

NEWSLETTER

MARCH 2011



CFSEI
COLD-FORMED STEEL
ENGINEERS INSTITUTE



2011 – OFFICERS:

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Vice President: Julie Lowrey, E.I.,
TrusSteel, ITW BCG, Inc.

Secretary: Kenny Pagano, P.E.,
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UPCOMING EVENTS:

CFSEI Webinar: Cold-Formed Steel Design & Detailing
To Dodge Distortional Buckling Mar 23, 2011

Association of the Wall and Ceiling Industry (AWCI)
Convention and INTEX Expo, Las Vegas, NV Apr 3-7, 2011

CFSEI Florida Chapter Spring Meeting
(Information Coming Soon) Apr 28, 2011

Mid-Atlantic Steel Framing Expo and National CFSEI
Conference and Annual Meeting, Annapolis, MD May 23-24, 2011

ASCE/SEI Seminar: ASCE 7-10 – Changes from ASCE
7-05, ASCE/SEI East Central Branch, Orlando, FL Jun 17, 2011

METALCON International, Atlanta, GA Oct 11-13, 2011

2011 ANNUAL MEETING WAS A SUCCESS!¹

The CFSEI Florida Chapter's 2011 Annual Meeting held on January 13th in Orlando Florida was a huge success. In all, 47 attendees registered, which included many new faces as well as many familiar ones. The 2011 Board of Directors was installed, as was the 2011 Chapter President, Jennifer Zabik. 2011 Board Members are as follows:

- Jennifer Zabik, PE, SE (President)
- Julie Lowrey, EI (Vice President)
- Bill Babich, PE (Treasurer)
- Kenneth Pagano, PE (Secretary)
- Tamil Samiappan, EI
- Patricio Romero, EI
- Adam Russell, EI
- Paul Dalia, PE
- Frank Mestre
- Robert Kelzer
- Darden Cobb
- Sharon Warner



2011 Board of Directors being sworn in

¹ Julie Lowrey, E.I., TrusSteel, ITWBCG, Inc. Vice-President (2011), CFSEI Florida Chapter



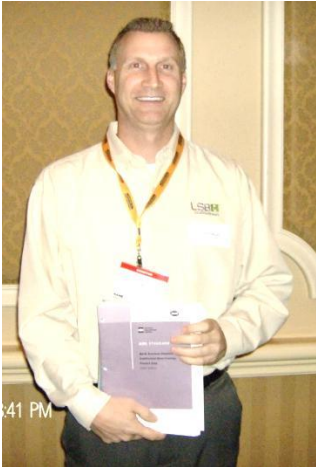
2011 Chapter President being sworn in

Guests enjoyed a delicious dinner and gift bags filled with CFSEI stress balls, pens, pencils, and personalized candy. Our presenter, Don Allen, PE and CFSEI Technical Director, gave a very interesting and lively presentation on Construction Solutions with Cold-Formed Steel Framing, which was extremely well received by the audience.



Don Allen, PE (Presenter)

Congratulations to our raffle winner, Tim Kallan, from LiteSteelbeam, who won BOTH of our raffles! Tim won 2011 CFSEI and Florida Chapter membership along with a suite of AISI CFS Framing Standards. Welcome to the CFSEI Florida Chapter, Tim, and have fun designing CFS framing with your new Standards!



Tim Kallan (Raffle winner)

Kevin Brown from Aegis Metal Framing and Dave Dunbar, PE from TrusSteel accepted the 2010 Gold Sponsor Awards for continual and faithful sponsorship of the CFSEI Florida Chapter. It was our honor to present this award to them.



2010 Gold Sponsors - TrusSteel and Aegis

We were pleased to welcome our newest sponsors as well; Argos Systems, Flex-Ability Concepts, and LiteSteelbeam. All sponsors provided great displays which were enjoyed by attendees during happy hour. As promised, we started off 2011 with a bang! Thank you to all who participated. We look forward to seeing you all at the next Chapter meeting.



