

*City of Brisbane
Agenda Report*

TO: Mayor and City Council
FROM: Hal Toppel, City Attorney
SUBJECT: Adoption of 2010 Editions of Fire Code and Construction Codes
DATE: For Council Meeting on November 15, 2010

City Council Goals:

- To provide for effective and efficient delivery of City services. [1]
- To provide public service that assures the safety of property and citizens residing, working, or visiting in Brisbane. [9]

Purpose:

The purpose of the ordinances is to adopt the most recent versions of the California Fire Code and the California Construction Codes.

Recommendation:

1. Introduce Ordinance No. 551, adopting the 2010 Edition of the California Fire Code, with local modifications.
2. Introduce Ordinance No. 552, adopting the 2010 Edition of the California Building Standards Code

Background:

Every three years a new set of construction codes is published by the State. If no action is taken by a local jurisdiction to modify the standard codes, they will automatically become effective. In 2007, the City amended Chapter 15.04 of the Municipal Code to adopt the 2007 uniform building codes, and amended Chapter 15.44 to adopt the 2007 uniform Fire Code.

The 2010 Codes are no longer referred to as the "Uniform" codes due to a merger between the two organizations that establish the national standards. These national standards are then adopted and modified by the State of California and become the "California construction codes." In addition to the national standards, the State has also adopted its own separate regulations, such as the California Green Building Standards Code.

In order to modify the standard codes, a local jurisdiction must make a finding that the modification is required due to climatic, geographical, topographical or other conditions.

Discussion:

A. Ordinance No. 551 – Fire Code Adoption:

Ordinance No. 551 will adopt the 2010 Edition of the California Fire Code, which is based upon the 2009 Edition of the International Fire Code. When the 2007 code was adopted, numerous local modifications were made, as set forth in Chapter 15.44 of the Municipal Code. All of these modifications will be continued for the 2010 Fire Code. Section 1 of the Ordinance contains the same findings to support the modifications as recited in the 2007 ordinance. However, only 3 sections actually need to be amended, and these amendments are being made only for the purpose of changing the references to the section number of the 2010 California Fire Code that is being modified. All other modifications in Chapter 15.44 will remain the same and shall constitute amendments to the 2010 Edition of the Fire Code, as provided in Section 7 of the proposed ordinance.

B. Ordinance No. 552 – Construction Codes Adoption:

Ordinance No. 552 will adopt the 2010 Editions of the various construction codes listed in Section 15.04.040 (except for the Uniform Code for Abatement of Dangerous Buildings, which was not changed and is still the 1997 Edition). There is no longer any need to adopt local modifications since the modifications adopted in 2007 have now been incorporated into the 2010 versions. Consequently, all of these modifications have been eliminated and Ordinance No. 552 will replace the entire Chapter 15.04. Section 15.04.030 recognizes that the construction codes are no longer the "exclusive" source of building regulations. For example, in separate chapters of BMC Title 15 the City has also adopted its green building ordinance, water conservation ordinances and construction debris ordinance. In the event of any conflict between these chapters, Section 15.04.030 provides that the regulation which establishes the highest standard of safety or environmental protection or conservation shall be controlling.

C. Amendments to Penalty Provisions:

Both ordinances also contain amendments to their respective penalty provisions for violations. These sections were taken from the larger ordinance that will amend all of the penalty provisions throughout the Municipal Code. This draft ordinance is currently before the Planning Commission to consider those sections dealing with violations of the Zoning

ORDINANCE NO. 551

AN ORDINANCE OF THE CITY OF BRISBANE ADOPTING THE 2009 EDITION OF THE INTERNATIONAL FIRE CODE AND THE 2010 EDITION OF THE CALIFORNIA FIRE CODE WITH CERTAIN LOCAL MODIFICATIONS

The City Council of the City of Brisbane hereby ordains as follows:

SECTION 1: The City Council finds and determines as follows:

A. Certain hillside areas of the City are characterized by heavy vegetation and close proximity of structures to the vegetation and to each other. These areas also contain narrow, winding streets, with steep grades and congested parking and traffic, making access difficult for fire apparatus and equipment in the event of emergency. Numerous dwellings located within the upper hillsides can only be reached by means of private access ways which may not be adequately constructed or maintained for access by Fire Department vehicles.

B. There are several natural conditions that affect the risk of fire damage within the City, including the following:

1. Brisbane is located near the San Andreas Fault and is subject to seismic activity that could potentially ignite fires throughout the City.
2. Brisbane regularly experiences strong winds, with average velocities ranging from approximately 15 to 25 miles per hour and reaching high velocities of 50 miles per hour. These winds may significantly contribute to the spread of fire and will increase the difficulty of fire suppression work.
3. The hillside areas of the City are constructed on the East slope of San Bruno Mountain, immediately adjacent to a protected habitat conservation area which is subject to wildland fires. During recent years, several wildland fires have threatened the safety of persons and property located near these areas.

C. By reason of the foregoing climatic, geographical, topographical, and community conditions, it is necessary to adopt certain local amendments to the California Fire Code in order to provide a high level of fire and life safety for all persons who live and work within the City of Brisbane and to adequately protect both public and private property within the City.

SECTION 2: Section 15.44.010 in Chapter 15.44 of the Municipal Code is amended to read as follows:

§15.44.010 Adoption of fire prevention code.

The fire prevention code for the City of Brisbane shall be the 2009 Edition of the International Fire Code and the 2010 Edition of the California Fire Code, including

Ordinance. There was no reason to wait for the larger ordinance when the changes can easily and more quickly be adopted in Ordinances 551 (see Section 6) and Ordinance 552 (see Section 2).

