.	☒		

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
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% shall be provided.		☒	
A5.303.2.3.2 Tier 2 – 35% savings. A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by 35% shall be provided.			☒
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% shall be provided. (Calculate savings by Water Use Worksheets)		☐	☐
A5.303.2.3.4 Nonpotable water systems for indoor use. Utilizing nonpotable water systems (such as captured rainwater, treated graywater, and recycled water) intended to supply water closets, urinals, and other allowed sues, may be used in the calculations demonstrating the 30, 35 or 40% reduction. The nonpotable water systems shall comply with the current edition of the *Los Angeles Plumbing Code*.		☐	☐
5.303.3 Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:	☒		
5.303.3.1 Water closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S EPA WaterSense Specification for Tank-Type Toilets.	☒		
Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.			
5.303.3.2 Urinals. The effective flush volume of urinals shall not exceed 0.5 gallons per flush.	☒		
5.303.3.3 Showerheads.	☒		
5.303.3.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 2.0 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S EPA WaterSense Specification for Showerheads.	☒		
5.303.3.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all showeheads and/or other shower outlets controlled by a single valve shall not exceed 2.0 gallons per minute at 80psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.	☒		
Note: A hand-held shower shall be considered a showerhead.			

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
A5.303.3 Appliances. 1. Clothes washers shall have a maximum Water Factor (WF) that will reduce the use of water. 2. Dishwashers shall meet the criteria in Section A5.303.3(2)(a) and (b). 3. Ice makers shall be air cooled. 4. Food steamers shall be connectionless or boilerless. 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 (38 L/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 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		☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐
5.303.4 Wastewater reduction. Each building shall reduce the generation of wastewater by one of the following methods: 1. The installation of water-conserving fixtures or 2. Utilizing nonpotable water systems.	As applicable ☒ ☒		
A5.303.5 Dual plumbing. New buildings and facilities shall be dual plumbed for potable and recycled water systems.		☐	☐
5.303.6 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the Los Angeles Plumbing Code, and shall meet the applicable standards referenced in Table 1401.1 of the Los Angeles Plumbing Code and in Chapter 6 of this code.	As applicable ☒		
Outdoor Water Use			
5.304.1 Water budget. A water budget shall be developed for landscape irrigation use.[3] Applies to additions and alterations.	☒		
5.304.2 Outdoor potable water use. For new water service or for an addition or alteration requiring upgraded water service, separate meters or submeters shall be installed for indoor and outdoor potable water use for cumulative landscaped areas of at least 1,000 square feet. **A5.304.2.1 Outdoor potable water use.** For new water service not subject to the provisions of Section 304.2, separate meters or submeters shall be installed for outdoor potable water use for landscaped areas of at least 500 square feet but not more than 1,000 square feet (the level at which Section 5.304.2 applies).	☒	☐	☐

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
5.304.3 Irrigation design. In new nonresidential projects with at least 1,000 square feet of landscaped area, install irrigation controllers and sensors which include the following criteria and meet manufacturer's recommendations. Applies to additions and alterations.	☒		
5.304.3.1 Irrigation controllers. Automatic irrigation system controllers installed at the time of final inspection shall comply with the following:	☒		
1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.	As applicable ☒		
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.			
A5.304.4 Potable water reduction. Provide water efficient landscape irrigation design that reduces by the use of potable water.			
A5.304.4.1 Tier 1 – Reduce the use of potable water to a quantity that does not exceed 60% of ETo times the landscape area.		☒	
A5.304.4.2 Tier 2 –Reduce the use of potable water to a quantity that does not exceed 55% of ETo times the landscape area. Methods used to accomplish the requirements of this section shall include, but not be limited to, the items listed in A5.304.4.			☒
A5.304.4.3 Verification of compliance. A calculation demonstrating the applicable potable water use reduction required by this section shall be provided.		☒	☒
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. Methods used to accomplish the requirements of this section shall include, but not be limited to, the items listed in Section A5.304.4.		☐	☐
A5.304.6 Restoration of areas disturbed by construction. Restore all areas disturbed during construction by planting with local native and/or noninvasive vegetation.		☐	☐
A5.104.7 Previously developed sites. On previously developed or graded sites, restore or protect at least 50% of the site area with		☐	☐
A5.304.8 Graywater irrigation system. Install graywater collection system for onsite subsurface irrigation using graywater.		☐	☐
Water Reuse			
A5.305.1 Nonpotable water systems. Nonpotable water systems for indoor and outdoor use shall comply with the current edition of the Los Angeles Plumbing Code.		☐	☐
A5.305.2 Irrigation systems. Irrigation systems regulated by a local water efficient landscape ordinance or by the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO) shall use recycled water.		☐	☐
Material Conservation and Resource Efficiency			