Preliminary Conference agenda:

May 23—Day One:

- 5 Educational Sessions including topics on Brick Veneer, Green Building, Codes and Standards, Design/Build and Insurance Liabilities; see conference schedule.
- Trade Expo of the technologies and services for the Cold-Formed Steel Framing Industry
- Luncheon Keynote Address
- Dinner Cruise on the Chesapeake Bay

May 24—Day Two:

- 11 Educational sessions including topics covering, Delegated Design, International Opportunities, Holes and Penetrations, Lateral Systems, Beams, Case Studies of Creative CFS Designs, CFSEI Technical Notes, Sheathing Braced Design, Curtain Wall Design, see conference schedule.
- Trade Expo of technologies and services for Cold-formed Steel Framing Industry
- Luncheon Keynote address: The Impact of Energy Codes on Structural Design
- Cold-Formed Steel Engineers Institute Annual Meeting

For more information, visit CFSEI website at <http://www.cfsei.org/annualmtg2011.htm>.



A NEW ASCE 7 STANDARD – ASCE/SEI 7-10¹

Well, it has happened again, another substantial rewrite of the ASCE/SEI 7 standard titled “Minimum Design Loads for Buildings and Other Structures”. This new standard was published in 2010 and will supersede ASCE/SEI 7-05. It will appear as a reference in the 2012 International Building Code (IBC) as well as the 2010 Florida Building Code (FBC). Since the 2010 FBC is scheduled to be implemented on 12/31/11 this will give the users a bit of time to read, understand, and apply the new provisions into their practices before these new building codes are adopted. While there were some changes to the snow loading and rain loading provisions, I am going to take a few minutes of your time to discuss the changes to the wind load provisions since they were more substantial and is really what drives our designs here in Florida. I will not get into the changes in detail but rather just discuss the major reasons for the change.



The main change that you will notice about the wind provisions is the reorganization of the wind chapter into several chapters, which are now Chapters 26 through 31 in the new standard. The goal of this restructuring was to separate the major subject areas into their own chapters and offer

clarity to the use of the wind load provisions. While it will take some getting used to, it should make everyone’s life easier when they learn how to find the proper provisions. For instance, the Main Wind-Force Resisting Systems (MWFRS) provisions are in their own chapter while the Components and Cladding (C&C) provisions also have their own as well.

As any faithful user of the ASCE/SEI 7 standard wind provisions knows, the wind chapter was hard to use and find things and seemed a bit disorganized in some areas. ASCE has done a good job at making the provisions easier to follow now. They added flow charts that show step-by-step procedures to determine wind loads and reorganized each chapter for clarity. This should make it easier to determine wind loads for your structure.

The most substantial change the ASCE/SEI 7 made was regarding the design wind speeds for buildings. All information regarding wind speeds are located in Chapter 26 titled “General Requirements”. Not only did wind speeds change but there are different wind speeds for different building occupancy categories. This could get complicated when specifying your wind loads, especially if a project has more than one occupancy category for the building(s) on site.

In general, there are now three wind speed maps in this new standard instead of one. There is one map for each of the three building categories as defined in ASCE/SEI 7-10. See Figures 1, 2, and 3 shown on Page 4 for basic wind speeds in Florida and what building category they correspond to. These maps are directly applicable when determining wind pressures for strength design approaches. By that, I mean the use of a single map with Importance factors and load factors for different building risk categories is gone.

