

**EXPRESS TERMS  
FOR  
PROPOSED BUILDING STANDARDS  
OF THE  
CALIFORNIA BUILDING STANDARDS COMMISSION (CBCS)**

**REGARDING ADOPTION OF AMENDMENTS TO THE 2010 CALIFORNIA BUILDING STANDARDS  
CODE, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR), PARTS 2, 3, 4, 5 and 6 in TITLE 24,  
CCR, PART 11, CALIFORNIA GREEN BUILDING STANDARDS CODE**

**LEGEND FOR EXPRESS TERMS**

1. New California language is shown without underline for clarity. This Division will be included, underlined, in the complete Express Terms for Part 11 for the rulemaking.

**CHAPTER 5 – NONRESIDENTIAL MANDATORY MEASURES**

**DIVISION 5.7  
ADDITIONS AND ALTERATIONS TO EXISTING NONRESIDENTIAL BUILDINGS**

**SECTION 5.701  
ADMINISTRATION**

**5.701.1 Scope.** For those occupancies subject to section 103 of this code, the provisions of this division shall apply to the planning, design, operation, construction, use and occupancy of additions to buildings or structures over 1,000 square feet and alterations with a permit valuation or estimated construction cost that exceeds \$200,000, unless otherwise indicated in this code. The provisions of this Division shall only apply to the portions of the building being added or altered.

**SECTION 5.702  
DEFINITIONS**

**5.702.1 Definitions.** Unless otherwise stated, the following words and terms shall, for the purposes of this code, have the meanings shown in this division. Refer also to definitions in Chapter 2 of this code.

**ADDITION.** An extension or increase in floor area or height of an existing building or structure.

**ALTERATION OR ALTER.** Any construction or renovation to an existing structure other than repair for the purpose of maintenance or addition.

**ARB (CARB).** The California Air Resources Board.

**SECTION 5.703  
GREEN BUILDING**

**5.703.1 Scope.** Building additions and alterations shall be designed to include the green building measures specified as mandatory in the application checklists for alterations or additions contained in this code.

**5.703.2 Phased projects.** For shell buildings and others constructed for future tenant improvements, only those code measures relevant to the building components and systems considered to be new construction (or newly constructed) shall apply.

**5.703.2.1 Tenant improvements.** The provisions of this code shall apply to the initial tenant or occupant improvements to a project and to subsequent tenant improvements subject to Section 5.701.1.

**SECTION 5.710  
PLANNING AND DESIGN**

**5.710.1 General.** The provisions of this chapter outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore, and enhance the environmental quality of the site and respect the integrity of adjacent properties.

**5.710.2 Definitions.** Refer to Section 5.102 of this code.

**5.710.3 Site selection (Reserved)**

#### 5.710.4 Site preservation (Reserved)

#### 5.710.5 Deconstruction and reuse of existing structures (Reserved)

#### 5.710.6 Site development

**5.710.6.1 Storm water pollution prevention.** Additions that disturb soil of less than one acre shall prevent the pollution of stormwater runoff from the construction activities through one or more of the following measures:

**5.710.6.1.1 Local ordinance.** Comply with a lawfully enacted stormwater management and/or erosion control ordinance.

**5.710.6.1.2. 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

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

**5.710.6.2 Bicycle parking.** Comply with Sections 5.710.6.2.1 and 5.710.6.2.2; or meet the applicable local ordinance, whichever is stricter.

**5.710.6.2.1 Short-term bicycle parking.** If the project is anticipated to generate visitor traffic and adds 10 or more vehicular parking spaces, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of the additional visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.

**5.710.6.2.2 Long-term bicycle parking.** For buildings with over 10 tenant-occupants that add 10 or more vehicular parking spaces, provide secure bicycle parking for 5% of additional motorized vehicle parking capacity, with a minimum of one space. Acceptable parking facilities shall be convenient from the street and may include:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; and
3. Lockable, permanently anchored bicycle lockers.

