

**15-DAY EXPRESS TERMS
FOR
PROPOSED BUILDING STANDARDS
OF THE
OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT**

**REGARDING ADOPTION OF AMENDMENTS TO 2007 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 amendment (CA):** California language will appear underlined.
2. **Amended, adopted, or repealed language:** Amended, adopted, or repealed language will appear in double underline and ~~double-strikeout~~.
3. **Rationale:** The justification for the change is shown after each section or series of related changes.
4. **Notation:** Authority and reference citations are provided at the end of each chapter.

CHAPTER 1 ADMINISTRATION

SECTION 101
GENERAL

...

101.7 City, county, or city and county amendments, additions or deletions. This code does not limit the authority of city, county, or city and county governments to make necessary changes to the provisions contained in this code pursuant to Section 101.7.1. The effective date of amendments, additions, or deletions to this code of cities, counties, or city and counties filed pursuant to Section 101.8.1 shall be the date on which it is filed ~~with the CBSG~~. However, in no case shall the amendments, additions or deletions to this code be effective any sooner than the effective date of this code.

...

101.8 Alternate materials, designs and methods of construction and equipment. The provisions of this code are not intended to prevent the use of any alternate material, appliance, installation, device, arrangement, method, design or method of construction not specifically prescribed by this code. Consideration and compliance provisions for occupancies regulated by adopting state agencies are found in the sections listed below.

...

Recommendation:

Based on criteria 1 and 6, OSHPD proposes to delete these words for consistency with other sections within this chapter and among the Chapters 1 in other parts of CCR, Title 24.

Rationale:

The amendments do not have regulatory effect.

SECTION 102
CONSTRUCTION DOCUMENTS AND INSTALLATION VERIFICATION

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102.3 Verification. Documentation of conformance for applicable green building measures shall be provided to the enforcing agency. ~~Third party verification or other special documentation shall be provided as specified in this code.~~ Alternate methods of documentation shall be acceptable when the enforcing agency finds that the proposed alternate documentation is satisfactory to demonstrate substantial conformance with the intent of the proposed green building measure.

Recommendation:

Based on criteria 1 and 6, OSHPD proposes to withdraw this sentence.

Rationale:

The second sentence's intent was to draw attention to certain provisions that may require special expertise.

However, it does not seem necessary to the meaning of the section. A state agency may withdraw a proposed code change.

Notation

Authority: Health & Safety Code Sections 1226, 1275, and 129850; Government Code Section 11152.5

References: Health & Safety Code Sections 1226, 1275, 129790, and 129850

CHAPTER 4

PLANNING AND DESIGN

(NOT ADOPTED BY OSHPD)

SECTION 401

GENERAL

~~**401.1 Purpose.** 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.~~

SECTION 402

DEFINITIONS

~~**402.1 Definitions.** The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein:~~

~~**WATTLES.** Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material chaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.~~

SECTION 403

SITE SELECTION

~~(Reserved)~~

SECTION 404

SITE PRESERVATION

~~(Reserved)~~

SECTION 405

~~(Reserved)~~

SECTION 406

SITE DEVELOPMENT

~~**406.1 General.** Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.~~

~~**406.2 Storm water drainage and retention during construction.** Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall develop a plan to manage storm water drainage during construction. A plan to manage storm water drainage during construction shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site. One or more of the followings methods shall be utilized to manage storm water drainage.~~

- ~~1. Retention basins of sufficient size shall be utilized to retain storm water on the site.~~
- ~~2. Where storm water is conveyed to a public drainage system, collection point, gutter, or similar disposal method, water shall be filtered by use of a barrier system, wattles, or other method approved by the enforcing agency.~~
- ~~3. Compliance with a lawfully enacted storm water management ordinance.~~

Recommendation:

Withdraw the provisions of Chapter 4, Planning and Design.

Rationale:

A state agency may withdraw a proposed code change.

Notation

Authority: Health & Safety Code Sections 1226, 1275, and 129850; Government Code Section 11152.5

References: Health & Safety Code Sections 1226, 1275, 129790, and 129850

CHAPTER 5 ENERGY EFFICIENCY

501.1 Scope. The provisions of this chapter shall outline means of achieving enhanced building energy efficiency using either a performance approach or a prescriptive approach.

