

PRODUCT SPOTLIGHT

MAS ANCHORS REPLACE ANCHOR BOLTS (AND WASHERS) FOR FASTENING SILL PLATES TO THE FOUNDATION

Simpson Strong-Tie's MAS mudsill anchors are commonly used to attach sill plates to the foundation instead of using anchor bolts. MAS anchors do not require holes drilled into the sill plate and therefore restrain the sill plate from the side of the wall. They offer many advantages over cast-in-place bolts as they allow easier installation by both the concrete finisher and the framer while providing the necessary strength resistance.

There have been questions raised about using this connector to attach shearwalls in regions of the country that have moderate to high seismic risk. During damage assessment of the Northridge earthquake, some sill plates in shearwalls were found to have split down the middle. Northridge damage assessments noted that this may have been caused by oversized bolt holes and/or sheathing which lifted up the sill on the outer edge while



Typical MAS Installation (shown with concrete cut away for purposes of illustration.)

the bolt restrained the middle of the sill. It was determined that adding a sill bolt washer would reinforce the sill plate and help prevent splitting and cross-grain bending failure. Now, the Uniform Building Code, International Building Code and the International Residential Code, all require square steel washers to be placed between the anchor bolt and the sill. The codes also

require using a 3x sill plate for seismic forces greater than 350 plf. (An exception allows for a 2x sill plate, provided twice as many anchor bolts are installed.)

Since MAS connectors do not require a washer, do they meet the code requirement? To address this issue, Simpson Strong-Tie performed extensive, full-scale monotonic and cyclic testing of shear wall assemblies with MAS anchors at its state-of-the-art Tyrell Gilb Research Laboratory. Test results indicated that MAS anchors do effectively meet the intent of the code.

Testing showed that the MAS anchors are very effective in transferring shear and preventing cross-grain bending failure of the plate. The results led to recommendations for use in engineered shearwalls, as well as for prescriptive walls.

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TRAINING & EVENTS

SIMPSON INTRODUCES NEW INSTALLATION POCKET GUIDE AND TRAINING KIT FOR CONTRACTORS AND INSTALLERS

Simpson Strong-Tie continues to increase its training library with a new, compact product installation guide and mudsill anchors training kit.

As the name implies, the pocket guide is designed to fit in a back pocket for easy access in the field and provides a quick visual reference of how to install many of Simpson's products. Introduced in January, the builder response has been positive.

"The pocket guide will be a valuable learning tool for our field supervisors. The bilingual and detail-oriented layout is extremely helpful for framers," says Chris Channell, chief engineer with M/I Homes, Inc. in Columbus, Ohio. "One of the key features that we have found is the details showing how NOT

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Simpson's new Installer's Pocket Guide

PRODUCT SPOTLIGHT *(continued from page 1)*

Simpson Strong-Tie recommends the MAS for use in shearwalls in UBC Seismic Zones 1 through 4 and IBC Seismic Design Categories A through F. Further recommendations for shearwalls using the MAS in UBC Seismic Zones 3 and 4 and IBC Seismic Design Categories D, E, and F are as follows:

- MAS connectors can be installed on either a 2x or 3x mudsill.
- MAS legs must be installed directly to the framing on the structural sheathing side only.
- No more than 25% of the connectors should be installed with one leg up.
- Installations should be limited to single-sided shearwalls only.
- When lateral loads are between 350 plf and 600 plf, a 3x sill plate is not required. (A 3x mudsill must be used when the wall shear capacity exceeds 600 plf.) Additionally the quantity of MAS anchors does not have to be doubled as required for

sill bolts per UBC Table 23-II-I-1 footnote 3 and IBC 2305.3.10.

- Use of the MAS following these recommendations is subject to approval by the building official.

For additional information including recommended load tables, request Simpson Technical Bulletin T-MASSW05, or visit the Simpson website at www.strongtie.com. ■



Full-scale shearwall cyclic tests with MAS Anchors at the Tyrell Gilb Laboratory.

TRAINING & EVENTS *(continued from page 1)*

to connect certain hangers. Incorrect installation is sometimes an issue among some contractors and having a quick pocket reference will be invaluable for helping to eliminate problems. Finding the information you need is quick and easy.”

Simpson also recently launched its third builder training kit entitled “Introduction to Mudsill Anchors.” The materials provide an overview of basic terms associated with mudsill anchor installation as well as step-by-step techniques for installing several of Simpson’s mudsill anchors. Simpson’s builder training series is a part of the NAHB Research Center’s National Housing Quality Certified Training Material Program.