**5.710.6.3 Designated parking.** For projects that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient, and carpool/van pool vehicles as shown in Table 5.106.2.2 of Division 5.1 based on the number of additional spaces.

**5.710.6.3.1 Parking stall marking.** Paint, in the paint used for stall striping, the following characters such that the lower edge of the last word aligns with the end of the stall striping and is visible beneath a parked vehicle:

**“VANPOOL/ELECTRIC/  
HOV LANE STICKER”**

**5.710.8 Light pollution reduction.** Comply with the following:

1. Lighting power requirements in the California Energy Code and lighting zones 1-4 and lighting zone characteristics as defined in Chapter 10 of the California Administrative Code, CCR, Title 24, Part 1, and
- 2 Control interior and exterior lighting to minimize direct-beam illumination leaving the building site as follows:
  - a. Provide cutoff luminaires per Section 132 (b) of the California Energy Code or shield all exterior luminaires to control uplight equivalent to cutoff luminaires
  - b. Contain interior lighting within each structure
  - c. Design site lighting layout and fixtures to allow no more than 0.2 vertical and horizontal footcandles at the site boundary
  - d. Provide exterior lighting controls that can be programmed to turn off or lower light levels during inactive periods

- from sunset to sunrise  
or
3. Meet lawfully enacted local dark sky ordinance, whichever is more restrictive.

**Exceptions:**

1. California Building Code, Chapter 12, Section 1205.6 for campus lighting requirements for parking facilities and walkways.
2. Emergency lighting and lighting required for nighttime security.
3. Lighting which falls into task or process categories which include, but are not limited to the following:
  - a. Temporary outdoor lighting.
  - b. Lighting required and regulated by the Federal Aviation Administration, and the Coast Guard
  - c. Lighting for public streets, roadways, highways, and traffic signage lighting, including for driveway entrances occurring in the public right-of-way.
  - d. Lighting for sports and athletic fields, and children's playgrounds.
  - e. Lighting for industrial sites, including but not limited to, rail yards, maritime shipyards and docks, piers, marinas, chemical and petroleum processing plants, and aviation facilities.
  - f. Lighting specifically for Automated teller machine as required by California Financial Code Section 13040, or required by law through a local ordinance.
  - g. Lighting of public monuments.
  - h. Signs shall meet the requirements of T 24, Part 6 Section 148
  - i. Lighting used in or around swimming pools, water features or other locations subject to Article 680 of the California Electrical Code
  - j. Lighting of bridges, stairs, wheelchair elevator lifts for American with Disabilities Act (ADA) compliance, and ramps that are other than parking garage ramps.
  - k. Landscape lighting
  - l. In theme parks: outdoor lighting for themes and special effects.
  - m. Lighting for outdoor theatrical and other outdoor live performances, provided that these lighting systems are additions to area lighting systems and are controlled by a multiscene or theatrical cross-fade control station accessible only to authorized operators.
  - n. Outdoor lighting systems for qualified historic buildings, as defined in the California Historic Building Code (Title 24, Part 8), if they consist solely of historic lighting components or replicas of historic lighting components. If lighting systems for qualified historic buildings contain some historic lighting components or replicas of historic components, only those historic or historic replica components are exempt. All other outdoor lighting systems for qualified historic buildings shall comply with this Section.
  - o. Flags

**5.710.10 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, but are not limited to, the following:

1. Swales
2. Water collection and disposal systems
3. French drains
4. Water retention gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge

**Exception:** Additions and alterations not altering the drainage path.

**SECTION 5.711  
ENERGY EFFICIENCY (Reserved)**

**SECTION 5.712  
WATER EFFICIENCY AND CONSERVATION**

**5.712.1 Scope.** The provisions of this section shall establish the means of conserving water used indoors, outdoors, and in wastewater conveyance.

**5.712.2 Definitions.** Refer to Section 5.302 of this code.

**5.712.3 Indoor water use.**

**5.712.3.1 Meters.** Separate meters or metering device shall be installed for the uses described in Sections 5.712.3.1.1 and 5.713.3.1.2.