...

Recommendation:

Based on criteria 1 and 6, OSHPD proposes to add a phrase to clarify for the code user that compliance with either a performance-based approach to energy savings or a prescriptive approach is required, but not both.

Rationale:

The amendment is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur. The amendment does not change the regulations proposed in Chapter 5.

SECTION 502
DEFINITIONS

502.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

...

ENERGY STAR. A joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy. ENERGY STAR is a voluntary labeling program designed to identify and promote energy-efficient products and practices to reduce greenhouse gas emissions.

...

Recommendation:

Based on criteria 1 and 6, OSHPD proposes coordinate the definition of ENERGY STAR with that on the Energy Star website to provide consistency for the code user.

Rationale:

The amendment is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur. The amendment does not change the regulations proposed in Chapter 5.

TIME DEPENDENT VALUATION (TDV) ENERGY. The time varying energy caused to be used by the building to provide space conditioning and water heating and for specified buildings lighting. TDV energy accounts for the energy cost used at the building site and consumed in producing and in delivering energy to a site, including, but not limited to, power generation, transmission and distribution losses.

...

Recommendation:

Based on criteria 1 and 6, OSHPD proposes to replace the second word “energy” in the last sentence to read “energy cost” to provide greater clarity to the code user.

Rationale:

The amendment is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur.

SECTION 504
PRESCRIPTIVE MEASURES

...

~~**504.2 Energy monitoring.** Provide sub metering or equivalent combinations of sensor measurements and thermodynamic calculations, if appropriate, to record energy use data for each major energy system in the building, including chillers, heat pumps, packaged AC systems, fans, pumps, cooling towers, boilers and other heating systems, lighting systems, and process loads. This energy use data, once collected, shall be stored within a data management system.~~

~~**504.2.1 Data storage.** The data management system must be capable of electronically storing energy data and creating user reports showing hourly, daily, monthly and annual energy consumption for each major energy system. Hourly data shall be retained a minimum of 30 days, daily data shall be retained a minimum of 6 months and monthly data shall be retained a minimum of 2 years.~~

~~**504.2.2 Data access.** Hourly energy use data shall be accessible through a central data management system and must be available daily.~~

~~**504.4 Commissioning.** 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 project requirements. Commissioning shall be performed in accordance with this section by personnel trained and certified in commissioning by a nationally recognized organization. Commissioning requirements shall include as a minimum:~~

- ~~1. Owner's Project Requirements.~~
- ~~2. Basis of Design.~~
- ~~3. Commissioning measures shown in the construction documents.~~
- ~~4. Commissioning Plan~~
- ~~5. Functional Performance Testing.~~
- ~~6. Post Construction Documentation & Training.~~
- ~~7. Commissioning Report.~~

~~All building systems and components 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.~~

~~**504.4.1 Owner's Project Requirements (OPR).** The expectations and requirements of the building shall be documented before the design phase of the project begins. At a minimum, this documentation shall include the following:~~

- ~~1. Environmental and Sustainability Goals.~~
- ~~2. Energy Efficiency Goals.~~
- ~~3. Indoor Environmental Quality Requirements.~~
- ~~4. Equipment and System Expectations.~~
- ~~5. Building Occupant and O&M Personnel Expectations.~~

~~**504.4.2 Basis of Design (BOD).** A written explanation of how the design of the building systems meets the Owner's Project Requirements shall be completed at the design phase of the building project, and updated as necessary during the design and construction phases. At a minimum, the Basis of Design document shall cover the following systems:~~

- ~~1. Heating, Ventilation, Air Conditioning (HVAC) Systems and Controls.~~
- ~~2. Indoor Lighting System and Controls.~~
- ~~3. Water Heating System.~~
- ~~4. Renewable Energy Systems.~~

~~**504.4.3 Commissioning plan.** A commissioning plan shall be completed to document the approach to how the project will be commissioned and shall be started during the design phase of the building project. The Commissioning Plan shall include the following at a minimum:~~

