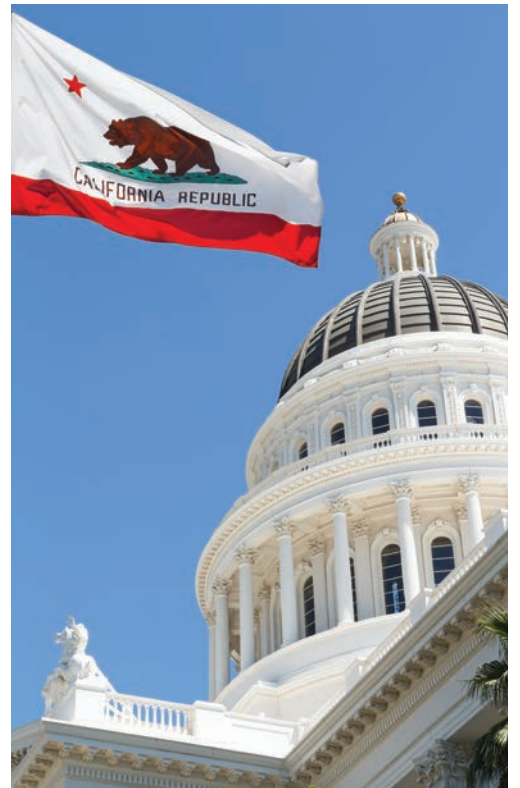
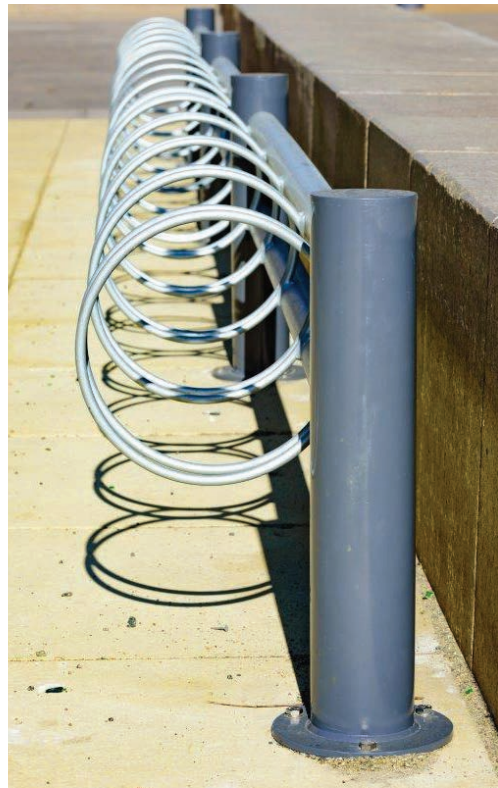


GUIDE TO THE 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE
Includes Verification Guidelines

NONRESIDENTIAL

CALGreen®





**Guide to the 2016 California Green Building Standards Code
Nonresidential**

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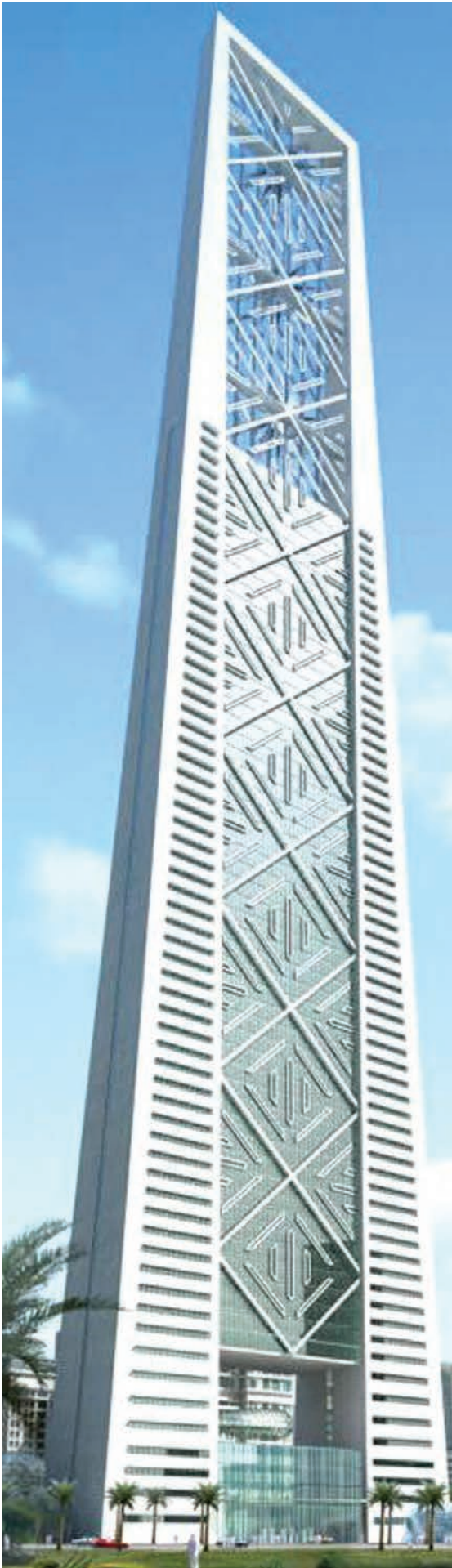
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Table of Contents