D. Impact of State Green Building Code:

A new State law that will become effective January 1 is CALGreen, the nation's first mandatory green building code. CALGreen applies to new residential and nonresidential construction, and includes mandatory provisions pertaining to site design and stormwater management, indoor/outdoor water use, waste reduction, indoor air quality, noise control and other environmental considerations. Some of the issues addressed under CALGreen are addressed elsewhere in the City Municipal Code. In the event an issue is addressed both in CALGreen and another provision of the Municipal Code, the more stringent requirement shall apply, as noted above. Staff is in the process of identifying areas of overlap and/or potential conflict between CALGreen and the Municipal Code, and anticipates amending the Municipal Code to eliminate inconsistencies and otherwise clarify requirements.

CALGreen includes both mandatory provisions and more stringent optional levels (Tier 1 and Tier 2) which can be adopted at the discretion of the local agency. Ordinance 552 will adopt the mandatory provisions of CALGreen [see Section 15.04.010(G)]. Given the Open Space and Ecology Committee's participation in the City's Green Building Ordinance, staff recommends that the City Council refer further monitoring of CALGreen and its implications on the City's Green Building Ordinance to the Open Space and Ecology Committee.

Fiscal Impact:

None

Measure of Success:

Application of updated standards to comply with State law.

Attachments:

1. Proposed Ordinance No. 551 to adopt the 2010 California Fire Code.
2. Proposed Ordinance No. 552 to adopt the 2010 California Construction Codes


City Manager


City Attorney


Director of Community Development

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Appendices B, C, D, F and J (hereinafter referred to as the "Fire Code"), as promulgated by the International Code Council, and the same is hereby adopted and incorporated herein by reference, subject to the modifications as contained in this Chapter 15.44. Two (2) copies of the Fire Code have been filed for use and examination by the public, one copy being located at Brisbane City Hall and the other copy being located at the Brisbane Fire Station.

SECTION 3: Section 15.44.070 in Chapter 15.44 of the Municipal Code is amended to read as follows:

§15.44.070 Section 507.5.7 added – Fire Hydrants and water supply.

Section 507.5.7 is added to the Fire Code, to read as follows:

507.5.7 Hydrants. All new fire hydrants shall be UL listed, or equivalent, wet barrel type having a minimum of two 2½" and one 4 ½" outlets, all equipped with national standard threads (Clow 860, or approved equivalent). The minimum fire service main size permitted is six inch (6").

SECTION 4: Section 15.44.110 in Chapter 15.44 of the Municipal Code is amended to read as follows:

§15.44.110 Section 907.9.5 amended – Maintenance, Inspection and Testing.

Section 907.9.5 of the Fire Code is amended by adding the following paragraph at the end of said Section:

Owners and operators of group R-1 occupancies shall provide documentation to the Fire Department, such as annual inspection forms, which confirm that all smoke detection devices and equipment within apartment units are installed and are in good operating condition.

SECTION 5: Section 15.44.150 in Chapter 15.44 of the Municipal Code is amended to read as follows:

§15.44.150 Section 3301.2 amended – Limits for storage of explosive materials.

Section 3301.2 of the Fire Code is amended by adding the following paragraph at the end of said Section:

The storage of explosives and blasting agents is prohibited in all areas of the City, except that the Fire Marshal may grant a permit to allow such storage if the Fire Marshal determines, in each case, that the storage is required for the conduct of a lawful use upon the property, will not constitute a safety hazard, and will otherwise comply with all applicable provisions of this Code and all other

ordinances, rules and regulations of the City. The Fire Marshal may impose such conditions and requirements upon the issuance of the permit as the Fire Marshal deems necessary or appropriate.

SECTION 6: Section 15.44.180 in Chapter 15.44 of the Municipal Code is amended to read as follows:

§15.44.180 Violations of Fire Code-Penalties.

The violation of any of the provisions of the Fire Code adopted by this Chapter, or any permit issued thereunder, shall constitute a misdemeanor, punishable by the fines, penalties and enforcement provisions set forth in Chapters 1.14, 1.16 and 1.18 of this Code.

SECTION 7: Except for the specific sections amended by this Ordinance, all other sections set forth in Chapter 15.44 of the Municipal Code shall remain in full force and effect and shall constitute amendments to the 2009 Edition of the International Fire Code and the 2010 Edition of the California Fire Code.

SECTION 8: If any section, subsection, sentence, clause or phrase of this Ordinance is for any reason held by a court of competent jurisdiction to be invalid or unconstitutional, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council of the City of Brisbane hereby declares that it would have passed this Ordinance and each section, subsection, sentence, clause and phrase thereof, irrespective of the fact that one or more sections, subsections, sentences, clauses or phrases may be held invalid or unconstitutional.

SECTION 9: This Ordinance shall be in full force and effect thirty days after its passage and adoption.

* * * *

The above and foregoing Ordinance was regularly introduced and after the waiting time required by law, was thereafter passed and adopted at a regular meeting of the City Council of the City of Brisbane held on the _____ day of _____, 2010, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

ORDINANCE NO. 552

AN ORDINANCE OF THE CITY OF BRISBANE AMENDING CHAPTER 15.04 IN TITLE 15 OF THE MUNICIPAL CODE TO ADOPT THE 2010 EDITION OF THE CALIFORNIA BUILDING STANDARDS CODE

Cy Bologoff, Mayor

ATTEST:

Sheri Marie Spediaci, City Clerk

APPROVED AS TO FORM:


Harold S. Toppel, City Attorney

The City Council of the City of Brisbane hereby ordains as follows:

SECTION 1: Chapter 15.04 in Title 15 of the Municipal Code is repealed in its entirety and replaced by a new Chapter 15.04, to read as follows:

CHAPTER 15.04
ADOPTION OF CONSTRUCTION CODES

Sections:

15.04.010	Purpose and authority
15.04.020	Citation
15.04.030	Conflicts with other laws, rules or regulations
15.04.040	Adoption of Construction Codes
15.04.050	Disclaimer of liability

§15.04.010 Purpose and authority

The purpose of this Chapter is to adopt by reference the 2010 edition of the California Building Standards Code, Title 24 of the California Code of Regulations. This Chapter is also adopted to provide minimum requirements and standards for the protection of the public safety, health, property and welfare of the City of Brisbane. This Chapter is adopted under the authority of Government Code Subsection 50022.2 and Health and Safety Code Section 18941.5.