¹ Bill Babich, P.E., TrusSteel, ITWBCG, Inc., President, CFSEI

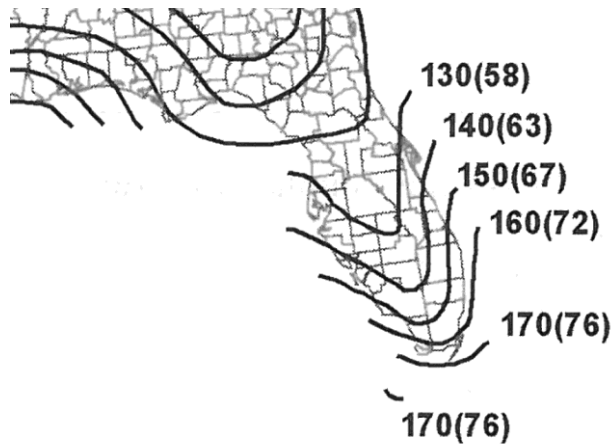


Figure 1: Basic Wind Speeds for Occupancy Category I Buildings and Other Structures

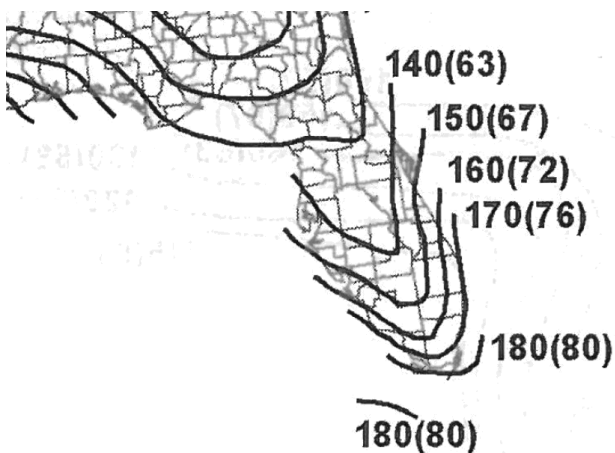


Figure 2: Basic Wind Speeds for Occupancy Category II Building and Other Structures

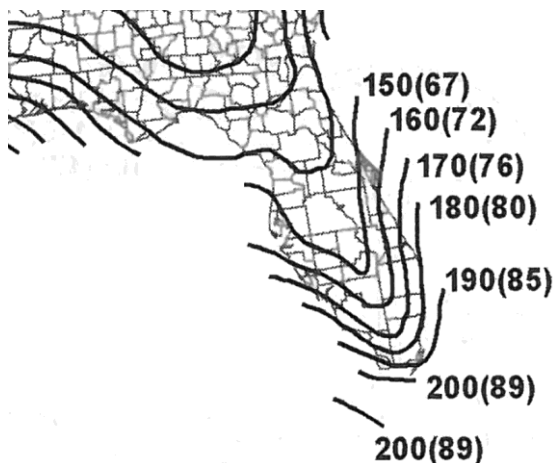


Figure 3: Basic Wind Speeds for Occupancy Category III and IV Buildings and Other Structures

When determining your velocity pressure, you no longer multiply by the importance factor but rather use the wind speed applicable to the building occupancy category. As far as the load factors for wind are concerned, 1.6 for strength design and 1.0 for allowable stress design are now changed to 1.0 and 0.6, respectively.

The end of the Importance factor is here. The use of a uniform hurricane importance factor has been in use since 1982. This uniform use within the same building occupancy category is not appropriate because the risk varies with location along the coast. These new maps establish uniformity in the return period for the design-basis wind speeds along the coastlines for each building category. You can easily see the result of these statements when you look at the three wind speed maps. The probability of reaching those wind speeds vary with each map (see note 5 under each map as shown in the actual standard) and the wind contour lines don't follow the same path along the coastline from map to map.

Since this article is a brief explanation of the changes in the wind load provisions in ASCE/SEI 7-10, I urge you all to research further to gain a better understanding of what the changes are. If you have not purchased your copy of ASCE/SEI 7-10, please take this opportunity to get one so you have time to study it and determine how you incorporate it into your practice so you are ready at the end of the year when the 2010 FBC is officially adopted. ASCE will be having a webinar on this subject on Friday, March 25th from 11:30 AM to 1:00 PM (EDT). If this is of interest to you, go to the ASCE website at <http://www.asce.org/knowledge-learning/continuing-education/> and sign up.

Good luck and happy loading!!!