Preface	v
About the California Building Standards Commission	vi
About the International Code Council	vi
Title 24, California Code of Regulations	vii
CBSC Education and Outreach	vii
History of <i>CALGreen</i>	viii
Effective Use of This Guide	x
Chapter 1 Administration	1
Chapter 2 Definitions	9
Chapter 3 Green Building	11
Chapter 4 Residential Mandatory Measures	17
Chapter 5 Nonresidential Mandatory Measures	19
Division 5.1 – Planning and Design	21
Division 5.2 – Energy Efficiency	35
Division 5.3 – Water Efficiency and Conservation	36
Division 5.4 – Material Conservation and Resource Efficiency	46
Division 5.5 – Environmental Quality	74
Chapter 6 Referenced Organizations and Standards	91
Chapter 7 Installer and Special Inspector Qualifications	93
Chapter 8 Compliance Forms and Worksheets	95
Nonresidential Forms and Templates	95
Verification Guidelines (Guide Only)	96
Appendix A4 Residential Voluntary Measures	157
Appendix A5 Nonresidential Voluntary Measures	159
Division A5.1 – Planning and Design	161
Division A5.2 – Energy Efficiency	178
Division A5.3 – Water Efficiency and Conservation	186
Division A5.4 – Material Conservation and Resource Efficiency	197
Division A5.5 – Environmental Quality	215
Division A5.6 – Voluntary Tiers	230
Appendix A6.1 – Voluntary Standards for Health Facilities	235

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Preface

This is the 3rd edition of the *Guide to the California Green Building Standards Code Nonresidential*, which was prepared by the California Building Standards Commission (CBSC). This edition reflects regulatory changes that were made to the *California Green Building Standards Code*, Part 11, Title 24 and includes Verification Guidelines for use by local building departments, builders and designers. The guide is intended to highlight and clarify both mandatory and voluntary nonresidential standards for the 2016 *California Green Building Standards Code* commonly referred to as *CALGreen*. The effective date of the 2016 *CALGreen* Code is Jan. 1, 2017.

Comments and suggestions regarding the 2016 *CALGreen Guide Nonresidential* are welcomed in order to make future editions more beneficial to code users. Written comments may be submitted via email to cbsc@dgs.ca.gov, or regular mail and addressed to:

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About the California Building Standards Commission (CBSC)

Established in 1953 by California Building Standards Law, CBSC is a commission within the Department of General Services. Members of the commission are appointed by the governor and confirmed by the state senate, and serve four-year terms.

CBSC's mission is to produce sensible and usable state building standards and administrative regulations that implement or enforce those standards. Specifically, CBSC administers the adoption, approval and implementation processes for the *California Building Standards Code* as follows:

- Manages the regulatory triennial and intervening code adoption cycles, and respective Title 24 publications;
- Coordinates and collaborates with all code-proposing and code-adopting state agencies regarding the code cycles and model code revisions to ensure uniformity throughout California's building standards;
- Demonstrates transparency and public participation throughout the code development processes;
- Administers a public appeal process;
- Educates the public and stakeholders about the building code to ensure understanding and compliance; and
- Develops building standards for state buildings and universities, nonresidential green building standards where no other state agencies have the authority, and others as directed by the legislature and/or executive order.

About the International Code Council® (ICC)

ICC is a member-focused association. It is dedicated to developing model codes and standards used in the design, build and compliance process to construct safe, sustainable, affordable and resilient structures. Most U.S. communities and many global markets choose the International Codes. ICC Evaluation Service, known as ICC-ES, is the industry leader in performing technical evaluations for code compliance fostering safe and sustainable design and construction.

