* NEW 2010 CALIFORNIA BUILDING CODES *
SUMMARY OF CHANGES

BUILDING DEPARTMENT INFORMATION BULLETIN

DATE: **SEPTEMBER. 15, 2010**

TO: **ALL INTERESTED BUILDING DESIGN PROFESSIONALS**

FROM: **BUILDING OFFICIAL**

SUBJECT: **NEW CALIFORNIA BUILDING STANDARDS CODES**
SUMMARY OF CHANGES

California has recently adopted a new series of Building Standards Codes and they are now available for purchase. **All local jurisdictions will be required to enforce these new codes starting January 2011.**

The following is a list of the new Building Standards Codes, reference document and a summary of the significant changes. **All projects submitted for permit application on or after January 1, 2011 will need to show complete conformance to these new codes.** Project review, approval and permit issuance may be slowed or rejected if they do conform to these new standards.

The following codes and references are the minimum now necessary for design and construction. Additional codes, references, reports and other State or Local laws may be applicable depending on the project design requirements and local conditions. **Note that the California Residential Code and the California Green Building Code (CALGreen) are new documents not previously adopted in California**.

2010 CODE
California Building Code, Vols 1 & 2
California Residential Code **(New)**
California Plumbing Code
California Mechanical Code
California Electrical Code
California Energy Code
California Green Building Code **(New)**
California Fire Code
California Reference Standards Code

REQUIRED REFERENCE STANDARDS
ASCE 7-05 (Minimum Design Loads)
AISC 341-05 (2005 Seismic Design for Steel Bldgs.)
AISC 358-05 (Prequalified Connections for Special and Intermediate Moment Frames)
AISC 360-05 (2005 Steel Specs13th ed)
ACI 318-08 (Concrete Design)
ACI 530-08 (Masonry Design)
AF&PA/NDS-05 (Wood Design)

General information about the code development and adoption process may be found at the **California Building Standards Commission** website at: www.bsc.ca.gov/default.htm

General purchase information may be found at the **International Code Council** website at: www.iccsafe.org/ca2010

SUMMARY OF CHANGES – 2010 CALIFORNIA CODES

BUILDING CODE CHANGES – GENERAL SUMMARY, ALL CODES:

1. California has adopted the nation's first green building code known as the **California Green Building Code** (CALGreen). These requirements are all new and have significant impact on all building types.
2. All structural design requirements require the use of additional supplemental **Reference Standards** from various professional organizations such as AISC, ASCE, ACI, etc.
3. The **disabled access** requirements for both multifamily and commercial occupancies have very few changes. See CBC Chapters 11A (Housing) & 11B (Commercial).
4. California has now adopted the **International Residential Code** with California amendments as the new residential code. Significant changes are now applicable to residential construction.
5. The 2010 **Energy Conservation Code** requirements are similar to the current 2008 regulations.
6. The plumbing and mechanical codes are based on the current 2006 IAPMO **Uniform Plumbing and Uniform Mechanical Codes** and have minor changes.
7. The electrical code is based on the current 2008 **National Electric Code** and has minor changes.

BUILDING CODE CHANGES – RESIDENTIAL OCCUPANCIES (*NEW* CALIFORNIA RESIDENTIAL CODE):

1. The **California Residential Code** is completely new and is a separate document applicable to detached one & two family dwellings. This Code covers all structural requirements for "conventional construction" and non-structural aspects of dwelling construction.
2. The requirements for Multi-family residential projects are found in the California Building Code.
3. **Residential Fire Sprinklers** are now required in all new residential construction. (Sec. R313.2)
4. **Townhouses** (not more than three stories) are included in the Residential Code.
5. The **Occupancy Separation** between dwellings and a garage or carport is found in Sec. R302.5 & .6.
6. New dwellings equipped with fire sprinklers, require a one-hour rated exterior property line firewall with no openings when less than three feet to the property line. (Sec. R302.1)
7. **Guardrails** (guards) for all residential dwelling units (inside and outside) are required to be 42 inches in height. (Sec. R312.2)
8. In addition to smoke alarms, **Carbon Monoxide** alarms are required in new dwellings units. (Sec. R315)
9. **Exiting** from floors above or below the first floor has been revised to limit the maximum travel distance to 50 feet. (Sec. R311.4)

BUILDING CODE CHANGES – COMMERCIAL OCCUPANCIES:

1. Wall and opening protection, allowable areas and area increases, number of stories, and sprinkler requirements are found in Chapters 3, 4 and 5 and 9.
2. Mixed-use Occupancy requirements are located in Sec. 508.
3. **Type of Construction** requirements and designations are located in Chap. 6.
4. Fire rated wall terminology, construction and application are located in Chap. 7.
5. **Means of egress** are located in Chap. 10.

BUILDING CODE CHANGES – STRUCTURAL PROVISIONS:

1. The structural design for residential dwellings is now found in the new **California Residential Code**. All other design is found in the **California Building Code**. Residential construction may use conventional framing (where structure is no irregular) per the CRC or engineered design using the CBC. (Sec. R301.1.3)
2. All structural design methods refer to applicable reference standards published by the various corresponding technical committees or organizations such as AISC, ACI, ASCE, AF&PA/NDS, etc. Engineers must have these documents to design structures in wood, steel, concrete, masonry, etc.
3. All design forces, including seismic design forces, are established in CRC Secs. R301.2, R602, CBC Chap. 16 and ASCE 7-05.
4. Seismic design requires the determination of Site Classification and Seismic Design Categories. CRC Sec. R301.2.2 and CBC Sec. 1613.
5. Seismic design methodology is per CBC Sec. 1613 and ASCE 7-05, Chap. 12.
6. Seismic Base Shear, vertical and horizontal distribution and other seismic design requirements are found in ASCE 7-05, Sec. 12.8 through 12.14.
7. **Seismic Design Categories** now include the new categories D_0 , D_1 and D_2. (R301.2.2.1)
8. Assistance in the determination of Seismic Design Categories can be found on the USGS website at: http://earthquake.usgs.gov/research/hazmaps/design
9. Seismic design for steel buildings resides in the AISC publication: "Seismic Design for Steel Buildings". The use of the FEMA guidelines are not applicable.
10. Seismic design for most structures in Southern California, including most new single-family dwellings not using the CRC, will require the use of a site-specific soils report. (CBC Sec. 1802.2 & 1802.2.7)
11. The CRC requires 3000 psi concrete in Seismic Design Categories D_0 , D_1 and D_2. (CRC Sec. R404.1.2.3.1)
12. Flexible diaphragms are now considered with design provisions and restriction in both CBC Chap. 16 and ASCE 7-05.
13. **Conventional construction** is permitted with a significant number of restrictions and limitations in Seismic Design Categories D & E (Southern California). CRC Sec. 301.1.3 & CBC Sec. 2308.
14. Wood Truss design drawings require specific design and detail information as well as specific submittal requirements. (CBC Sec. 2303.4)

BUILDING CODE CHANGES – CALIFORNIA GREEN BUILDING CODE PROVISIONS (*NEW* CALGREEN):

1. The **CALGreen Code** is completely new and is a separate document applicable to all new residential and non-residential construction.
2. Establishes sustainable construction practices in planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency and environmental quality.
3. Sets minimum mandatory Green Building Standards and may include optional improved "tiers".