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
Efficient Framing Systems			
A5.404.1 Wood framing. Employ advanced wood framing techniques or OVE, as permitted by the department.		☐	☐
Material Sources			
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 Section A5.405.1.		☐	☐
A5.405.2 Bio-based materials. Select bio-based building materials per Section A5.405.2.1 or A5.405.2.2. **A5.405.2.1 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. **A5.405.2.2 Rapidly renewable materials.** Use materials made from plants harvested within a ten-year cycle for at least 2.5% of total materials value, based on estimated cost.		☐ ☐	☐ ☐
A5.405.3 Reused materials. Use salvaged, refurbished, refinished or reused materials for at least 5% of the total value, based on estimated cost of materials on the project.		☐	☐
A5.405.4 Recycled content. Use materials, equivalent in performance to virgin materials, with a total (combined) recycled content value (RCV) of: **Tier 1.** The RCV shall not be less than 10% of the total material cost of the project. **Tier 2.** The RCV shall not be less than 15% of the total material cost of the project. **Note:** Use the equations in the subsections for calculating total materials cost, recycled content, RCV of materials and assemblies, and total RCV.		☐	☐

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
A5.405.5 Cement and concrete. Use cement and concrete made with recycled products and complying with the following sections:			
A5.405.5.1 Cement. Cement shall comply with one of the following standards: 1. Portland cement shall meet ASTM C 150. 2. Blended hydraulic cement shall meet ASTM C 595. 3. Other Hydraulic Cements shall meet ASTM C 1157.		☐	☐
A5.405.5.2 Concrete. Unless otherwise directed by the Engineer of Record, use concrete manufactured with cementitious materials in accordance with Sections A5.405.5.2.1 and A5.405.5.2.1.1, as approved by the department.		☐	☐
A5.405.5.2.1 Supplementary cementitious materials (SCMs). Use concrete made with one or more of the SCMs listed in Section A5.405.5.2.1.		☐	☐
A5.405.5.2.1.1 Mix design equation. Use any combination of one or more SCMs, satisfying Equation A4.5-14. **Exception:** Minimums in mix designs approved by the Engineer of Record may be lower where high early strength is needed.			
A5.405.5.3 Additional means of compliance. Any of the following measures shall be permitted to be employed for the production of cement or concrete, depending on their availability and suitability, in conjunction with Section A5.405.5.2.			
A5.405.5.3.1 Cement. The following measures may be used in the manufacture of cement.			
A5.405.5.3.1.1 Alternative fuels. Where permitted by state or local air quality standards.		☐	☐
A5.405.5.3.1.2 Alternative power. Alternate electric power generated at the cement plant and/or green power purchased from the utility meeting the requirements of Section A5.211.		☐	☐
A5.405.5.3.2 Concrete. The following measures may be used in the manufacture of concrete,			
A5.405.5.3.2.1 Alternative energy. Renewable or alternative energy meeting the requirements of Section A5.211.		☐	☐
A5.405.5.3.2.2 Recycled aggregates. Concrete made with one or more of the materials listed in Section A5.405.5.3.2.2.		☐	☐
A5.405.5.3.2.3 Mixing water. Water recycled by the local water purveyor or water reclaimed from manufacturing processes and conforming to ASTM C1602.		☐	☐
A5.405.5.3.2.4 High strength concrete. Concrete elements designed to reduce their total size compared to standard 3,000 psi concrete, as approved by the Engineer of Record.			☐
Enhanced Durability and Reduced Maintenance			
A5.406.1 Choice of materials. Compared to other products in a given category, choose materials from the following for a minimum of 5% of the total value, based on estimated cost of materials on the project. **A5.406.1.2 Reduced maintenance.** Select materials that require little, if any, finishing.		☐	☐