**5.712.3.1.1 Additions to existing buildings in excess of 50,000 square feet (4645 m<sup>2</sup>).** 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 (380 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
2. Where meters for individual building tenants are unfeasible, for 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)

**5.712.3.1.2 Excess consumption.** Any addition or added space within an addition that is projected to consume more than 1,000 gal/day (3800 L/day).

**5.712.3.2 20% Savings.** A schedule of newly installed plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by 20% shall be provided. The reduction shall be based on the maximum allowable water use per plumbing fixture and fittings as required by the California Building Standards Code. The 20% reduction in potable water use shall be demonstrated by one of the following methods.

1. Prescriptive method. Each plumbing fixture and fitting shall not exceed the maximum flow rate at  $\geq 20$  percent reduction as specified in Table 5.303.2.3 of Division 5.3, or
2. Performance method. A calculation demonstrating a 20% reduction in the building "water use baseline" as established in Table 5.303.2.2 shall be provided.

**5.712.3.3 Multiple showerheads serving one shower.** When a shower is served by more than one newly installed showerhead, the combined flow rate of all the showerheads controlled by a single valve shall not exceed the maximum flow rate at  $\geq 20$  percent reduction contained in Table 5.303.2.2 or the shower shall be designed to only allow one showerhead to be in operation at a time.

**Exception:** The maximum flow rate for shower heads when using the performance method specified in Section 5.303.2.1, Item 2 is 2.5 gpm @ 80 psi.

#### **5.712.3.4 (Reserved)**

**5.712.3.5 Plumbing fixtures and fittings.** Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall meet the standards referenced in Table 5.503.6 of Division 5.3.

### **5.712.4 Outdoor water use.**

**5.712.4.1 Water budget.** A water budget shall be developed for landscape irrigation use installed in conjunction with addition or alteration that conforms to the local water efficient landscape ordinance or to the California Department of Water Resources Model Water Efficient Landscape Ordinance where no local ordinance is applicable.

**Note:** Prescriptive measures to assist in compliance with the water budget are listed in Sections 492.5 through 492.8, 492.10 and 492.11 of the ordinance, which may be found at:  
<http://www.owue.water.ca.gov/landscape/ord/ord.cfm>

**5.712.4.2 Outdoor potable water use.** For building addition or alteration requiring upgraded water service for landscaped areas of at least 1000 square feet but not more than 5000 square feet (the level at which Water Code §535 applies), separate submeters or metering devices shall be installed for indoor and outdoor potable water use.

**5.712.4.3 Irrigation design.** In building addition or alteration with at least 1000 square feet but not more than 2500 square feet of cumulative landscaped area (the level at which the MLO applies), install irrigation controllers and sensors which include the following criteria, and meet manufacturer's recommendations.

**5.712.4.3.1 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.

#### **5.712.5 Water reuse systems (Reserved)**

## **SECTION 5.713 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY**

**5.713.1 Scope.** The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture, construction waste diversion, provisions in the workplace for recycling of materials, and system testing and adjusting and balancing of HVAC.

**5.713.2 Definitions.** Refer to Section 5.402 of this code.

#### **5.713.3 Foundation systems (Reserved)**

#### **5.713.4 Efficient framing techniques (Reserved)**

#### **5.713.5 Material sources (Reserved)**

#### **5.713.6 Enhanced durability and reduced maintenance (Reserved)**

#### **5.713.7 Water resistance and moisture management.**

**5.713.7.1 Weather protection.** Provide a weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1403.2 (Weather Protection) and California Energy Code Section 150, (Mandatory Features and Devices), manufacturer's installation instructions, or local ordinance, whichever is more stringent.

**5.713.7.2 Moisture control.** Employ moisture control measures by the following methods.

**5.713.7.2.1 Sprinklers.** Design and maintain landscape irrigation systems to prevent spray on structures.

**5.713.7.2.2 Entries and openings.** Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings.

**Notes:**

1. Use features such as overhangs and recesses, and flashings integrated with a drainage plane.
2. Use non-absorbent floor and wall finishes within at least two feet around and perpendicular to such openings.

