

CODE UPDATE

MASA/MASAP CODE LISTED TO 2006/2009 IBC/IRC

Simpson Strong-Tie® MASA/MASAP mudsill anchors are now code listed to the 2006 and 2009 IBC/IRC (see code report ICC-ES ESR-2555). This is the first code report for a cold-formed steel connector for light-frame wood construction embedded in non-cracked and cracked concrete evaluated in accordance with ICC-ES AC398. MASA mudsill anchors attach easily to concrete forms and lay flat on top of the form board, eliminating the need to finish around anchor bolts. The MASA provides an alternative for 5/8" and 1/2" anchor bolts on 2x and 3x sills. It eliminates the need for 3" square plate washers and, in some cases, has load capacities that meet or exceed that of other cast-in-place anchors. MASAP mudsill anchors are available for panelized forms. For more information, visit www.strongtie.com. ■



CODE CORNER

SUMMARY OF WOOD DESIGN CHANGES TO THE 2009 IBC

The 2009 IBC is already adopted or in the process of being adopted in many jurisdictions around the country. With that in mind, this article will summarize some of the changes in the 2009 IBC that deal with connections or structural design.

As usual, many of the standards that designers use in conjunction with the code have been updated to new editions. These include ACI (318-08, 530-08, 530.1-08), AF&PA (PWF-07, SDPWS-08), AISI (S100-07, S200-07, S210-07, S211-07, S212-07, S213-07, S214-07, S230-07), TPI (TPI 1-07), and several new ICC Standards (ICC 300-07, ICC 400-07, ICC 500-08, ICC 600-08).

Several major changes were made to Chapter 16, including the addition of a new 1609.6 "Alternate all-heights method" for wind design. This is a simplified version of the all heights method in ASCE 7. For wind loading, the reference to the old prescriptive manual SBCCI SSTD-10 was replaced by a reference to the new ICC 660 *Standard for Residential Construction in High Wind Regions*. Another major change is the addition of the new Section 1614 on Structural Integrity. High-rise Occupancy Category III and IV buildings will now be

required to have minimum detailing requirements to ensure the primary structural elements are tied together.

One subtle change in Chapter 16 is in regards to wood design for allowable stress. The change is to 1605.3.1.1, which has been modified from "Increases in allowable stresses ... shall not be used ... except that a duration of load increase shall be permitted in accordance with Chapter 23" to "Increases in allowable stresses ... shall not be used ... except that increases

shall be permitted in accordance with Chapter 23." With the old language, some jurisdictions or designers were not permitting or using other increases in the NDS or SDPWS (such as, repetitive member factor, bearing area factor, stud bending stress increase for wind, shearwall and diaphragm capacity increase for wind) because they thought they were prohibited. The new language clarifies that these other increases can be used.

(continued on page 2)



LITERATURE UPDATE

2010 CONNECTOR CATALOG ADDENDUM

As a reminder, Simpson Strong-Tie is now publishing its *Wood Construction Connectors* catalog every two years, so please keep your 2009-2010 copy. To supplement the catalog on this non-print year, you'll be receiving our 2010 Addendum (F-C2009ADD) which features new and obsolete products and catalog updates. An online copy is available on our website. ■

CODE CORNER (continued from page 1)

Section 1604.8.2, which used to apply only to concrete and masonry walls, has been expanded to apply to the anchorage of all walls to the floors, roofs and other structural elements that provide support for the wall. In Table 1607.1, the live load on balconies was changed from 100 psf (and 60 psf for one- and two-family residences) to be the same load as the occupancy served, so balconies now have the same required live loads as decks.

For seismic design, a new section 1613.6.7 "Minimum distance for building separation" was added to restore these requirements from previous codes since they are not addressed in ASCE 7. In addition, Supplement 2 of ASCE 7-05 was adopted which increases the minimum base shear equations in ASCE 7-05.

In Chapter 17, there is no longer an exemption from special inspection for Group R-3 occupancies. So if one- and two-family dwellings are designed to the IBC instead of the IRC, then special inspection for some designed elements may be required in high hazard areas. In addition, Chapter 17 has separated the inspection of bolts in concrete into two categories – bolts installed prior to or during placement of concrete and anchors installed in hardened concrete. Inspection of anchors in hardened concrete (*post-installed anchors, such as Simpson Strong-Tie Anchor Systems® mechanical or adhesive anchors*) is now specified as periodic special inspection.

Several modifications to ACI 318 have been added to Chapter 19. The new 1908.1.9 modifies ACI 318 to exempt anchors from the non-ductile provisions of ACI 318-08 Section D3.3.4 and D3.3.5 when they resist out of plane forces and the design strengths are equal to or greater than ASCE 7 Equation 12.11-1 or 12.14-10.