COLD-FORMED STEEL TECHNICAL DOCUMENTS¹

Many specifying engineers have used standards such as ASTM International or product specific technical documents from groups like the National Concrete Masonry Association (NCMA). However, many do not know that similar technical documents are available from the Cold-Formed Steel Engineers Institute (CFSEI) for design of cold-formed steel (CFS) framing.

Up until 2006, the CFSEI was known as the Light Gauge Steel Engineers Association (LGSEA), and the library of LGSEA documents are still available through CFSEI. However with their new mission and focus of enabling and aiding engineers in the efficient structural design of safe and cost-effective CFS structures, CFSEI is releasing new notes every month that typically provide design examples for real-world engineering problems. Recent efforts within CFSEI and their parent organization, the Steel Framing Alliance, are to provide design information and resources for those faced with the design of mid-rise structures. Some current and in-development CFSEI notes:

CURRENT:

- * Clip Angle Bearing Stiffeners
- * Design Aids and Examples for Distortional Buckling
- * Welding Cold-Formed Steel
- * ASTM Standards for Cold-Formed Steel Design and Construction
- * Reinforcing Holes in CFS Bending Members

¹ Don Allen, P.E., Technical Director, Cold-Formed Steel Engineers Institute (CFSEI)

- * Changes from the 1997 Uniform Building Code (UBC) to the 2006 International Building Code (IBC) for Cold-Formed Steel Design
- * Roof Anchorage Design for Cold-Formed Steel under Wind Loads
- * Design of End Posts for CFS Shear Walls
- * Inspection Checklist for Cold-Formed Steel
- * And many others not listed here

IN DEVELOPMENT:

- * Steel roof-deck diaphragm design on Cold-Formed Steel Framing Members
- * Clip-Angle Design for Cold-Formed Steel
- * Specifying Cold-Formed Steel: Sample Structural Notes and Coordination with Specifications
- * Specifying and Detailing Welds with Cold-Formed Steel Framing

In addition, the CFSEI has a 57-page design guide for shear walls with design examples for both wind and seismic, using both allowable strength design (ASD) and load and resistance factor design (LRFD). CFSEI has several American Institute of Architects (AIA) accredited education programs, available for delivery at local structural engineer association meetings, and has restarted their web-based seminars which resumed at the end of 2009. Since that date, CFSEI has had 5 webinars and has an aggressive schedule set for 2011 with the next one to air on Wednesday, March 23rd about practical distortional buckling design to be presented by Dr. Cris Moen from Virginia Tech. Professional development hours will be available to all who attend and fill out the appropriate materials in a

timely manner. There will be no extra charge for additional attendees viewing on the same screen from the same company.

Membership in CFSEI is not required to purchase or use CFSEI technical documents; but members get free downloads of all Technical Notes as well as a 25% discount on all printed matter and CFSEI or SFA-sponsored seminars. In addition, CFSEI provides educational programs to METALCON International, the trade show for the metal construction industry (October 11-13, 2011 in Atlanta), and is a sponsor of the Wei-Wen Yu Center for Cold-Formed Steel Structures (CCFSS). The CFSEI will hold an annual meeting on May 23-24, 2011 in Annapolis, Maryland at the Historic Inns. For a listing of all CFSEI upcoming technical presentations and resources, or to find a CFS engineer, go to www.cfsei.org, or contact CFSEI Technical Director Don Allen, P.E. at dallen@cfsei.org.



THANK YOU!

JAN 13, 2011 – ANNUAL MEETING SPONSORS



CFSEI ON SOCIAL NETWORKING SITES¹

Social networking is sometimes defined as the grouping of individuals together into specific groups, sometimes called communities, usually based upon common interests. If that sounds a lot like the CFSEI, well it is! Social networking is not new, but the leveraging of social networking via the internet is a fairly new concept. Facebook and LinkedIn are two social networking vehicles that were both born on the internet at about the same time but have grown into two very different children. Both were born as networked micro blogs, but there the resemblance ends.