§15.04.020 Citation

This Chapter shall be known as the Brisbane Construction Code, and may be cited as such, and will be referred to herein as "this Code."

§15.04.030 Conflicts with other laws, rules or regulations

In the event of any conflict between this Code and any law, rule or regulation of the State of California, or any other ordinance, rule or regulation of the City, that requirement which establishes the higher standard of safety or environmental protection or conservation, shall govern. Failure to comply with such higher standard shall be a violation of this Code.

§15.04.050 Disclaimer of Liability

The provisions of this Code shall not be construed as imposing upon the City of Brisbane any liability or responsibility for damage to persons or property resulting from defective work, nor shall the City of Brisbane or any official, employee or agent thereof, be held as assuming any such liability or responsibility by reason of the review or inspection authorized by the provisions of this Code of any permits or certificates issued under this Code.

SECTION 2: Section 15.08.280 in Chapter 15.08 of the Municipal Code, pertaining to building regulations, is amended to read as follows:

§15.08.280 Violation-Penalties.

A. It is unlawful for any person to erect, install, construct, enlarge, alter, repair, move, improve, remove, replace, convert, equip, use, occupy, maintain or demolish any building, structure or equipment therein regulated by this Chapter or the construction codes, or cause the same to be done, contrary to or in conflict with or in violation of any of the provisions of this Chapter or said codes.

B. The violation of any of the provisions of this Chapter or the construction codes shall constitute a misdemeanor, punishable by the fines, penalties and enforcement provisions set forth in Chapters 1.14, 1.16 and 1.18 of this Code. The penalties set forth herein are cumulative and shall not preclude the imposition of any other fine or penalty otherwise permitted by law, including a penalty fee for commencing work without a permit as prescribed by Section 15.12.150 of this Title.

SECTION 3: If any section, subsection, sentence, clause or phrase of this Ordinance is for any reason held by a court of competent jurisdiction to be invalid or unconstitutional, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council of the City of Brisbane hereby declares that it would have passed this Ordinance and each section, subsection, sentence, clause and phrase thereof, irrespective of the fact that one or more sections, subsections, sentences, clauses or phrases may be held invalid or unconstitutional.

SECTION 4: This Ordinance shall be in full force and effect thirty days after its passage and adoption.

* * *

§15.04.040 Adoption of Construction Codes

Title 24 of the California Code of Regulations, 2010 Edition of the California Building Standards Code, is hereby adopted by reference and incorporated in this Code, including the following parts:

- (a) Part 1: California Administrative Code.
- (b) Part 2: California Building Code, 2010 Edition, Volumes 1 and 2, based on the 2009 International Building Code (ICC), including Appendix Chapters G (Flood-Resistant Construction), H (Signs) and I (Patio Covers).
- (c) Part 2.5: California Residential Code, 2010 Edition, based on the 2009 Edition International Residential Code (IRC), including Appendix Chapter H (Patio Covers) and Appendix Chapter J (Existing Buildings).
- (d) Part 3: California Electrical Code, 2010 Edition, based on the 2008 Edition National Electric Code as published by the National Fire Protection Association (NFPA), including Appendix Chapters.
- (e) Part 4: California Mechanical Code, 2010 Edition, based on the 2009 Uniform Mechanical Code as published by the International Association of Plumbing and Mechanical Officials (IAPMO), including Appendix Chapters.
- (f) Part 5: California Plumbing Code, 2010 Edition, based upon the 2009 Uniform Plumbing Code as published by the International Association of Plumbing and Mechanical Officials (IAPMO), including Appendix Chapters.
- (g) Part 6: California Energy Code, 2010 Edition, including Appendix Chapters.
- (h) Part 8: California Historical Code, 2010 Edition, including Appendix Chapters.
- (i) Part 9: For adoption of the 2010 Edition of the California Fire Code, and modifications thereof, see Chapter 15.44 of this Title.
- (j) Part 11: California Green Building Standards Code, 2010 Edition.
- (k) Part 12: California Referenced Standards Code, including Appendix Chapters.
- (l) Uniform Code for Abatement of Dangerous Buildings, 1997 Edition.

The above and foregoing Ordinance was regularly introduced and after the waiting time required by law, was thereafter passed and adopted at a regular meeting of the City Council of the City of Brisbane held on the _____ day of _____, 2010, by the following vote:

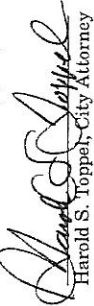
AYES:
NOES:
ABSENT:
ABSTAIN:

Cy Bologoff, Mayor

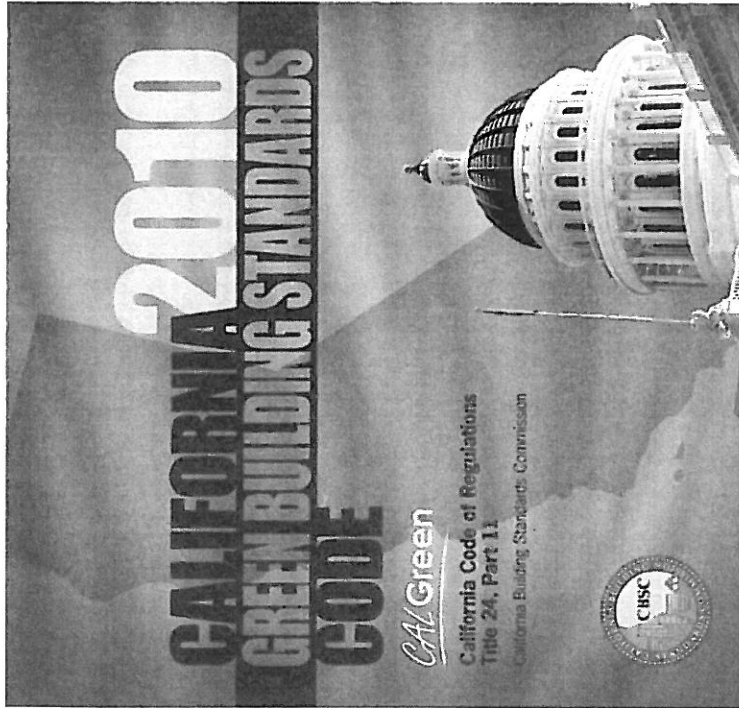
ATTEST:

Sheri Marie Spediacci, City Clerk

APPROVED AS TO FORM:


Harold S. Toppel, City Attorney

EXCERPTS
Guide to the (Non-Residential)
California Green Building Standards Code



*An educational publication by the
California Building Standards Commission
Second Edition, Issued November 2010*

The purpose of the CALGreen Code

The development of the CALGreen Code is intended to (1) cause a reduction in greenhouse gas emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. The reduction in greenhouse gases has been mandated in recent years by the Governor through executive orders and the passage of the California Global Warming Solutions Act of 2006 (Assembly Bill 32, Chapter 488 of the 2006 Statutes) adding Division 25.5 to the California Health and Safety Code. The provisions of AB 32 require a cap on greenhouse gas emissions by 2020, mandatory emissions reporting, and an ongoing market-based compliance program. Establishing the CALGreen Code is an important step towards more efficient and responsible building designs. The California Air Resources Board estimates that the mandatory provisions in this new code will reduce greenhouse gases by 3 million metric tons by the year 2020.

Green building legislation proposed in the 2007-2008 legislative session (AB 35 concerning state-owned buildings, AB 888 concerning commercial B-occupancy buildings and AB 1035 concerning residential construction) was vetoed by the Governor. In his veto messages, the Governor expressed his support for development of green building standards, but that they should not be statutory, conflict with current safety standards, and rely on private entities to set standards. He directed the California Building Standards Commission to work with state agencies to develop standards for the 2010 codes, gleaned from nationally recognized programs and the input of other state agencies, ensuring an open public adoption process.

The specific authority in law for each of the state agencies taking part in the development of the CALGreen Code, including the California Building Standards Commission, is provided within Chapter 1 of the CALGreen Code.

CALGreen Section: 5.106.5.2 Designated parking. Provide designated parking for any combination of low-emitting, fuel efficient, and carpool/van pool vehicles as follows.
Table 5.106.5.2 not shown refer to Code
5.106.5.2.1 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.

CLEAN AIR VEHICLE

Intent:
 This code provision is to ensure that newly constructed projects provide designated parking for clean air vehicles (low-emitting, fuel efficient, and carpool/van pool vehicles) which gives reserved parking to those who drive clean air vehicles. The intent is to promote the use of clean air vehicles in an attempt to conserve natural resources and reduce green house gas emissions

Existing Law or Regulation:
 There is **NO** current law or regulation for this code provision. However, there are some jurisdictions that have adopted ordinances.

Compliance Method:
Design Team: Construction documents (site plan) should reflect the location of the required number of designated parking stalls with the marking "CLEAN AIR VEHICLE" toward the back of the stall, similar to an accessible symbol, so that the writing can be seen when a clean air vehicle is parked. Lettering should be at least 6 inches high. The parking stalls can be located anywhere on the site without preferential location.

Suggestion: The plans should reflect the total number of required vehicular spaces and refer to TABLE 5.106.5.2 to ensure that the correct number of designated parking stalls is being provided include all parking spaces in the calculation. As approved by the enforcing agency, some compact stalls may also be marked for clean air vehicles.

- Examples:**
1. 55 total parking spaces: based on TABLE 5.106.5.2 – Provide 6 Clean Air Vehicle spaces which fall within the range.
 2. 240 total parking spaces: based on TABLE 5.106.5.2, calculate 240 x 8 percent = 19.2 – Provide 20 Clean Air Vehicle spaces.

Diagram in development.

Enforcement:
Plan Intake: The reviewer and/or plan checker should review the plans and confirm that the correct number and configuration of "CLEAN AIR VEHICLE" parking stalls are included on the drawings.

On-Site Enforcement: The inspector should review the permit set of plans to verify that the correct number of clean air vehicle parking stalls have been provided and marked

Enforcement:
Plan Intake: The reviewer and/or plan checker should review the plans and confirm that the correct number of bicycle parking racks and/or secured areas are included with the drawings and meet the requirements

On-Site Enforcement: The inspector should review the permit set of plans to verify that all required bicycle parking requirements as shown on the plans have been provided and installed.

CALGreen Section: 5.106.4 Bicycle parking and changing rooms. Comply with Sections 5.106.4.1 and 5.106.4.2, or meet local ordinance or the University of California Policy on Sustainable Practices, 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 percent 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 10 tenant-occupants, provide secure bicycle parking for 5 percent of 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.
Note: Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates.