- ~~1. General Project Information.~~
- ~~2. Commissioning Goals.~~
- ~~3. Systems to be commissioned. Plans to test systems and components shall include at a minimum:~~
 - ~~a. A detailed explanation of the original design intent.~~
 - ~~b. Equipment and systems to be tested, including the extent of tests.~~
 - ~~c. Functions to be tested.~~
 - ~~d. Conditions under which the test shall be performed.~~
 - ~~e. Measurable criteria for acceptable performance.~~
- ~~4. Commissioning Team Information.~~
- ~~5. Commissioning Process Activities, Schedules & Responsibilities — plans for the completion of Commissioning Requirements listed in 504.4.4 through 504.4.6 shall be included.~~

~~**504.4.4 Functional performance testing.** Functional performance tests shall demonstrate the correct~~

~~installation and operation of each component, system, and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.~~

~~**504.4.5 Post construction documentation and training.** A Systems Manual and Systems Operations Training are required.~~

~~**504.4.5.1 Systems manual.** Documentation of the operational aspects of the building shall be completed within the Systems Manual and delivered to the building owner and facilities operator. At a minimum, the Systems Manual shall include the following:~~

- ~~1. Site Information, including facility description, history and current requirements.~~
- ~~2. Site Contact Information.~~
- ~~3. Basic Operations & Maintenance, including general site operating procedures, basic troubleshooting, recommended maintenance requirements, site events log~~
- ~~4. Major Systems.~~
- ~~5. Site Equipment Inventory and Maintenance Notes.~~
- ~~6. Other Resources & Documentation.~~

~~**504.4.5.2 Systems operations training.** The training of the appropriate maintenance staff for each equipment type and/or system shall include, as a minimum, the following:~~

- ~~1. System/Equipment overview (what it is, what it does and what other systems and/or equipment it interfaces with).~~
- ~~2. Review of the information in the Systems Manual.~~
- ~~3. Review of the record drawings on the system/equipment.~~

~~**504.4.6 Commissioning report.** A complete report of commissioning process activities undertaken through the design, construction and post construction phases of the building project shall be completed and provided to the owner.~~

Recommendation:

1. Withdraw the provisions of energy monitoring (Section 504.2)
2. Withdraw the provisions of commissioning (Section 504.4)

Rationale:

1. A state agency may withdraw proposed code changes.
2. A state agency may withdraw proposed code changes.

504.5 Building orientation and shading. Locate, orient and shade the building as follows:

1. Provide exterior shade for south-facing windows during the peak cooling season.
2. Provide vertical shading against direct solar gain and glare due to low altitude sun angles for east- and west-facing windows.
- ~~3. When site and location permit, orient the building with the long sides facing north and south.~~
- ~~4. Protect the building from thermal loss, drafts, and degradation of the building envelope caused by wind and wind-driven materials such as dust, sand, snow, and leaves with building orientation and landscape features.~~

Recommendation:

1. Withdraw provisions that require orienting building with long sides facing north and south.
2. Withdraw provisions that require protection of building from thermal loss, drafts and degradation of building envelope.

Rationale:

1. A state agency may withdraw proposed code changes.
2. A state agency may withdraw proposed code changes.

Notation

Authority: Health & Safety Code Sections 1226, 1275, and 129850; Government Code Section 11152.5

References: Health & Safety Code Sections 1226, 1275, 129790, and 129850

CHAPTER 7 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

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SECTION 705 MATERIAL SOURCES

~~**705.1 Regional materials.** Compared to other products in a given product category, 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.~~

- ~~1. For those materials locally manufactured, select materials manufactured using low embodied energy or those that will result in net energy savings over their useful life.~~
- ~~2. Regional materials shall make up at least 10%, based on cost, of total materials value.~~
- ~~3. If regional materials make up only part of a product, their values are calculated as percentages based on weight.~~
- ~~4. Provide documentation of the origin, net projected energy savings, and value of regional materials.~~

~~**705.2 Bio-based materials.** Select bio-based building materials and products made from solid wood, engineered wood, bamboo, wool, cotton, cork, straw, natural fibers, products made from crops (soy-based, corn-based) and other bio-based materials with at least 50% bio-based content.~~

~~**705.2.1 Certified wood products.** Employ wood-based materials and products comprising at least 50% of a major building component, such as framing, flooring, or millwork, which are certified in accordance with one of the following standards organizations' requirements:~~

