Green California Summit and Exposition Presents

CALGreen®

2010 Updates

Introduction

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Today's Objectives

- CALGreen Intro
    - What is CALGreen?
- 2010 CALGreen Supplement
    - Overview of Mandatory Code Provisions
- Graywater & Rainwater Update
- Upcoming Code Cycle
- Q&A

2007/2008 Legislative Cycle

- Governor's message
  - Supports the development of green building standards and shared the goals of this bill
  - The Building Standards Commission was created to ensure an open public adoption process allowing experts to develop standards and periodic updates to the building codes
  - Allowing private entities, such as proposed in this bill, to dictate California's building standards usurps the state's authority to develop and adopt those standards
  - Directed specified state agencies with authority to develop green building standards for residential, commercial, and public building construction for the 2010 code adoption process

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Next Steps

- The California Building Standards Commission directed CBSC staff to develop green building standards for new construction of buildings under its authority.
- The appointed members of the CBSC also requested HCD and the other proposing agencies to work together to develop green building standards for new construction of buildings under their respective authority.
- HCD responded to the Governor's message and joined other state agencies in development of the California Green Building Standards Code now known as CALGreen.

Result – California Green Building Standards Code or CALGreen

- Enforced like other California codes
- Does not require third party inspection or verification
- Maintains current relationship between enforcing agencies and builders
- Uniformity and Consistency
  - Jurisdictions using different programs
  - Coordinated with other California codes

CALGreen Milestones

- Initial Voluntary Standards
  - Effective August 1, 2009
- Became Mandatory
  - Effective January 1, 2011
- **2010 Supplement**
  - **Effective July 1, 2012**
- 2013 Code Cycle
  - Effective January 1, 2014

2010 California Building Standards Codes – Title 24, CCR

- Part 1 California Administrative Code
- Part 2 California Building Code
- Part 2.5 California Residential Code
- Part 3 California Electrical Code
- Part 4 California Mechanical Code
- Part 5 California Plumbing Code
- Part 6 California Energy Code
- Part 7 Vacant
- Part 8 California Historical Building Code
- Part 9 California Fire Code
- Part 10 California Existing Building Code
- ***Part 11*** ***California Green Building Standards Code***
- Part 12 California Referenced Standards Code

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Code Format

- Chapter 1 Administration
- Chapter 2 Definitions
- Chapter 3 Green Building
- Chapter 4 Residential Mandatory Measures
- Chapter 5 Nonresidential Mandatory Measures
- Chapter 6 Reference Organizations and Standards
- Chapter 7 Installer and Special Inspector Qualifications
- Chapter 8 Compliance Forms and Worksheets
- Appendix A4
- Appendix A5

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California Green Building Standards Code

- Chapter 1 - Administration

Purpose

- Minimize impact of construction and improve construction practices

Scope

- Application
- Not intended to be identified as meeting the requirements of a point rated system

Local amendments based on findings

- Climate
- Topography
- Geology

Alternate Materials and Methods

Construction Documents

Application and State Agency Authorities

California Green Building Standards Code

- Chapter 2 - Definitions
  - If used in more than one location in the code a defined term will be located in Chapter 2. <u>This is changing.</u>
  - Italics, definitions and California amendments
  - Banners
    - **CONDITIONED FLOOR AREA. [BSC, HCD]**
  - Matrix Tables

California Green Building Standards Code

- Chapter 3 - Green Building
  - Scope

    Newly constructed low rise residential buildings

    Newly constructed non- residential buildings, alterations and additions
  - Mixed Occupancy Buildings

    Shall comply with appropriate requirements for each separate occupancy type
  - Phased Projects
  - Voluntary Tiers

    Tier 1 and Tier 2

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California Green Building Standards Code

Chapter 4 - Residential Mandatory Measures

Five Divisions

Division 4.1 - Planning and Design

Division 4.2 - Energy Efficiency

Division 4.3 - Water Efficiency and Conservation

Division 4.4 - Material Conservation and Resource Efficiency

Division 4.5 - Environmental Quality

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PLANNING AND DESIGN – Chapter 4 - Division 4.1

Site Development

January 1, 2011

- The site shall be planned and developed to keep surface water from entering buildings.

July 1, 2012

- Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings

WATER EFFICIENCY AND CONSERVATION

Chapter 4 - Division 4.3, Indoor Water Use

January 1, 2011

- When single shower fixtures are served by more than one showerhead, the combined flow rate of all the showerheads shall not exceed the maximum flow rate.

July 1, 2012

- When a shower is served by more than one showerhead, the combined flow rate of all the showerheads controlled by a single valve shall not exceed the maximum flow rate.