Intent:
 The intent of this code provision is to ensure that newly constructed projects provide short term and/or long term bicycle parking accommodations to promote the use of bicycles as an alternate means of transportation in an attempt to reduce green house gas emissions.

Existing Law or Regulation:
 There is **NO** current law or regulation for this code provision. However, there are some jurisdictions that have adopted local ordinances

Compliance Method:
Short-Term Bicycle Parking:
 Construction documents (plans & specifications and/or site plan) should reflect the location of the required number of short-term permanently anchored bicycle parking racks for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.

Long-Term Bicycle Parking:
 1. Determine which of the three options will be used to comply or identify an alternate method(s)
 2. Construction documents (plans & specifications and/or site plan) should reflect the method and location of the required number of long-term secured bicycle parking facilities based on 5 percent of motorized vehicle parking capacity, with a minimum of one space.

Note: If the applicant is seeking a parking capacity reduction under §45.106.6, or the local jurisdiction has a zoning ordinance for reduced parking, use the parking requirements that apply before the reduction is taken or outside any special zone in the calculations. This is to recognize that, with reduced parking capacity, more people are likely to ride bicycles.

Suggestion: Provide a calculation table or a note on the plans showing the total number of required short-term spaces by multiplying the anticipated visitor parking spaces by 5 percent and for long-term spaces by multiplying the total vehicular parking required spaces by 5 percent

Examples:
Short-term: Visitor parking capacity at 42 x 5 percent = 2.1 – Provide racks for 3 bikes
Long-term: Total Vehicular parking capacity at 216 x 5 percent = 10.8 – Provide 11 spaces.
 If specifying lockers, consider using six two-bike lockers.

CALGreen Section: 5.106.8 Light pollution reduction. Comply with lighting power requirements in the California Energy Code, CCR, Part 6, and design interior and exterior lighting such that zero direct-beam illumination leaves the building site. Meet or exceed exterior light levels and uniformity ratios for lighting zones 1-4 as defined in Chapter 10 of the California Administrative Code, CCR, Part 1, using the following strategies:

1. Shield all exterior luminaires or provide cutoff luminaires per Section 132 (b) of the California Energy Code
2. Contain interior lighting within each source
3. Allow no more than .01 horizontal lumen foot candles to escape 15 feet beyond the site boundary
4. Automatically control exterior lighting dusk to dawn to turn off or lower light levels during inactive periods

Exceptions:

1. Part 2, Chapter 12, Section 1205.6 for campus lighting requirements for parking facilities and walkways
2. Emergency lighting and lighting required for nighttime security

Intent:
The intent of this code provision is to ensure that newly constructed projects reduce the amount of light and glare from both interior and exterior light sources leaving the site. This is an attempt to minimize light pollution in order to maintain our dark skies.

Existing Law or Regulation:

There are several existing codes that are being referenced in this provision as follows:

1. Lighting power requirements in the California Energy Code, CCR, Title 24, Part 6
2. Exterior light levels and uniformity ratios for lighting zones 1-4 as defined in Chapter 10 of the California Administrative Code, CCR Title 24, Part 1
3. Requirements for cutoff luminaires per Section 132 (b) of the California Energy Code
4. California Building Code, CCR title 24, Part 2 Section 1205.6 exception regarding campus lighting for parking and walkways

Compliance Method:

FIRST:
Comply with California Energy Commission regulations in Part 1 and Part 6 cited above. Those standards form a basis upon which to build for the purpose of light pollution reduction in addition to energy efficiency. The provisions in Part 1 provide a weighted approach to the project site location, with a project located in the middle of a big city allowed more light to escape than a project at a rural or urban location. Part 6 addresses power and energy efficiency of outdoor lighting. There are exceptions for certain occupancies for lighting power requirements, and generally, they would apply to this provision, but voluntary compliance with any or all of the items is encouraged.

THEN:

To comply with Item 1, you can:

1. If custom lighting is needed, have it shielded to prevent uplight equivalent to cutoff fixtures.
2. This could be an expensive option that may require photometric measurement.
3. Select cutoff exterior lighting fixtures that meet the definition in Section 5.102 of CALGreen, for installation at the building and the site.

Means to comply with Item 2:

1. Lay out lighting to prevent light from shining through windows or screen walls.
2. Design exterior shading features that also serve as screens at night.
3. Design indirect interior lighting, e.g. cove, at the perimeter or locate fixtures inside the exterior walls to shine into the space.

4. Specify shielded fixtures, e.g. sconces, in corridors and on building exterior, fixtures that prevent uplight.
5. Specify interior task lighting, e.g. under-cabinet
6. Specify perimeter window coverings, e.g. blinds.
7. Include instructions in the Operations and Maintenance Manual for extinguishing lights or drawing blinds when it gets dark, and recommend daylight janitorial services.

Means to comply with Item 3:

1. Avoid locating parking or site lighting fixtures adjacent to the property line, or choose perimeter fixtures whose photometrics are asymmetrical, focusing light on the site's interior.
2. Provide trees or man-made screens around perimeter of site
3. As approved by the enforcing agency, multiple sites in a development or sites sharing common functions may be included within an overall site boundary for the purposes of this section.

Means to comply with Item 4

1. For occupancies that operate principally only during daylight hours, specify photo sensors to turn off exterior lighting between dawn and dusk
2. Employ new dimming technologies that sense motion and activate lighting only as needed.