- ~~1. Forest Stewardship Council (FSC) Principles and Criteria for wood framing and paneling. (FSC also has a certification process for federal lands.)~~
- ~~2. Canadian Standards Association Z809 Standards. (CSA may also have a certification process for federal lands.)~~
- ~~3. Sustainable Forestry Initiative Standard, 2005-2009.~~
- ~~4. American Tree Farm System, 2004-2008 AFF Standard~~
- ~~5. Programme for the Endorsement of Forest Certification Scheme (PEFC)~~

~~**705.2.2 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.~~

~~**705.3 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.~~

~~**705.3.1 Sources of reused materials.** Sources of some reused materials can be found at <http://www.ciwmb.ca.gov/RCP/Product.asp?VW=CAT&CATID=257>~~

~~See also Appendix A, Sections A405.1 and A405.2 for on-site materials reuse.~~

~~**705.4 Recycled content.** Use materials, equivalent in performance to virgin materials, with post-consumer or pre-consumer recycled content value (RCV) for a minimum of 10% of the total value, based on estimated cost of materials on the project. Provide documentation as to the respective values.~~

~~**705.4.1 Determination of recycled content value (RCV).** The recycled content of a material assembly shall be determined by weight, and the fractional value of the weight is then multiplied by the total estimated cost of the material assembly.~~

~~**705.4.2 Sources of recycled materials.** Sources and recycled content of some recycled materials can be found at <http://www.ciwmb.ca.gov/RCP/Product.asp?VW=CAT&CATID=257>.~~

SECTION 706 ENHANCED DURABILITY AND REDUCED MAINTENANCE

~~**706.1 Choice of materials.** Compared to other products in a given product category, choose materials proven to be characterized by one or more of the following:~~

~~**706.1.1 Service life.** Select materials for longevity and minimal deterioration under conditions of use.~~

~~**706.1.2 Reduced maintenance.** Select materials that require little, if any, finishing. For those with surface protection, choose materials that do not require frequent applications of toxic or malodorous finishes.~~

~~**706.1.3 Recyclability.** Select materials that can be re-used or recycled at the end of their service life in the project.~~

SECTION 707
WATER RESISTANCE AND MOISTURE MANAGEMENT

~~707.2 Moisture control. Employ moisture control measures by one of the following methods.~~

~~707.2.1 Sprinklers. Design and maintain landscape irrigation systems to prevent spray on structures.~~

~~707.2.2 Entries and openings. Design exterior entries and openings to prevent water intrusion into buildings, using features such as overhangs and recesses, flashings integrated with a drainage plane, and use non-pervious interior finishes in the vicinity of each opening.~~

...

Recommendation:

1. Withdraw provisions for Material Sources (Section 705)
2. Withdraw provisions for Enhanced Durability and Reduced Maintenance (Section 706)
3. Withdraw provisions for Water Resistance and Moisture Management (Section 707)

Rationale:

1. A state agency may withdraw proposed code changes.
2. A state agency may withdraw proposed code changes.
3. A state agency may withdraw proposed code changes.

SECTION 708
CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

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708.3 Construction waste reduction of at least 50%. Recycle and/or salvage for reuse a minimum of 50% of the non-hazardous construction and demolition debris, or meet a local construction and demolition waste management ordinance, whichever is more stringent. Calculate the amount of materials diverted by weight or volume, but not by both.

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.

Recommendation:

Based on criteria 1 and 6, OSHPD proposes to add articles and a phrase to coordinate this section with other proposing agencies'.

Rationale:

The phrase "construction and demolition waste management ordinance" is used elsewhere in this section and its addition here does not have regulatory effect.