A major change to Chapter 23 is the removal of most of the provisions for the design of wood framed lateral-force resisting systems, with reference instead to the AF&PA Special Design Provisions for Wind and Seismic (SDPWS). (Note: the SDPWS can be downloaded for free from www.awc.org.) In addition, Section 2304.9.5 has been reorganized to separate the requirements for fasteners in preservative-treated wood from those in fire-retardant-treated wood. Requirements for connectors in contact with preservative-treated wood have been added as well as an exemption to allow plain carbon steel fasteners in SBX/DOT and zinc borate-treated wood used in interior, dry environments.

Happy designing! ■



The code corner is written by our code specialist Randy Shackelford, P.E. You can reach Randy by email at rshackelford@strongtie.com.

CODE DEVELOPMENT UPDATE

Even though it seems the 2009 I-Codes were just published, development is well underway for the 2012 editions. Beginning this year, the International Code Council (ICC) is instituting a completely new code development process with the hopes of reducing the length of the hearings, increasing participation, maintaining the importance of in-person attendance, boosting the significance of a successful assembly action, and in the end, saving costs for ICC, its members and code development participants.

Unlike past years, there will be only one code change cycle between published editions of each code. That means only one chance for proponents to get code changes approved.

Since the cycle for the 2012 I-Codes is already in progress, it's important for those interested in participating to understand the process. The initial code proposals for the 2009/2010 cycle were heard at the Code Development Hearings in Baltimore this past October and November. Results are now published on the ICC website at <http://www.iccsafe.org/cs/codes/Documents/2009-10cycle/ProposedChanges/FinalResults.pdf>. Final results are expected to be published around December 16, 2009 as downloadable pdf files and a CD-ROM. It is not expected that code change documents will be published into a large printed volume as in years past.

The 2012 I-Codes have been divided into two groups, with each group having a separate Final Action Hearing. The primary structural codes (*IBC and IRC, except IRC-Energy*) have been assigned to Group A.

There will be a quick turnaround for the codes in Group A. Public comments will have to be submitted by February 8, 2010 and will be posted on the ICC website as Final Action Agenda on March 15. The Final Action Hearings will be held May 14-23 in Dallas, Texas. After the hearings, Group A codes will be completed for this cycle.

For the codes in Group B, public comments will be due July 1, 2010, and the Final Action Hearings will be in conjunction with the Annual Meeting on October 28 - November 1 in Charlotte, North Carolina. The 2012 I-Codes are expected to be published and available by April 2011.

Beginning in 2012, the code change process will be slightly modified again. There will be completely separate sets of code change proposal deadlines, Code Development Hearings and Final Action Hearings for Group A and Group B codes. In addition, the codes making up Groups A and B will be reorganized slightly. For more information visit <http://www.iccsafe.org/cs/codes/Documents/2009-10cycle/misc/HearingSchedule.pdf>. ■

VIDEO UPDATE

NEESWOOD CAPSTONE VIDEO

To document the design, build and testing of the NEESWood Capstone building – the tallest building ever tested on the world's largest earthquake shake table – we have created a six-minute video. Watch as a full-scale, seven-story wood-framed condominium tower is hit with a 7.5 magnitude earthquake and learn more about the latest developments in earthquake-resistant construction for mid-rise, wood-frame buildings. Visit www.strongtie.com/capstonetest. ■



WORKSHOPS & TRAINING

NORTHEAST

Deck Framing Connection Seminar

Louisville, Kentucky	Wednesday, February 10
Lexington, Kentucky	Thursday, February 11
Ft. Mitchell, Kentucky	Friday, February 12
Wildwoods, New Jersey	Wednesday, February 17
Novi, Michigan	Tuesday, March 9
Grand Rapids, Michigan	Wednesday, March 10
Columbus, Ohio	Wednesday, March 17
Sioux Falls, Iowa	Tuesday, April 13
Lincoln, Nebraska	Wednesday, April 14

Simpson Strong-Tie Anchor Systems®

Fairfax, Virginia	Wednesday, March 24
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SOUTHEAST

Designing with Simpson Strong-Tie Anchor Systems®

Houston, Texas	Thursday, March 4
St. Louis, Missouri	Thursday, March 11

High Wind Design & Construction

Houston, Texas	Wednesday, April 7
Corpus, Texas	Thursday, April 8
Myrtle Beach, South Carolina	Tuesday, April 27
Virginia Beach, Virginia	Thursday, April 29