Suggestion: Pay particular attention to the lighting design at the building and site perimeter, keeping in mind that this provision is limited to the effects of nighttime lighting only. Lighting layout, in and on the building and on the site, and selection of fixtures are key. Lighting manufacturers generally publish photometric data that can assist in selection of fixtures

Diagrams in development

Enforcement:

Plan Intake: The reviewer and/or plan checker should review the construction documents, including exterior light sources, to confirm compliance with Part 1, Part 2 and Part 6; review the electrical plans and specifications for complying building and exterior lighting, including photometric data for perimeter site lighting fixtures; and review specifications for any controls to be installed on the project.

On-Site Enforcement: The inspector should review the permit set of plans to verify that all lighting and power calculations and specified products are installed as specified on the approved plans and specifications. The inspector may make a site visit after dark when all fixtures and amenities are installed to make visual assessments and take light measurements within 15 feet of the property line.

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CALGreen Section: 5.304.2 Outdoor potable water use. For new water service for landscaped areas between 1,000 square feet and 5,000 square feet (the level at which Water Code §535 applies), separate meters or submeters shall be installed for indoor and outdoor potable water use.

Intent:

The intent of this code provision is to reduce outdoor potable water use for new water service for landscaped areas between 1,000 square feet and 5,000 square feet by making building owners and/or tenants aware of their daily outdoor potable water consumption for landscaping. Additionally, it allows the consumer to monitor water use to identify spikes that may occur due to leaks in irrigation systems. Water loss attributed to leaks can be substantial.

Existing Law or Regulation:

AB 1881 (Stats. 2006, c. 559) currently requires that a separate water meter be installed by the water purveyor for new water service serving more than 5,000 square feet of irrigated landscape. There might be some local jurisdictions that have adopted ordinances that may be more restrictive.

Compliance Method:

How to comply:

First determine if the new project will require separate meters based on the 1,000-5,000 square foot landscape area. If so then:

1. Owner or contractor shall install a submeter after the main meter for outdoor potable water use.

Suggestion: Show separate meters and submeters on the plans (Site Utility Plan) and specifications.

Enforcement:

Plan Intake: The reviewer and/or plan checker should review the construction documents to confirm that a separate submeter for landscape irrigation was provided.

On-Site Enforcement: The inspector should review the permit set of plans to verify that separate meters as specified on the approved construction documents are installed.

CALGreen Section: 5.304.3 Irrigation design. In new nonresidential construction with between 1,000 and 2,500 square feet of landscaped area (the level at which the MLO applies), install irrigation controllers and sensors which include the following criteria, and meet manufacturer's recommendations.

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
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.

Intent:

The intent of this code provision is to reduce outdoor potable water use for new construction landscaped areas between 1,000 square feet and 2,500 square feet by requiring the installation of irrigation controllers and sensors that are weather- or soil moisture-based.

Existing Law or Regulation:

The California Department of Water Resources has adopted a Model Water Efficient Landscape Ordinance (MLO) which requires that irrigation controllers utilizing either evapotranspiration or soil moisture sensor data for landscape areas 2,500 square feet or more. There might be some local jurisdictions that have adopted ordinances.

Compliance Method:

First determine if the new project landscape area is between 1,000-2,500 square feet. If so then:

Determine which type of controller is going to be installed (weather based versus soil-moisture based). If specifying a weather-based controller, make sure that it either has an integral rain sensor, or provide a separate sensor.

Install all components of the irrigation control system per the manufacturer's instructions.

Note: More information regarding irrigation controller function and specifications is available from the Irrigation Association at <http://www.irrigation.org/SWAT/industry/ia-tested.aspx>.

Suggestion: Show on the plans (Landscaping Plan) and specifications the irrigation controllers and sensors and design criteria outlined in section 492.7 of the MLO.

Enforcement:

Plan Intake: The reviewer and/or plan checker should review the construction documents to confirm that irrigation controllers and sensors are weather- or soil moisture-based.

On-Site Enforcement: The inspector should review the permit set of plans to verify that irrigation controllers and sensors as specified on the approved construction documents are installed according to the manufacturer's instructions and as shown on the irrigation design plan. The inspector may accept a certification form as a method of compliance, including any forms used for compliance with MLO or local ordinance.

CALGreen Section: 5.408.4 Excavated soil and land clearing debris 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed

Intent:

The intent of this code provision is to reduce the high volume, bulky land clearing materials from filling up the landfills and to encourage the market for non-hazardous land clearing debris. It is not meant to apply to clearing or contaminated sites for purposes such as brownfield remediation

Existing Law or Regulation:

There is **NO** current law or regulation for this code provision. However, there are some local jurisdictions that have ordinances in place that have requirements for this provision.

Compliance Method:

1. Determine if a local construction ordinance is in place in your jurisdiction and comply with the more stringent requirement or as accepted by the local enforcing agency
2. Look for local markets and salvage opportunity for re-use of clearing debris.
3. For phased developments and other long term projects, the materials may be stored on site until project completion.

Suggestion: *The need to salvage or recycle land clearing debris can be reduced by site planning that maintains such features as trees and rocks in the project where feasible.*

Enforcement:

Plan Intake: The reviewer and/or plan checker should review the plans and look for the appropriate note on the plans (civil plan), WMP or CWM Worksheet that describes the method of disposal of land clearing debris.

On-Site Enforcement: The inspector should review the permit set of plans and will verify that the excavated soil and land clearing debris is being reused or recycled as specified on the plans

CALGreen Section: 5.410.1 Recycling by occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics and metals

5.410.1.1 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.

Intent:

The intent of this code provision is to direct attention to existing law to provide areas for recycling by occupants, including collection and loading of recyclable materials.

Existing Law or Regulation:

Currently there is a requirement for a model ordinance in 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) that can be used for statewide application.