Facebook has grown up with the chat room family and is now maturing into the most prominent vehicle on the web for personal social interaction. You go to, and spend time on, Facebook to communicate with your friends and family, share personal trivia and photos, or to join an interest group based upon your lifestyle, political, or musical preferences. Your Facebook persona may, or may not, resemble your real persona. But, since all your fellow users understand this, and there is no accountability system, most all users realize that the Facebook experience is mainly about fun and not facts.

LinkedIn has grown up with the resume and business meeting family and is now maturing in the most prominent vehicle on the web for professional social interaction. You go to, and spend time on, LinkedIn to network with business peers, share professional information and resumes, or to vet

¹ Dave Goodwin, TrusSteel, ITWBCG, Inc., Member, CFSEI Florida Chapter

Webinar: CFS Distortional Buckling



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Wednesday, March 23, 2011 CFSEI presents

Cold-Formed Steel **Design & Detailing to Dodge** **Distortional Buckling**



Cold-formed steel columns and joists with open cross-sections can be

susceptible to distortional buckling. Learn what causes distortional buckling and how to minimize its effects in practice. Design examples employing AISI-S100-07 will be provided.

Date:	Wednesday, March 23, 2011
Time:	3 p.m. Eastern; 2 p.m. Central; 1 p.m. Mountain; Noon Pacific; 10 a.m. Hawaii
Format:	Web-based seminar using "Go To Meeting" technology.
Duration:	1+ hour of lecture and design examples, followed by 30 minutes of discussion and questions. (1.5 hour total—however this is registered for 1 hour of continuing education)
Cost:	\$75 per computer screen for CFSEI & SFA Members; \$100 for non-members

Unlimited participants from the same firm at each screen. Gatherings at professional associations are encouraged, but need to be communicated and approved by CFSEI.

Late Registration: Registrations must be received 48 hours prior to the webinar time or a \$20 late registration fee will be assessed.

Continuing Education: 1.0 hour available. Additional participants registered by a non-member can purchase continuing education credits for \$25 each.

Who Should Attend?

- Structural engineers
- Other design professionals using the 2009 Building Code
- Academicians and researchers
- CFS framing manufacturers
- Code enforcement staff
- Forensic engineers
- Software developers
- Evaluation Services

Sign up today at www.cfsei.org. See next page for additional details.

CFS Distortional Buckling

**Wednesday, March 23, 2011 CFSEI
Webinar: Design & Detailing to
Dodge Distortional Buckling**



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ENGINEERS INSTITUTE

This webinar includes:

- How to identify distortional buckling and other failure modes.
- Quantification of distortional buckling
- Where it occurs and how to avoid it
- Recent research
- Code requirements and provisions, including using sheathing as a restraint for distortional buckling in floors and walls
- Design examples

Webinar Materials

The day before the webinar, registered participants will receive a link to download the following:

- Presenter's notes
- CFSEI Technical Note on *Design Aids & Examples for Distortional Buckling*
- Free software CUFSM
- CUFSM tutorials & examples.
- Evaluation form

About the Presenter:



Dr. Cris Moen is an assistant professor in the Charles E. Via, Jr. Department of Civil and Environmental Engineering at Virginia Tech where his primary research and teaching area is cold-formed steel component and system behavior. He received his Ph.D. from Johns Hopkins University in 2008 and has several years of experience as a practicing structural engineer. He has performed research for the CFS industry on members with stiffened and unstiffened holes, and his research team has been selected to study energy dissipation for CFS members in conjunction with the AISI Seismic Design Optimization project. Cris is a registered professional engineer in Virginia.



Steel Framing Alliance™

SFA FBPE Provider #0005013

Why should you attend?

- More structures are using CFS framing in structural and load-bearing applications.
- Distortional Buckling checks are new to the 2007 AISI specification, and therefore now required by the 2009 International Building Code.
- If you are a member or join CFSEI when you sign up, other participants at your location can obtain **continuing education at no additional cost.**

Sign up today at www.cfsei.org