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To purchase all or part of the 2016 edition of Title 24 or the 2016 *Guide to the Green Building Standards Code* (nonresidential or residential) contact ICC at 888-ICC-SAFE (888-422-7233) or www.iccsafe.org.

Title 24, California Code of Regulations

The 2016 *California Building Standards Code*, Title 24, California Code of Regulations consists of the following thirteen parts. The *CALGreen* Code is Part 11 of Title 24.

- Part 1 *California Administrative Code*;
- Part 2 *California Building Code* Volume 1 and Volume 2 are based on the 2015 *International Building Code*;
- Part 2.5 *California Residential Code* is based on the 2015 *International Residential Code*;
- Part 3 *California Electrical Code* is based on the 2014 *National Electrical Code*;
- Part 4 *California Mechanical Code* is based on the 2015 *Uniform Mechanical Code*;
- Part 5 *California Plumbing Code* is based on the 2015 *Uniform Plumbing Code*;
- Part 6 *California Energy Code*;
- Part 7 Vacant;
- Part 8 *California Historical Building Code* is located within Part 2, Volume 2;
- Part 9 *California Fire Code* is based on the 2015 *International Fire Code*;
- Part 10 *California Existing Building Code* is located within Part 2, Volume 2;
- Part 11 *California Green Building Standards Code (CALGreen)*;
- Part 12 *California Referenced Standards Code*.

CBSC Education and Outreach

CBSC offers *CALGreen* training along with a variety of web resources and educational publications. For information on *CALGreen* training contact the commission via email to cbcs@dgs.ca.gov, or complete the Education and Outreach Request form located on the CBSC website: www.bsc.ca.gov/educ/edout.aspx . The following industry organizations may also offer *CALGreen* educational programs:

- International Code Council, local chapters (www.iccsafe.org)
- Green Technology (www.green-technology.org)
- California Building Officials (www.calbo.org)
- American Institute of Architects – California Council (www.aiacc.org)

History of CALGreen

CALGreen is the first-in-the-nation mandatory green building standards code. CBSC was directed to develop green building standards in 2007 in an effort to meet the goals of California's landmark initiative AB 32, which established a comprehensive program of cost-effective reductions of greenhouse gases (GHG) to 1990 levels by 2020. A voluntary *CALGreen* Code was published in 2008 and had an effective date of August 2009. The first mandatory measures were adopted in the 2010 triennial code publication, which went into effect in January 2011. CBSC worked closely with the Department of Housing and Community Development, Division of the State Architect and the Office of Statewide Health Planning and Development to establish the new standards. State agency representatives, industry stakeholders and interested parties were enthusiastic contributors to the initial code development process and remain active participants in the progression of *CALGreen* measures.

CALGreen was developed to (1) reduce GHG 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 environmental directives of the administration. The reduction in GHG was mandated via executive orders and the passage of the California Global Warming Solutions Act of 2006 (Assembly Bill 32, Chapter 488 of the 2006 Statutes), which added Division 25.5 to the California Health and Safety Code. The provisions of AB 32 require the cap on GHG by 2020, mandatory emissions reporting and an ongoing market-based compliance program. The establishment of the *CALGreen* Code has been an important step toward more efficient and responsible building design. The California Air Resources Board estimates that the mandatory provisions in *CALGreen* will reduce GHG by three million metric tons by the year 2020, and this number should increase due to the continued efforts to minimize the impact buildings have on the environment.

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 or rely on private entities to set the standards. The initial 2008 publication identified Administration, Definitions and Green Building chapters and established the

categories of planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, environmental air quality, referenced standards, installer and inspector qualifications, and appendices for residential, nonresidential and referenced standards.

The 2010 *CALGreen* Code established chapters for residential and nonresidential mandatory measures. A 20 percent reduction of indoor water use and a 50 percent construction waste reduction were required along with waste management plan requirements. Building commissioning for new buildings 10,000 square feet and over was also introduced along with requirements for temporary construction ventilation and finish materials.

The 2013 *CALGreen* Code clarified and expanded a number of requirements that included nonresidential additions and alterations. New sections were added in the areas of water efficiency and conservation, which included a 20 percent reduction in indoor water use. References to the California Energy and Plumbing Codes were also included. Demolition and recycling requirements were further defined.