#### **5.713.8 Construction waste reduction, disposal and recycling**

**5.713.8.1 Construction waste management.** Recycle and/or salvage for reuse a minimum of 50% of the non-hazardous construction waste in accordance with Section 5.713.8.1.1 or 5.713.8.1.2; or meet a local construction and demolition waste management ordinance, whichever is more stringent.

**5.713.8.1.1 Construction waste management plan.** Where a local jurisdiction does not have a construction and demolition waste management ordinance that is more stringent, submit a construction waste management plan that:

1. Identifies the construction waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project, or salvage for future use or sale.
2. Determines if construction waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
3. Identifies approved diversion facilities where construction waste material collected will be taken.
4. Specifies that the amount of construction waste materials diverted shall be calculated by weight or volume, but not by both.

**5.713.8.1.2 Waste management company.** Utilize a waste management company, approved by the enforcing agency, that can provide verifiable documentation that the percentage of construction waste material diverted from the landfill complies with this section.

**Note:** The owner or contractor shall make the determination if the construction waste material will be diverted by a waste management company.

**Exceptions to 5.713.8.1.1 and 5.713.8.1.2:**

1. Excavated soil and land-clearing debris
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.
3. Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets, where demolition of an existing structure(s) is necessary for the construction of a new structure

**5.713.8.1.3 Documentation.** Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 5.713.8.1.1, Items through 4. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

**Notes:**

1. Sample forms found in "A Guide to the California Green Building Standards Code (Nonresidential)" located at <http://www.bsc.ca.gov/CALGreen/default.htm> may be used to assist in documenting compliance with the waste management plan.
2. Mixed construction and demolition debris (C&D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

**5.713.8.2 Isolated jobsites.** The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.

**5.713.8.3 Excavated soil and land clearing debris.** 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

**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](http://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](http://www.cdfa.ca.gov))

**5.713.9 Life cycle assessment (Reserved)**

**5.713.10 Building maintenance and operation**

**5.713.10.1 Recycling by occupants.** If not provided on the existing site, 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.

**5.713.10.1.1 Sample ordinance.** Space allocation for recycling areas shall comply with Chapter 18, Part 3, Division 30 of the Public Resources Code. Chapter 18 is known as the California Solid Waste Reuse and Recycling Access Act of 1991 (Act).

**Note:** A sample ordinance for use by local agencies may be found in Appendix A of the document at the CalRecycle's web site.

**5.713.10.2 (Reserved)**

**5.713.10.3 (Reserved)**

**5.713.10.4 Testing and adjusting.** Testing and adjusting of new systems installed in conjunction with addition or alteration shall be required.

**5.713.10.4.1 (Reserved)**

**5.713.10.4.2 Systems.** Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include, as applicable to the project:

1. HVAC systems and controls
2. Indoor and outdoor lighting and controls
3. Water heating systems
4. Renewable energy systems
5. Landscape Irrigation Systems
6. Water Reuse Systems.

**5.713.10.4.3 Procedures.** Perform testing and adjusting procedures in accordance with applicable standards on each system as determined by the enforcing agency.

**5.713.10.4.3.1 HVAC balancing.** In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, balance the system in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; or Associated Air Balance Council National Standards or as approved by the enforcing agency.

**5.713.10.4.4 Reporting.** After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.

**5.713.10.4.5 Operation and maintenance (O & M) manual.** Provide the building owner or representative with detailed operating and maintenance instructions and copies of guaranties/warranties for each system. O & M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations.

**5.713.10.4.5.1 Inspections and reports.** Include a copy of all inspection verifications and reports required by the enforcing agency.

**SECTION 5.714  
ENVIRONMENTAL QUALITY**

**5.714.1 Scope.** The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants, and neighbors.

**5.714.2 Definitions.** Refer to Section 5.502 of this code.

**5.714.3 Fireplaces.**

**5.714.3.1 General.** Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed

woodstove or pellet stove, and refer to residential requirements in the California Energy Code, Title 24, Part 6, Subchapter 7, Section 150. Woodstoves, pellet stoves and fireplaces shall comply with applicable local ordinances.