Compliance Method:

1. Determine if a local recycling ordinance is in place in your jurisdiction and comply. If no ordinance, then use the model recycling ordinance.
2. Show on the plans (site and/or floor plans) readily accessible areas and signage for those areas that serve the entire building for recycling of non-hazardous materials by occupants
3. In accordance with the model ordinance, recycling areas shall be secure, be protected from the elements, such as rain, and be adequately separated from occupied spaces for protection against impacts such as noise, odor and pests.
4. Where feasible, recycling areas should be located adjacent to solid waste collection areas

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

Enforcement:

Plan Intake: The reviewer and/or plan checker should review the plans and confirm that the appropriate recycling areas and signage for those areas have been provided on the plans

On-Site Enforcement: The inspector should review the permit set of plans to verify that the recycling areas and signage for those areas on the plans and specifications are installed

**CALIFORNIA GREEN BUILDING STANDARDS CODE – MATRIX ADOPTION TABLE
CHAPTER 5 – NONRESIDENTIAL MANDATORY MEASURES
DIVISION 1 – PLANNING AND DESIGN**

Adopting agency	BSC	SFM	HCD			DSA		OSHPD				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	1	2	3	4								
Adopt entire CA chapter	X																		
Adopt entire chapter as amended (amended sections listed below)																			
Adopt only those sections that are listed below							X												
Chapter/Section																			
5.101							X												
5.102 Definitions							X												
5.106.8							X												
5.106.10							X												

**CHAPTER 5
NONRESIDENTIAL MANDATORY MEASURES**

Division 5.1 – PLANNING AND DESIGN

**SECTION 5.101
GENERAL**

5.101 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 5.102
DEFINITIONS**

5.102 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.

CUTOFF LUMINAIRES. Luminaires whose light distribution is such that the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90° above nadir, and 100 (10 percent) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.

LOW-EMITTING AND FUEL EFFICIENT VEHICLES. Eligible vehicles are limited to the following:

1. Zero emission vehicle (ZEV), including neighborhood electric vehicles (NEV), partial zero emission vehicle (PZEV), advanced technology PZEV (AT ZEV) or CNG fueled (Original equipment manufacturer only) regulated under Health and Safety Code section 43800 and CCR, Title 13, Sections 1961 and 1962.

2. High-efficiency vehicles, regulated by U.S. EPA, bearing High-Occupancy Vehicle (HOV) car pool lane stickers issued by the Department of Motor Vehicles.

NEIGHBORHOOD ELECTRIC VEHICLE (NEV). A motor vehicle that meets the definition of “low-speed vehicle” either in Section 385.5 of the Vehicle Code or in 49 CFR571.500 (as it existed on July 1, 2000), and is certified to zero-emission vehicle standards.

PZEV. Any vehicle certified by the California Air Resources Board as a Partial Credit Zero Emission Vehicle.

TENANT-OCCUPANTS. Building occupants who inhabit a building during its normal hours of operation as permanent occupants, such as employees, as distinguished from customers and other transient visitors.

VANPOOL VEHICLE. Eligible vehicles are limited to any motor vehicle, other than a motortruck or truck tractor, designed for carrying more than 10 but not more than 15 persons including the driver, which is maintained and used primarily for the nonprofit work-related transportation of adults for the purposes of ridesharing.

Note: Source: Vehicle Code, Division 1, Section 668

ZEV. Any vehicle certified to zero-emission standards.

**SECTION 5.103
SITE SELECTION
(Reserved)**

**SECTION 5.104
SITE PRESERVATION
(Reserved)**

Appendix A

Model Ordinance Relating to Areas for Collecting and Loading Recyclable Materials in Development Projects

Section I: Purpose

Cities and counties must divert 50 percent of all solid waste by January 1, 2000, through source reduction, recycling, and composting activities.

Diverting 50 percent of all solid waste requires the participation of the residential, commercial, industrial, and public sectors.

The lack of adequate areas for collecting and loading recyclable materials that are compatible with surrounding land uses is a significant impediment to diverting solid waste and constitutes an urgent need for state and local agencies to address access to solid waste for source reduction, recycling, and composting activities. This ordinance has been developed to meet that need.

Section II: Definitions

The following definitions shall apply to the language contained in this ordinance:

- A. **Development Project.** Means any of the following:
 1. A project for which a building permit is required for a commercial, industrial, or institutional building, marina, or residential building having five or more living units, where solid waste is collected and loaded and any residential project where solid waste is collected and loaded in a location serving five or more living units.
 2. Any new public facility where solid waste is collected and loaded and any improvements for areas of a public facility used for collecting and loading solid waste.
 3. The definition of development project only includes subdivisions or tracts of single-family detached homes if, within such subdivisions or tract there is an area where solid waste is collected and loaded in a location which serves five or more living units. In such instances, recycling areas as specified in this ordinance are only required to serve the needs of the living units which utilize the solid waste collection and loading area.
- B. **Improvement.** An improvement adds to the value of a facility, prolongs its useful life, or adapts it to new uses. Improvements should be distinguished from repairs. Repairs keep facilities in good operating condition, do not materially add to the value of the facility, and do not substantially extend the life of the facility.
- C. **Floor Area of a Marina.** The floor area of a marina shall be defined as the space dedicated to the docking or mooring of marine vessels.
- D. **Public Facility.** The definition of public facility includes, but is not limited to buildings, structures, marinas, and outdoor recreation areas owned by a local agency.
- E. **Recycling Area (areas for recycling).** Space allocated for collecting and loading of recyclable materials. Such areas shall have the ability to accommodate receptacles for recyclable materials. Recycling areas shall be accessible and convenient for those who deposit as well as those who collect and load any recyclable materials placed therein.