“It’s important that we continue to develop training materials that are easy to use and understand,” says Mike Moran, vice president of Simpson’s builder programs. “The purpose of this effort is to help improve overall construction quality and efficiencies. Builders, contractors, suppliers and manufacturers all need to work together to accomplish this goal.”

Simpson’s mudsill anchor training kit includes an instructional video as well as instructor and student guides. Materials are also offered on a CD-Rom. Offered in both English and Spanish, Simpson’s training series and pocket guide can be ordered online, visit www.strongtie.com and click on training. ■



Simpson’s latest training materials on mudsill anchors.

CONTINUING EDUCATION & EVENTS

NORTHEAST

Architects, Engineers, Building Officials & Contractors

Madison, Wisconsin Tuesday, May 2
 Taunton, Massachusetts Wednesday, May 10
 Charlottesville, Virginia Tuesday, May 23
 Indianapolis, Indiana Wednesday, June 7

High Wind Workshops for Architects & Engineers

Tom's River, New Jersey Tuesday, May 9

Workshops for Builders & Contractors

Westbury, Long Island, NY Wednesday, June 7

SOUTHEAST

Building Officials & Inspectors

Jacksonville, Florida Thursday, May 18

Design Professionals

McKinney, Texas Thursday, June 22

Designing with Simpson Anchor Systems

McKinney, Texas Friday, June 23
 Jacksonville, Florida Thursday, July 13

NORTHWEST

Engineers, Architects & Specifiers

Stockton, California Wednesday, June 14

SOUTHWEST

Anchor Systems Workshop – Emphasis on Design for Engineers, Architects, Specifiers & Plan Checkers ONLY

Las Vegas, Nevada Thursday, May 18

Anchor Systems Workshop for Building Inspectors, Contractors, Builders & Distributors

San Diego, California Thursday, June 15

Anchor Systems Workshop for Engineers, Architects, Specifiers & Plan Checkers

San Diego, California Wednesday, June 14

Building Officials & Inspectors

Brea, California Thursday, May 11

Contractors, Builders & Developers

Brea, California Thursday, June 8

Connector Workshop for All Audiences

San Luis Obispo, California Friday, May 5
 Prescott, Arizona Friday, June 30

Design Professionals

Brea, California Thursday, July 13

Introduction to Simpson Anchor Systems

Brea, California Thursday, May 25

For more information regarding workshop content and for a complete schedule, visit the Workshops and Training section of our Web site at www.strongtie.com/workshops.

SERVICE UPDATE

EDUCATING CONSUMERS ABOUT EARTHQUAKE PREPAREDNESS

Simpson Strong-Tie is helping to commemorate the centennial of the 1906 San Francisco Earthquake and support Earthquake Preparedness Month (April) by launching educational television commercials and radio spots in the Bay Area. Targeted at homeowners, the ads are designed to bring awareness to earthquake preparedness and home safety. Simpson has also dedicated a section of its Web site to help educate the public about preparing homes for the next big quake. The site includes frequently asked questions and a homeowner checklist. ■



Structural Report is published by Simpson Strong-Tie Co., Inc. All information is meant to be relevant and useful. Information provided is for general understanding only. All designs or other information should be evaluated by a qualified design professional.

MAILING LIST

To revise your mailing information or to be added to the mailing list, sign up on our Web site at www.strongtie.com/newsletter. If you have article ideas, send them to chudak@strongtie.com.



50TH ANNIVERSARY UPDATE

VISIT OUR 50TH ANNIVERSARY SITE!

We've enjoyed 50 amazing years, thanks to our customers and employees. In honor of our 50th, we've created a special 50th anniversary site on strongtie.com. We've highlighted some of our favorite memories, shared how we got our start in the connector business and featured some of the customer appreciation events we have scheduled throughout our anniversary year. We invite you to visit the site and sign our customer guest book – you have a chance to win a 1950s-style desk radio.

Thank you for your continued support as we all work together to reach our common goal of designing and building stronger, safer and more economical structures. ■



Simpson's customer appreciation event at the International Builders' Show in Orlando.

HISTORY CHANNEL DEBUT

Simpson's Tyrell Gilb Research Laboratory, which conducts testing to understand how earthquakes, high winds and other natural disasters affect building performance, will be featured on the History Channel in April and May. The program commemorates the anniversary of San Francisco's Great Quake of 1906 and investigates recent advances in seismic research and technology. Check local listings for exact dates and times.



P.O. Box 2969, Dublin, CA 94568
800-999-5099
www.strongtie.com

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