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WATER EFFICIENCY AND CONSERVATION

Chapter 4 - Division 4.3, Indoor Water Use

January 1, 2011

- Kitchen faucet at 20% reduction had maximum flow rate of 1.8 @ 60 psi..

July 1, 2012

- Kitchen faucets may temporarily increase flow above the maximum rate, but not above 2.2 gpm @ 60 psi and must default to a maximum flow rate of 1.8 gpm @ 60 psi.

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MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

Chapter 4 - Division 4.4, Enhanced Durability and Reduced Maintenance

January 1, 2011

- Joints and openings

July 1, 2012

- Rodent proofing.
- Removed a reference to the *California Energy Code*.

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MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

Chapter 4 - Division 4.4, Construction Waste Reduction, Disposal and Recycling

January 1, 2011

- Recycle and/or salvage a minimum of 50 percent of the nonhazardous construction and demolition waste or meet a local construction and demolition waste management ordinance,. whichever is more stringent.

July 1, 2012

- Submit a construction waste management plan in conformance with Items 1 through 5.
- Utilize a waste management company which can document 50% diversion.
- Verify the total combined weight of construction and demolition waste disposed of in landfills, does not exceed four (4) lbs./sq. ft

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MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

Chapter 4 - Division 4.4, Construction Waste Reduction, Disposal and Recycling

January 1, 2011

- 4.408.2.2 Isolated jobsites.

July 1, 2012

- Moved to exception in Section 4.408.1

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ENVIRONMENTAL QUALITY

Chapter 4 - Division 4.5, Pollutant Control

January 1, 2011

- Covering of duct openings and protection of mechanical equipment from dust and debris.

July 1, 2012

- Added water to the items that need to be addressed.

ENVIRONMENTAL QUALITY

Chapter 4 - Division 4.5, Pollutant Control

January 1, 2011

- California Department of Public Health, "Standard Practice for the testing of VOCs (Specification 01350)

July 1, 2012

- Revised reference to "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers", Version 1.1, February 2010 (also known as Specification 01350.)

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ENVIRONMENTAL QUALITY

Chapter 4 - Division 4.5, Pollutant Control

January 1, 2011

- Moisture content shall be determined with either a probe-type or a contact-type moisture meter.

July 1, 2012

- Revised to allow equivalent moisture verification methods approved by the enforcing agency and shall satisfy requirements found in Section 101.8 of this code.

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ENVIRONMENTAL QUALITY

Chapter 4 - Division 4.5, Pollutant Control

January 1, 2011

- Fans must be controlled by a humidistat which shall be readily accessible.

July 1, 2012

- Removed readily accessible, they may be a separate component to the exhaust fan and are not required to be integral (i.e., built-in).

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California Green Building Standards Code

REVISIONS TO RESIDENTIAL VOLUNTARY MEASURES

- Appendix A4
  - A4.106.6. Electric vehicle (EV) charging.
  - A4.405.3 Recycled content.

Current Events

Mandatory considerations for the 2012 Code Cycle (effective January 1, 2014)

- High rise, above three stories
- Alterations and renovations
- Remove performance method for water conservation
- Mandatory reduction in cement use
- Mandatory flashing details

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Current Events

- Other Proposed Regulations
  - (Anticipated Effective Date January 2014)
  - Graywater
  - Rainwater Catchment
  - Move CALGreen requirements to other codes

CA.GOV Department of Housing and Community Development

Business, Transportation and Housing Agency

PERMANENT SOURCE

WHAT'S NEW

- HCD Web News
- HCD Blog
- Press Releases
- Announcements
- Events
- Recent Site Updates

THE DEPARTMENT

- HCD Mission
- Contact HCD

IMPORTANT INFORMATION

CALGreen | Bond Programs Status | Available Now! BUILDING BLOCKS FOR EFFECTIVE HOUSING ELEMENTS | Economic Recovery and Stimulus | BOND ACCOUNTABIL

INFORMATION ABOUT...