Section III: General Requirements

- A. Any new development project for which an application for a building permit is submitted on or after September 1, 1994, shall include adequate, accessible, and convenient areas for collecting and loading recyclable materials.
- B. Any improvements for areas of a public facility used for collecting and loading solid waste shall include adequate, accessible, and convenient areas for collecting and loading recyclable materials.
- C. Any existing development project for which an application for a building permit is submitted on or after September 1, 1994, for a single alteration which is subsequently performed that adds 30 percent or more to the existing floor area of the development project shall provide adequate, accessible, and convenient areas for collecting and loading recyclable materials.
- D. Any existing development project for which an application for a building permit is submitted on or after September 1, 1994, for multiple alterations which are conducted within a 12-month period which collectively add 30 percent or more to the existing floor area of the development project shall provide adequate, accessible, and convenient areas for collecting and loading recyclable materials.
- E. Any existing development project for which multiple applications for building permits are submitted within a 12-month period beginning on or after September 1, 1994, for multiple alterations which are subsequently performed that collectively add 30 percent or more to the existing floor area of the development project shall provide adequate, accessible, and convenient areas for collecting and loading recyclable materials.
- F. Any existing development project occupied by multiple tenants, one of which submits on or after September 1, 1994, an application for a building permit for a single alteration which is subsequently performed that adds 30 percent or more to the existing floor area of that portion of the development project which said tenant leases shall provide adequate, accessible, and convenient areas for collecting and loading recyclable materials. Such recycling areas shall, at a minimum, be sufficient in capacity, number, and distribution to serve that portion of the development project which said tenant leases.
- G. Any existing development project occupied by multiple tenants, one of which submits on or after September 1, 1994 an application for a building permit for multiple alterations which are conducted within a 12-month period which collectively add 30 percent or more to the existing floor area of that portion of the development project which said tenant leases shall provide adequate, accessible, and convenient areas for collecting and loading recyclable materials. Such recycling areas shall, at a minimum, be sufficient in capacity, number, and distribution to serve that portion of the development project which said tenant leases.
- H. Any existing development project occupied by multiple tenants, one of which submits within a 12-month period beginning on or after September 1, 1994 multiple applications for building permits for multiple alterations which are subsequently performed that collectively add 30 percent or more to the existing floor area of that portion of the development project which said tenant leases shall provide adequate, accessible, and convenient areas for collecting and loading recyclable materials. Such recycling areas shall, at a minimum, be sufficient in capacity, number, and distribution to serve that portion of the development project which said tenant leases.
- I. Any costs associated with adding recycling space to existing development projects shall be the responsibility of the party or parties who are responsible for financing the alterations.

Section IV: Guidelines for All Development Projects

- A. Where local standards exist, recycling areas should be designed to be architecturally compatible with nearby structures and with the existing topography and vegetation, in accordance with such standards.
- B. The design and construction of recycling areas shall not prevent security of any recyclable materials placed therein.
- C. The design, construction, and location of recycling areas shall not be in conflict with any applicable federal, state, or local laws relating to fire, building, access, transportation, circulation, or safety.
- D. Recycling areas or the bins or containers placed therein must provide protection against adverse environmental conditions, such as rain, which might render the collected materials unmarketable.
- E. Driveways and/or travel aisles shall, at a minimum, conform to local building-code requirements for garbage collection access and clearance. In the absence of such building-code requirements, driveways and/or travel aisles should provide unobstructed access for collection vehicles and personnel.
- F. A sign clearly identifying all recycling and solid waste collection and loading areas and the materials accepted therein shall be posted adjacent to all points of direct access to the recycling areas.
- G. Developments and transportation corridors adjacent to recycling areas shall be adequately protected for any adverse impacts such as noise, odor, vectors, or glare through measures including, but not limited to maintaining adequate separation, fencing, and landscaping.

Section V: Additional Guidelines for Single-Tenant Development Projects

- A. Areas for recycling shall be adequate in capacity, number, and distribution to serve the development project.
- B. Dimensions of the recycling area shall accommodate receptacles sufficient to meet the recycling needs of the development project.
- C. An adequate number of bins or containers to allow for the collection and loading of recyclable materials generated by the development project should be located within the recycling area.

Section VI: Additional Guidelines for Multiple-Tenant Development Projects

- A. Recycling areas shall, at a minimum, be sufficient in capacity, number, and distribution to serve that portion of the development project leased by the tenant(s) who submitted an application or applications resulting in the need to provide recycling area(s) pursuant to Section III of this ordinance.
- B. Dimensions of recycling areas shall accommodate receptacles sufficient to meet the recycling needs of that portion of the development project leased by the tenant who submitted an application or applications resulting in the need to provide recycling area(s) pursuant to Section III of this ordinance.
- C. An adequate number of bins or containers to allow for the collection and loading of recyclable materials generated by that portion of the development project leased by the tenant(s) who submitted an application or applications resulting in the need to provide recycling area pursuant to Section III of this ordinance should be located within the recycling area.

Section VII: Location

- A. Recycling areas shall not be located in any area required to be constructed or maintained as unencumbered, according to any applicable federal, state, or local laws relating to fire, access, building, transportation, circulation, or safety.
- B. Any and all recycling area(s) shall be located so they are at least as convenient for those persons who deposit, collect, and load the recyclable materials placed therein as the location(s) where solid waste is collected and loaded. Whenever feasible, areas for collecting and loading recyclable materials shall be adjacent to the solid waste collection areas.

Section VIII: Declaration of Severability

All provisions of this Ordinance are severable and, if for any reason any sentence, paragraph, or section of this Ordinance shall be held invalid, such decision shall not affect the validity of the remaining parts of the Ordinance.