SECTION 709
LIFE CYCLE ASSESSMENT

~~709.1 Materials and system assemblies. Select materials assemblies based on life cycle assessment of their embodied energy and/or green house gas emission potentials.~~

~~709.1.1 Materials and system assemblies. Software for calculating life cycle costs for materials and assemblies may be found at:~~

1. ~~the Athena Institute web site at: <http://www.athenasmi.ca/tools/impactEstimator/>~~
2. ~~the NIST BEES web site at: <http://www.brl.nist.gov/eao/software/bees/>~~
3. ~~Life Cycle assessment may also be done in accordance with ISO Standard 14044, www.iso.ch~~

~~709.1.2 Additional resources. More information on life cycle assessment may be found at the Sustainable Products Purchasers Coalition: www.sppcoalition.org ; at the American Center for Life Cycle Assessment: www.lcacenter.org ; at U.S. EPA Life Cycle Assessment Research: www.epa.gov/nrmrl/lcaccess/index.html ; and at U.S. EPA Environmentally Preferable Products, www.epa.gov/opp.~~

Recommendation:

Withdraw provisions for Life Cycle Assessment (Section 709)

Rationale:

A state agency may withdraw proposed code changes.

Notation

Authority: Health & Safety Code Sections 1226, 1275, and 129850; Government Code Section 11152.5

References: Health & Safety Code Sections 1226, 1275, 129790, and 129850

CHAPTER 8 ENVIRONMENTAL QUALITY

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**SECTION 802
DEFINITIONS**

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VOC. A volatile organic compound broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

Recommendation:

Based on criteria 1, 2 and 6, OSHPD proposes to add a reference to more detailed definitions of VOCs currently in regulations of the Air Resources Board (ARB).

Rationale:

The definition shown is broad, and the reference minimizes possible conflict with ARB's definitions. The reference is editorial and does have regulatory effect.

...

**SECTION 804
POLLUTANT CONTROL**

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804.4 Finish material pollutant control. Finish materials shall comply with Sections 804.4.1 through 804.4.4.

804.4.1 Adhesives and sealants. Adhesives and sealants used on the project shall meet the requirements of the following standards.

1. Adhesives, adhesive bonding primers, adhesive primers, ~~sealants and sealant primers~~ shall comply with Table 804.4.1.
2. Aerosol adhesives shall meet the requirements of California Code of Regulations, Title 17, commencing with Section 94507, <http://ccr.oal.ca.gov/>.

Recommendation:

Based on criteria 1 and 6, OSHPD proposes to delete the references to sealants.

Rationale:

ARB has commented that Table 804.4.1 does not include sealants. OSHPD believes that to include a new table for sealants or include additional requirements would require an additional 45 day comment period and review by the California Building Standards Commission Code Advisory Committee. OSHPD will work with ARB and other stakeholders to study provisions for sealants in the next code cycle. The amendment is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur.

...

804.4.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of ~~Section Table 804.4.4.1: VOC limit of 50 grams per liter (less water and less exempt compounds).~~

Rationale:

OSHPD received a comment that suggested the reference to Section 804.1.1 was not correct and that a typographical error also appeared in this section. Upon review, OSHPD determined that the comment was correct and has proposed to remove the typographical error and correct the section reference. The changes do not have regulatory effect.

...

804.4.4.1 Early compliance. Where complying product is readily available for non-residential occupancies, meet Phase 2 requirements before the compliance dates indicated in Table 804.4.

Recommendation:

Based on criteria 5 and 6, OSHPD proposes to add the word “readily” on the recommendation of ARB to provide clarity to the code user.

Rationale:

ARB commented that stating “readily available” minimizes the chance of obtaining costly product with higher embodied energy from overseas. The amendment merely provides clarity and is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur.

...

804.4.4 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 804.4.4

~~804.4.4.2 Agrifiber products. Agrifiber products shall contain no added urea formaldehyde resins.~~

~~804.4.4.3 Adhesives. Adhesives used to fabricate composite wood and agrifiber assemblies shall contain no urea formaldehyde resins.~~

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

1. ~~Mill~~ Product certifications and specifications.
2. Chain of custody certifications.
3. Other methods acceptable to the enforcing agency.

**TABLE 804.4.4
FORMALDEHYDE LIMITS**

Maximum formaldehyde emissions in parts per million.

Product	Phase 1		Phase 2			
	Jan 1, 2009	Jul 1, 2009	Jan 1, 2010	Jan 1, 2011	Jan 1, 2012	Jul 1, 2012
Hardwood Plywood Veneer Core	0.08		0.05			
Hardwood Plywood Composite Core		0.08				0.05
Particle Board	0.18			0.09		
Medium Density Fiberboard	0.21			0.11		
Thin Medium Density Fiberboard ²	0.21				0.13	

¹~~Thin medium density fiberboard has a maximum thickness of eight millimeters.~~

¹values in this table are consistent with those developed by the California Air Resources Board. For additional information see California Code of Regulations, Title 17, Section 93120 through 93120.12.