**5.714.3.1.1 Woodstoves.** Woodstoves and pellet stoves shall comply with US EPA Phase II emission limits.

#### **5.714.4 Pollutant control.**

**5.714.4.1 Temporary ventilation.** The permanent HVAC system shall only be used during construction if necessary to condition additions or areas of alteration within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (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, or, if the building is occupied during alteration, at the conclusion of construction.

#### **5.714.4.2 (Reserved)**

**5.714.4.3 Covering of duct openings of mechanical equipment during construction.** At the time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system.

**5.714.4.4 Finish material pollutant control.** Finish materials shall comply with Sections 5.714.4.4.1 through 5.714.4.4.4.

**5.714.4.4.1 Adhesives, sealants, and caulks.** Adhesives, sealants, and caulks used on the project shall meet the requirements of the following standards.

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2 in Division 5.5. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene, and trichloroethylene), except for aerosol products as specified in subsection 2, below.
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.

#### **5.714.4.4.2 (Reserved)**

**5.714.4.4.3 Paints and coatings.** Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measure, as shown in Table 5.504.4.3 in Division 5.5, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3, shall be determined by classifying the coating as a Flat, Nonflat, or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat, or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply.

**5.714.4.4.3.1 Aerosol Paints and Coatings.** Aerosol paints and coatings shall meet the Product-Weighted MIR Limits for ROC in section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in sections 94522(c)(2) and (d)(2) of California Code of Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.

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

1. Manufacturers product specification.
2. Field verification of on-site product containers.

**5.714.4.4.4 Carpet systems.** All carpet installed in the building interior shall meet the testing and product requirements of one of the following:

1. Carpet and Rug Institute's Green Label Plus Program
2. California Department of Public Health Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.1, February 2010 (also known as Specification 01350.)
3. NSF/ANSI 140 at the Gold level or higher
4. Scientific Certifications Systems Sustainable Choice

**5.714.4.4.4.1 Carpet cushion.** All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute Green Label program.

**5.714.4.4.4.2 Carpet adhesive.** All carpet adhesive shall meet the requirements of Table 5.504.4.1 in Division 5.5.

**5.714.4.4.5 Composite wood products.** Hardwood plywood, particleboard, and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 5.504.4.5 in Division 5.5.

**5.714.4.4.5.1 Early compliance. Reserved.**

**5.714.4.4.5.2 Documentation.** Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following.

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, *et seq.*)
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards.
5. Other methods acceptable to the enforcing agency.

**5.714.4.4.6 Resilient flooring systems.** For 50% of floor area receiving resilient flooring, install resilient flooring complying with the VOC-emission limits defined in the 2009 Collaborative for High Performance Schools (CHPS) criteria and listed on its High Performance Database; products compliant with CHPS criteria certified under the Greenguard Children & Schools program; certified under the Resilient Floor Covering Institute (RFCI) FloorScore program; or meet California Department of Public Health 2010 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.)

**5.714.4.4.6.1 Verification of compliance.** Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.

**Note:** may also be used.

**5.714.4.5 Hazardous particulates and chemical pollutants.** Minimize and control pollutant entry into buildings and cross-contamination of regularly occupied areas.

**5.714.4.5.1 (Reserved)**

**5.714.4.5.2 (Reserved)**

**5.714.4.5.3 Filters.** In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provide at least a Minimum Efficiency Reporting Value (MERV) of 8. MERV 8 filters shall be installed after any flush-out or testing and prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.

**Exception:** A MERV-1 filter shall be allowed for return air only or return with prefiltered outside air, if the filter is of a re-usable, non-disposable type, and the fan energy use of that air delivery system is 0.4W/cfm or less at design airflow.