Online Services | Propositions 46 & 1C | Resources | Quick Links | Highlights

- File A Complaint Online
- Mobilehome & Special Occupancy (RV) Parks Listing
- Manufactured Home/Mobilehome Registration Renewal
- Occupational Licensing Query
- Redevelopment Agency Reporting System (RDA)
- Requestor Account Title Search
- Title Search and Escrow Opening

Join HCD on Facebook

Join HCD on Twitter

CalHFA - Keep Your Home California - Foreclosure Program

Proposition 1C Project

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- 2010 California Green Building Standards Code (CALGreen) — (*Adobe PDF*)
- A Guide to the California Green Building Standards Code (Low-Rise Residential) – May 2011 — (*Adobe PDF*)
- Low-Rise Residential Mandatory Measures — (*Adobe PDF*)
- 2011 Report to the Legislature Regarding the California Green Building Standards Code (CALGreen) — (*Adobe PDF*)

COMPLIANCE FORMS AND WORKSHEETS

HCD developed the following forms and worksheets to support users in meeting CALGreen documentation requirements. The forms and worksheets are offered only as aids, which may be used to show compliance with CALGreen, and are not state mandated. They are capable of being downloaded and modified to fit the needs of an individual or local enforcing agency. Before utilizing the following compliance forms, a user should always check with the local enforcing agency to verify whether any jurisdiction-specific forms are required.

Residential Occupancies Application Checklist (Appendix A4, Section A4.602) — (*Adobe PDF*) or (*Microsoft Word*)

Water Use Calculation Forms (Section 4.303)

- WS 1 – Baseline Water Use — (*Adobe PDF*) or (*Microsoft Word*)
- WS 2 – 20 Percent Reduction Water Use Calculation Table — (*Adobe PDF*) or (*Microsoft Word*)

Construction Waste Management Forms (Section 4.408)

- CW 1 – Construction Waste Management Plan (CWMP) — (*Adobe PDF*) or (*Microsoft Word*)
- CW 2 – Construction Waste Management Worksheet (Volume Method) and Instructions — (*Adobe PDF*) or (*Microsoft Excel*)
  - Instructions — (*Microsoft Word*)
- CW 3 – Construction Waste Management Worksheet (Weight Method) and Instructions — (*Adobe PDF*) or (*Microsoft Excel*)
  - Instructions — (*Microsoft Word*)
- CW 4 – Weight or Volume Summary Worksheet — (*Adobe PDF*) or (*Microsoft Excel*)

California Green Building Standards Code

Compliance Forms and Worksheets

- Water Use Calculation Forms
- Construction Waste Management Forms
- Building Maintenance and Operation Forms
- Pollutant Control Forms
- Documentation and Verification Forms
- Recycled Content Calculator

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California Green Building Standards Code

- Chapter 5 Nonresidential Mandatory Measures
  - Planning and Design – Division 5.1
  - Energy Efficiency – Division 5.2
  - Water Efficiency and Conservation – Division 5.3
  - Material Conservation and Resource Efficiency – Division 5.4
  - Environmental Quality – Division 5.5
  - Additions and Alterations – Division 5.7
    - New- Effective July 1, 2012

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PLANNING AND DESIGN – Chapter 5-Division 5.1
Site Development

January 1, 2011

- Stormwater soil loss prevention plan
- Bicycle parking
- Designated parking

July 1, 2012

- Stormwater pollution prevention BMP *
- Delete UC reference *
- Clarify stall marking *

* Also applies to additions and alterations

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PLANNING AND DESIGN – Chapter 5- Division 5.1

Site Development

January 1, 2011

- Light pollution reduction
  - Voluntary on April 20, 2011
- Grading and paving

July 1, 2012

- IESNA 2011 BUG Ratings mandatory as of July 1, 2012
- Coordinate BMP with HCD *

* Also applies to additions and alterations

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ENERGY EFFICIENCY - Chapter 5- Division 5.2

Mandatory Measures are Regulated by the California Energy Commission

- Mandatory provisions are found in Part 6 of Title 24

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WATER EFFICIENCY AND CONSERVATION
Chapter 5- Division 5.3
Indoor Water Use

January 1, 2011

- Separate water submeters for high water use
- 20% reduction in indoor water use
  - Prescriptive and performance standards

July 1, 2012

- Separate water submeters for subsystems *
- Clarify prescriptive and performance methods, showerheads and tables *

* Also applies to additions and alterations

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WATER EFFICIENCY AND CONSERVATION
Chapter 5- Division 5.3
Outdoor Water Use

January 1, 2011

- Water budget
- Separate submeter for outdoor potable water use
- Weather or soil moisture-based irrigation controllers

July 1, 2012

- No change *
- Minor clarifications *
- Minor clarifications *

* Also applies to additions and alterations

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MATERIAL CONSERVATION and RESOURCE EFFICIENCY - Chapter 5- Division 5.4

Water Resistance & Moisture Management

January 1, 2011

- Exterior weather protection by Title 24 or local ordinance
- Design for moisture control
  - Sprinklers
  - Entries and openings