²Thin medium density fiberboard has a maximum thickness of eight millimeters.

Recommendation:

Based on criteria 1, 2 and 6, OSHPD proposes to amend the section to coordinate with ARB’s regulations for formaldehyde limits.

Rationale:

OSHPD received a comment from ARB stating the original proposal by OSHPD could put agrifiber products at a competitive disadvantage. The comment also stated recent innovations in resin technology will serve to lower formaldehyde levels and that these products will be covered by both the maximum levels set in Table 804.4.4 if they meet the definition of products covered by the table. In addition, ARB commented that VOC limitations for composite wood products are accounted for in the limitation the entire product must meet and it is not necessary to include a specific limit for only one part of the composite product.

Further, OSHPD received a comment stating the ARB Airborne Toxic Control Measure (ATCM) recently approved by the Office of Administrative Law should be included as a reference in Section 804.4.4 and cited as a reference in a footnote to Table 804.4.4. OSHPD has included a footnote to the table to ensure the code user is aware that the maximum limits in Table 804.4.4 are consistent with the maximum values developed by the ARB. The amendments are sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur.

...

SECTION 807
ENVIRONMENTAL COMFORT

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807.1.1.2 Thermal comfort. Provide individual thermal comfort controls for at least 50% of the building occupants.

1. Occupants shall have control over at least one of the factors of air temperature, radiant temperature, air speed, and humidity as described in ASHRAE 55-2004.
 2. Occupants inside 20 feet of the plane of and within 10 feet either side of operable windows can substitute windows to control thermal comfort. The areas of operable window must meet the requirements of Section 121 of the California Energy Code
- ...

Recommendation:

Based on criterion 6, OSHPD proposes to add the phrase "the plane of" to provide clarity to the code user regarding orientation of the subject occupants.

Rationale:

The amendment merely provides clarity and is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur.

Notation

Authority: Health & Safety Code Sections 1226, 1275, and 129850; Government Code Section 11152.5
References: Health & Safety Code Sections 1226, 1275, 129790, and 129850

CHAPTER 11

GREEN APPLICATION CHECKLIST (AC-OSHDP)

GREEN BUILDING FEATURE	REQUIRED	OPTIONAL	SPECIAL VERIFICATION
<u>PLANNING AND DESIGN</u>			
<u>SITE DEVELOPMENT</u> (406)			
406.1 General. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.		<input type="checkbox"/>	
406.2 Storm water drainage and retention during construction. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall develop and implement a plan to manage storm water drainage during construction. Use one or more of the following methods: 1. Retention basins of sufficient size shall be utilized to retain storm water on the site. 2. Where storm water is conveyed to a public drainage system, collection point, gutter, or similar disposal method, water shall be filtered by use of a barrier system, wattles, or other method approved by the enforcing agency. 3. Compliance with a lawfully enacted storm water management ordinance.		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
<u>ENERGY EFFICIENCY</u>			
<u>PRESCRIPTIVE MEASURES</u> (504)			
504.1 ENERGY STAR equipment and appliances. All equipment and appliances provided by the builder shall be ENERGY STAR labeled if ENERGY STAR is applicable to that equipment or appliance		<input type="checkbox"/>	
504.2 Energy monitoring. Provide sub metering or equivalent combinations of sensor measurements and thermodynamic calculations, if appropriate, to record energy use data for each major energy system in the building.		<input type="checkbox"/>	
504.4 Commissioning. Building commissioning for all building systems covered by T24, Part 6, process systems, and renewable energy systems shall be included in the design and construction processes of the building project. Commissioning requirements shall include as a minimum items listed in 504.4. 504.4.1 Owner's Project Requirements (OPR). Documented before the design phase of the project begins the OPR shall include items listed in 504.4.1. 504.4.2 Basis of Design (BOD). A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project and updated periodically to cover the systems listed in 504.4.2. 504.4.3 Commissioning plan. A commissioning plan describing how the project will be commissioned shall be		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