Introduction to Simpson Strong-Tie Anchor Systems®

Houston, Texas	Wednesday, March 3
St. Louis, Missouri	Wednesday, March 10

NORTHWEST

Authorized Stocking Dealers – Condensed

Stockton, California	Thursday, February 25
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Deck Framing Connection Seminar

Olympia, Washington	Tuesday, February 9
Bellingham, Washington	Tuesday, March 16

General Connector Technology

Stockton, California	Thursday, February 4
Pleasanton, California	Thursday, March 4
Kent, Washington	Thursday, March 18
Denver, Colorado	Thursday, April 8

SOUTHWEST

Connector Workshop for Building Officials & Inspectors

Brea, California	Thursday, April 1
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Connector Workshop for Contractors, Builders, & Developers

Brea, California	Thursday, March 4
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Connector Workshop for Design Professionals

Brea, California	Thursday, February 11
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Connector Workshop, Emphasis on Installation

Phoenix, Arizona	Thursday, March 11
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Cracked Concrete & Advanced Anchor Topics

North Las Vegas, Nevada	Thursday, March 25
Phoenix, Arizona	Wednesday, April 7
Brea, California	Thursday, April 29

Simpson Strong-Tie Anchor Systems® Workshop

Brea, California	Thursday, March 18
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For more information regarding workshop content and for a complete schedule, visit the Workshops and Training section of our website at www.strongtie.com/workshops.

INDUSTRY NEWS

NEW 2009 IRC LATERAL BRACING PROVISIONS GUIDE

The ICC has recently published *A Guide to the 2009 IRC Wood Wall Bracing Provisions* to improve the understanding and application of the 2009 IRC lateral bracing requirements. The 255-page guide for residential structures explains the code requirements for resisting lateral loads caused by wind and seismic events. Visit www.iccsafe.org for more information. ■

NEW GREEN BUILDING STUDY SHOWS STRONG OUTLOOK

According to a new study published by the U.S. Green Building Council and consulting firm Booz Allen Hamilton, green building will support 7.9 million U.S. jobs and contribute \$554 billion to the U.S. economy over the next four years (2009-2013). This forecast is more than triple the impact the green construction market played over the previous eight year period (2000-2008) which totaled \$173 billion. To download the full study, go to www.usgbc.org/greeneconomy. ■

NEW DESIGN GUIDE FOR COLD-FORMED STEEL FRAMING

The Cold-Formed Steel Engineers Institute has recently published a Design Guide for Cold-Formed Steel Framed Wood Panel or Steel Sheet Sheathed Shearwall Assemblies. Referred to as the "Shearwall Design Guide", it's intended to provide a better understanding of the latest code requirements with respect to lateral design using cold-formed steel framing and focuses on shearwall applications and design and detailing requirements for wind and seismic forces. Additional information is available at www.cfsei.org. ■

NEW PRODUCTS

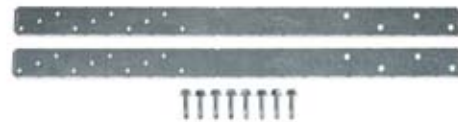
**STRONG-DRIVE®
SD STRUCTURAL-CONNECTOR SCREWS:
AN ALTERNATIVE TO NAILS**

Simpson Strong-Tie introduces the Strong-Drive® SD structural-connector screw. Designed to replace nails in certain products, the load-rated SD screw has been tested and approved for use in many popular Simpson Strong-Tie® connectors. In tight spaces and overhead applications screws are easier and more convenient to install than nails, and in some cases, the single-fastener load values achieved by the SD screws exceed those of typical 10d common or 16d common nails. In addition, the galvanized coating makes it suitable for use in interior and most exterior conditions. For a complete list of Simpson Strong-Tie connectors approved for use with our new SD screws, visit www.strongtie.com/fasten. ■



**STEEL STRONG-WALL®
SHEARWALL GARAGE
PORTAL KIT**

The new Simpson Strong-Tie® Garage Portal Connection Kit improves the performance of standard Steel Strong-Wall® shearwalls in a garage portal application. It provides extra strength and rigidity at the connection between the shearwall and the header, resulting in higher loads and reduced concrete anchorage requirements (*less digging*). The kit includes two straps and self-drilling fasteners to attach the strap to the shearwall, and uses the standard Steel Strong-Wall anchor-bolt template. Visit our website for more details. ■



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STRUCTURALREPORT

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- ▶ **Summary of Wood Design Changes to the 2009 IBC**
- ▶ **Strong-Drive® SD Structural-Connector Screws: An Alternative to Nails**
- ▶ **Steel Strong-Wall® Shearwall Garage Portal Kit**