July 1, 2012

- No change *
- No change *

* Also applies to additions and alterations

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MATERIAL CONSERVATION AND RESOURCE EFFICIENCY - Chapter 5- Division 5.4

Construction Waste Reduction, Disposal & Recycling

January 1, 2011

- Construction waste reduction of 50%
- Waste management plan required, or meet local ordinance

July 1, 2012

- No change *
- Same; add options for *
  - Waste management company
  - Waste stream reduction

* Also applies to additions and alterations

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MATERIAL CONSERVATION AND RESOURCE EFFICIENCY - Chapter 5- Division 5.4

Construction Waste Reduction, Disposal & Recycling

January 1, 2011

- Exception for isolated jobsites
- Recycle or reuse 100% of land clearing debris

July 1, 2012

- No change *
- Same; add exception for contaminated debris *

* Also applies to additions and alterations

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MATERIAL CONSERVATION AND RESOURCE EFFICIENCY - Chapter 5- Division 5.4

Building Maintenance and Operation

January 1, 2011

- Recycling by occupants

July 1, 2012

- No change *

*** Also applies to additions and alterations**

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MATERIAL CONSERVATION AND RESOURCE EFFICIENCY - Chapter 5- Division 5.4

Building Maintenance and Operation

January 1, 2011

- Building commissioning for new buildings 10,000 s.f. and over

July 1, 2012

- Minor clarifications; add exceptions for
  - Dry warehouses
  - Some tenant improvements
  - Appendix A6 for Sample Compliance Forms & Templates

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MATERIAL CONSERVATION AND RESOURCE EFFICIENCY - Chapter 5- Division 5.4

Building Maintenance and Operation

January 1, 2011

- Testing and adjusting for buildings less than 10,000 s.f.
  - HVAC balancing

July 1, 2012

- Same with minor clarifications *

* Also applies to additions and alterations

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ENVIRONMENTAL QUALITY –
Chapter 5- Division 5.5
Pollutant Control

January 1, 2011

- Fireplaces
- Temp. const. ventilation (Voluntary)
- Covering of duct openings and protection of equipment during construction

July 1, 2012

- No change *
- If HVAC is used for temp. const. ventilation (replace filters)*
- Minor clarifications *

* Also applies to additions and alterations

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ENVIRONMENTAL QUALITY –
Chapter 5- Division 5.5
Pollutant Control

January 1, 2011

- Indoor air quality
  - Finish materials
  - Filters
  - Environmental tobacco smoke

July 1, 2012

- Minor clarifications *
  - Referenced standards
  - Exception for small, H.E. ductless units
  - Clarification of authority to regulate

* Also applies to additions and alterations

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ENVIRONMENTAL QUALITY –
Chapter 5- Division 5.5

January 1, 2011

- Indoor moisture control (other codes)
- Indoor air quality (Energy Code)
  - Ventilation
  - CO_2 monitoring

July 1, 2012

- No change *
- Editorial changes *

* Also applies to additions and alterations

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ENVIRONMENTAL QUALITY –
Chapter 5- Division 5.5

January 1, 2011

- Environmental Comfort
  - Exterior noise transmission
  - Interior sound
- Outdoor air quality
  - Ozone depleting chemicals

July 1, 2012

- Significant changes *
  - Align with HCD in CBC and general plans; added performance & prescriptive methods
  - Minor change
- No change *

* Also applies to additions and alterations

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2010 California Green Building Standards Code

NONRESIDENTIAL VOLUNTARY MEASURES

- Appendix A5
  - The measures contained in the appendix are not mandatory unless adopted by a city, county, or city and county. Appendix provisions may also be used voluntarily by designers, builders, and property owners.
  - *CALGreen* Tier 1 and Tier 2 are intended for adoption by cities, counties, and cities and counties to help California meet its goals for greenhouse gas emission reduction.