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
Weather Resistance and Moisture Management			
5.407.1 Weather protection. Provide a weather-resistant exterior wall and foundation envelope as required by Los Angeles Building Code Section 1403.2 and California Energy Code Section 150, manufacturer's installation instructions or local ordinance, whichever is more stringent.[3]	☒		
5.407.2 Moisture control. Employ moisture control measures by the following methods: **5.407.2.1 Sprinklers.** Prevent irrigation spray on structures. **5.407.2.2 Entries and openings**. Design exterior entries and openings to prevent water intrusion into buildings.	☒ ☒		
Construction Waste Reduction, Disposal and Recycling			
5.408.1 Construction waste management. Comply with Section 66.32 of the Los Angeles Municipal Code.	☒		
5.408.3 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. **Exception:** Reuse, either on-or off-site, of vegetation or soil contaminated by disease or pest infestation.	☒		
A5.408.3.1 Enhanced construction waste reduction–Tier 1. Divert to recycle or salvage at least 65% of nonhazardous construction and demolition waste generated at the site. **A5.408.3.1.1 Enhanced construction waste reduction–Tier 2.** Divert to recycle or salvage at least 80% of nonhazardous construction and demolition waste generated at the site. **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. **Exceptions:** 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.		☒ ☒	 ☒ ☒
Life Cycle Assessment			

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1] CALGreen Tier 1	VOLUNTARY[1] CALGreen Tier 2
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.		☐	☐
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.		☐	☐
A5.409.3 Materials and system assemblies. If whole building analysis of the project is not elected, select a minimum of 50% of materials or assemblies based on life cycle assessment of at least three for the impacts listed in Section A5.409.2.2, one of which shall be climate change.		☐	☐
A5.409.4 Substitution for prescriptive standards. Performance of a life cycle assessment completed in accordance with Section A5.409.2 may be substituted for other prescriptive provisions of Division A5.4, including those made mandatory through local adoption of Tier 1 or Tier 2 in Division A5.6.		☐	☐
A5.409.5 Verification of compliance. Documentation of compliance shall be provided as follows:			
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.		☐	☐
See notes for available tools.			
Building Maintenance and Operation			
5.410.1 Recycling by occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling.[3]	☒		
5.410.2 Commissioning. [N] For new buildings 10,000 square feet and over, building commissioning for all building systems covered by Title 24, Part 6, process systems and renewable energy systems shall be included in the design and construction processes of the building project. Commissioning requirements shall include items listed in Section 5.410.2.	☒		
Exceptions:			
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.			
5.410.2.1 Owner's Project Requirements (OPR). [N] Documented before the design phase of the project begins the OPR shall include items listed in Section 5.410.4.	☒		

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
5.410.2.2 Basis of Design (BOD). [N] A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project to cover the systems listed in Section 5.410.2.2.	☒		
5.410.2.3 Commissioning plan. [N] A commissioning plan describing how the project will be commissioned shall include items listed in Section 5.410.2.3.	☒		
5.410.2.4 [N] Functional performance testing shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications.	☒		
5.410.2.5 Documentation and training. [N] A Systems manual and systems operations training are required.	☒		
5.410.2.5.1 Systems manual. [N] The systems manual shall be delivered to the building owner or representative and facilities operator and shall include the items listed in Section 5.410.2.5.1.	☒		
5.410.2.5.2 Systems operations training. [N] A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and shall include items listed in Section 5.410.2.5.2.	☒		
5.410.2.6 Commissioning report. [N] A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or representative.	☒		
A5.410.3 Commissioning. For new buildings under 10,000 square feet building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel with experience on projects of comparable size and complexity. Commissioning requirements shall include items 1-7 listed in Section A5.410.3.		☐	☐