**5.714.4.6 (Reserved)**

**5.714.4.7 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, if not already prohibited by other laws or regulations, or as enforced by ordinances, regulations, or policies of any city, county, city and county, California Community College, campus of the California State University, or campus of the University of California, whichever are more stringent. When ordinances, regulations, or policies are not in place, post signage to inform building occupants of the prohibitions.

## **5.714.5 Indoor moisture control**

**5.714.5.1 Indoor moisture control.** Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Sections 1203 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures not applicable to low-rise residential occupancies, see Section 5.407.2 of this code.

## **5.714.6 Indoor air quality**

**5.714.6.1 Outside air delivery.** For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 121 (Requirements For Ventilation) of the 2010 California Energy Code, or the applicable local code, whichever is more stringent, and Chapter 4 of CCR, Title 8.

**5.714.6.2 Carbon dioxide (CO<sub>2</sub>) monitoring.** For additions equipped with demand control ventilation, CO<sub>2</sub> sensors and ventilation controls shall be specified and installed in accordance with the requirements of the current edition of the 2010 California Energy Code, Section 121(c).

#### **5.714.7 Environmental comfort**

**5.714.7.1 Acoustical control.** Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E90 and ASTM E413 or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E1332.

**5.714.7.1.1 Exterior noise transmission, performance method.** Wall and roof-ceiling assemblies making up the building envelope shall be constructed to provide an interior noise environment that does not exceed an hourly equivalent noise level ( $L_{eq-1Hr}$ ) of 50 dBA in occupied areas for any of the following building locations:

1. Within 1000 ft. (300 m.) of right of ways of expressways or freeways.
2. Within 5 mi. (8 km.) of airports serving more than 10,000 commercial jets per year.
3. Within 2,000 ft. (600 m) of active railroad tracks
4. Other than occasional sound due to church bells, train horns, emergency vehicles and public warning systems, where exterior sound levels exceed one of the following during occupied hours:-
  - a. An  $L_{eq-1Hr}$  of 65 dBA
  - b. A 65 day night noise level ( $DNL/L_{dn}$ )
  - c. A 65 community noise exposure level (CNEL)

**5.714.7.1.2 Exterior noise transmission, prescriptive method.** Exterior wall and roof-ceiling assemblies shall comply with either 5.407.4.1.1 or 5.407.4.1.2 as applicable.

**5.714.7.1.2.1 Exposure to airport, road, or railroad noise.** Buildings exposed to airport, road, or railroad noise 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 following locations:

1. Within the 65 CNEL noise contour of an airport
2. Within the 65 CNEL or  $L_{dn}$  noise contour of a road as determined by the Noise Element of the General Plan
3. Within 1000 ft. of the horn-sounding zone of active railroad tracks

**5.714.7.1.2.2 Noise exposure in other areas.** Buildings exposed to noise exceeding sound levels in Section 5.407.4.1, Item 4 shall have exterior wall and roof-ceiling assemblies meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).

**Exception:** Buildings with few or no occupants and where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures, and utility buildings.

**5.714.7.1.3 Interior sound transmission.** Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.

**Note:** Examples of assemblies and their various STC ratings may be found at the California Office of Noise Control: [http://www.toolbase.org/PDF/CaseStudies/stc\\_icc\\_ratings.pdf](http://www.toolbase.org/PDF/CaseStudies/stc_icc_ratings.pdf) .

#### **5.714.8 Outdoor air quality**

**5.714.8.1 Ozone depletion and greenhouse gas reductions.** Installations of HVAC, refrigeration, and fire suppression equipment shall comply with Sections 5.714.8.1.1 and 5.714.8.1.2.

**5.714.8.1.1 Chlorofluorocarbons (CFCs.)** Install HVAC, refrigeration and fire suppression equipment that do not contain CFCs.

**5.714.8.1.2 Halons.** Install HVAC, refrigeration and fire suppression equipment that do not contain Halons.

Notation:

**Authority** – Health and Safety Code Sections 18930.5, 18934.5 and 18938 (b).

**Reference** – Health and Safety Code, Division 13, Part 2.5, commencing with Section 18901.