Category	Environmental Performance Goal	Tier 1	Tier 2
All	Minimum Mandatory	Meet all of the provisions of Chapter 5	**Meet all of the provisions of Chapter 5**
Planning and Design	Designated Parking for Fuel Efficient Vehicles	10 percent of total spaces	**12 percent of total spaces**
	Cool Roof to Reduce Heat Island Effect	Roof Slope < 2:12 SRI 64 Roof Slope > 2:12: < 5 lb/s.f. SRI 16 ≥ 5 lb/s.f. SRI 10	**Roof Slope < 2:12 SRI 78** **Roof Slope > 2:12:** **< 5 lb/s.f. SRI 23** **≥ 5 lb/s.f. SRI 30**
		1 additional Elective from Division A5.1	**3 additional Electives from Division A5.1**
Energy Efficiency	Energy Performance	Exceed 2010 CA Energy Code by 15 percent	**Exceed 2010 CA Energy Code by 30 percent**
Water Efficiency and Conservation	Indoor Water Use	30 percent Savings	**35 percent Savings**
	Outdoor Water Use	Not exceed 60 percent of ETo times the landscape area	**Not exceed 55 percent of ETo times the landscape area**
		1 additional Elective from Division A5.3	**3 additional Electives from Division A5.3**
Material Conservation and Resource Efficiency[2]	Construction Waste Reduction	At least 65 percent reduction	**At least 80 percent reduction**
	Recycled Content	Utilize recycled content materials for 10 percent of total material cost	**Utilize recycled content materials for 15 percent of total material cost**
		1 additional Elective from Division A5.4	**3 additional Electives from Division A5.4**
Environmental Quality	Low-VOC Resilient Flooring	80 percent of flooring meets VOC limits	**90 percent of flooring meets VOC limits**
	Low-VOC Thermal Insulation	Comply with VOC limits	**Install no-added formaldehyde insulation & comply VOC limits**
		1 additional Elective from Division A5.5	**3 additional Electives from Division A5.5**
Additional Measures	Added measures shall be achieved across at least 3 categories	1 Additional Elective	**3 Additional Electives**
Approximate Total Measures		**14**	**24**

California Building Standards Commission

- Proposed Regulations
  - (Anticipated Effective Date January 2014)
  - Graywater
  - Rainwater Catchment

California Building Standards Commission

- Codes Online
  - Newly reformatted CBSC website for easier access to code information
    - Rulemaking Process
    - Code Cycles
    - Current Codes
    - Guidebooks and other resources
    - Information Bulletins
    - Meeting Notices
- www.bsc.ca.gov

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FEATURED LINKS

- CALGreen
- Bulletins
- Notices
- SB1473
- Feedback
- Related Sites
- Archives

Welcome! The California Building Standards Commission (CBSC) is responsible for the administration of California's building codes (California Code of Regulation, Title 24), which includes the adoption, approval, publication, and implementation of codes and standards.

California's building codes are published on a triennial basis. Supplements and errata are issued throughout the cycle. Review the current code cycle here.

The 2010 codes are available online both on this website and on the submitting agencies websites:

Residential construction: California Department of Housing and Community Development, www.hcd.ca.gov

Schools Construction: California Department of General Services, Division of the State Architect, www.dgs.ca.gov/dsa

Access Compliance: California Department of General Services, Division of the State Architect, www.dgs.ca.gov/dsa/Programs/progAccess

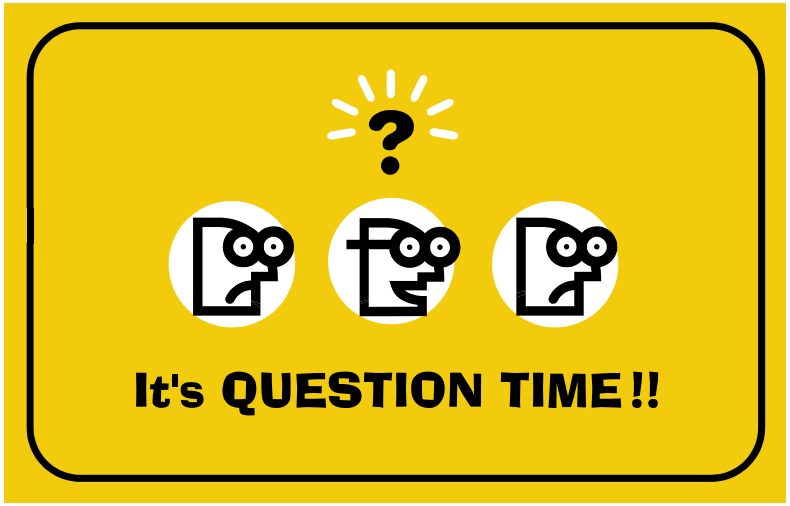
Hospitals and clinic construction: California Office of Statewide Health Planning and Development, http://www.oshpd.ca.gov/

Fire and Panic Safety: Office of the State Fire Marshal, http://www.osfm.fire.ca.gov/

California Building Standards Commission Meetings are now webcast - http://www.dca.ca.gov/stream/audiocast.asx. Link is active five minutes prior to meeting start times.

California's building codes are published by the International Code Council (ICC), with the exception of the Plumbing and Mechanical codes, and may be purchased directly from the council. Visit the online store at www.iccsafe.org, or call 800-786-4452 for order information.

Thank you…



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