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
5.410.4 Testing and adjusting. Testing and adjusting of systems shall be required for buildings less than 10,000 square feet. Applies to new systems serving additions or alterations.	☒		
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.	☒		
5.410.4.3 Procedures. Perform testing and adjusting procedures in accordance with applicable standards on each system as determined by the department.	☒		
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.	☒		
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.	☒		
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.	☒		
5.410.4.5.1 Inspections and reports. Include a copy of all inspection verifications and reports required by the department.	☒		
Environmental Quality			
Fireplaces			
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 Energy Code, Title 24, Part 6, Subchapter 7, Section 150.	☒ As applicable		
5.503.1.1 Woodstoves. Woodstoves shall comply with US EPA Phase II emission limits.	☒		
Pollutant Control			
A5.504.1 Indoor air quality (IAQ) during construction. Maintain IAQ as provided in Sections A5.504.1.1 and A5.504.1.2.			
A5.504.1.1 Temporary ventilation. Provide temporary ventilation during construction in accordance with Section 121 of the California Energy Code, 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.		☐	☐
A5.504.1.2 Additional IAQ measures. Employ additional measures as listed in Items 1 through 5 in Section A5.504.1.3.		☐	☐
5.504.1.3 Temporary ventilation. If the HVAC system is used during construction, use return air filters with a MERV of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy. Applies to additions or alterations.	☒		

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
A5.504.2 IAQ postconstruction. Flush out the building per Section A5.504.2 prior to occupancy or if the building is occupied.		☐	☐
A5.504.2.1 IAQ Testing. A testing alternative may be employed after all interior finishes have been installed, using testing protocols recognized by the United State Environmental Protection Agency (U.S. EPA) and in accordance with Section A5.504.2.1.2. Retest as required in Section A5.504.2.1.3.		☐	☐
A5.504.2.1.1 Maximum levels of contaminants. Allowable levels of contaminant concentrations measured by testing shall not exceed the following:		As applicable	As applicable
1. Carbon Monoxide (CO): 9 parts per million, not to exceed outdoor levels by 2 parts per million;		☐	☐
2. Formaldehyde: 27 parts per billion;		☐	☐
3. Particulates (PM10): 50 micrograms per cubic meter;		☐	☐
4. 4-Phenylcyclohexene (4-PCH): 6.5 micrograms per cubic meter; and		☐	☐
5. Total Volatile Organic Compounds (TVOC): 300 micrograms per cubic meter.		☐	☐
A5.504.2.1.2 Test protocols. Testing of indoor air quality should include the elements listed in Items 1 through 4.		☐	☐
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.		☐	☐
5.504.3 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation and during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the department to reduce the amount of dust, water and debris which may enter the system.	☒		
5.504.4 Finish material pollutant control. Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.4.			
5.504.4.1 Adhesives, sealants, caulks. Adhesives and sealants used on the project shall meet the requirements of the following standards:			
1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2.	☒		
2. Aerosol adhesives and smaller unit sizes of adhesives and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with Section 94507.	☒		

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
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.	☒		
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*).	☒		
5.504.4.3.2 Verification. Verification of compliance with this section shall be provided at the request of the department.	☒		
5.504.4.4 Carpet systems. All carpet installed in the building interior shall meet the testing and product requirements of one of the standards listed in Section 5.504.4.4.	☒		
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.	☒		
5.504.4.4.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1.	☒		
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.	☒		
A5.504.4.5.1 No added formaldehyde. Use composite wood products approved by the ARB as no-added formaldehyde (NAF) based resins or ultra-low emitting formaldehyde (ULEF) resins.		☐	☐
5.504.4.5.3 Documentation. Verification of compliance with this section shall be provided as requested by the department.	☒	☐	☐
Documentation shall include at least one of the following.	As applicable		
1. Product certifications and specifications.	☒		
2. Chain of custody certifications.	☒		
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, *et seq.*)	☒		
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards.	☒		
5. Other methods acceptable to the department.	☒		