GREEN BUILDING FEATURE	REQUIRED	OPTIONAL	SPECIAL VERIFICATION
40% of the total value, based on estimated cost of materials on the project.			
<u>ENHANCE DURABILITY AND REDUCED MAINTENANCE (706)</u>			
<u>706.1.1 Service life.</u> Select materials for longevity and minimal deterioration under conditions of use.		<input type="checkbox"/>	
<u>706.1.2 Reduced maintenance.</u> Select materials that require little, if any, finishing.		<input type="checkbox"/>	
<u>706.1.3 Recyclability.</u> Select materials that can be re-used or recycled at the end of their service life.		<input type="checkbox"/>	
<u>WEATHER RESISTANCE AND MOISTURE MANAGEMENT</u>			
<u>707.2 Moisture control.</u> Employ moisture control measures by one of the following methods:			
<u>707.2.1 Sprinklers.</u> Prevent irrigation spray on structures.		<input type="checkbox"/>	
<u>707.2.2 Entries and openings.</u> Design exterior entries and openings to prevent water intrusion into buildings.		<input type="checkbox"/>	
<u>CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING (708)</u>			
<u>708.1 Construction waste diversion.</u> Establish a construction waste management plan or meet local ordinance, whichever is more stringent.		<input type="checkbox"/>	
<u>708.3 Construction waste.</u> Recycle and/or salvage for reuse a minimum of 50% of non-hazardous construction and demolition debris. Exceptions: 1. <u>Excavated soil and land-clearing debris.</u> 2. <u>Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.</u>		<input type="checkbox"/>	
<u>708.4 Excavated soil and land clearing debris.</u> 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled.		<input type="checkbox"/>	
<u>LIFE CYCLE ASSESSMENT (709)</u>			
<u>709.1 Materials and system assemblies.</u> Select materials assemblies based on life cycle assessment of their embodied energy and/or green house gas emission potentials. See 709.1.1 and 709.1.2 for available tools.		<input type="checkbox"/>	
<u>BUILDING MAINTENANCE AND OPERATION (710)</u>			
<u>710.1 Recycling by occupants.</u> Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling.		<input type="checkbox"/>	

...

Rationale:

Green Application Checklist modified to match the changes proposed elsewhere in this document.

Notation

Authority: Health & Safety Code Sections 1226, 1275, and 129850; Government Code Section 11152.5
References: Health & Safety Code Sections 1226, 1275, 129790, and 129850

APPENDIX A COMMENTARY OF ADDITIONAL DESIGN CONSIDERATIONS

...

**SECTION A401
PLANNING AND DESIGN**

...

A406.1.5.2.1 Electric vehicle supply wiring. For each space required in Table A406.1.5.2, provide one ~~conductive, 120 V AC 20 A amp and one 208/240 V 40 amp, grounded AC outlets or panel capacity and conduit installed for future outlets.~~

Table A406.1.5.2

<u>Total Number of Parking Spaces¹</u>	<u>Number of Required Spaces</u>
1-50	<u>1</u>
51-200	<u>2</u>
201 and over	<u>4</u>

¹ In a parking garage, the total number of parking spaces is for each individual floor or level.

Recommendation:

Based on criteria 3 and 6, OSHPD proposes to amend a section to provide clarity to the code user. Electric vehicle technology is emerging to improve power storage, such as using lithium ion batteries which may require charging using 220 outlets. This amendment would accommodate a variety of plug-in electric vehicles, including some being developed for the 2009 market.

Rationale:

The amendment is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur.

Recommendation:

In addition, based on criteria 1 and 6, OSHPD proposes to amend the table to add a footnote to explain that electric vehicle charging stations shall be provided at each floor or level of a parking garage.

Rationale:

This language was in the express terms reviewed and not disputed by the Green Building Code Advisory Committee. It was inadvertently lost when OSHPD formatted the provisions into a table for consistency with other code sections. The amendment is sufficiently related to the original proposal for the public to have been adequately noticed that the change might occur.

Notation

Authority: Health & Safety Code Sections 1226, 1275, and 129850; Government Code Section 11152.5
References: Health & Safety Code Sections 1226, 1275, 129790, and 129850