CALGreen 2016 addresses clean air vehicles and increased requirements for electric vehicle charging infrastructure. A new universal waste code section has been incorporated for additions and alterations. Organic waste is new and includes an exception for rural jurisdictions. Clarification concerning commissioning ‘I’ and ‘L’ occupancies, which are not under the Office of Statewide Health Planning and Development or California Energy Commission authority, has been added. Water efficiency and conservation includes a new section for food waste disposers. Outdoor water use remains subject to the water-conserving measures that were amended due to the Model Water Efficient Landscape Ordinance (MWELO) emergency standards in 2015. Pursuant to Executive Order No. B-29-15, addressing California’s ongoing emergency drought conditions, state agencies proposed water-related emergency standards that were immediately enforceable in June 2015 and later adopted as amendments to the 2013 *CALGreen* Code. Those amendments have been carried over into the 2016 *CALGreen* Code. For more information concerning the water-related emergency actions see Information Bulletins 15-02, 15-03 and 15-04 on the CBSC website: www.bsc.ca.gov/pubs/bullet.aspx.

Effective Use of This Guide

This guide is intended to assist code users and local enforcement authorities with nonresidential applications of the 2016 *CALGreen* Code. This edition of the guide corresponds with the chapters in *CALGreen*, Part 11, Title 24. The emphasis, however, is on the nonresidential mandatory requirements located in Chapter 5 and the nonresidential voluntary measures located in Appendix A5. The intent of each code section, along with compliance and enforcement recommendations, is emphasized. The guide is formatted as follows:

- **Code section:** Code sections are reprinted from the 2016 *CALGreen* Code and shown in green text.
- **Intent:** Many of the code sections are followed by intent language for the requirement. In some instances an explanation of other laws or regulations that served as a catalyst for the regulation is included.
- **Change for 2016:** Identifies new code language or amendments made during the development of the 2016 *CALGreen* Code.
- **Compliance method:** The recommended compliance method is identified, which may include:
 - Design team information;
 - Suggestions; or
 - Examples.
- **Enforcement:**
 - Plan intake:** Recommendations for the plan reviewer concerning the construction documents; and
 - On-site enforcement:** Recommendations for the local inspector during construction.

Sections in the *CALGreen* Code marked “Reserved” are not shown in this guide.

New in 2016

- ***CALGreen* Verification Guidelines**, for use by the enforcing agency and/or code user, are a new addition to the guide and are located in Chapter 8 of this publication. The *CALGreen* Verification Guidelines consist of checklists that are intended to assist building departments with mandatory measures, and Tier 1 and Tier 2 compliance in local jurisdictions. Best practice is to always confer with the local enforcement agency as the checklists may have been modified for that jurisdiction. Otherwise, check the CBSC website for the most current versions of the compliance checklists: www.bsc.ca.gov/Home/CALGreen.aspx.
- A [BSC-CG] banner is new for the 2016 code. In accordance with Assembly Bill No. 341 (Chapter 585, Statutes of 2013, Health and Safety Code Section 18940.5), CBSC and other state agencies that

propose green building standards for inclusion in Part 11 were directed, to the extent feasible, to reference or reprint the *California Green Building Standards Code* in other relevant portions of Title 24. To that end, CBSC developed the [BSC-CG] banner to indicate *CALGreen* applications for occupancies under its authority. The banner is referenced in this guide and included in the matrix adoption tables used in most parts of Title 24 (see the example that follows).

**CALIFORNIA GREEN BUILDING STANDARDS CODE – MATRIX ADOPTION TABLE
CHAPTER 5 – NONRESIDENTIAL MANDATORY MEASURES
DIVISION 5.4 – MATERIAL CONSERVATION AND RESOURCE EFFICIENCY**

(Matrix Adoption Tables are non-regulatory, intended only as an aid to the user.
See Chapter 1 for state agency authority and building applications.)

Adopting agency	BSC	BSC- CG	SFM	HCD			DSA		OSHPD				BSCC	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																				
5.401.1								X												
5.402.1 Definitions								X												

The 'X' under the column heading BSC-CG, located opposite "Adopt entire CA chapter," indicates that the California Building Standards Commission (BSC-CG) has adopted the entirety of Chapter 5. The 'X' under the column heading DSA-SS, located opposite "Adopt only those sections that are listed below," indicates that the Division of the State Architect- Structural Safety has only adopted specific sections, as listed, of the *CALGreen* nonresidential building standards.