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
5.504.4.6 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.	☒		
A5.504.4.6.1 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.	☒		
A5.504.4.7 Resilient flooring systems, Tier 1. For 90% 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.		☒	
A5.504.4.7.1 Resilient flooring systems, Tier 2. For 100% of floor area to scheduled to receive 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.			☒
A5.504.4.7.2 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.		☒	☒
A5.504.4.8 Thermal insulation, Tier 1. Comply with the standards listed in Items 1 through 3.		☒	
A5.504.4.8.1 Thermal insulation, Tier 2. Install thermal insulation which complies with Tier 1 plus does not contain any added formaldehyde.			☒
A5.504.4.8.2 Verification of compliance. Documentation shall be provided verifying that thermal insulation materials meet the pollutant emission limits.		☒	☒
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.		☐	☐
A5.504.4.9.1 Verification of compliance. Documentation shall be provided verifying that acoustical finish materials meet the pollutant emission limits.		☐	☐

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
A5.504.5 Hazardous particulates and chemical pollutants. Minimize and control pollutant entry into buildings and cross-contamination of regularly occupied areas.			
A5.504.5.1 Entryway systems. Install permanent entryway systems measuring at least six feet in the primary direction of travel to capture dirt and particulates at entryways directly connected to the outdoors as listed in Items 1 through 3 in Section A5.504.5.1.		☐	☐
A5.504.5.2 Isolation of pollutant sources. In rooms where activities produce hazardous fumes or chemicals, exhaust them and isolate them from their adjacent rooms as listed in Items 1 through 3 in Section A5.504.5.2.		☐	☐
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. **Exception:** 1. An ASHRAE 10% to 15% efficiency filter shall be permitted for an HVAC unit meeting the 2013 California Energy Code having 60,000 Btu/h or less capacity per fan coil, if the energy use of the air delivery system is 0.4 W/cfm or less at design air flow. 2. Existing mechanical equipment	☒		
A5.504.5.3.1 Filters, Tier 1. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air prior to occupancy that provides at least a MERV of 11.		☐	
A5.504.5.3.1.1 Filters, Tier 2. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air prior to occupancy that provides at least a MERV of 13.			☐
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 the City.	☒		
Indoor Moisture and Radon Control			
5.505.1 Indoor moisture control. Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Sections 1203 and Chapter 14.1.[3]	☒		
Air Quality and Exhaust			
5.506.1 Outside air delivery. For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 121 of the California Energy Code and Chapter 4 of CCR, Title 8 or the applicable local code, whichever is more stringent.[3]	☒		

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
5.506.2 Carbon dioxide (CO_2) monitoring. For buildings equipped with demand control ventilation, CO_2 sensors and ventilation controls shall be specified and installed in accordance with the requirements of the California Energy Code, CCR, Section 121(c).[3]	☒		
Environmental Comfort			
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.			
A5.507.1.1 Single-occupant spaces. Provide individual controls that meet energy use requirements in the 2007 California Energy Code by Sections A5.507.1.1.1 and A5.507.1.1.2.		☐	☐
A5.507.1.1.1 Lighting. Provide individual task lighting and/or daylighting controls for at least 90% of the building occupants.		☐	☐
A5.507.1.1.2 Thermal comfort. Provide individual thermal comfort controls for at least 50% of the building occupants by Items 1 and 2 in Section A5.507.1.1.2.		☐	☐
A5.507.1.2 Multi-occupant spaces. Provide lighting and thermal comfort system controls for all shared multi-occupant spaces.		☐	☐
A5.507.2 Daylight. Provide daylit spaces as required for toplighting and sidelighting in the California Energy Code. In constructing a design, consider Items 1 through 4 in Section A5.507.3.		☐	☐

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
5.507.4 Acoustical control. Employ building assemblies and components with STC values determined in accordance with ASTM E 90 and ASTM E 413 or OITC determined in accordance with ASTM E 1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.	☒		
5.507.4.1 Exterior noise transmission, prescriptive method. Wall and floor-ceiling assemblies exposed to the noise source making up the building envelope shall have exterior wall and roof ceiling assemblies meeting a composite STC rating of at least 50 or a composite OITC rating of no less than 40 with exterior windows of a minimum STC of 40 or OITC of 30 in the locations described in Items 1 and 2.	☒		
5.507.4.1.1 Noise exposure where noise contours are not readily available. Buildings exposed to a noise level of 65 dB L_{eq}-1Hr during any hour of operation shall have exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).	☒ or		
5.507.4.2 Performance method. For buildings located as defined in Sections A5.507.4.1 or A5.507.4.1.1, wall and roof-ceiling assemblies making up the building envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (L_{eq}-1Hr) of 50 dBA in occupied areas during any hour of operation.	☒		
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.	☒		
5.507.4.2.2 Documentation of compliance. An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.	☒		
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.	☒		
Outdoor Air Quality			

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
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.	As applicable		
5.508.1.1 CFCs. Install HVAC and refrigeration equipment that does not contain CFCs.[3]	☒		
5.508.1.2 Halons. Install fire suppression equipment that does not contain Halons.[1]	☒		
A5.508.1.3 Hydrochlorofluorocarbons (HCFCs). Install HVAC and refrigeration equipment that does not contain HCFCs.		☐	☐
A5.508.1.4 Hydrofluorocarbons (HFCs). Install HVAC complying with either of the following:			
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.		☐	☐
5.508.2 Supermarket refrigerant leak reduction. New commercial refrigeration systems shall comply with the provisions of this section when installed in retail food stores 8,000 square feet or more conditioned areas, and that utilize either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units. The leak reduction measures apply to refrigeration systems containing high-global-warming potential (high-GWP) refrigerants with a GWP of 150 or greater. New refrigeration systems include both new facilities and the replacement of existing refrigeration systems in existing facilities.	☒ As applicable		
Exception: Refrigeration systems containing low-global warming potential (low-GWP) refrigerant with a GWP value less than 150 are not subject to this section. Low-GWP refrigerants are nonozone-depleting refrigerants that include ammonia, carbon dioxide (CO_2) and potentially other refrigerants.			

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
5.508.2.1 Refrigerant piping. Piping compliant with the Los Angeles Mechanical Code shall be installed to be accessible for leak protection and repairs. Piping runs using threaded pipe, copper tubing with an outside diameter (OD) less than ¼ inch, flared tubing connections and short radius elbows shall not be used in refrigerant systems except as noted below. **5.508.2.1.1 Threaded pipe.** Threaded connections are permitted at the compressor rack. **5.508.2.1.2 Copper pipe**. Copper tubing with an OD less than ¼ inch may be used in system with a refrigerant charge of 5 pounds or less. **5.508.2.1.2.1 Anchorage.** ¼ inch OD tubing shall be securely clamped to a rigid base to keep vibration levels below 8 mils. **5.508.2.1.3 Flared tubing connections.** Double-flared tubing connections may be used for pressure controls, valve pilot lines and oil. **Exception:** Single-flared tubing connections may be used with a multiring seal coated with industrial sealant suitable for use with refrigerants and tightened in accordance with manufacturer's recommendations. **5.508.2.1.4 Elbows.** Short radius elbows are only permitted where space limitations prohibit use of long radius elbows. **5.508.2.2 Valves.** Valves and fittings shall comply with the California Mechanical Code and as follows. **5.508.2.2.1 Pressure relief valves.** For vessels containing high-GWP refrigerant, a rupture disc shall be installed in the space between the rupture disc and the relief valve inlet to indicate a disc rupture or discharge of the relief valve. **5.508.2.2.1.1 Pressure detection.** Pressure gauge, pressure transducer or other device shall be installed in the space between the rupture disc and the relief valve inlet to indicate a disc rupture or discharge of the relief valve. **5.508.2.2.2 Access valves.** Only Schrader access valves with a brass or steel body are permitted for use. **5.508.2.2.2.1 Valve caps.** For systems with a refrigerant charge of 5 pounds or more, valve caps shall be brass or steel and not plastic. **5.508.2.2.2.2 Seal caps.** If designed for it, the cap shall have a neoprene O-ring in place. **5.508.2.2.2.2.1 Chain tethers.** Chain tethers to fit over the stem are required for valves designed to have seal caps. **Exception:** Valves with seal caps that are not removed from the valve during stem operation. **5.508.2.3 Refrigerated services cases.** Refrigerated service cases holding food products containing vinegar and salt shall have evaporator coils or corrosion-resistant material, such as stainless steel; or be coated to prevent corrosion from these substances. **5.508.2.3.1 Coil coating.** Consideration shall be given to the heat transfer efficiency of coil coating to maximize energy efficiency.			

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY[1]	
		CALGreen Tier 1	CALGreen Tier 2
5.508.2.4 Refrigerant receivers. Refrigerant receivers with capacities greater than 200 pounds shall be fitted with a device that indicated the level of refrigerant in the receiver. **5.508.2.5 Pressure testing.** The system shall be pressure tested during installation prior to evacuation and charging. **5.508.2.5.1 Minimum pressure.** The system shall be charged with regulated dry nitrogen and appropriate tracer gas to bring system pressure up to 300psig minimum. **5.508.2.5.2.1 Leaks.** Check the system for leaks, repair any leaks, and retest for pressure using the same gauge. **5.508.2.5.3 Allowable pressure charge.** The system shall stand, unaltered, for 24 hours with no more than +/- one pound pressure change from 300 psig, measure with the same gauge. **5.508.2.3 Evacuation.** The system shall be evacuated after pressure testing and prior to charging. **5.508.2.6.1 First vacuum.** Pull a system vacuum down to at least 1000 microns +/- 50 microns), and hold for 30 minutes. **5.508.2.6.2 Second vacuum.** Pull a second system vacuum to a minimum of 500 microns and hold for 30 minutes. **5.508.2.6.3 Third vacuum.** Pull a third vacuum down to a minimum of 300 microns and hold for 24hours with a maximum drift of 100 microns over a 24-hour period.			

1. Green building measures in this table may be mandatory if adopted by a city, county, or city and county as specified in Section 101.7.
2. Required prerequisite for this Tier.
3. These measures are currently required elsewhere in statute or in regulation.

Sec. 131. **Urgency Clause**. The City Council finds and declares that this Ordinance is required for the immediate protection of the public peace, health and safety for the following reason: In order for the City of Los Angeles to facilitate a seamless transition with the State of California and its Green Code and maintain predictability and streamlined case processing for the benefit of economic development during distressed times, it is necessary to immediately adopt the foregoing exceptions, modifications and additions to the California Green Code. Additionally, the California Green Code becomes effective on January 1, 2014 and the amendments to that code as reflected herein must be adopted by the City Council and become effective as soon as possible. The Council, therefore, with the Mayor's concurrence, adopts this ordinance to become effective upon publication pursuant to Los Angeles City Charter Section 253.

Sec. 132. The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy, either in a daily newspaper circulated in the City of Los Angeles or by posting for ten days in three public places in the City of Los Angeles: one copy on the bulletin board located at the Main Street entrance to the Los Angeles City Hall; one copy on the bulletin board located at the Main Street entrance to the Los Angeles City Hall East; and one copy on the bulletin board located at the Temple Street entrance to the Los Angeles County Hall of Records.

I hereby certify that this ordinance was passed by the Council of the City of Los Angeles, **by a vote of not less than three-fourths** of all of its members, at its meeting of _____.

HOLLY L. WOLCOTT, Interim City Clerk

By _____
Deputy

Approved _____

_____
Mayor

Approved as to Form and Legality

MICHAEL N. FEUER, City Attorney

By _____
KIM RODGERS WESTHOFF
Deputy City Attorney

Date 12/12/13

File No. CF13-1214

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